

September 1, 2021

Mr. Jaskaran Singh
First Job Naches, LLC
10121 Highway 12
Naches, Washington 98937-9785
karan1707@hotmail.com

RE: ***July 2021 Groundwater Monitoring Report & NFA Request***
Naches Pit Stop
10121 Highway 12
Naches, Washington 98937-9785
Ecology VCP ID: CE0449

Dear Mr. Singh:

Associated Environmental Group, LLC (AEG) has prepared this ***July 2021 Groundwater Monitoring Report***, presenting a summary of the latest activities performed at the *Naches Pit Stop*, located at the above address in Naches, Washington (Site). Based on the work performed at the Site to date, AEG is also including a request for a No Further Action (NFA) determination from the Washington State Department of Ecology (Ecology). The location of the Site is illustrated on Figure 1, *Vicinity Map*. Locations of Site features, monitoring wells, and groundwater gradients determined at the time of this sampling event are detailed in Figure 2, *Groundwater Elevation Contour Map 07/29/2021*.

WORK PERFORMED [July 2021]:

- Obtained depth to groundwater data in 12 groundwater wells (MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, and MW-13).
- Purged and sampled six groundwater monitoring wells (MW-6, MW-9, MW-10, MW-11, MW-12, and MW-13).

WORK PROPOSED:

- None at this time, pending Ecology review.

GROUNDWATER SUMMARY:

Sampling Event:	July 2021	Values
Range of Depths to Groundwater:	10.10 to 12.61	Feet below top of well casing (Table 1, <i>Summary of Groundwater Elevations</i>)
Range of Groundwater Elevations:	1451.39 to 1455.28	Feet above Mean Sea Level (Table 1, <i>Summary of Groundwater Elevations</i>)
Groundwater Gradient: (Direction / Magnitude)	Southeast / 0.02	Feet per foot (ft/ft)
Measurable NAPL Detected:	No	
Measurable NAPL Thickness:	N/A	
Current Remedial Action:	None	

DISCUSSION:

Constituents of concern were not detected in any monitoring wells during the July 2021 sampling event. Analytical results for this sampling event, and historical analytical results, are presented in the attached Table 2, *Summary of Groundwater Analytical Results*. Full laboratory analytical results for this sampling are presented in the attached Appendix A, Supporting Documents, *Laboratory Datasheets*.

The calculated groundwater gradient for the July 2021 sampling event is primarily towards the southeast, with an approximate gradient of 0.02 feet per foot (Figure 2, *Groundwater Elevation Contour Map 07/29/2021*).

NFA REQUEST:

It is AEG's professional opinion that an NFA determination is appropriate for this Site based on the following multiple lines of evidence:

- Impacts to soil and groundwater have been sufficiently characterized, including areas identified by Ecology in previous opinion letters. Soil results in exceedance of MTCA Method A cleanup levels were limited to borings B-4, B-6, and MW-13. The borings are all within the same location along the southeastern property boundary. The boring for MW-12 defines the extent of soil in this direction and shows it does not extend off property. The soil sample collected from B-6 in April 2020 was further analyzed for volatile and extractable petroleum hydrocarbons (VPH/EPH), the results of which were used to calculate a Method B cleanup level of 2,230 milligrams per kilogram (mg/kg). All soil at the Site is either below this cleanup level or is below the 15-foot point of compliance for direct contact. Method B calculations are included in Appendix A.

- While Method B cleanup levels are appropriate for the Direct Contact Exposure Pathway, they do not account for the Leaching to Groundwater pathway. Groundwater flow direction beneath the Site has consistently been to the southeast. Analytical results of groundwater monitoring data collected from the Site to date has shown the residual soil impacts are not partitioning into groundwater. Groundwater collected from selected boring locations (B-1 and B-6) indicated the presence of gasoline- and/or diesel-range petroleum hydrocarbons (TPH) above MTCA cleanup levels; however, representative groundwater data collected from permanent wells installed in these same locations (MW-10 and MW-13, respectively) were non-detect in consecutive quarters for the same constituents. Further, total lead detected in boring groundwater from B-2 was alternately non-detect in the results of the dissolved lead analysis. As such, these results suggest particulates in the boring groundwater samples were creating false positives in the data, and the representative data from the Site monitoring wells show groundwater meets MTCA cleanup standards.
- While Method B cleanup levels are appropriate for the Direct Contact Exposure Pathway, they do not account for the Soil-to-Vapor Pathway. No sampling of the on-Site building's sub-slab vapor or indoor air has been performed to date. However, all soil impacts above MTCA Method A cleanup levels were detected at 14 feet or deeper, and the depth to groundwater measured throughout the Site has ranged from about 10 to 12 feet bgs. As such, all detections in soil and groundwater have been below the recommended 6-foot vertical separation distance for TPH from the Site building. In addition, all locations have been greater than 30 feet from the structure, which is the recommended lateral separation distance for TPH.

CLOSING:

Thank you for the opportunity to provide you with environmental consulting services. Should you have questions or require additional information, please contact our office at 360-352-9835.

Sincerely,

Associated Environmental Group, LLC



John Schenk
Staff Scientist



Scott Rose, L.H.G.
Senior Hydrogeologist



SCOTT I ROSE

Attachments: *Figure 1 – Vicinity Map*

Figure 2 – Groundwater Elevation Contour Map 07/29/2021

Figure 3 – Site Map

Table 1 – Summary of Groundwater Elevations

Table 2 – Summary of Groundwater Analytical Results

Table 3 – Summary of Soil Analytical Results

Appendix A – Supporting Documents

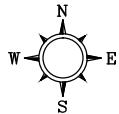
Laboratory Datasheets

Method B Calculations

FIGURES

2633 Parkmont Lane SW, Suite A • Olympia, WA • 98502-5751
Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

FILENAME 16-102_1504.DWG	DRAWN BY ICD 2/1/2016	CHECKED BY BD 2/1/2016	APPROVED BY BD 2/1/2016	PROJECT NUMBER 16-102
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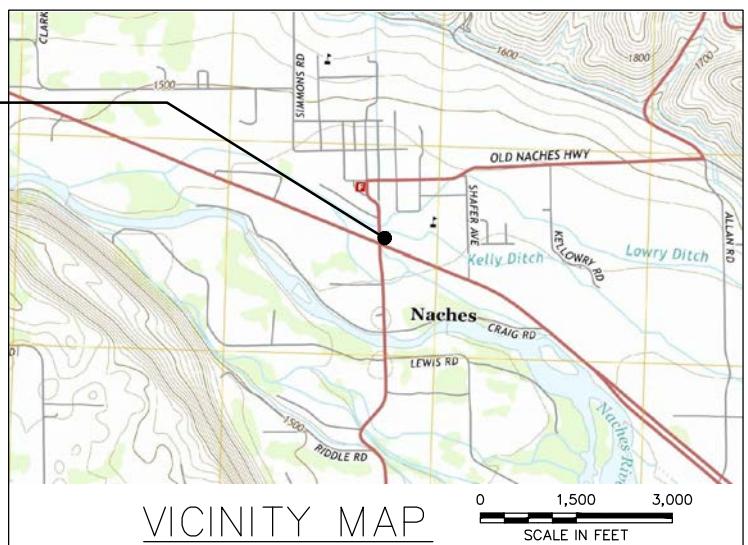
PROJECT LOCATION

NOTES

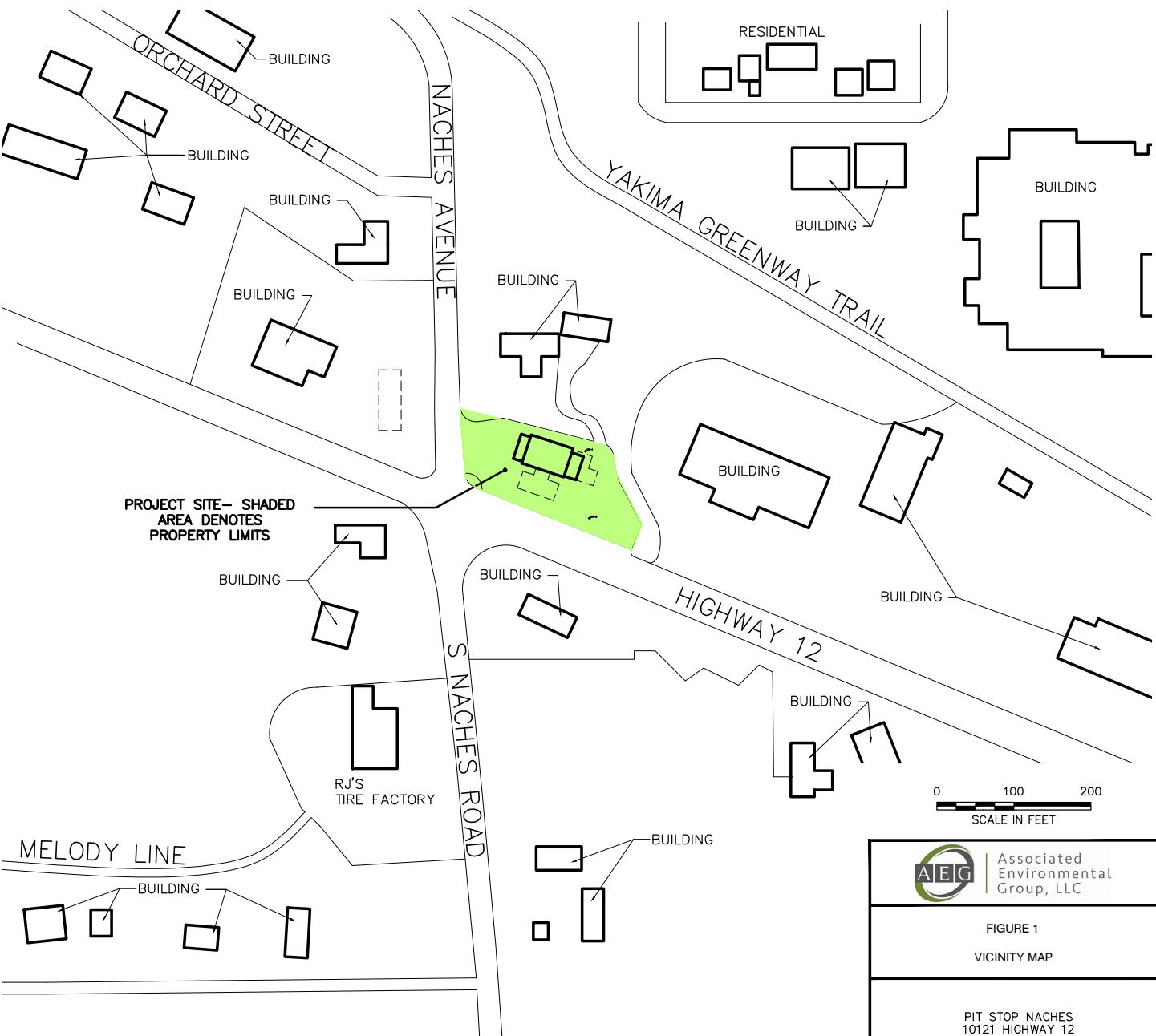
1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
2. THIS DRAWING IS FOR INFORMATION PURPOSES. IT IS INTENDED TO ASSIST IN SHOWING FEATURES DISCUSSED IN AN ATTACHED DOCUMENT.

REFERENCE

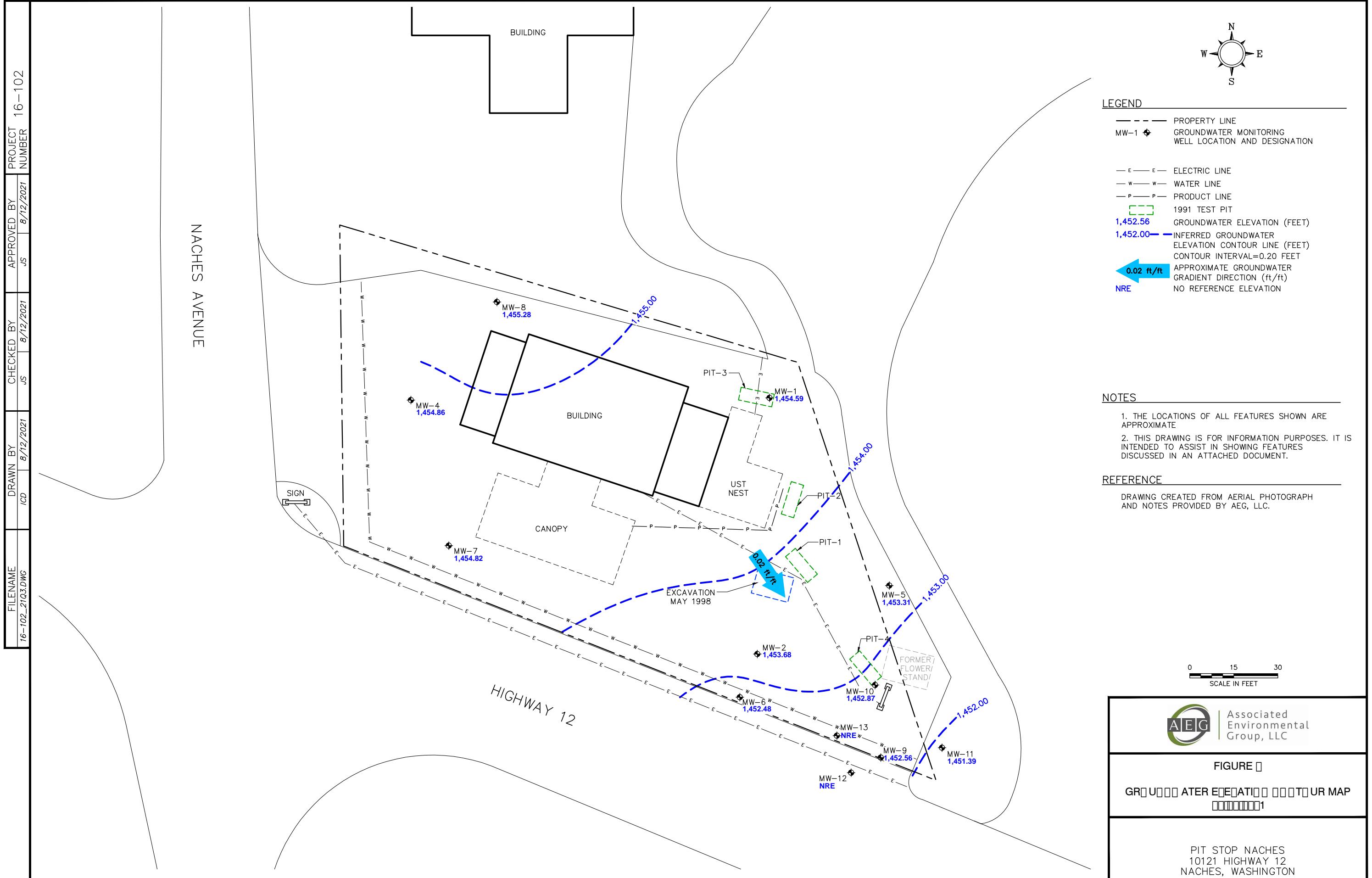
DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.
VICINITY IMAGE SOURCE: U.S. GEOLOGICAL SURVEY-2013, 7.5 MINUTE QUADRANGLE MAP NACHES, WASHINGTON

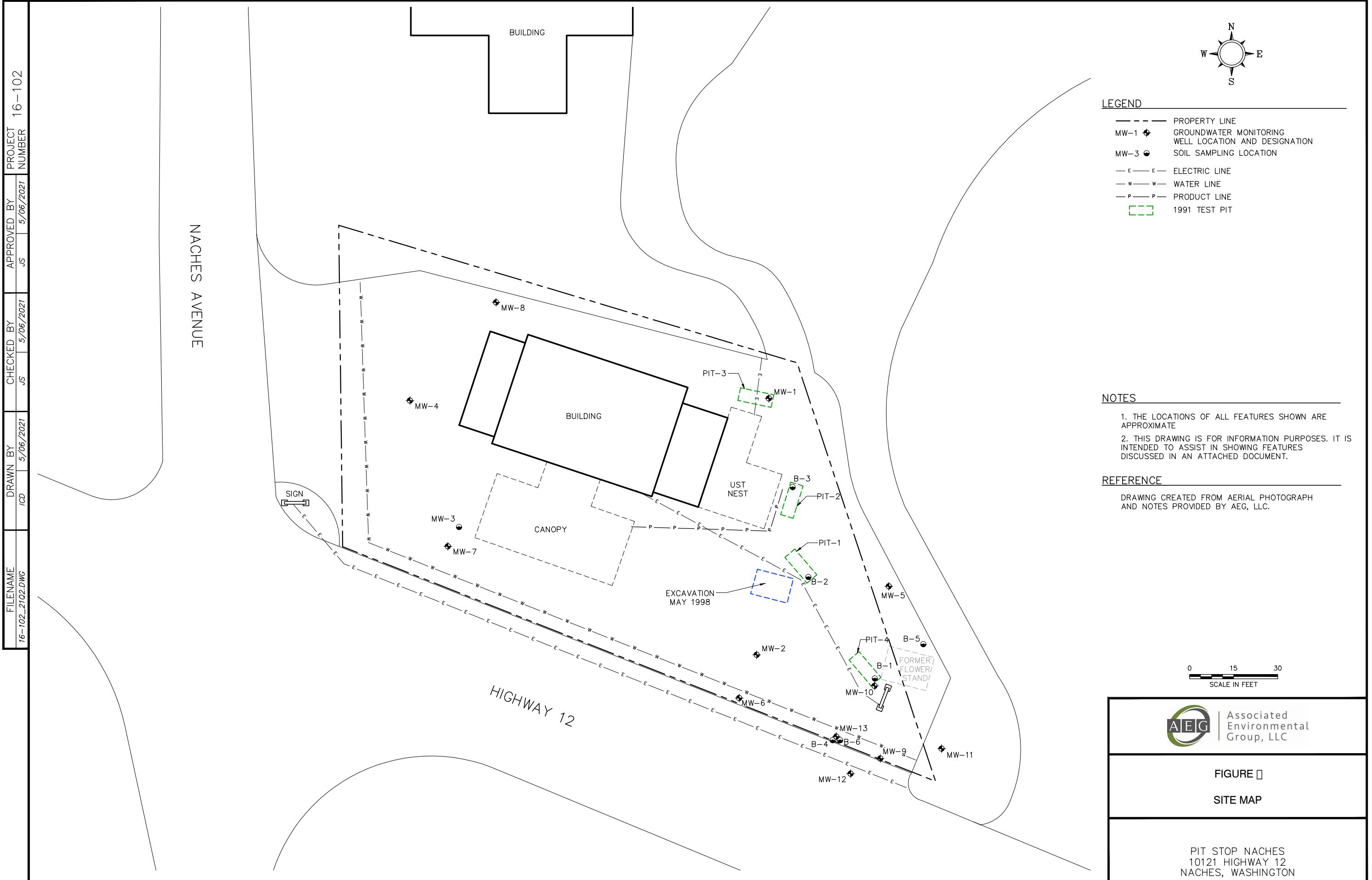


PROJECT SITE - SHADED AREA DENOTES PROPERTY LIMITS



Associated
Environmental
Group, LLC





TABLES

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Table 1 - Summary of Groundwater Elevations

Naches Pit Stop
Naches, Washington

Well No./ TOC Elevation	Date	Depth to Water	Depth to Free Product	Free Product Thickness	Apparent Groundwater Elevation	Actual Groundwater Elevation	Change in Elevation
MW-1	5/27/2016	10.60	--	--	--	1454.47	--
1465.07	9/28/2016	10.36	--	--	--	1454.71	0.24
	3/27/2017	10.30	--	--	--	1454.77	0.06
	12/20/2017	10.93	--	--	--	1454.14	-0.63
	3/27/2018	10.24	--	--	--	1454.83	0.69
	5/8/2020	10.16	--	--	--	1454.91	0.08
	7/29/2021	10.48	--	--	--	1454.59	-0.32
MW-2	5/27/2016	10.83	--	--	--	1453.65	--
1464.48	9/28/2016	10.67	--	--	--	1453.81	0.16
	3/27/2017	10.86	--	--	--	1453.62	-0.19
	12/20/2017	11.21	--	--	--	1453.27	-0.35
	3/27/2018	11.20	--	--	--	1453.28	0.01
	5/8/2020	10.72	--	--	--	1453.76	0.48
	7/29/2021	10.80	--	--	--	1453.68	-0.08
MW-4	5/27/2016	10.79	--	--	--	1454.86	--
1465.65	9/28/2016	10.68	--	--	--	1454.97	0.11
	3/27/2017	10.66	--	--	--	1454.99	0.02
	12/20/2017	11.71	--	--	--	1453.94	-1.05
	3/27/2018	10.63	--	--	--	1455.02	1.08
	5/8/2020	10.41	--	--	--	1455.24	0.22
	7/29/2021	10.79	--	--	--	1454.86	-0.38
MW-5	5/27/2016	10.83	--	--	--	1453.25	--
1464.08	9/28/2016	10.68	--	--	--	1453.40	0.15
	3/27/2017	11.14	--	--	--	1452.94	-0.46
	12/20/2017	11.78	--	--	--	1452.30	-0.64
	3/27/2018	11.05	--	--	--	1453.03	0.73
	5/8/2020	10.72	--	--	--	1453.36	0.33
	7/29/2021	10.77	--	--	--	1453.31	-0.05
MW-6	5/27/2016	11.84	--	--	--	1452.89	--
1464.73	9/28/2016	11.57	--	--	--	1453.16	0.27
	3/27/2017	11.92	--	--	--	1452.81	-0.35
	12/20/2017	12.62	--	--	--	1452.11	-0.70
	3/27/2017	12.48	--	--	--	1452.25	0.14
	5/8/2020	11.69	--	--	--	1453.04	0.79
	4/13/2021	12.31	--	--	--	1452.42	-0.62
	7/29/2021	12.25	--	--	--	1452.48	0.06
MW-7	5/27/2016	10.43	--	--	--	1454.81	--
1465.24	9/28/2016	10.33	--	--	--	1454.91	0.10
	3/27/2017	10.27	--	--	--	1454.97	0.06
	12/20/2017	10.98	--	--	--	1454.26	-0.71
	3/27/2018	10.26	--	--	--	1454.98	0.72
	5/8/2020	10.00	--	--	--	1455.24	0.26
	7/29/2021	10.42	--	--	--	1454.82	-0.42

Table 1 - Summary of Groundwater Elevations

Naches Pit Stop
Naches, Washington

Well No./ TOC Elevation	Date	Depth to Water	Depth to Free Product	Free Product Thickness	Apparent Groundwater Elevation	Actual Groundwater Elevation	Change in Elevation
MW-8	5/27/2016	10.14	--	--	--	1455.24	--
1465.38	9/28/2016	10.04	--	--	--	1455.34	0.10
	3/27/2017	10.02	--	--	--	1455.36	0.02
	12/20/2017	10.72	--	--	--	1454.66	-0.70
	3/27/2018	9.97	--	--	--	1455.41	0.75
	5/8/2020	9.77	--	--	--	1455.61	0.20
	7/29/2021	10.10	--	--	--	1455.28	-0.33
MW-9	5/8/2020	11.50	--	--	--	1452.96	--
1464.46	4/13/2021	12.06	--	--	--	1452.40	-0.56
	7/29/2021	11.90	--	--	--	1452.56	0.16
MW-10	5/8/2020	10.78	--	--	--	1452.98	--
1463.76	4/13/2021	11.40	--	--	--	1452.36	-0.62
	7/29/2021	10.89	--	--	--	1452.87	0.51
MW-11	5/8/2020	12.22	--	--	--	1451.78	--
1464.00	4/13/2021	12.91	--	--	--	1451.09	-0.69
	7/29/2021	12.61	--	--	--	1451.39	0.30
MW-12	4/13/2021	12.46	--	--	--	--	--
--	7/29/2021	12.35	--	--	--	--	-0.11
MW-13	4/13/2021	11.69	--	--	--	--	--
--	7/29/2021	11.50	--	--	--	--	-0.19

Notes:

All values in feet

TOC = Top of casing elevation relative to assigned benchmark.

-- = Not measured, not available, or not applicable

* = Ceased groundwater monitoring/sampling activities at this well

Table 2 - Summary of Groundwater Analytical Results

Naches Pit Stop
Naches, Washington

Sample Number	Date Collected	Total Petroleum Hydrocarbons			Volatile Organic Compounds								Total Lead	Dissolved Lead	Cadmium	Chromium	Arsenic	Mercury	
		Gasoline	Diesel	Heavy Oil	Benzene	Toluene	Ethyl-benzene	Xylenes	EDC	EDB	Total Naphthalenes	MTBE							
MONITORING WELL DATA																			
MW-1	5/27/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	
	9/28/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	
	3/27/2017	<100	<200	<400	1.1	<2.0	<1.0	3.1	--	--	--	--	<5.0	<5.0	--	--	--	--	
	12/21/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	
	3/27/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	
	5/8/2020	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	
MW-2	1/21/2016	3,000	61,000	<500	<1.0	<1.0	<1.0	<3.0	--	--	--	--	--	--	--	--	--	--	--
	5/27/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	9/28/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	--
	3/27/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	--
	12/20/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	3/27/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
MW-4	5/27/2016	<100	<200	<400	<1.0	<1.0	<1.0	<2.0	<1.0	<0.01	<5.0	<5.0	84	--	<0.5	<5.0	<3.0	<0.5	--
	9/28/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	--
	3/27/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	--
	12/21/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	5/8/2020	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	5/27/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
MW-5	9/28/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	--
	3/27/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	--
	12/21/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	3/27/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	5/8/2020	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	5/27/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
MW-6	9/28/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	--
	3/27/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	--
	12/21/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--	--
	3/27/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	5/8/2020	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	4/14/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--
	7/30/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--	--

Table 2 - Summary of Groundwater Analytical Results

Naches Pit Stop
Naches, Washington

Sample Number	Date Collected	Total Petroleum Hydrocarbons			Volatile Organic Compounds								Total Lead	Dissolved Lead	Cadmium	Chromium	Arsenic	Mercury
		Gasoline	Diesel	Heavy Oil	Benzene	Toluene	Ethyl-benzene	Xylenes	EDC	EDB	Total Naphthalenes	MTBE						
MW-7	5/27/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	<1.0	<0.01	<5.0	<5.0	102	--	<0.5	<5.0	<3.0	<0.5
	9/28/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	6.4	<5.0	--	--	--	--
	3/27/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--
	12/21/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	5/8/2020	<100	<200	<400	<1.0	<2.0	2.7	<2.0	--	--	--	--	--	--	--	--	--	--
MW-8	5/27/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	9/28/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--
	3/27/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--
	12/21/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	5/8/2020	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
MW-9	9/13/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--
	12/21/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	5/8/2020	120	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	4/14/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	7/30/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
MW-10	5/8/2020	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	4/14/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	7/30/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
MW-11	5/8/2020	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	4/14/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	7/30/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
MW-12	4/14/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	7/30/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
MW-13	4/14/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--
	7/30/2021	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	--	--	--	--	--

Table 2 - Summary of Groundwater Analytical Results

Naches Pit Stop
Naches, Washington

Sample Number	Date Collected	Total Petroleum Hydrocarbons			Volatile Organic Compounds								Total Lead	Dissolved Lead	Cadmium	Chromium	Arsenic	Mercury
		Gasoline	Diesel	Heavy Oil	Benzene	Toluene	Ethyl-benzene	Xylenes	EDC	EDB	Total Naphthalenes	MTBE						
BORING GROUNDWATER																		
B-1	3/28/2017	<100	29,700	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	12.9	<5.0	--	--	--	--
B-2	3/28/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	19.9	<5.0	--	--	--	--
B-5	9/13/2017	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	--	--	--	--	<5.0	<5.0	--	--	--	--
B6-W	4/17/2020	9,180	1,390	<400	<2.0	<10.0	68	44	--	--	--	--	--	--	--	--	--	--
PQL		100	200	400	1.0	1.0 / 2.0	1.0	2.0 / 3.0	1.0	0.01	5.0	5.0	5.0	5.0	0.5	5.0	3.0	0.5
MTCA Method A Cleanup Levels		800*	500	500	5.0	1,000	700	1,000	5	0.01	160	20	15	15	2	19	20	2

Notes:

All values in micrograms per liter ($\mu\text{g/L}$)

-- = Not analyzed for constituent

< = Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level

Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels

* TPH-Gasoline Cleanup Level with presence of Benzene anywhere at the Site

MTBE = Methyl tert-butyl ether

EDC = 1,2-Dichloroethane

EDB = 1,2-Dibromoethane

Table 3 - Summary of Soil Analytical Results

Naches Pit Stop
Naches, Washington

Sample Number	Depth Collected (feet)	Date Collected	Total Petroleum Hydrocarbons			Volatile Organic Compounds								Lead
			Gasoline	Diesel	Heavy Oil	Benzene	Toluene	Ethyl-benzene	Xylenes	EDC	EDB	Total Naphthalenes	MTBE	
MW1-13	13.0	1/21/2016	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--
MW1-15	15.0	1/21/2016	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--
MW2-8	8.0	1/21/2016	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--
MW2-13	13.0	1/21/2016	<10	1,400	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--
MW2-15	15.0	1/21/2016	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--
MW3-10	10.0	1/21/2016	<10	<50	<100	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--
MW4-5	5.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.03	<0.005	<0.10	<0.05	<5.0
MW4-10	10.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.03	<0.005	<0.10	<0.05	<5.0
MW5-5	5.0	5/23/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW5-10	10.0	5/23/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW6-5	5.0	5/23/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW6-10	10.0	5/23/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW7-5a	5.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.03	<0.005	<0.10	<0.05	<5.0
MW7-6	6.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.03	<0.005	<0.10	<0.05	<5.0
MW7-10	10.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<0.03	<0.005	<0.10	<0.05	<5.0
MW8-5	5.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW8-10	10.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW8-15	15.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW8-20	20.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
B1-3	3.0	3/28/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
B1-8	8.0	3/28/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
B1-10	10.0	3/28/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
B1-15	15.0	3/28/2017	<10	294	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	7.1
B2-3	3.0	3/28/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
B2-9	9.0	3/28/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
B3-4	4.0	3/28/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	12.6
B3-9	9.0	3/28/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	8.5
B4-5	5.0	9/13/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	9.1
B4-14	14.0	9/13/2017	464	258	<250	0.021	<0.10	2.6	4.73	--	--	--	--	<5.0
B4-20	20.0	9/13/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
B5-6	6.0	9/13/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
B5-15	15.0	9/13/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
MW9-5	5.0	9/13/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
MW9-15	15.0	9/13/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
MW9-20	20.0	9/13/2017	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	<5.0
B6-15	15.0	4/17/2020	1,620	1,070	<250	<0.02	<0.10	2.9	1.6	--	--	--	--	--
B6-20	20.0	4/17/2020	19	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
B6-25	25.0	4/17/2020	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW10-14	14.0	4/17/2020	<10	480	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW10-20	20.0	4/17/2020	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW11-15	15.0	4/20/2020	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW12-15	15.0	3/16/2021	<10	<50	390	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW12-20	20.0	3/16/2021	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW12-25	25.0	3/16/2021	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW13-15	15.0	3/16/2021	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
MW13-20	20.0	3/16/2021	560	280	<250	0.34	0.18	3.2	1.3	--	--	--	--	--
MW13-25	25.0	3/16/2021	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--	--	--	--	--
PQL			10	50	100 / 250	0.02	0.05 / 0.10	0.05	0.15	0.03	0.005	0.10	0.05	5.0
MTCA Method A Cleanup Levels			30*	2,000	2,000	0.03	7	6	9	--	0.005	5.0	0.1	250
MTCA Method B Cleanup Level for Direct Contact Exposure			2,230**			18	6,400	8,000	16,000	11	0.5	1,600	560	2

APPENDIX A

Supporting Documents:
Laboratory Datasheets
Method B Calculations



Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

August 6, 2021

Scott Rose
Associated Environmental Group, LLC
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr. Rose:

Please find enclosed the analytical data report for the Naches Pit Stop Project located in Naches, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L210730-2
Client Project # 16-102

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Sample Description	Method Blank	MW-6	MW-9	MW-9 Dup	MW-10	MW-11
Date Sampled	N/A	7/30/2021	7/30/2021	7/30/2021	7/30/2021	7/30/2021
Date Analyzed	PQL ($\mu\text{g/L}$)	8/2/2021 ($\mu\text{g/L}$)	8/2/2021 ($\mu\text{g/L}$)	8/2/2021 ($\mu\text{g/L}$)	8/3/2021 ($\mu\text{g/L}$)	8/2/2021 ($\mu\text{g/L}$)
Benzene	1.0	nd	nd	nd	nd	nd
Toluene	2.0	nd	nd	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd	nd	nd
Total Xylenes	2.0	nd	nd	nd	nd	nd
Gasoline	100	nd	nd	nd	nd	nd
Surrogate Recovery						
Dibromofluoromethane	108	92	96	100	102	100
1,2-Dichloroethane-d4	102	94	97	100	98	97
Toluene-d8	101	97	103	97	103	102
4-Bromofluorobenzene	91	92	86	85	91	86

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Melissa Harrington

Libby Environmental, Inc.

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L210730-2
Client Project # 16-102

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Sample Description	MW-12	MW-13
Date Sampled	7/30/2021	7/30/2021
Date Analyzed	PQL ($\mu\text{g/L}$)	8/3/2021 ($\mu\text{g/L}$)
Benzene	1.0	nd
Toluene	2.0	nd
Ethylbenzene	1.0	nd
Total Xylenes	2.0	nd
Gasoline	100	nd
Surrogate Recovery		
Dibromofluoromethane	101	100
1,2-Dichloroethane-d4	100	98
Toluene-d8	104	103
4-Bromofluorobenzene	92	94

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Melissa Harrington

Libby Environmental, Inc.

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L210730-2
Client Project # 16-102

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Matrix Spike Sample Identification: L210729-1								
Date Analyzed: 8/2/2021								
	Spiked Conc. ($\mu\text{g/L}$)	MS Response ($\mu\text{g/L}$)	MSD Response ($\mu\text{g/L}$)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Benzene	5.0	4.2	4.0	84	80	4.9	65-135	
Toluene	5.0	4.5	4.1	90	82	9.3	65-135	
Ethylbenzene	5.0	4.5	4.4	90	88	2.2	65-135	
Total Xylenes	15.0	14.5	13.7	97	91	5.7	65-135	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	93	98	65-135
1,2-Dichloroethane-d4	96	98	65-135
Toluene-d8	103	104	65-135
4-Bromofluorobenzene	102	108	65-135

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Melissa Harrington

Laboratory Control Sample

Date Analyzed: 8/2/2021					
	Spiked Conc. ($\mu\text{g/L}$)	LCS Response ($\mu\text{g/L}$)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Benzene	5.0	4.6	92	80-120	
Toluene	5.0	4.5	90	80-120	
Ethylbenzene	5.0	4.2	84	80-120	
Total Xylenes	15.0	14.1	94	80-120	

Surrogate Recovery			
Dibromofluoromethane	101	65-135	
1,2-Dichloroethane-d4	101	65-135	
Toluene-d8	99	65-135	
4-Bromofluorobenzene	99	65-135	

ANALYSES PERFORMED BY: Melissa Harrington

Libby Environmental, Inc.

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L210730-2
Client Project # 16-102

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel ($\mu\text{g}/\text{L}$)	Oil ($\mu\text{g}/\text{L}$)
Method Blank	8/3/2021	93	nd	nd
MW-6	8/3/2021	87	nd	nd
MW-9	8/3/2021	89	nd	nd
MW-10	8/3/2021	81	nd	nd
MW-11	8/3/2021	95	nd	nd
MW-12	8/3/2021	84	nd	nd
MW-13	8/3/2021	80	nd	nd
Practical Quantitation Limit			200	400

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Randolph Kraus

Libby Environmental, Inc.

NACHES PIT STOP PROJECT
AEG, LLC
Libby Project # L210730-2
Date Received 7/30/21 13:55

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

Received By KD

Sample Receipt Checklist

Chain of Custody

- | | | | |
|--------------------------------------|--|------------------------------------|----------------------------------|
| 1. Is the Chain of Custody complete? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 2. How was the sample delivered? | <input checked="" type="checkbox"/> Hand Delivered | <input type="checkbox"/> Picked Up | <input type="checkbox"/> Shipped |

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. Cooler or Shipping Container is in good condition. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A |
| 6. Was an attempt made to cool the samples? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>4.2 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>5.6 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 10. Is it clear what analyses were requested? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 11. Did container labels match Chain of Custody? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 12. Are matrices correctly identified on Chain of Custody? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 13. Are correct containers used for the analysis indicated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 14. Is there sufficient sample volume for indicated analysis? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 15. Were all containers properly preserved per each analysis? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 16. Were VOA vials collected correctly (no headspace)? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 17. Were all holding times able to be met? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |

Discrepancies/ Notes

18. Was client notified of all discrepancies? Yes No N/A

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506

Ph: 360-352-2110
Fax: 360-352-4154

Client: AEG

Address: 2633 PARKMONT LANE SW, SUITE A

City: OLYMPIA State: WA Zip: 98502

Phone: (360) 890-2205 Fax:

Client Project # 16-102



Chain of Custody Record

www.LibbyEnvironmental.com

Date: 7/30/21

Page: 1 of 1

Project Manager: SCOTT ROSE

Project Name: NACHES PIT STOP

Location: 10121 HIGHWAY 12 City, State: NACHES, WA

Collector: Foster Kortzel Date of Collection: 7/30/21

Email: SROSE@AEGWA.COM

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (6260)	(8021)	NWTPH-HCID	NWTPH-DX / DX	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Field Notes
1 MW-6		0917	W	VFA Amber	XX		X											
2 MW-9		0801	W	VFA, Amber	XX		X											
3 MW-10		0852	W	VFA Amber	XX		X											
4 MW-11		0733	W	VFA, Amber	XX		X											
5 MW-12		0941	W	VFA, Amber	XX		X											
6 MW-13		0828	W	VFA, Amber	XX		X											
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		

Relinquished by:

Date / Time Received by:

Date / Time

Sample Receipt

Remarks:

7/30/21 1355

Good Condition? Y N

Relinquished by:

Date / Time Received by:

Date / Time

Cooler Temp. °C

Relinquished by:

Date / Time Received by:

Date / Time

Sample Temp. °C

TAT: 24HR 48HR 5-DAY

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

1. Enter Site Information

Date: 04/17/20

Site Name: Naches Pit Stop

Sample Name: B6-15

2. Enter Soil Concentration Measured

Chemical of Concern or Equivalent Carbon Group	Measured Soil Conc dry basis	Composition Ratio
	mg/kg	%
Petroleum EC Fraction		
AL_EC >5-6	0.915	0.05%
AL_EC >6-8	114	5.98%
AL_EC >8-10	78.7	4.13%
AL_EC >10-12	0.785	0.04%
AL_EC >12-16	275	14.43%
AL_EC >16-21	265	13.90%
AL_EC >21-34	49.5	2.60%
AR_EC >8-10	102.5	5.38%
AR_EC >10-12	680	35.68%
AR_EC >12-16	94.2	4.94%
AR_EC >16-21	212	11.12%
AR_EC >21-34	33.3	1.75%
Benzene	0.01	0.00%
Toluene	0.05	0.00%
Ethylbenzene	0	0.00%
Total Xylenes	0	0.00%
Naphthalene	0	0.00%
1-Methyl Naphthalene	0	0.00%
2-Methyl Naphthalene	0	0.00%
n-Hexane	0	0.00%
MTBE	0	0.00%
Ethylene Dibromide (EDB)	0	0.00%
1,2 Dichloroethane (EDC)	0	0.00%
Benzo(a)anthracene	0	0.00%
Benzo(b)fluoranthene	0	0.00%
Benzo(k)fluoranthene	0	0.00%
Benzo(a)pyrene	0	0.00%
Chrysene	0	0.00%
Dibenz(a,h)anthracene	0	0.00%
Indeno(1,2,3-cd)pyrene	0	0.00%
Sum	1905.96	100.00%

3. Enter Site-Specific Hydrogeological Data

Total soil porosity:	0.43	Unitless
Volumetric water content:	0.3	Unitless
Volumetric air content:	0.13	Unitless
Soil bulk density measured:	1.5	kg/L
Fraction Organic Carbon:	0.001	Unitless
Dilution Factor:	20	Unitless

4. Target TPH Ground Water Concentration (if adjusted)

If you adjusted the target TPH ground water

concentration, enter adjusted ug/L
value here:

Notes for Data Entry

Set Default Hydrogeology

[Clear All Soil Concentration Data Entry Cells](#)

[Restore All Soil Concentration Data cleared previously](#)

REMARK:

Enter site-specific information here.....

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 4/17/2020

Site Name: Naches Pit Stop

Sample Name: B6-15

Measured Soil TPH Concentration, mg/kg: 1,905.960

1. Summary of Calculation Results

Exposure Pathway	Method/Goal	Protective Soil TPH Conc, mg/kg	With Measured Soil Conc		Does Measured Soil Conc Pass or Fail?
			RISK @	HI @	
Protection of Soil Direct Contact: Human Health	Method B	2,230	5.51E-10	8.55E-01	Pass
	Method C	34,901	7.37E-11	5.46E-02	Pass
Protection of Method B Ground Water Quality (Leaching)	Potable GW: Human Health Protection	0	2.24E-06	8.40E+01	Fail
	Target TPH GW Conc. @ 800 ug/L	10,000	NA	NA	Fail

Warning! Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (Refer to WAC 173-340-7490 through ~7494).

Warning! Check Residual Saturation (WAC340-747(10)).

2. Results for Protection of Soil Direct Contact Pathway: Human Health

	Method B: Unrestricted Land Use	Method C: Industrial Land Use
Protective Soil Concentration, TPH mg/kg	2,230.07	34,901.31
Most Stringent Criterion	HI =1	HI =1

Soil Criteria	Protective Soil Concentration @Method B				Protective Soil Concentration @Method C			
	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @	Most Stringent?	TPH Conc, mg/kg	RISK @	HI @
HI =1	YES	2.23E+03	6.44E-10	1.00E+00	YES	3.49E+04	1.35E-09	1.00E+00
Total Risk=1E-5	NO	3.46E+07	1.00E-05	1.55E+04	NO	2.59E+08	1.00E-05	7.41E+03
Risk of Benzene= 1E-6	NO	3.46E+06	1.00E-06	1.55E+03	NA			
Risk of cPAHs mixture= 1E-6	NA	NA	NA	NA	NA			
EDB	NA	NA	NA	NA	NA			
EDC	NA	NA	NA	NA	NA			

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1 Protection of Potable Ground Water Quality (Method B): Human Health Protection

Most Stringent Criterion	#N/A
Protective Ground Water Concentration, ug/L	0.00
Protective Soil Concentration, mg/kg	0.00

Ground Water Criteria	Protective Potable Ground Water Concentration @Method B				Protective Soil Conc, mg/kg
	Most Stringent?	TPH Conc, ug/L	RISK @	HI @	
HI=1	NO	7.08E+04	1.15E-05	3.43E+02	1.00E+04
Total Risk = 1E-5	NO	8.10E+02	1.14E-06	3.69E+00	100% NAPL
Total Risk = 1E-6	NO	7.08E+04	1.15E-05	3.43E+02	1.00E+04
Risk of cPAHs mixture= 1E-5	NA	NA	NA	NA	NA
Benzene MCL = 5 ug/L	NO	8.10E+02	1.14E-06	3.69E+00	100% NAPL
MTBE = 20 ug/L	NA	NA	NA	NA	NA

3.2 Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

Ground Water Criteria	Protective Ground Water Concentration			Protective Soil Conc, mg/kg
	TPH Conc, ug/L	Risk @	HI @	
Target TPH GW Conc = 800 ug/L	7.08E+04	1.15E-05	3.43E+02	1.00E+04