ASSOCIATED ENVIRONMENTAL GROUP, LLC

Subsurface Investigation Report

Conducted on:

Naches Pit Stop
10121 Highway 12
Naches, Washington 98937-9785
Ecology Facility/Site ID: 505

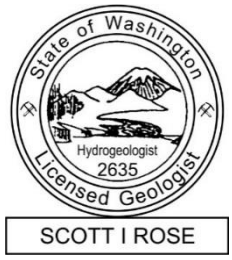
Prepared for:

Mr. Han Chang
10121 Highway 12
Naches, Washington 98937-9785

Prepared & Reviewed by:

Nicolas Pushckor, R.S.A.
Staff Geologist

Scott Rose, L.H.G.
Senior Hydrogeologist



AEG Project #: 16-102
Date of Report: May 3, 2017

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1.0 INTRODUCTION

Associated Environmental Group, LLC (AEG) has completed a Subsurface Investigation at Naches Pit Stop, located at 10121 Highway 12, in Naches, Washington (Site). This Subsurface Investigation was performed in general conformance with ASTM E1903-11, *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process.* This Subsurface Investigation was performed in response to a January 27, 2017 opinion letter issued by the Washington State Department of Ecology (Ecology), which indicated the need to investigate subsurface conditions at the Site in the vicinity of former test pits excavated in 1991 by White Shield, Inc.

To detect potential contamination, AEG advanced three soil borings on the property and collected soil and groundwater samples from each boring. AEG also completed a quarterly groundwater monitoring and sampling event by obtaining depth to groundwater data, and purging and sampling existing groundwater monitoring wells at the Site. Soil and groundwater samples were collected and laboratory analyzed for the presence of gasoline-, diesel-, and oil-range total petroleum hydrocarbons (TPH), total and dissolved lead, and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

1.1 Site and Vicinity Area Background

The Site is located at the intersection of Naches Avenue and Highway 12 in Naches, Washington. A Tesoro-branded gasoline station and convenience store occupies the property, which is assigned Yakima County Tax Parcel No. 171403-32004. The 0.27-acre parcel is occupied by the 2,951-square-foot convenience store and associated fuel canopy. Three underground storage tanks (USTs) are currently operational at the Site: one 8,000-gallon unleaded gasoline UST, one 2,500-gallon gasoline UST, and one 2,500-gallon diesel UST. The western portion of the Site is underlain by a concrete stormwater trench that runs north-south. Figure 1, *Vicinity Map*, presents the general vicinity of the Site. The Site's current layout can be seen in Figure 2, *Site Map*.

1.2 Previous Environmental Activities

Exploratory Investigation for Petroleum Contaminants – White Shield, Inc. – 1991

In 1991, White Shield, Inc. performed an Exploratory Investigation for Petroleum Contaminants at the property to confirm the release of petroleum hydrocarbons from the USTs, fuel islands, and associated piping into soil and groundwater. Four test pits where excavated and samples were obtained from each pit. White Shield (1991) reported that:

"*Based on our visual observations, analytical laboratory analyses, olfactory responses (smell), we found gasoline, ethylbenzene and xylene contamination in the soil which requires remedial action. We also found gasoline, diesel, benzene, toluene, ethylbenzene and xylene contamination in the groundwater which again requires remedial action. The vertical and horizontal extent of petroleum contaminants in the soil suggests that the petroleum contamination originated from the area of the abandoned dispenser island and possibly the area of the underground storage tanks. The relative concentrations of volatile petroleum constituents near the abandoned dispenser island indicates that the petroleum is moderately degraded and appears to be an aged release. The relative concentrations of volatile petroleum constituents near the underground storage tanks suggests that the petroleum is relatively fresh…A plume of petroleum contaminated groundwater, which requires remedial action, extends to the eastern property boundary. Soil contamination, which also requires remedial action, appears to be confined to the area adjacent to the unused dispenser island and a 1 to 2 foot zone above the groundwater surface. It also extends to the eastern property boundary. Although we did not investigate outside the property boundary, it is likely that petroleum hydrocarbons have migrated off-site.*"

White Shield then recommended:

"*...conducting additional exploration on adjacent properties to determine the extent of the petroleum plume in the soil and groundwater and to assess the potential hazards the plume may present. Once the extents of petroleum plume are known, at least three groundwater monitoring wells should be established to ensure that petroleum contaminants do not migrate and to also allow determination of the precise direction of groundwater flow. Measures should then be taken to contain the plume and halt migration. Once the plume is characterized and contained, an appropriate remediation may be selected to lower petroleum concentrations to acceptable levels. It is likely that excavation of petroleum contamination near the source is appropriate. In this case, removal of the existing tanks is recommended to facilitate soil removal. The tank system should then be replaced with tanks meeting regulatory standards.*"

<u>Limited Site Cleanup – Northwest Envirocon, Inc. – 1998</u>

In 1998, Northwest Envirocon, Inc. conducted a limited cleanup of impacted soil at the Site. Northwest Envirocon, Inc. reported that:

"*The removal action consisted of excavating the impacted soil to the vertical and lateral extent where field screening and direct observation indicated obviously stained, or*

odiferous soil. The obviously contaminated material (Sample #BP-P1 4,200/ppm diesel) was temporarily stockpiled on plastic, bermed and covered with plastic, until disposal at the Anderson Rock and Demolition Pit in Yakima landfill was permitted. No petroleum hydrocarbon contamination was detected by WA-TPH-HCID in the confirmation samples (Sample #BP-3, BP-4, and BP-5) from the excavation."

Phase II Environmental Site Assessment – AEG – March 2016

In January 2016, AEG completed a Phase II Environmental Site Assessment at the Site to investigate possible TPH impacts at the Site. AEG advanced three soil borings to a depth of 15 feet below ground surface (bgs), completing two as monitoring wells, to evaluate the subsurface for the presence of TPH-based contaminants. Due to subsurface conditions at the Site, it was not possible to complete the third soil boring (MW-3) as a monitoring well. Conclusions from the Phase II ESA were as follows:

"*Soil contamination was detected above Ecology's MTCA Method A cleanup levels in soil samples obtained from monitoring well MW-2, from the southeast corner of the Site;*

Detections of soil contamination occurred just above the water level at the time of drilling, at approximately 13 feet bgs; and

Groundwater contamination was detected above Ecology's MTCA Method A cleanup levels in the groundwater sample obtained from monitoring well MW-2, from the southeast corner of the Site."

Subsurface Investigation Report – AEG – July 2016

In May 2016, AEG supervised the advancement of five monitoring wells (MW-4, MW-5, MW-6, MW-7, and MW-8) to evaluate the subsurface for the presence of TPH-based contaminants at the Site. The monitoring wells were each advanced to a maximum depth of 20 feet bgs via a Sonic drilling rig. Conclusions from the Subsurface Investigation Report are as follows:

"*Soil contamination was not detected above MTCA Method A cleanup levels in soil samples obtained from the Site.*

Total lead was detected above Ecology's MTCA Method A cleanup levels in the groundwater samples obtained from monitoring well MW-4 and MW-7. Lead was not detected in soil samples collected during the advancement of MW-4 and MW-7.

No other constituents of concern were detected in groundwater samples above MTCA Method A cleanup levels. This includes gasoline- and diesel-range TPH previously detected in MW-2."

September 2016 Groundwater Sampling Results Report – AEG – October 2016

In September 2016, AEG obtained depth to groundwater measurements, and purged and sampled seven groundwater monitoring wells (MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, and MW-8). No constituents of concern were detected above the Ecology MTCA Method A cleanup levels. Total lead was detected below the MTCA Method A cleanup level in monitoring well MW-7 at a concentration of 6.4 micrograms per liter (µg/l). The calculated groundwater gradient for the September 2016 sampling event is primarily towards the southeast, with an approximate gradient of 0.018 feet per foot.

1.3 Site Geology and Hydrogeology

According to the United States Department of Agriculture Natural Resources Conservation Service soil survey, the Site consists of soil unit Weirman gravelly fine sandy loam. The Weirman series consists of very deep, somewhat excessively drained soils formed in alluvium on flood plains and low terraces.

Soils encountered at the Site during this investigation consisted primarily of brown, moist, medium dense, gravelly silty sand to 4 feet bgs. From approximately 4 to 20 feet bgs, coarse gravel was encountered. Groundwater was encountered at the time of drilling at approximately 14 feet bgs in boring B-1 and B-2. Groundwater was not encountered in boring B-3 to the total depth explored of 19 feet bgs.

On March 27, 2017, depth to groundwater in the monitoring ranged from 10.02 to 11.92 feet bgs. Groundwater elevation ranged from 1452.81 feet above mean sea level (amsl) in monitoring well MW-6 to 1455.36 feet amsl in monitoring well MW-8 (Table 1, *Summary of Groundwater Elevations*). The calculated groundwater gradient for the March 2017 sampling event is primarily towards the southeast, with an approximate gradient of 0.016 feet per foot (Figure 3, *March 2017 Groundwater Contour Map*).

2.0 OBJECTIVES AND SCOPE OF WORK

AEG was retained to perform this Subsurface Investigation to investigate subsurface conditions at the Site in the vicinity of White Shield, Inc. 1991 test pits (Figure 2, *Site Map*). AEG advanced three soil borings to a depth of 15 feet bgs to evaluate the subsurface for the presence of TPH-based contaminants. AEG combined this Subsurface Investigation with quarterly groundwater monitoring and sampling of seven on-Site monitoring wells.

Specific tasks performed included:

- Collecting depth to groundwater data and purging and sampling seven monitoring wells located on Site.
- Conducting both public and private utility locates for the Site and vicinity. The public rights of way locates were performed by the Underground Utilities Locate Center; Applied Professional Services, Inc. (APS) provided private utility locates for the Site.
- Advancing three borings to 15 feet bgs at select locations on the Site, using a Geoprobe® direct push drilling rig, operated by Holt Services, Inc. (Holt), a licensed driller in the State of Washington.
- Continuously logging the subsurface media during the investigation, to observe and document soil lithology, color, moisture content, and sensory evidence of impairment.
- Collecting soil samples for laboratory analyses at various depths, based on the field observations.
- Purging and collecting groundwater samples from each boring, where available.
- Containing investigation-derived wastes, including soil cuttings, purge water, and decontamination wash fluids, in 30-gallon steel drums, and storing them on Site awaiting the results of laboratory analyses.
- Transporting and submitting soil and groundwater samples to Libby Environmental, Inc. (Libby), a Washington State certified analytical laboratory, for analyses.
- Evaluating laboratory analytical results and comparing data to Model Toxics Control Act (MTCA) Method A cleanup levels for soil and groundwater.
- Preparing this report presenting final documentation of the field activities and methodologies, and summarizing the analytical results, conclusions, and recommendations.

3.0 FIELD METHODOLOGY

3.1 Soil Borings

On March 28, 2017, AEG supervised the advancement of borings B-1, B-2, and B-3 at the Site. The borings were located in the vicinity of White Shield's 1991 test pits. The borings were each advanced to a maximum depth of 15 feet bgs via a direct-push drilling rig operated by Holt. Where refusal was reached, the boring was moved over 1-2 feet and reattempted until reaching the desired depth. Soil samples were collected during drilling for field screening and laboratory analyses. The locations of soil borings and Site features are illustrated in Figure 2, *Site Map*. Photographs from the investigation are presented in Appendix A, *Site Photographs*. Boring logs and laboratory analytical results are provided in Appendix B, *Supporting Documents, Boring Logs, Laboratory Datasheets*.

3.2 Soil Sampling Procedures

Soil samples were collected and observed to document soil lithology, color, moisture content, and sensory evidence of impairment. The soil samples were collected using a core barrel and drilling rod. The soil samples were retrieved in transparent plastic sleeves from the core barrel and placed at surface for inspection. All soil samples were screened in the field for organic vapor content utilizing a photoionization detector (PID). The PID readings are presented in the soil boring logs provided in Appendix B, *Supporting Documents, Boring Logs*.

The soil sampling methods for this work followed the protocols established by Ecology and the U.S. Environmental Protection Agency (EPA). To minimize volatile organic compound (VOC) losses, soil sampling for VOCs and field preservation methods followed methods set forth by EPA's Method 5035A and Ecology's guidance, "*Collecting and Preparing Soil Samples for VOC Analysis*".

Soil samples selected for laboratory analyses were immediately transferred to laboratory-provided containers. All soil samples were placed in a portable chilled ice chest and couriered to Libby for analysis. Soil samples were handled and transported following industry standard chain-of-custody procedures. Laboratory analyses included:

- Gasoline-range TPH using Method NWTPH-Gx.
- Diesel- and oil-range TPH using Method NWTPH-Dx/Dx Extended.
- BTEX using EPA Method 8260C.
- Total lead using EPA Method 7010 Series.

All analytical soil results were compared to MTCA Method A soil cleanup levels.

3.3 Groundwater Sampling Procedures

On March 27, 2017, AEG sampled the groundwater from monitoring wells MW-1, MW-2, and MW-4 through MW-8. Dedicated polyethylene tubing was inserted into each well, and groundwater was purged using a peristaltic pump and EPA-approved low-flow purge techniques until the field parameters (temperature, conductivity, total dissolved solids, salinity, dissolved oxygen, pH, and oxygen reduction potential) were stabilized and discharge was relatively free of sediment. On March 28, 2017, AEG sampled the groundwater from borings B-1 and B-2. Dedicated polyethylene tubing was inserted into a PVC temporary well, and groundwater was purged using a peristaltic pump and EPA-approved low-flow purge techniques until the discharge was relatively free of sediment. A groundwater sample was then collected from the monitoring well and placed into a laboratory-provided pre-weighed 40-milliliter (ml) volatile organic analysis (VOA) glass vials, 1-liter glass amber bottle, and 250-ml poly bottles. Groundwater samples were analyzed for:

- Gasoline-range TPH using Method NWTPH-Gx.
- Diesel- and oil-range TPH using Method NWTPH-Dx/Dx Extended.
- BTEX using EPA Method 8260C.
- Total lead and dissolved lead using EPA Method 7010 Series.

3.4 Quality Controls

To ensure that quality information was obtained at the Site:

- All samples were collected in general accordance with industry protocols for the collection, documentation, and handling of environmental samples.
- Descriptions of soil and groundwater sampling depths were carefully logged in the field. The driller and geologist confirmed sample depths as soil samples were collected.
- Nitrile gloves were worn when handling all sampling containers and sampling devices. Clean gloves were used at each soil boring to prevent cross contamination.
- Sampling equipment was scrubbed with Alconox detergent and rinsed with water prior to each sample extracted.
- Soil samples were tightly packed into laboratory-provided dedicated sampling containers to eliminate sample headspace.
- Groundwater samples were collected using laboratory-provided dedicated sampling containers using zero headspace sampling techniques.

- Upon sampling, all soil and groundwater samples were immediately placed into chilled ice chests, and transported for analysis under a chain-of-custody protocol to the Libby Environmental, Inc. (Libby) analytical laboratory in Olympia, Washington.

The analytical laboratory provided project quality assurance/quality control (QA/QC), including:

- Surrogate recoveries for each sample.
- Duplicate results.
- Method blank results.
- Laboratory control samples.

All analytical laboratory QA/QC results were within required tolerances. Analytical Laboratory results are provided in Appendix B, *Supporting Documents*, *Laboratory Datasheets.*

3.5 Investigation-Derived Waste

Investigation-derived waste for this project consisted of soil cuttings from the subsurface exploration activities and decontamination water from decontamination of the drilling core barrel and associated equipment. These wastes were separated and placed in U.S. Department of Transportation-approved 30-gallon drums. The drums were appropriately labelled, and stored on Site for subsequent characterization and disposal.

4.0 ANALYTICAL RESULTS

Analytical results obtained from soil and groundwater samples were compared to MTCA Method A cleanup levels. Copies of the laboratory analytical results are provided in Appendix B, *Supporting Documents, Laboratory Datasheets*.

4.1 Soil Analytical Results

Analytical results of soil samples did not detect any constituents of concern above MTCA Method A cleanup levels. Diesel-range TPH was detected below the MTCA Method A cleanup level in boring B-1 at a depth of 15 feet bgs at 294 milligrams per kilogram (mg/kg). Total lead was detected below the MTCA Method A cleanup level in boring B-1 (7.1 mg/kg) at a depth of 15 feet bgs, boring B-3 (12.6 mg/kg) at a depth of 4 feet bgs, and boring B-3 (8.5 mg/kg) at a depth of 9 feet bgs. Table 2, *Summary of Soil Analytical Results*, presents the soil analytical results for all samples analyzed as compared to MTCA Method A soil cleanup levels.

4.2 Groundwater Analytical Results

Analytical results of the groundwater samples collected from monitoring wells did not detect any constituents of concern above MTCA Method A cleanup levels. Benzene was detected below the MTCA Method A cleanup level in MW-1 at 1.1 µg/l. Total xylenes were detected below the MTCA Method A cleanup level in MW-1 at 3.1 µg/l.

Diesel-range TPH was detected above the MTCA Method A cleanup level of 500 µg/l in boring B-1 at 29,700 µg/l. Total lead was detected above the MTCA Method A cleanup level of 15 µg/l in boring B-2 at 19.9 µg/l; however, dissolved lead analysis of this same sample was non-detect. Total lead was detected below the MTCA Method A cleanup level in boring B-1 at 12.9 µg/l.

Table 3, *Summary of Groundwater Analytical Results*, presents the groundwater analytical results compared to MTCA Method A groundwater cleanup levels.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The conclusions derived during the subsurface investigation activities at the Site are as follows:

5.1 Conclusions

- Soil contamination was not detected above MTCA Method A cleanup levels in soil samples collected from the Site. Diesel-range TPH and total lead were detected below the MTCA Method A cleanup levels in boring B-1 at a depth of 15 feet bgs. Total lead was detected below the MTCA Method A cleanup level in boring B-3 at depths of 4 feet bgs and 9 feet bgs.
- Diesel-range TPH was detected above the MTCA Method A cleanup level in the groundwater sample from boring B-1. Total lead was detected above the MTCA Method A cleanup level in the groundwater sample from borings B-2; however, dissolved lead analysis of this same sample was non-detect suggesting the detection was likely a result of suspended solids in the boring sample.
- No constituents of concern were detected in groundwater samples from the permanently installed monitoring wells above MTCA Method A cleanup levels. Benzene and total xylenes were detected in monitoring well MW-1 below MTCA Method A cleanup levels.

5.2 Recommendations

Based on the conclusions from this investigation, AEG recommends the following:

- Additional borings be advanced in the vicinity of boring B-1 to evaluate the extent of TPH impacts to soil and groundwater.
- One additional monitoring well be advanced in the southeast corner of the property to evaluate and define the extent of TPH impacts to groundwater.
- Groundwater monitoring and sampling of monitoring wells MW-1, MW-2, and MW-4 through MW-8 for at least one additional quarter be conducted to determine any seasonal variation in contaminant concentrations. Analyses should include both total and dissolved lead, in addition to gasoline-, diesel-, and oil-range TPH and BTEX.

6.0 LIMITATIONS

This report summarizes the findings of the services authorized under our agreement with Mr. Han Chang. It has been prepared using generally accepted professional practices, related to the nature of the work accomplished. This report was prepared for the exclusive use of Mr. Chang and his designated representatives, for the specific application to the project purpose.

Recommendations, opinions, Site history, and proposed actions contained in this report apply to conditions and information available at the time this report was completed. Since conditions and regulations beyond our control can change at any time after completion of this report, or our proposed work, we are not responsible for any impacts of any changes in conditions, standards, practices, and/or regulations subsequent to our performance of services. We cannot warrant or validate the accuracy of information supplied by others, in whole or part.

7.0 REFERENCES

American Society for Testing and Materials (ASTM) Standard E 1903-97. *Standard Guide Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

Associated Environmental Group, LLC. 2016. *Phase II Environmental Site Assessment*, dated March 4, 2016.

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US EPA Method 5035A. *Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples*.

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White Shield, Inc. 1991. *Exploratory Investigation for Petroleum Contaminants at the Pit Stop, Naches, WA*, dated July 3, 1991.

FIGURES

605 11th Ave. SE, Suite 201 • Olympia, WA • 98501
Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

FILENAME	DRAWN BY		CHECKED BY		APPROVED BY		PROJECT NUMBER
16-102_15Q4.DWG	ICD	2/1/2016	BD	2/1/2016	BD	2/1/2016	16-102

N
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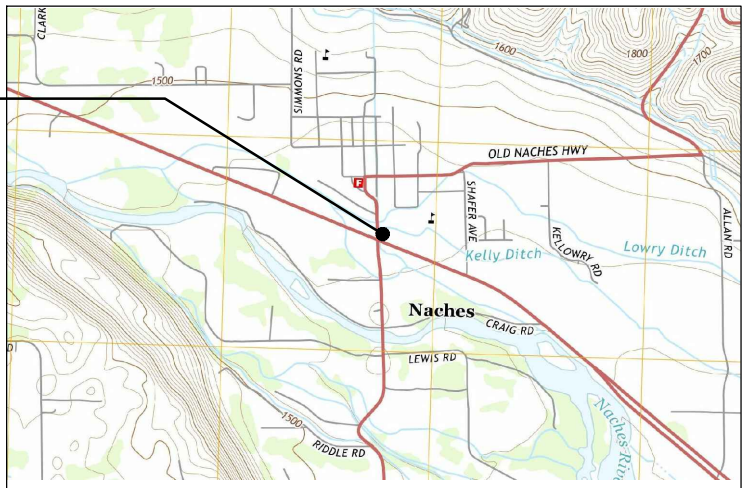
S

PROJECT LOCATION



VICINITY MAP

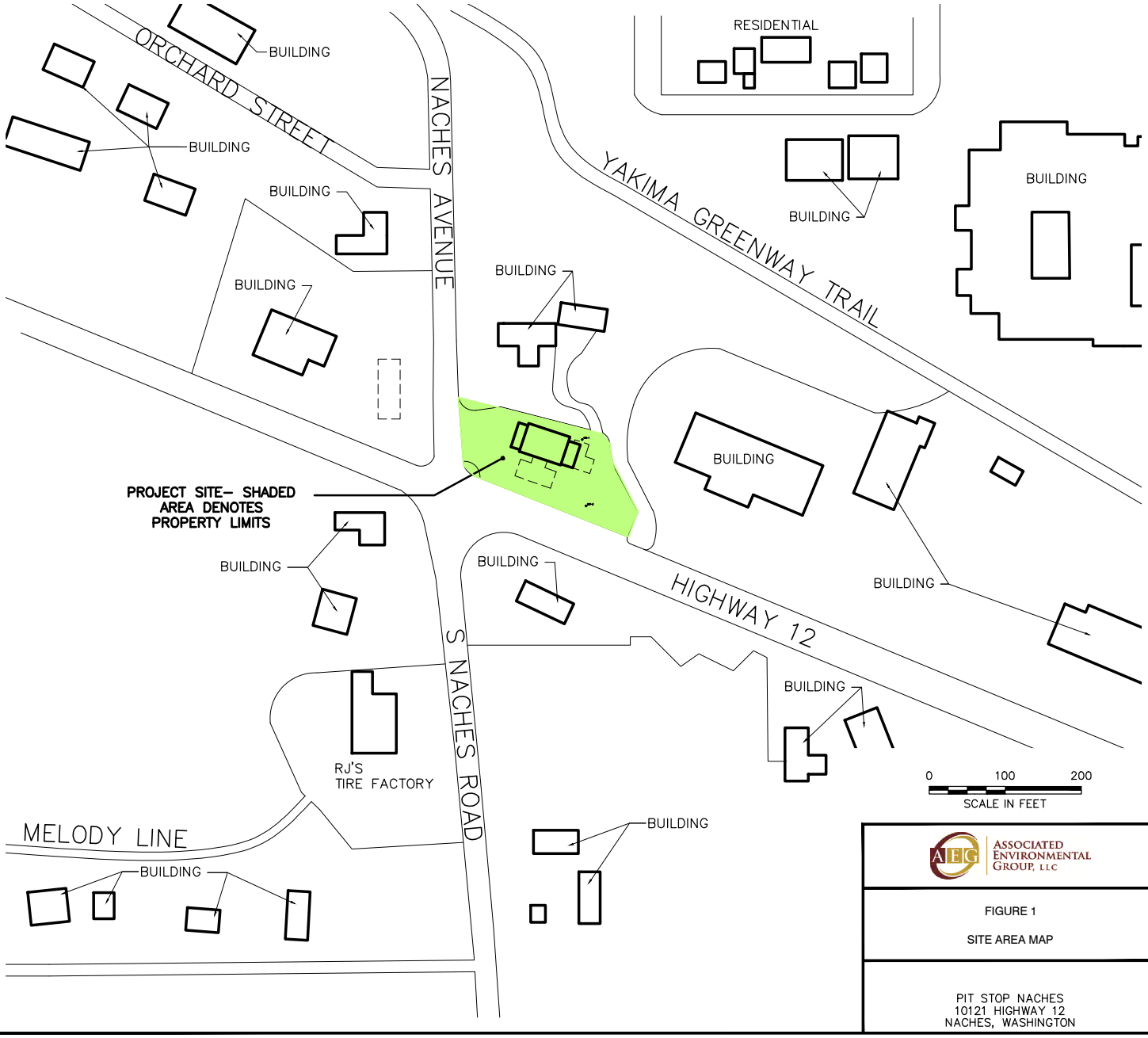
0 1,500 3,000
SCALE IN FEET

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



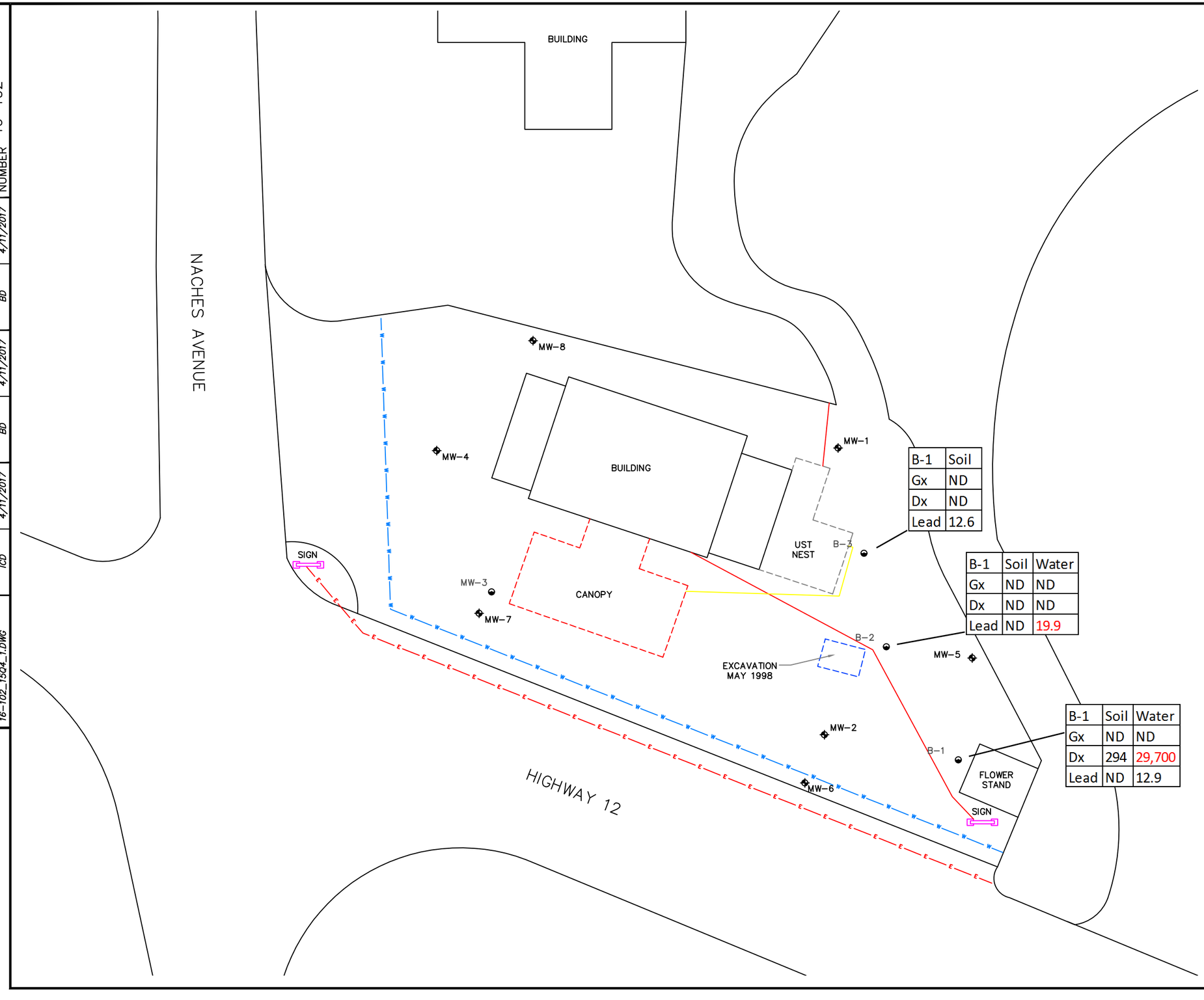
ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 1

SITE AREA MAP

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

PROJECT NUMBER	16-102
APPROVED BY	BD 4/11/2017
CHECKED BY	BD 4/11/2017
DRAWN BY	ICD 4/11/2017
FILENAME	16-102_1504_1.DWG



B-1	Soil
Gx	ND
Dx	ND
Lead	12.6

B-1	Soil	Water
Gx	ND	ND
Dx	ND	ND
Lead	ND	19.9

B-1	Soil	Water
Gx	ND	ND
Dx	294	29,700
Lead	ND	12.9

LEGEND

- MW-1 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-3 — SOIL SAMPLING LOCATION
- E — E — ELECTRIC LINE
- W — W — WATER LINE
- W — W — FUEL LINE
- 1454 — GROUNDWATER ELEVATION (FEET MSL)
- GROUNDWATER FLOW DIRECTION

NOTES

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0 15 30
SCALE IN FEET

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 2

SITE MAP

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

PROJECT NUMBER	16-102	
APPROVED BY	BD	4/11/2017
CHECKED BY	BD	4/11/2017
DRAWN BY	ICD	4/11/2017
FILENAME	16-102_1504_1.DWG	

NACHES AVENUE

BUILDING

MW-8
1455.36

1454.99
MW-4

MW-1
1454.77

BUILDING

1455

UST
NEST

SIGN

MW-3

CANOPY

1454.6

MW-7
1454.97

1454.2

EXCAVATION
MAY 1998

MW-5
1452.94

1453.8

MW-2
1453.62

1453.4

1453

FLOWER
STAND

MW-6
1452.81

SIGN

HIGHWAY 12

N
W E
S

LEGEND

- MW-1 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-3 — SOIL SAMPLING LOCATION
- E — E — ELECTRIC LINE
- W — W — WATER LINE
- W — W — FUEL LINE
- 1454 — GROUNDWATER ELEVATION (FEET MSL)
- GROUNDWATER FLOW DIRECTION

NOTES

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2. THIS DRAWING IS FOR INFORMATION PURPOSES. IT IS INTENDED TO ASSIST IN SHOWING FEATURES DISCUSSED IN AN ATTACHED DOCUMENT.
3. ELEVATIONS ARE DEPTH TO WATER FROM TOP OF CASING ELEVATION POINT MEASURED FROM SURVEY CONDUCTED BY PLSA IN OCTOBER 2016
4. GROUNDWATER CONTOURS MADE WITH MONITORING WELLS MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, AND MW-8

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

0 15 30
SCALE IN FEET

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FIGURE 3
MARCH 2017
GROUNDWATER CONTOUR MAP

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

TABLES

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Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

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
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
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
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
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
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
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

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 Soil Analytical Results
Naches Pit Stop
Naches, Washington

Sample Number	Depth Collected (feet)	Date Collected	Total Petroleum Hydrocarbons (TPH) (mg/kg)			Volatile Organic Compounds (mg/kg)				Lead (mg/kg)	EDC (mg/kg)	EDB (mg/kg)	Total Naphthalenes (mg/kg)	MTBE (mg/kg)
			Gasoline	Diesel	Heavy Oil	Benzene	Toluene	Ethylbenzene	Xylenes					
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	<5.0	<0.03	<0.005	<0.10	<0.05
MW4-10	10.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<5.0	<0.03	<0.005	<0.10	<0.05
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	<5.0	<0.03	<0.005	<0.10	<0.05
MW7-6	6.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<5.0	<0.03	<0.005	<0.10	<0.05
MW7-10	10.0	5/24/2016	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	<5.0	<0.03	<0.005	<0.10	<0.05
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**	--	--	--	--
PQL (mg/kg)			10	50	100	0.02	0.05 / 0.10	0.05	0.15	5.0	0.03	0.005	0.10	0.05
MTCA Method A Cleanup Levels (mg/kg)			100*	2,000	2,000	0.03	7	6	9	250	11**	0.005	5.0	0.1

Notes:
mg/kg = milligrams per kilogram
-- = Not analyzed for constituent
< = Not detected at the listed laboratory detection limits
EDC = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
MTBE = Methyl tert-butyl ether
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 no presence of Benzene anywhere at the Site
** No MTCA Method A cleanup level established, Method B cleanup level used

Table 3 - Summary of Groundwater Analytical Results
Naches Pit Stop
Naches, Washington

Sample Number	Date Collected	Total Petroleum Hydrocarbons (TPH)			Volatile Organic Compounds				Total Lead	Dissolved Lead	Cadmium	Chromium	Arsenic	Mercury	EDC	EDB	Total Naphthalenes	MTBE (µg/l)
		Gasoline	Diesel	Heavy Oil	Benzene	Toluene	Ethylbenzene	Xylenes										
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	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--
MW-4	5/27/2016	<100	<200	<400	<1.0	<1.0	<1.0	<2.0	**84**	--	<0.5	<5.0	<3.0	<0.5	<1.0	<0.01	<5.0	<5.0
	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	--	--	--	--	--	--	--	--
MW-5	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	--	--	--	--	--	--	--	--
MW-6	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	--	--	--	--	--	--	--	--
MW-7	5/27/2016	<100	<200	<400	<1.0	<2.0	<1.0	<2.0	**102**	--	<0.5	<5.0	<3.0	<0.5	<1.0	<0.01	<5.0	<5.0
	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	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--
PQL (µg/l)		100	200	400	1.0	1.0 / 2.0	1.0	2.0 / 3.0	5.0	5.0	0.5	5.0	3.0	0.5	1.0	0.01	5.0	5.0
MTCA Method A Cleanup Levels (µg/l)		1000*	500	500	5.0	1,000	700	1,000	15	15	2	19	20	2	5	0.01	160	20

Notes:
All values in micrograms per liter (µg/L)
-- = Not analyzed for constituent
< = Not detected at the listed laboratory detection limits
EDC = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
MTBE = Methyl tert-butyl ether
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 no presence of Benzene anywhere at the Site

APPENDIX A

Site Photographs

605 11th Ave. SE, Suite 201 • Olympia, WA • 98501
Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

ASSOCIATED ENVIRONMENTAL GROUP, LLC

SITE PHOTOGRAPHIC RECORD

Project No.: 16-102 **Project Name: Naches Pit Stop**

				
Photo #1:	Photo looking northeast at location of boring B-1.		Photo #2:	Photo looking north at location of boring B-2.
				
Photo #3:	Photo looking northwest at location of boring B-3.		Photo #4:	Photo looking at typical soil profile from 0-15 feet bgs. (Boring B-1)
				
Photo #5:	Photo looking at typical soil profile from 0-10 feet bgs. (Boring B-2)		Photo #6:	Photo looking at typical soil profile from 0-15 feet bgs. (Boring B-3)

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Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

APPENDIX B

Supporting Documents

Boring Logs

Laboratory Datasheets

605 11th Ave. SE, Suite 201 • Olympia, WA • 98501
Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Naches Pit Stop*		**JOB #** *16-102*	**BORING #** *B-1*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*		**Approximate Elevation:** *1461 feet above sea level*		
Subcontractor / Driller: *Holt / Louis*		**Equipment / Drilling Method:** *Geoprobe / Direct Push*		
Date: *March 28, 2017*		**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	2-inch asphalt surface underlain by;		1				N/A		N/A	
			2							Refusal at 6 feet, 8 feet, 7.5 feet, and 6 feet
			3		B1-3	10:06		0		
	Brown, moist, medium dense, **GRAVELLY SAND**; coarse grained gravel, coarse grained sand	SW	4							
	At 3.5 feet; Brown, moist, medium dense, **SILT**	ML								
5	At 4 feet; Brown, moist, dense, **SANDY GRAVEL**; coarse grained sand, coarse grained gravel		5					0		
		GW	6		B1-6	10:12		0		
			7							
			8		B1-8	10:38		0		
			9							
10			10		B1-10	11:22		0		
			11							
			12							
			13					0		
		▼	14							
15	At 14 feet; Wet		15		B1-15	11:31		0		
	Total Depth = 15 feet									
20										
25										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Naches Pit Stop*		**JOB #** *16-102*	**BORING #** *B-2*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*		**Approximate Elevation:** *1461 feet above sea level*		
Subcontractor / Driller: *Holt / Louis*		**Equipment / Drilling Method:** *Geoprobe / Direct Push*		
Date: *March 28, 2017*		**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	2-inch asphalt surface underlain by;		1				N/A		N/A	
			2							Refusal at 8 feet
			3		B2-3	12:35		0		
	Brown, moist, medium dense, **GRAVELLY SAND**; coarse grained gravel, coarse grained sand	SW	4							
	At 3.5 feet; Brown, moist, medium dense, **SILT**	ML								
5	At 4 feet; Brown/tan, moist, dense, **SANDY GRAVEL**; coarse grained sand, coarse grained gravel	GW	5							
			6		B2-6	12:40		0		
			7							
			8							
			9		B2-9	12:55		0		
10			10							
			11							
			12							
			13		B2-12.5	13:11		0		
		▼	14							
15	At 14 feet; Wet, gray		15		B2-15	13:11		0		Slight odor
	Total Depth = 15 feet Steel point drill to 17 feet for water sample									
20										
25										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Naches Pit Stop*	**JOB #** *16-102*	**BORING #** *B-3*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*	**Approximate Elevation:** *1461 feet above sea level*		
Subcontractor / Driller: *Holt / Louis*	**Equipment / Drilling Method:** *Geoprobe / Direct Push*		
Date: *March 28, 2017*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	2-inch asphalt surface underlain by;		1				N/A		N/A	
			2							
			3							
	Brown, moist, medium dense, **SILTY SAND**; with gravel; coarse graind sand, coarse grained gravel	SW	4		B3-4	14:18		0		
5			5					0		
			6							
			7							
			8							
			9		B3-9	14:23				
10			10					0		
			11							
			12							
			13							
			14		B3-13	14:30				
15			15					0		
			16							
	Total Depth = 16 feet Steel point drill to 19 feet for water sample - Refusal - No water									
20										
25										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

Libby Environmental, Inc.
4139 Libby Road NE • Olympia, WA 98506-2518

April 11, 2017

Nicolas Pushckor
Associated Environmental Group, LLC
605 11th Avenue SE, Suite 201
Olympia, WA 98501

Dear Mr. Pushckor:

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 in 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.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@aol.com

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260C) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	4/2/17	nd	nd	nd	nd	nd	99
LCS	4/2/17	91%	94%				114
B1-3	4/2/17	nd	nd	nd	nd	nd	98
B1-8	4/2/17	nd	nd	nd	nd	nd	99
B2-3	4/2/17	nd	nd	nd	nd	nd	99
B2-9	4/2/17	nd	nd	nd	nd	nd	99
B3-4	4/2/17	nd	nd	nd	nd	nd	100
B3-9	4/2/17	nd	nd	nd	nd	nd	111
B3-9 Dup	4/2/17	nd	nd	nd	nd	nd	98
B3-9 MS	4/2/17	93%	97%				99
B3-9 MSD	4/2/17	94%	97%				104
Practical Quantitation Limit		0.02	0.10	0.05	0.15	10	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260C) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	4/6/17	nd	nd	nd	nd	nd	97
LCS	4/6/17	85%	94%				99
B1-10	4/6/17	nd	nd	nd	nd	nd	110
B1-15	4/6/17	nd	nd	nd	nd	nd	99
B1-15 Dup	4/6/17	nd	nd	nd	nd	nd	98
B1-10 MS	4/6/17	106%	120%				117
B1-10 MSD	4/6/17	107%	121%				117
Practical Quantitation Limit		0.02	0.10	0.05	0.15	10	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

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

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	4/4/17	107	nd	nd
B1-3	4/4/17	95	nd	nd
B1-8	4/4/17	97	nd	nd
B2-3	4/4/17	96	nd	nd
B2-9	4/4/17	110	nd	nd
B3-4	4/4/17	104	nd	nd
B3-9	4/4/17	96	nd	nd
Practical Quantitation Limit			50	250

"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: Maria Friedrich

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

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

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	4/7/17	97	nd	nd
B1-10	4/7/17	112	nd	nd
B1-15	4/7/17	int	294	nd
Practical Quantitation Limit			50	250

"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: Kodey Eley

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

Analyses of Total Lead in Soil by EPA Method 7010 Series

Sample Number	Date Analyzed	Lead (mg/kg)
Method Blank	3/31/17	nd
B1-3	3/31/17	nd
B1-8	3/31/17	nd
B2-3	3/31/17	nd
B2-9	3/31/17	nd
B3-4	3/31/17	12.6
B3-9	3/31/17	8.5
Practical Quantitation Limit		5.0

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

QA/QC for Total Lead in Soil by EPA Method 7010 Series

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	3/31/17	92%
L170329-1 MS	3/31/17	85%
L170329-1 MSD	3/31/17	83%
RPD	3/31/17	2%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

Analyses of Total Lead in Soil by EPA Method 7010 Series

Sample Number	Date Analyzed	Lead (mg/kg)
Method Blank	4/9/17	nd
B1-10	4/9/17	nd
B1-15	4/9/17	7.1
Practical Quantitation Limit		5.0

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
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FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

QA/QC for Total Lead in Soil by EPA Method 7010 Series

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	4/9/17	87%
L170407-6 MS	4/9/17	83%
L170407-6 MSD	4/9/17	87%
RPD	4/9/17	5%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

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

Sample Number	Date Analyzed	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	Gasoline (µg/l)	Surrogate Recovery (%)
Method Blank	4/1/17	nd	nd	nd	nd	nd	99
LCS	4/1/17	115%	122%				97
B-1	4/1/17	nd	nd	nd	nd	nd	98
B-2	4/1/17	nd	nd	nd	nd	nd	97
L170331-4 MS	4/1/17	72%	72%				111
L170331-4 MSD	4/1/17	84%	75%				115
Practical Quantitation Limit		1.0	2.0	1.0	2.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

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

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (µg/l)	Oil (µg/l)
Method Blank	3/31/17	94	nd	nd
B-1	3/31/17	int	29700	nd
B-2	3/31/17	91	nd	nd
B-2 Dup	3/31/17	91	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: Maria Friedrich

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

Analyses of Total Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (µg/l)
Method Blank	3/31/17	nd
B-1	3/31/17	12.9
B-2	3/31/17	19.9
Practical Quantitation Limit		5.0

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

QA/QC for Total Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	3/31/17	91%
L170331-2 MS	3/31/17	97%
L170331-2 MSD	3/31/17	97%
RPD	3/31/17	0%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

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Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

Analyses of Dissolved Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (µg/l)
Method Blank	3/31/17	nd
B-1	3/31/17	nd
B-2	3/31/17	nd
Practical Quantitation Limit		5.0

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

ANALYSES PERFORMED BY: Dirk Peterson

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Olympia, WA 98506
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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-2
Client Project # 16-102

QA/QC for Dissolved Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	3/31/17	101%
L170331-2 MS	3/31/17	91%
L170331-2 MSD	3/31/17	97%
RPD	3/31/17	6%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 3/31/17 Page: 1 of 1

Client: AEG

Project Manager: Nicolas Pushckor

Address: 605 11th Ave SE, Suite 201, Olympia, WA

Project Name: Naches Pit Stop

City: Olympia State: WA Zip: 98501

Location: 10121 Hwy 12, City, State: Naches, WA

Phone: 360 352 9835 Fax: 360 352 8164

Collector: Nicolas Pushckor Date of Collection: 3/28/17

Client Project # 16-102

Email: npushckor@aegwa.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	Lead (total)	Lead (~~dissolved~~)	Field Notes
1	B1-3	3	1006	soil			X	X			X						X			4-6-17 Added
2	B1-6	6	1012																	per Nicolas via
3	B1-8	8	1032				X	X			X						X			email. STD
4	B1-10	10	1122				(X)	(X)			(X)						(X)			
5	B1-15	15	1131				(X)	(X)			(X)						(X)			
6	B-1	—	1205	water			X	X			X						X	X		
7	B2-3	3	1235	soil			X	X			X						X			
8	B2-6	6	1240																	
9	B2-9	9	1255				X	X			X						X			
10	B2-12.5	12.5	1311																	
11	B2-15	15	1311																	
12	B-2	—	1400	water			X	X			X						X	X		
13	B3-4	4	1418	soil			X	X			X						X			
14	B3-9	9	1423				X	X			X						X			
15	B3-13	13	1430																	
16	~~B-3~~	~~—~~	~~1446~~	~~water~~																
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	3/31/17 940	[signature]	3/31/17 0940
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N	
Temp.		°C	
Seals Intact?	Y	N	N/A
Total Number of Containers			

Remarks:

TAT: 24HR 48HR (5-DAY)

Distribution: White - Lab, Yellow - File, Pink - Originator

Libby Environmental, Inc.
4139 Libby Road NE • Olympia, WA 98506-2518

April 7, 2017

Nicolas Pushckor
Associated Environmental Group, LLC
605 11th Avenue SE, Suite 201
Olympia, WA 98501

Dear Mr. Pushckor:

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 in 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.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@aol.com

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-1
Client Project # 16-102

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

Sample Number	Date Analyzed	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	Gasoline (µg/l)	Surrogate Recovery (%)
Method Blank	3/31/17	nd	nd	nd	nd	nd	101
LCS	3/31/17	104%	105%				103
MW-1	3/31/17	1.1	nd	nd	3.1	nd	96
MW-5	3/31/17	nd	nd	nd	nd	nd	102
MW-2	3/31/17	nd	nd	nd	nd	nd	103
MW-6	3/31/17	nd	nd	nd	nd	nd	102
MW-6 Dup	3/31/17	nd	nd	nd	nd	nd	101
MW-7	3/31/17	nd	nd	nd	nd	nd	102
MW-4	3/31/17	nd	nd	nd	nd	nd	103
MW-8	3/31/17	nd	nd	nd	nd	nd	102
L170331-3 MS	3/31/17	114%	117%				101
L170331-3 MSD	3/31/17	117%	121%				101
Practical Quantitation Limit		1.0	2.0	1.0	2.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

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Olympia, WA 98506
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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-1
Client Project # 16-102

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

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (µg/l)	Oil (µg/l)
Method Blank	3/31/17	94	nd	nd
MW-1	3/31/17	119	nd	nd
MW-5	3/31/17	88	nd	nd
MW-2	3/31/17	97	nd	nd
MW-6	3/31/17	86	nd	nd
MW-7	3/31/17	91	nd	nd
MW-4	3/31/17	109	nd	nd
MW-8	3/31/17	95	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: Maria Friedrich

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4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-1
Client Project # 16-102

Analyses of Total Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (µg/l)
Method Blank	3/31/17	nd
MW-1	3/31/17	nd
MW-5	3/31/17	nd
MW-2	3/31/17	nd
MW-6	3/31/17	nd
MW-7	3/31/17	nd
MW-4	3/31/17	nd
MW-8	3/31/17	nd
Practical Quantitation Limit		5.0

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-1
Client Project # 16-102

QA/QC for Total Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	3/31/17	101%
L170330-2 MS	3/31/17	91%
L170330-2 MSD	3/31/17	97%
RPD	3/31/17	6%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

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4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-1
Client Project # 16-102

Analyses of Dissolved Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (µg/l)
Method Blank	3/31/17	nd
MW-1	3/31/17	nd
MW-5	3/31/17	nd
MW-2	3/31/17	nd
MW-6	3/31/17	nd
MW-7	3/31/17	nd
MW-4	3/31/17	nd
MW-8	3/31/17	nd
MW-8 Dup	3/31/17	nd
Practical Quantitation Limit		5.0

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

ANALYSES PERFORMED BY: Dirk Peterson

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170331-1
Client Project # 16-102

QA/QC for Dissolved Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	3/31/17	101%
MW-8 MS	3/31/17	82%
MW-8 MSD	3/31/17	90%
RPD	3/31/17	10%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 3/31/17 Page: 1 of 1

Client: AEG

Project Manager: Nicolas Pushkor

Address: 605 11th Ave SE, Suite 201

Project Name: Naches Pit Stop

City: Olympia State: WA Zip: 98501

Location: 10121 Hwy 12 City, State: Naches, WA

Phone: 360 352 9835 Fax: 360 352 2164

Collector: Nicolas Pushkor Date of Collection: 3/27/17 & 3/28/

Client Project # 16-102

Email: npushkor@aegwa.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	Lead (total)	Lead (diss)	Field Notes
1	MW-1	—	1239	water	voa/amber/poly	X	X			X							X	X		
2	MW-5	—	1335			X	X			X							X	X		
3	MW-2	—	1406			X	X			X							X	X		
4	MW-6	—	1455			X	X			X							X	X		
5	MW-7	—	1541			X	X			X							X	X		
6	MW-4	—	312			X	X			X							X	X		
7	MW-8	—	904			X	X			X							X	X		
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	3/31/17 940	[signature]	3/31/17 0940
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition? Y N

Temp. °C

Seals Intact? Y N N/A

Total Number of Containers

Remarks:

TAT: 24HR 48HR 5-DAY

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a cout of law.*

Distribution: White - Lab, Yellow - File, Pink - Originator