Associated Environmental Group, LLC

Remedial Investigation Report

Conducted on:

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

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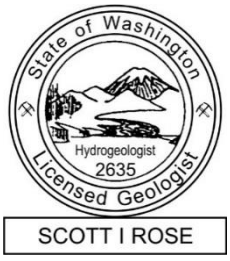

AEG Project #: 16-102
Date of Report: September 10, 2018

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

This report presents the findings of a Remedial Investigation (RI) conducted by Associated Environmental Group, LLC (AEG) at Naches Pit Stop, located at 10121 Highway 12, in Naches, Washington (Site). The purpose of this report is to document the completion of the RI. The scope of work for this investigation was developed based on our professional judgment and experience in accordance with requirements in the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Cleanup Regulations (Chapter 173-340 WAC). The investigation was performed in general accordance with the American Society for Testing and Materials (ASTM) Standard E 1903-11, Standard Guide Environmental Site Assessments: Phase II Environmental Site Assessment Process.

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 Site Characterization History

1.2.1. Exploratory Investigation – White Shield, Inc., 1991

In 1991, White Shield, Inc. performed an investigation at the Site to confirm whether a potential release of petroleum hydrocarbons from the USTs, fuel islands, and associated piping may have impacted soil and groundwater. Four test pits were excavated and samples were collected 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.*"

1.2.2. Limited Site Cleanup – Northwest Envirocon, Inc., 1998

In 1998, Northwest Envirocon, Inc. conducted a limited cleanup of impacted soil at the Site in the vicinity of the former dispenser. 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.*"

1.2.3. Phase II Environmental Site Assessment – AEG, January 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 (MW-1 and MW-2), 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. The locations of soil borings and Site features are illustrated in Figure 2, *Site Map*. 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.*"

Analytical results of the soil and groundwater samples are presented in Table 2, *Summary of Soil Analytical Results*, and Table 3, *Summary of Groundwater Analytical Results*, respectively.

1.2.4. Subsurface Investigation – AEG, May 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. The locations of wells and Site features are illustrated in Figure 2, *Site Map*. 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.*"

Analytical results of the soil and groundwater samples are presented in Table 2, *Summary of Soil Analytical Results*, and Table 3, *Summary of Groundwater Analytical Results*, respectively.

1.2.5. Subsurface Investigation – AEG, March 2017

In March 2017, AEG supervised the advancement of three soil borings (B-1, B-2, and B-3) to evaluate the subsurface for the presence of TPH-based contaminants at the Site. 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. The monitoring wells were each advanced to a maximum depth of 15 feet bgs via a direct-push drilling rig. Groundwater monitoring wells MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, and MW-8 were monitored and sampled. The locations of soil borings and Site features are illustrated in Figure 2, *Site Map*. Conclusions from the Subsurface Investigation Report are as follows:

> "*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 boring B-2; however, dissolved lead analysis of this same sample was non-detect suggesting the detection was likely a results of suspended solids in the boring sample.*
>
> *No constituents of concern were detected in groundwater samples from the permanently installed monitoring wells were above MTCA Method A cleanup levels. Benzene and total xylenes were detected in monitoring well MW-1 below MTCA Method A cleanup levels.*"

Analytical results of the soil and groundwater samples are presented in Table 2, *Summary of Soil Analytical Results*, and Table 3, *Summary of Groundwater Analytical Results*, respectively.

1.2.6. Data Gap Investigation – AEG, September 2017

On September 13, 2017, AEG supervised the advancement of borings B-4 and B-5, and monitoring well MW-9 at the Site. The borings and monitoring well were located in the vicinity of boring B-1. Each subsurface investigation point was advanced to a maximum depth of 20 feet bgs via a sonic drilling rig operated by Yellow Jacket. 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*.

Analytical results of the soil and groundwater samples are presented in Table 2, *Summary of Soil Analytical Results*, and Table 3, *Summary of Groundwater Analytical Results*, respectively.

1.2.7. Groundwater Monitoring – AEG, May 2016 through March 2018

AEG performed five groundwater monitoring events at the Site between May 2016 and March 2018. Monitoring wells MW-1 through MW-9 were sampled during this time; however, MW-9 was installed at a later date and was only included in the December 2017 sampling event. Also, MW-2 and MW-9 were sampled when they were first installed.

Gasoline- and diesel-range TPH were detected above MTCA cleanup levels in MW-2 prior to well installation; however, concentrations have been non-detect since. In addition, total lead was detected in MW-4 and MW-7 above MTCA cleanup levels during the initial round of sampling; however, concentrations of total and dissolved lead from these wells have either been non-detect or below MTCA cleanup levels since.

Analytical results of the groundwater samples are presented in Table 3, *Summary of Groundwater Analytical Results*.

1.3 Field Methodology

AEG supervised the advancement of soil borings as described in Section 2.1, *Site Characterization History*. Soil samples were collected during drilling for field screening and laboratory analyses. Groundwater samples were collected following borehole completion or as part of quarterly groundwater monitoring events. These sampling locations are illustrated in Figure 2, *Site Map*.

1.3.1 Soil Sampling Procedures

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 and field preservation methods for VOCs followed methods set forth by EPA's Method 5035A, and Ecology's guidance, "*Collecting and Preparing Soil Samples for VOC Analysis*". Soil samples were collected from the boreholes via continuous soil cores in an acetate sleeve inside the drilling rod's core barrel. Soils were observed to document soil lithology, color, moisture content, and sensory evidence of contamination.

Samples were transported via laboratory-provided pre-weighed 40-milliliter (ml) volatile organic analysis (VOA) glass vials and pre-weighted 4-ounce glass jars for analysis under chain-of-custody protocols.

Boring logs and laboratory analytical results for both investigations are provided in Appendix B, *Boring Logs, Laboratory Datasheets*.

1.3.2 Well Construction

The nine monitoring wells at the Site were constructed pursuant to Ecology's *Minimum Standards for Construction and Maintenance of Wells*, Chapter 173-160 WAC. MW-1 through MW-9 range in depth from 15 to 20 feet bgs, each well has 10 to 15 feet of 2-inch diameter 0.020-inch slotted PVC screen. The annular space around the well screen was filled with 10/20 Colorado sand to approximately 1.5 feet above the top of the well screen. To seal each well, bentonite chips were placed above the sand and a traffic-rated surface monument was placed over the well casing to protect it. The monitoring wells were properly developed after installation using high-flow pumping until turbidity decreased and stabilized.

1.3.3 Boring Groundwater, and Monitoring Well Groundwater Sampling Procedures

AEG sampled the groundwater from borings where groundwater was present. For one-time borings, a temporary well screen was installed to collect a groundwater sample. The temporary well screen was placed at the interval below the vadose zone where groundwater was encountered during drilling activities. Dedicated polyethylene tubing was inserted into the retractable screen and groundwater purged via the EPA-approved low-flow purge technique. A peristaltic pump was used to purge the well until the discharge was relatively free of sediment.

Groundwater monitoring wells were sampled via the low flow-purging technique, and purged until the field parameters, including pH, temperature, specific conductivity, dissolved oxygen, and/or total dissolved solids were stabilized, and the water was relatively free of sediment.

Groundwater samples were collected in laboratory-provided 40-ml VOA vials, and 250-ml polyurethane bottles. Upon collection, the samples were placed in a chilled cooler for transport to the analytical laboratory.

1.3.4 Quality Controls

To ensure that quality information was obtained at the Site:

- All soil and groundwater samples were collected in general accordance with industry protocols for the collection, documentation, and handling of samples.
- Descriptions of soil sampling depths were carefully logged in the field; the driller and Site geologist confirmed sample depths as soil samples were collected.
- Nitrile gloves were used in handling all sampling containers and sampling devices.
- Soil samples were tightly packed into jars to eliminate sample headspace.

- Water samples were filled carefully in the sampling bottles to prevent volatilization.
- Upon sampling, all samples were placed immediately into chilled ice chests.
- The samples were transported under a chain-of-custody to the analytical laboratory for analysis.

Analytical laboratories used for this investigation provided quality assurance/quality control (QA/QC), which included:

- Surrogate recoveries for each sample.
- Method blank results.
- Laboratory Control Samples, and Laboratory Control Duplicate Samples.
- Duplicate analyses.

1.3.5 Investigation-Derived Waste

Investigation-derived waste for this project consisted of soil cuttings from the subsurface exploration activities, purge water, and decontamination water from decontamination of the drilling core barrel and associated equipment. These wastes were placed in United States Department of Transportation (DOT)-approved 55-gallon drums. The drums were appropriately labelled, and stored on Site for subsequent characterization and disposal.

1.4 Analytical Results

Soil and groundwater samples collected to date have been analyzed for one or more of the following analyses:

- Gasoline-range TPH by Method NWTPH-Gx.
- Diesel- and oil-range TPH by Method NWTPH-Dx-Ext.
- Benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method 8260C.
- Ethylene dibromide (EDB), 1,2-dichlroethane (EDC), methyl tert-butyl ether (MTBE), and naphthalenes by EPA Method 8260.
- Total and Dissolved Lead by EPA Method 7010.
- MTCA 5 metals.

All analytical results were compared to MTCA Method A cleanup levels. Copies of the laboratory analytical results are provided in Appendix B, *Supporting Documents, Laboratory Datasheets.*

1.4.1. Soil Results

Analytical results of soil samples collected by AEG to date have documented only one detection in excess of MTCA cleanup levels. Gasoline-range TPH was detected above the MTCA Method A cleanup level in boring B-4 at a depth of 14 feet bgs at 464 milligrams per kilogram (mg/kg). All other constituents analyzed for were either non-detect or were detected below their applicable MTCA cleanup levels. 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.

The distribution of soil concentrations in excess of MTCA Method A cleanup levels in is illustrated in plan view on Figure 4, *Gasoline Plume Map in Soil*, and in cross section on Figure 7, *Geological Cross Section A-A'.*

1.4.2. Groundwater Results

Analytical results of the groundwater samples collected by AEG have indicated the following detections in excess of MTCA cleanup levels:

- Gasoline- and diesel-range TPH were detected above MTCA cleanup levels in MW-2 prior to well installation at 3,000 micrograms per liter (µg/L) and 61,000 µg/L, respectively; however, concentrations have been non-detect since. The initial sample was collected prior to well installation, and was likely biased by suspended soil in the sample.
- Total lead was detected in MW-4 and MW-7 above MTCA cleanup levels during the initial round of sampling; however, concentrations of total and dissolved lead from these wells have either been non-detect or below MTCA cleanup levels since.
- Diesel-range TPH was detected in boring B-1 at 29,700 µg/L. The permanent monitoring well downgradient of B-1 (MW-9) was non-detect for diesel-range TPH.
- Total lead was detected in boring B-2; however, dissolved lead in the same sample was non-detect suggesting the lead detection was related to suspended solids in the sample.

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

The distribution of groundwater concentrations in excess of MTCA Method A cleanup levels is illustrated on Figure 5, *Diesel Plume Map in Groundwater.*

2.0 CONCEPTUAL SITE MODEL (CSM)

This section provides a conceptual understanding of the Site, derived from the results of the subsurface investigations performed at the Site. The CSM is dynamic and may be refined as additional information becomes available.

2.1 Constituents of Concern and Affected Media

The primary conceptual release model for the Site is a release from a former diesel fuel dispenser that was located on the eastern portion of the Site. Based on the results of soil and groundwater samples collected to date, gasoline is also believed to have historically been distributed from this dispenser. The dispenser was removed in 1991, and residual petroleum-contaminated soil was removed in 1998. Contaminants of concern (COCs) at the Site consist of gasoline- and diesel-range TPH, BTEX, and lead in Site soil and groundwater. Figure 4, *Gasoline Plume Map in Soil*, and Figure 5, *Diesel Plume Map in Groundwater*, illustrate the extents of soil and groundwater contamination, respectively, at the Site in plan view. Cross sections are illustrated on Figure 7, *Geologic Cross Section A-A',* and Figure 8, *Geologic Cross Section B-B'*.

AEG believes the Site has been sufficiently characterized to be able to establish cleanup standards and select a cleanup action for the Site.

2.2 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 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 16 feet bgs.

On March 27, 2018, depth to groundwater in the monitoring wells ranged from 9.97 to 12.48 feet bgs. Groundwater elevations ranged from 1452.25 (MW-6) to 1455.41 (MW-8) feet above mean sea level (amsl) (Table 1, *Summary of Groundwater Elevations*). The calculated groundwater gradient for the March 2018 sampling event is primarily towards the south-southeast, with an approximate gradient of 0.02 feet per foot (Figure 3, *March 2018 Groundwater Contour Map*).

2.3 Environmental Fate of TPH in the Subsurface

Diesel- and gasoline-range TPH is soluble, and migrate in groundwater. These compounds have a specific gravity that is less than water, and can be measured in monitoring wells as Light Non-Aqueous Phase Liquid (LNAPL). To date, no LNAPL has been measured in Site monitoring wells.

LNAPL can also exist as a residual non-mobile phase that is either sorbed to the soil or trapped in the pore spaces between the soil particles. Unless treated, residual LNAPL can act as a long-term source for groundwater contamination.

Diesel- and gasoline -range TPH compounds are readily biodegraded in the subsurface by naturally occurring aerobic and anaerobic bacteria. Aerobic biodegradation is the most efficient of the biological activities. At this Site, dilution and ongoing aerobic biodegradation most likely aided in reducing contaminant concentrations.

2.4 Potential Exposure Pathways

As defined in WAC 173-340-200, an exposure pathway describes the mechanism by which a hazardous substance takes or could take a pathway from a source or contaminated medium to an exposed receptor.

i. Potential Soil Exposure Pathways

Potentially complete soil exposure pathways at the Site include:

- Contact (dermal contact, incidental ingestion) with hazardous substances in soil by visitors, residents, and workers (including excavation workers). Direct ingestion of, or dermal contact with, soil containing TPH is considered a potential exposure pathway. Impacted areas are currently covered by asphalt, the Site building, and landscaped areas, and unless disturbed, are not available for potential direct contact or ingestion.
- Groundwater Leaching Pathway. The groundwater leaching pathway is considered complete at this Site.

ii. Potential Groundwater Exposure Pathways

Potentially complete groundwater exposure pathways at the Site include:

- Contact (dermal, incidental ingestion) with hazardous substances dissolved in groundwater by visitors, residents, and workers (including excavation workers). Groundwater is considered a potentially complete pathway for direct contact and ingestion because of the potential for using groundwater, and the shallow depth of its occurrence. Groundwater levels are seasonally as shallow as 10 to 12 feet bgs. However, most impacted areas are

currently covered by asphalt, the Site building, and landscape areas and, unless disturbed, are not available for potential direct contact or ingestion.

- Consumption of hazardous substances in groundwater. Currently, drinking water is provided by the City of Naches. For the purpose of this CSM, consumption of hazardous substances in groundwater is considered a completed pathway.

iii. Potential Air Exposure Pathways

Potentially complete air exposure pathways include:

- Inhalation of hazardous substances in soil vapor by visitors and workers (including excavation workers). No ambient air sampling has been conducted as part of this RI. Migration of vapors through the unsaturated soil to the surface, both indoors and outdoors, is considered a potential exposure pathway at the Site. However, the limited soil (B-4) and groundwater (B-1) impacts detected are the Site are greater than 30 feet lateral separation distance and greater than 6 feet vertical separation distance from the on-Site building. As such, the soil-to-vapor pathway for potential vapor intrusion is not considered complete.

iv. Terrestrial Ecological Evaluation

Exclusion from further evaluation is appropriate for this Site for the following reasons:

- Undeveloped Land: WAC 173-340-7491(1)(c): There is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site.

The Terrestrial Ecological Evaluation Form is included in Appendix B.

3.0 CLEANUP STANDARDS

The following sections identify applicable or relevant and appropriate requirements (ARARs), remedial action objectives (RAOs), and preliminary cleanup standards for the Site, which were developed to address Ecology's requirements for cleanup. These requirements address conditions relative to potential identified impacts. Together, ARARs, RAOs, and cleanup standards provide the framework for evaluating remedial alternatives.

3.1 Potentially Applicable Laws

All cleanup actions conducted under MTCA shall comply with applicable state and federal laws [WAC 173-340-710(1)]. MTCA defines applicable state and federal laws to include legally applicable requirements and those requirements that are relevant and appropriate. Collectively, these requirements are referred to as ARARs. The primary ARAR is the MTCA regulation (WAC 173-340), especially with regard to the development of cleanup levels and procedures for development and implementation of a cleanup under MTCA. ARARs for the Site cleanup also include the following:

- Federal Safe Drinking Water Act Maximum Contaminant Levels (MCLs; 40 CFR Part 141).
- Washington Clean Air Act (Chapter 70.94 RCW).
- Yakima Regional Clean Air Agency (YRCAA), Regulation I.
- Washington Solid and Hazardous Waste Management (RCW 70.105); Chapter 173-303 WAC; 40 CFR 241, 257; Chapter 173-350 and 173-351 WAC) and Land Disposal Restrictions (40 CFR 268; WAC 173-303-340).
- Washington Industrial Safety and Health Act (RCW 49.17) and other Federal Occupational Safety and Health Act (29 CFR 1910, 1926).

Federal MCLs are minimum requirements for drinking water. MTCA Method A cleanup levels for groundwater are set at least as low as federal MCLs. State and federal groundwater and air quality criteria are considered in the development of cleanup levels. State dangerous waste regulations may be applicable to contaminated soil removed from the Site.

3.2 Remedial Action Objectives

RAOs have been established for the Site to establish remedial alternatives protective of human health and the environment under the MTCA cleanup process (WAC 173-340-350). The primary RAO for this cleanup action focused on substantially eliminating, reducing, and controlling

unacceptable risks to human health and the environment posed by the COCs, to the greatest extent practicable.

RAOs are important for the evaluation of the general response actions, technologies, process options, and cleanup action alternatives. Based on the assessment of Site-specific conditions and the potentially applicable cleanup levels presented below, the RAOs for the Site have been established as follows:

- *In a reasonable restoration time frame, reduce concentrations of COCs in Site soils and groundwater to levels protective of human health and the environment and which are protective of groundwater quality.*

3.3 Cleanup Standards

Cleanup standards include cleanup levels and points of compliance (POCs) as described in WAC 173-340-700 through WAC 173-340-760. Cleanup standards must also incorporate other state and federal regulatory requirements applicable.

3.3.1. Proposed Cleanup Levels

MTCA Method A cleanup levels for the soil and groundwater exposure pathways are appropriate for this Site. These cleanup levels are based on the most stringent values for each exposure pathway and are considered appropriate for the Site COCs. Proposed MTCA cleanup levels for the Site COCs that have been measured in soil, groundwater, and air at the Site include:

Constituent	Soil	Groundwater
• Gasoline-range TPH	30 mg/kg	800 µg/L
• Diesel/oil-range TPH	2,000 mg/kg	500 µg/L
• Benzene	0.03 mg/kg	5.0 µg/L
• Toluene	7 mg/kg	1,000 µg/L
• Ethylbenzene	6 mg/kg	700 µg/L
• Xylenes	9 mg/kg	1,000 µg/L
• Lead	250 mg/kg	15 µg/L

mg/kg = milligrams per kilogram
µg/L = micrograms per liter

3.3.2. Points of Compliance

For this Site, it is assumed that standard points of compliance will be used.

- Soil – Direct Contact: For soil cleanup levels based on human exposure via direct contact, the point of compliance is throughout the Site from the ground surface to 15 feet bgs.
- Soil – Leaching: For soil cleanup levels based on protection of groundwater, the point of compliance is throughout the Site.
- Groundwater: For groundwater, the point of compliance is throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth that could potentially be affected by the Site.
- Indoor Air/Soil Gas: The point of compliance is ambient and indoor air throughout the Site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The findings and conclusions derived during the subsurface assessment activities at the Site are as follows:

4.1 Findings and Conclusions

- Soil contamination detected at the Site by AEG above MTCA Method A cleanup levels was limited to one soil sample collected from boring B-4. Gasoline-range TPH was detected above the MTCA Method A cleanup level in boring B-4 at a depth of 14 feet bgs. Soil samples collected from above and below this depth were non-detect. Boring B-4 is located along the southern property boundary, adjacent to the Highway 12 right-of-way.
- Groundwater contamination detected at the Site by AEG above MTCA Method A cleanup levels included the following:
  - Gasoline- and diesel-range TPH were detected above MTCA cleanup levels in MW-2 prior to well installation at 3,000 µg/L and 61,000 µg/L, respectively; however, concentrations have been non-detect since. The initial sample was collected prior to well installation, and was likely biased by suspended solids in the sample.
  - Total lead was detected in MW-4 and MW-7 above MTCA cleanup levels during the initial round of sampling; however, concentrations of total and dissolved lead from these wells have either been non-detect or below MTCA cleanup levels since.
  - Diesel-range TPH was detected in boring B-1 at 29,700 µg/L. The permanent monitoring well downgradient of B-1 (MW-9) was non-detect for diesel-range TPH.
  - Total lead was detected in boring B-2; however, dissolved lead in the same sample was non-detect suggesting the lead detection was related to suspended solids in the sample.
- No constituents of concern were detected in groundwater samples from boring B-5 or monitoring well MW-9, which would be considered cross-gradient and downgradient, respectively, of boring B-1. This suggests impacts at B-1 are localized and not migrating off the property. In addition, it should be noted that this sample was collected from a temporary well point (similar to the initial sample from MW-2), which is likely to result in a somewhat biased high concentration.

4.2 Recommendations

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

- Submittal of this report to Ecology in consideration of closure with an environmental covenant. Consistent with the Model Remedies Guidance, cleanup actions have been performed at this Site to the extent practicable. What remains is localized, does not appear to be migrating, and is covered by impervious surfaces. AEG would draft an Environmental Covenant and Long-Term Monitoring Plan for Ecology review upon approval to pursue closure via institutional controls.

5.0 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.

6.0 REFERENCES

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FIGURES

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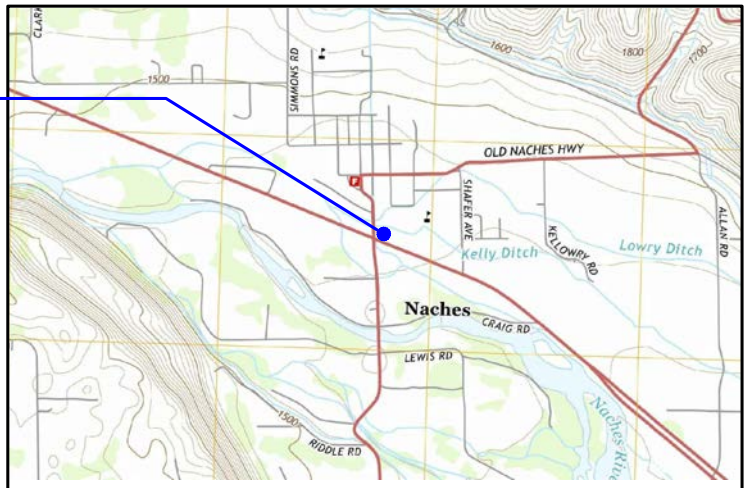
FILENAME	DRAWN BY		CHECKED BY		APPROVED BY		PROJECT NUMBER
16-102_1704_2.DWG	ICD	9/6/2018	BD	9/6/2018	BD	9/6/2018	16-102

N
W E
S

PROJECT LOCATION



VICINITY MAP

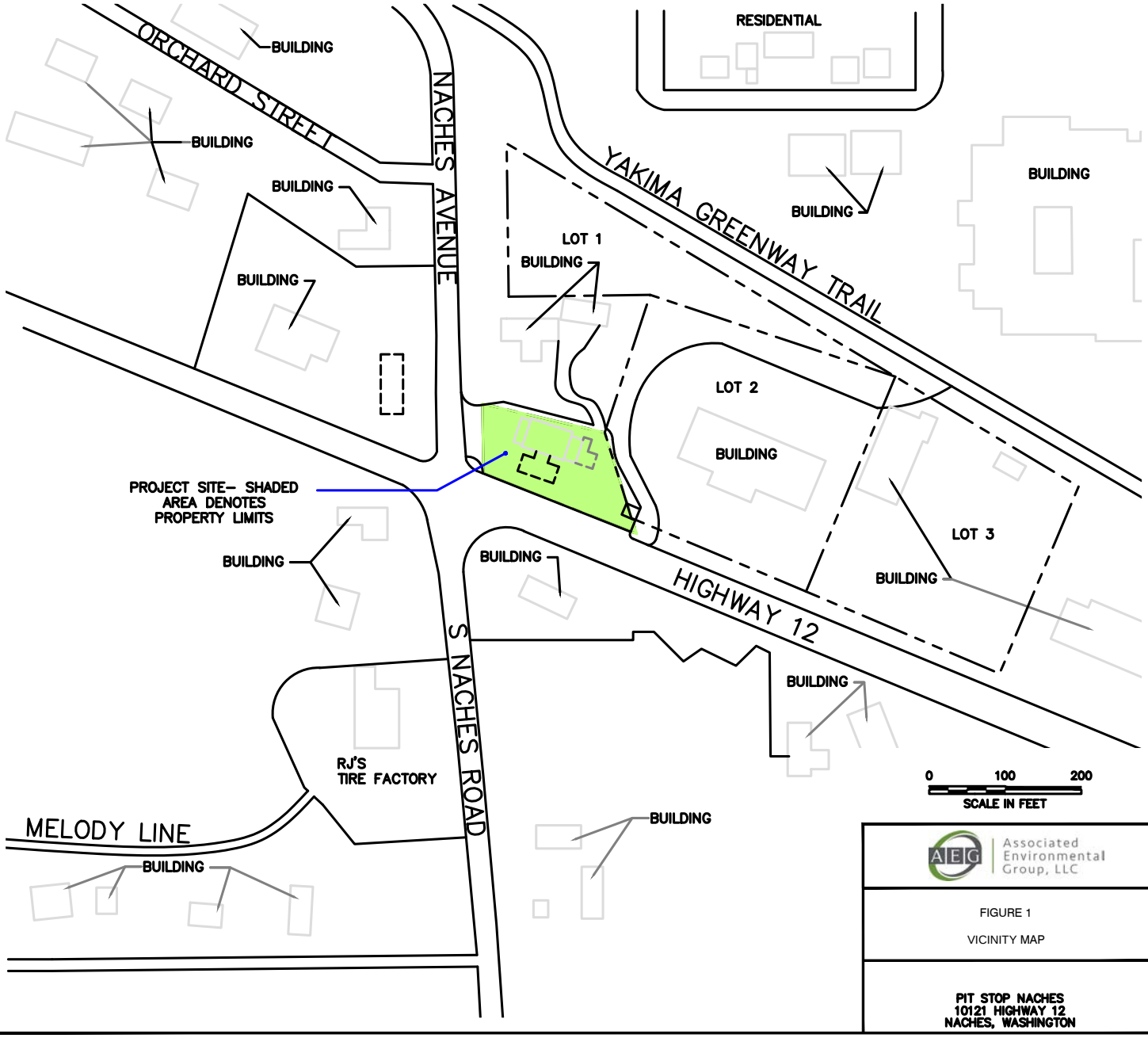
0 1,500 3,000
SCALE IN FEET

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



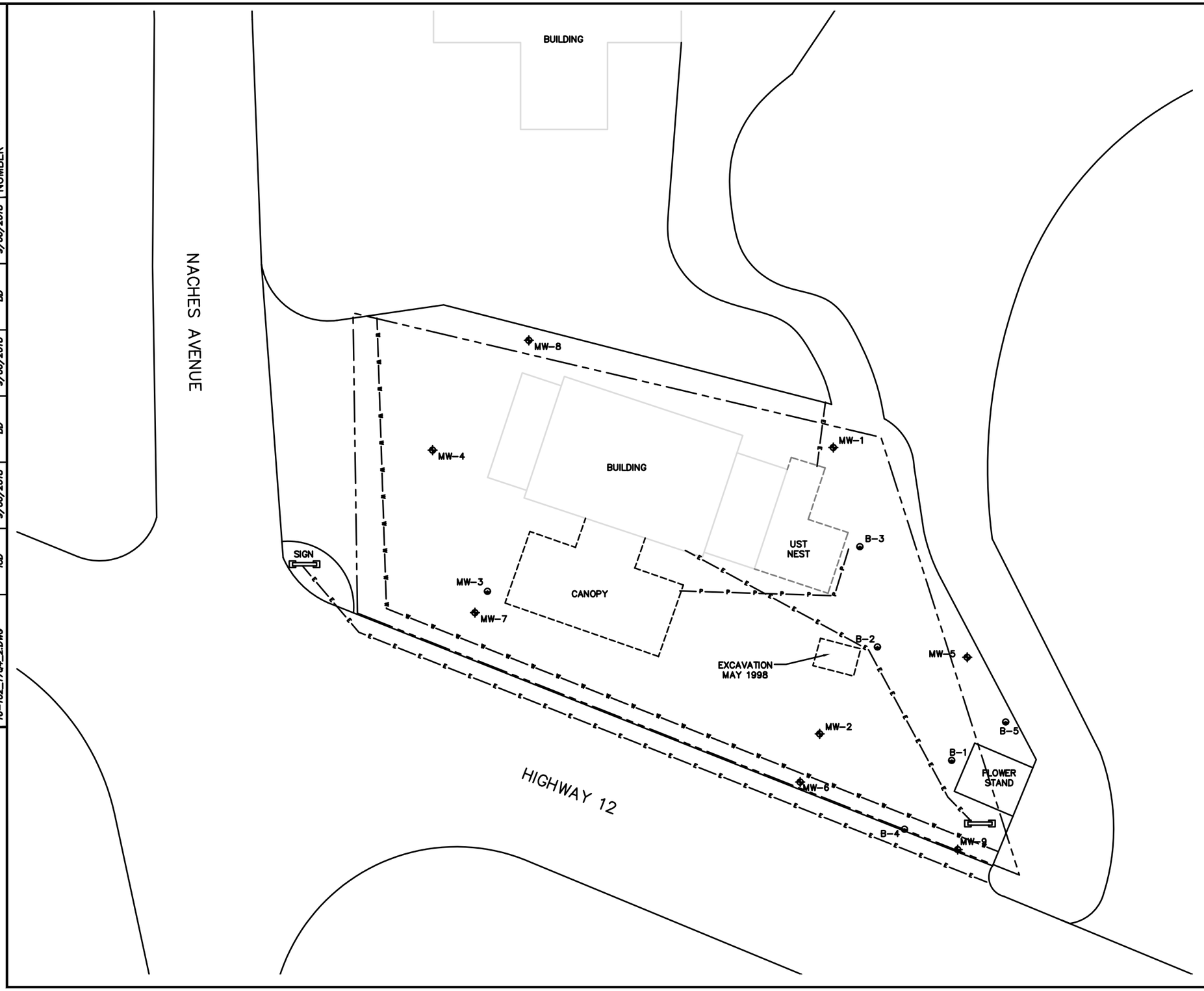
Associated Environmental Group, LLC

FIGURE 1

VICINITY MAP

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
16-102_1704_2.DWG	ICD 9/06/2018	BD 9/06/2018	BD 9/06/2018	16-102



N
W E
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LEGEND

- PROPERTY LINE
- MW-1 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-3 SOIL SAMPLING LOCATION
- ELECTRIC LINE
- WATER LINE
- PRODUCT LINE

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
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REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.

0 15 30
SCALE IN FEET

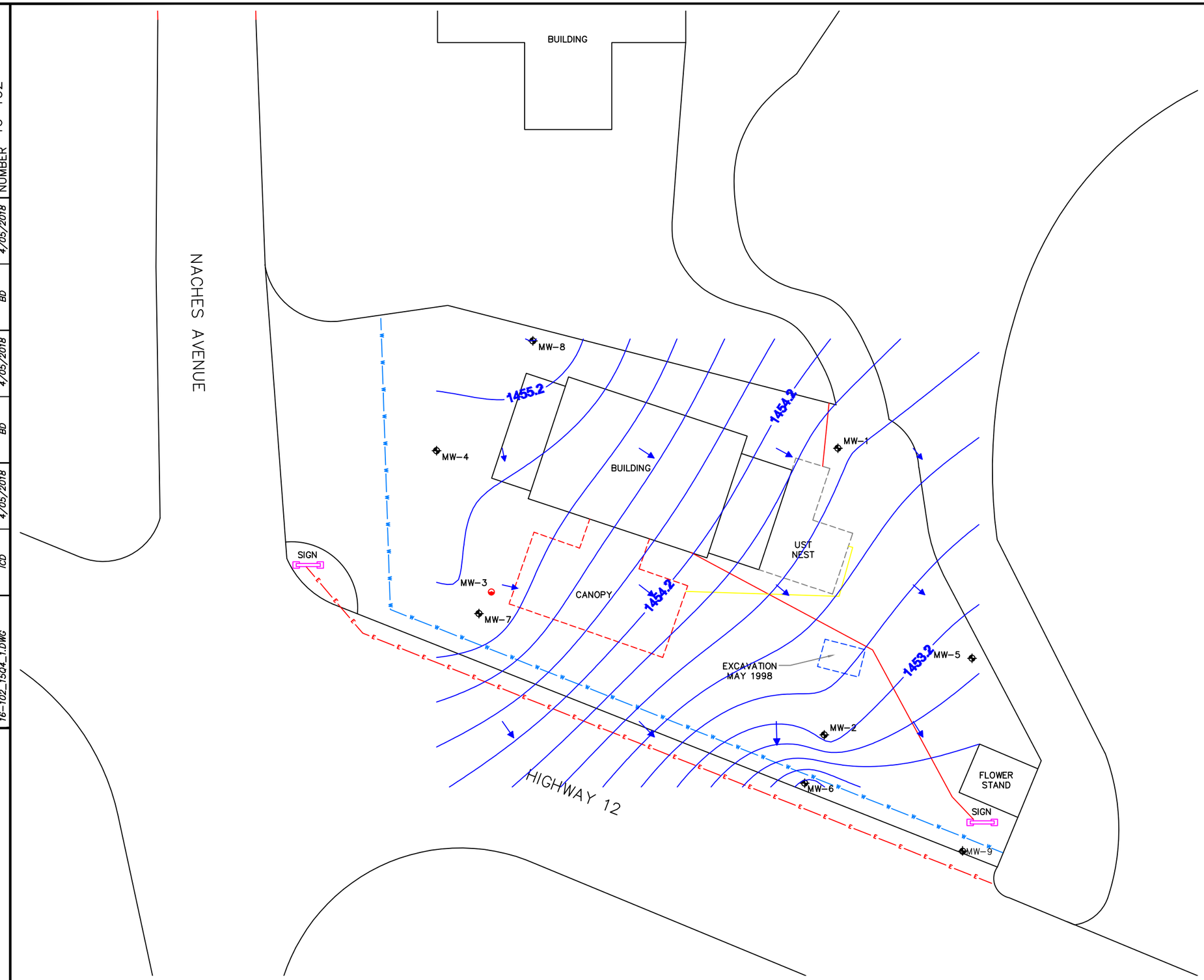
Associated Environmental Group, LLC

FIGURE 2

SITE MAP

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
16-102_1504_1.DWG	ICD 4/05/2018	BD 4/05/2018	BD 4/05/2018	16-102



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

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.
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

Associated Environmental Group, LLC

FIGURE 3
MARCH 2018
GROUNDWATER CONTOUR MAP

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

PROJECT NUMBER	16-102		
APPROVED BY	BD	9/06/2018	
CHECKED BY	BD	9/06/2018	
DRAWN BY	ICD	9/06/2018	
FILENAME	16-102_1704_2.DWG		

NACHES AVENUE

BUILDING

BUILDING

UST NEST

CANOPY

SIGN

EXCAVATION MAY 1998

FLOWER STAND

HIGHWAY 12

MW-1

MW-2

MW-3

MW-4

MW-5

MW-6

MW-7

MW-8

MW-9

B-1

B-2

B-3

B-4

B-5

MW-8		
05/24/16		
DP	TPH-G	TPH-D
5.0	<10	<50
10.0	<10	<50
15.0	<10	<50
20.0	<10	<50

MW-4		
05/24/16		
DP	TPH-G	TPH-D
5.0	<10	<50
10.0	<10	<50

MW-1		
01/21/16		
DP	TPH-G	TPH-D
13.0	<10	<50
15.0	<10	<50

B-3		
03/28/17		
DP	TPH-G	TPH-D
4.0	<10	<50
9.0	<10	<50

B-2		
03/28/17		
DP	TPH-G	TPH-D
3.0	<10	<50
9.0	<10	<50

MW-3		
01/21/16		
DP	TPH-G	TPH-D
10.0	<10	<50

MW-5		
05/23/16		
DP	TPH-G	TPH-D
5.0	<10	<50
10.0	<10	<50

MW-7		
05/24/16		
DP	TPH-G	TPH-D
5.0	<10	<50
6.0	<10	<50
10.0	<10	<50

B-5		
09/13/17		
DP	TPH-G	TPH-D
6.0	<10	<50
15.0	<10	<50

MW-2		
01/21/16		
DP	TPH-G	TPH-D
8.0	<10	<50
13.0	<10	**1,400**
15.0	<10	<50

B-1		
03/28/17		
DP	TPH-G	TPH-D
3.0	<10	<50
8.0	<10	<50
10.0	<10	<50
15.0	<10	**294**

MW-6		
05/23/16		
DP	TPH-G	TPH-D
5.0	<10	<50
10.0	<10	<50

B-4		
09/13/17		
DP	TPH-G	TPH-D
5.0	<10	<50
14.0	**464**	**258**
20.0	<10	<50

MW-9		
09/13/17		
DP	TPH-G	TPH-D
5.0	<10	<50
6.0	<10	<50
10.0	<10	<50

N

W E

S

LEGEND

- PROPERTY LINE
- MW-1 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-3 SOIL SAMPLING LOCATION
- E E ELECTRIC LINE
- W W WATER LINE
- P P PRODUCT LINE
- SOIL TPH-G PLUME (INDICATING EXCEEDANCE OF MTCA CUL OF 30 mg/kg)

PQL	PRACTICAL QUANTIFICATION LIMIT (LABORATORY DETECTION LIMIT)
mg/kg	MILLIGRAMS PER KILOGRAM
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
TPH-D	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
DP	DEPTH IN FEET
<	NOT DETECTED ABOVE LIMIT NOTED

RED BOLD VALUE INDICATES THE DETECTED CONCENTRATION EXCEEDS ECOLOGY MTCA METHOD A CUL

BOLD VALUE INDICATES THE DETECTED CONCENTRATION IS BELOW ECOLOGY MTCA METHOD A CUL

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.

0 15 30

SCALE IN FEET

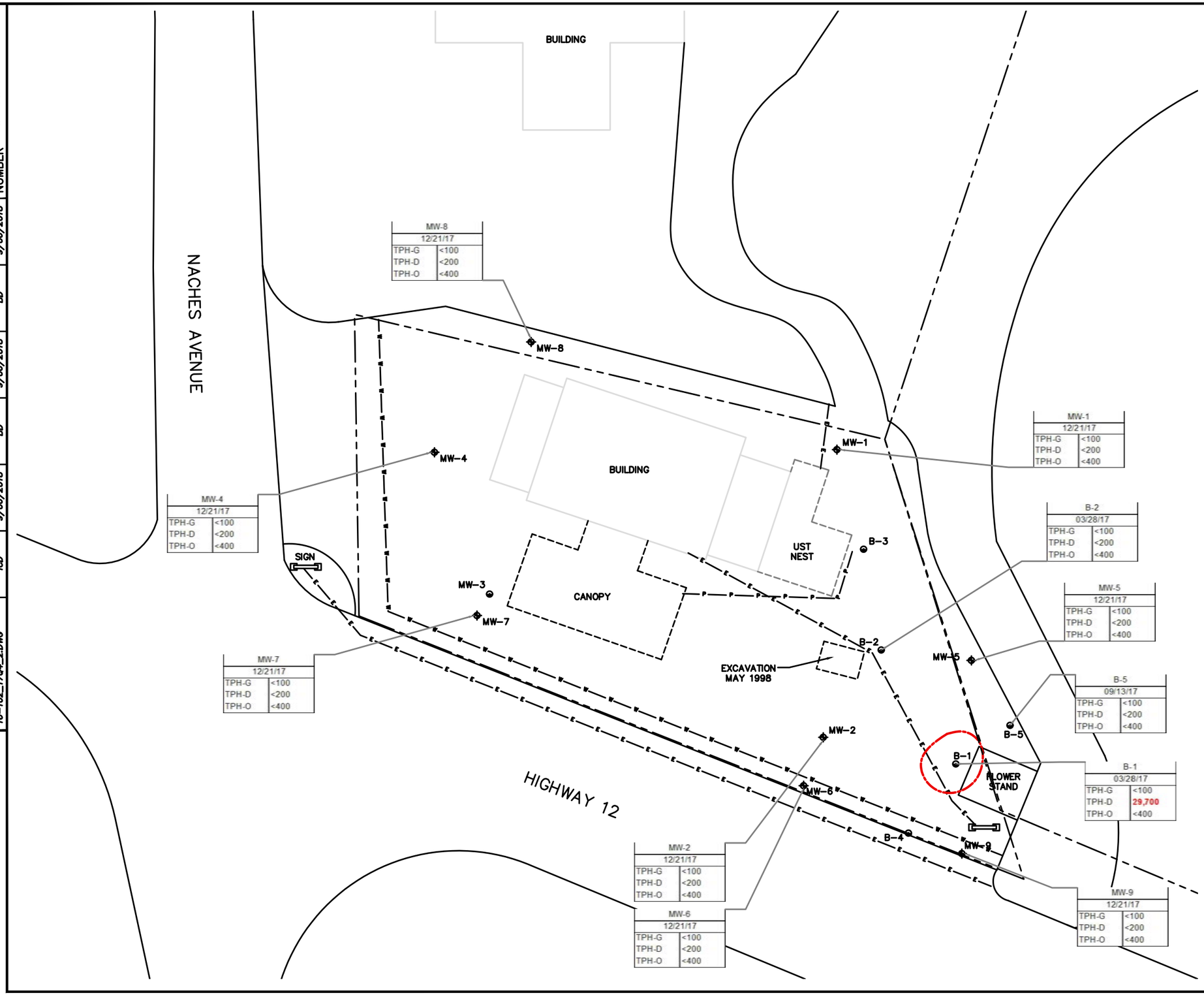
AEG Associated Environmental Group, LLC

FIGURE 4

GASOLINE PLUME MAP IN SOIL

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
16-102_1704_2.DWG	ICD 9/06/2018	BD 9/06/2018	BD 9/06/2018	16-102



LEGEND

———	PROPERTY LINE
MW-1	GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
MW-3	SOIL SAMPLING LOCATION
E E	ELECTRIC LINE
W W	WATER LINE
P P	PRODUCT LINE
	GROUNDWATER TPH-D PLUME (INDICATING EXCEEDANCE OF MTCA CUL OF 500 µg/L)
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (µg/L)
TPH-D	TOTAL PETROLEUM HYDROCARBONS AS DIESEL (µg/L)
TPH-O	TOTAL PETROLEUM HYDROCARBONS AS HEAVY OIL (µg/L)
µg/L	MICROGRAMS PER LITER
<	NOT DETECTED ABOVE LIMIT NOTED

RED BOLD VALUE INDICATES THE DETECTED CONCENTRATION EXCEEDS ECOLOGY MTCA METHOD A CUL

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.

0 15 30
SCALE IN FEET

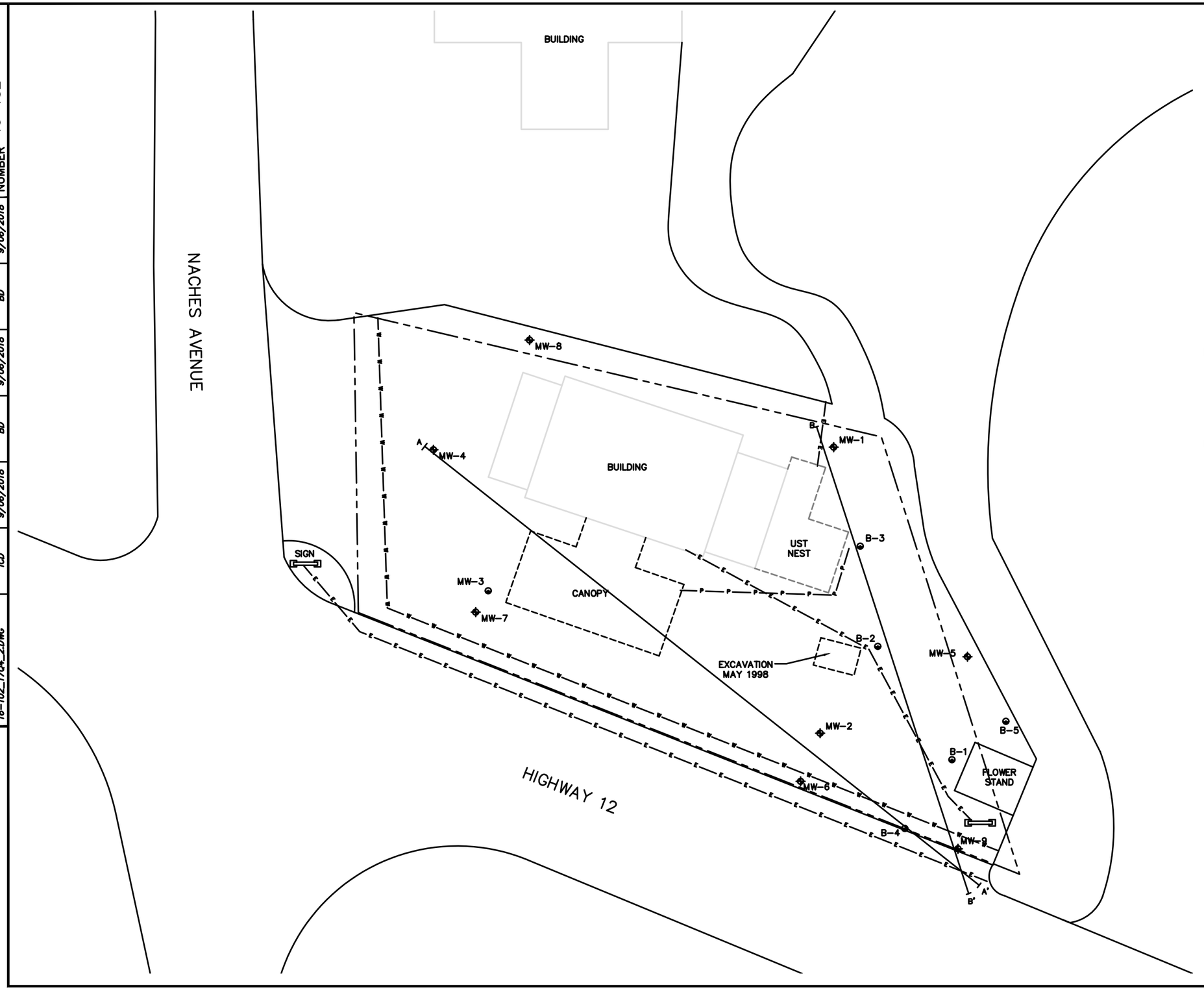
Associated Environmental Group, LLC

FIGURE 6

DIESEL PLUME MAP IN GROUNDWATER

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
16-102_1704_2.DWG	ICD 9/06/2018	BD 9/06/2018	BD 9/06/2018	16-102



LEGEND

- PROPERTY LINE
- MW-1 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-3 SOIL SAMPLING LOCATION
- ELECTRIC LINE
- WATER LINE
- PRODUCT LINE

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
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REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.

0 15 30
SCALE IN FEET

Associated Environmental Group, LLC

FIGURE 6

SITE MAP WITH GEOLOGIC CROSS SECTIONS A-A' AND B-B'

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

PROJECT NUMBER	17-125
APPROVED BY	BD 2/09/2018
CHECKED BY	BD 2/09/2018
DRAWN BY	ICD 2/09/2018
FILENAME	16-102_XSECTIONS_2.DWG

NORTHWEST

A

SOUTHEAST

A'

B-B' LINE

MW-4 MW-3 MW-7 MW-2 MW-6 B-4 MW-9

DEPTH BELOW GROUND SURFACE (FEET)

0 5 10 15 20

Gx- ND

Gx 464

Gx ND

0 10 20
HORIZONTAL SCALE

0 2.5 5
VERTICAL SCALE

LEGEND

B-4 MW-2

- WELL, SOIL BORING
- SOIL SAMPLE LOCATION
- GASOLINE-RANGE TPH ABOVE MTCA
- GROUNDWATER LEVEL AT TIME OF DRILLING
- SCREENED INTERVAL
- MAXIMUM DEPTH EXPLORED
- SOIL CONTACT

SW= WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES

SP= POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES

SM= SILTY-SANDS, SAND-SILT MIXTURES

GW= WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES

GP= POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 7
GEOLOGIC CROSS SECTION A-A'

PIT STOP NACHES
10121 HIGHWAY 12
NACHES, WASHINGTON

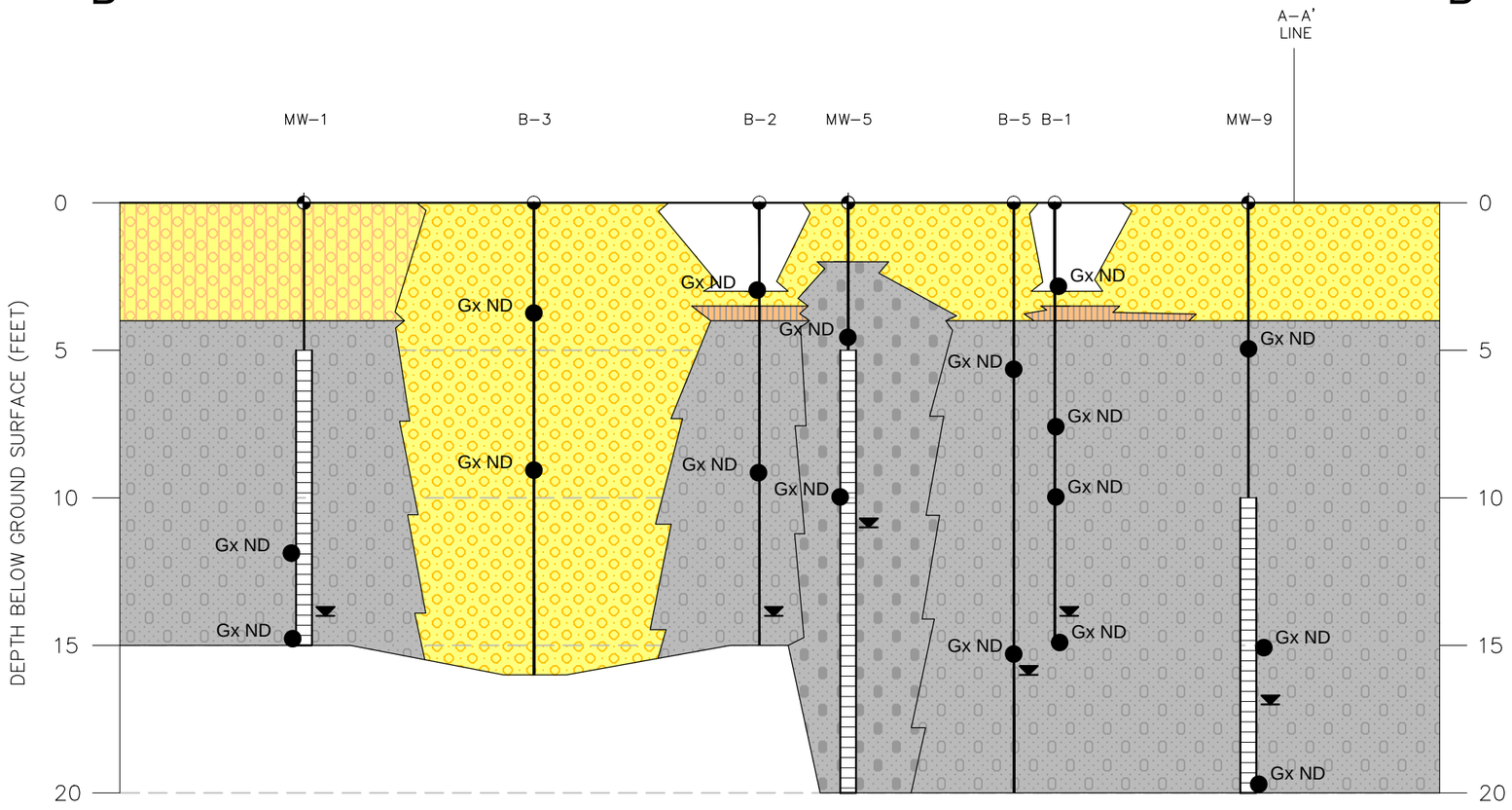
PROJECT NUMBER	17-125
APPROVED BY	BD 2/09/2018
CHECKED BY	BD 2/09/2018
DRAWN BY	ICD 2/09/2018
FILENAME	16-102_XSECTIONS_2.DWG

NORTHWEST

B

SOUTHEAST

B'



HORIZONTAL SCALE: 0, 10, 20

VERTICAL SCALE: 0, 2.5, 5

LEGEND

B–1 — WELL, SOIL BORING

MW–1 — WELL, SOIL BORING

– GROUNDWATER LEVEL AT TIME OF DRILLING

– SCREENED INTERVAL

– MAXIMUM DEPTH EXPLORED

– SOIL CONTACT

NO RECOVERY

SW= WELL–GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES

SM= SILTY–SANDS, SAND–SILT MIXTURES

GW= WELL–GRADED GRAVELS, GRAVEL–SAND MIXTURES, LITTLE OR NO FINES

GP= POORLY–GRADED GRAVELS, GRAVEL–SAND MIXTURES, LITTLE OR NO FINES

ML= INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS, WITH SLIGHT PLASTICITY

AEG ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 8
GEOLOGIC CROSS SECTION B-B'

PIT STOP NACHES
10121 HIGHWAY 12
NACES, WASHINGTON

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
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
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
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

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-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
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
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

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			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
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	11**	0.005	5.0	0.1	250

Notes:
All values reported in milligrams per kilogram (mg/kg)
-- = 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 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			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-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	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--
	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	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--
	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	--	--	--	--	--	--	--	--	--	--

Table 3 - 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	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--
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		1000*	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 (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 at soil cores from monitoring well MW-1.

Photo #2:	Photo looking at soil cores from monitoring well MW-2.

Photo #2:	Photo looking at soil cores from monitoring well MW-3.

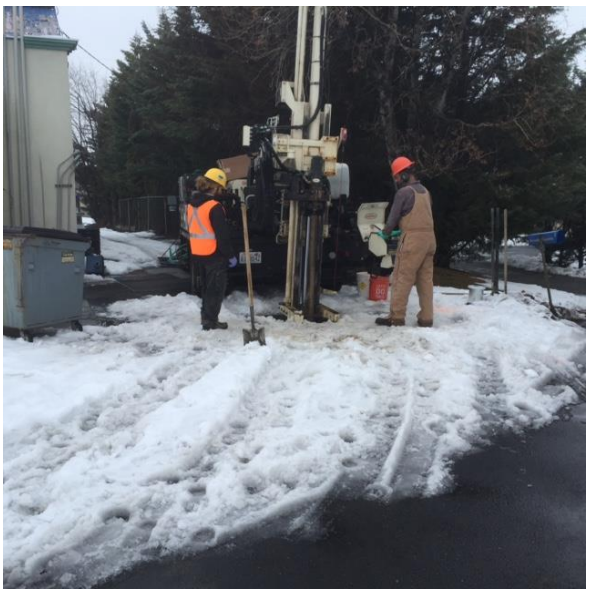

Photo #4:	Photo looking at location of monitoring well MW-1.

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PROPERTY AND VICINITY PHOTOGRAPHIC RECORD

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

				
Photo #5:	Photo looking northeast at the location of monitoring well MW-5.		Photo #6:	Photo looking at soil cuttings from monitoring well MW-5.
				
Photo #7:	Photo looking east at the location of monitoring well MW-6.		Photo #8:	Photo looking at soil cuttings from monitoring well MW-6.
				
Photo #9:	Photo looking east at the location of monitoring well MW-7.		Photo #10:	Photo looking at soil cuttings from monitoring well MW-7.

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ASSOCIATED ENVIRONMENTAL GROUP, LLC

PROPERTY AND VICINITY PHOTOGRAPHIC RECORD

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

					
Photo # 11	Photo looking east at the location of monitoring well MW-4.		Photo # 12	Photo looking at soil cuttings from monitoring well MW-4.	
					
Photo # 13	Photo looking northeast at the location of monitoring well MW-8.		Photo # 14	Photo looking at soil cuttings from monitoring well MW-8.	
					
Photo # 15	Photo looking at rock core from monitoring well MW-4.		Photo # 16	Photo looking at typical surface monument of monitoring well MW-5.	

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SITE PHOTOGRAPHIC RECORD

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

Photo #17	Photo looking northeast at location of boring B-1.

Photo #18	Photo looking north at location of boring B-2.

Photo #19	Photo looking northwest at location of boring B-3.

Photo #20:	Photo looking at typical soil profile from 0-15 feet bgs. (Boring B-1)

Photo #21:	Photo looking at typical soil profile from 0-10 feet bgs. (Boring B-2)

Photo #22:	Photo looking at typical soil profile from 0-15 feet bgs. (Boring B-3)

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SITE PHOTOGRAPHIC RECORD

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

				
Photo #23	Photo looking south at location of boring B-4.		Photo #24	Photo looking at typical soil cores from boring B-4.
				
Photo #25	Photo looking east at location of boring B-5.		Photo #26:	Photo looking at typical soil cores from boring B-5.
				
Photo #27:	Photo looking south at location of monitoring well MW-9.		Photo #28:	Photo looking at typical soil cores from monitoring well MW-9.

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APPENDIX B

Supporting Documents

Boring/Well Logs
Laboratory Datasheets
Terrestrial Ecological Evaluation Form

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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

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: ***Naches Pit Stop***	**JOB # *16-102***	**BORING # *B-4***	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*	**Approximate Elevation:** *1461 feet above sea level*		
Subcontractor / Driller: *Yellow Jacket / Casey*	**Equipment / Drilling Method:** *Sonic Drilling Rig*		
Date: *September 13, 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
	Asphalt surface underlain by; Brown, moist, dense, **GRAVELLY SAND**; coarse grained gravel, coarse grained sand; with silt	SW	1							
			2							
			3					0.9		
			4							
5	At 4 feet; Brown, moist, dense, **SANDY GRAVEL**; coarse grained sand, coarse grained gravel	GW	5		B4-5	9:43		5.6		
			6							
			7							
			8							
			9							
10			10		B4-10	9:50		35.8		
			11							
			12							
			13							Hydrocarbon Odor
	At 13 feet; Gray		14		B4-14	10:02		67.8		
15			15							
		▼	16							
	At 16 feet; Wet		17							
			18							
			19							Hydrocarbon Odor
20			20		B4-20	10:12				
	Total Depth = 20 feet bgs									
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-5*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*	**Approximate Elevation:** *1461 feet above sea level*		
Subcontractor / Driller: *Yellow Jacket / Casey*	**Equipment / Drilling Method:** *Sonic Drilling Rig*		
Date: *September 13, 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
	Asphalt surface underlain by; Brown, moist, dense, **GRAVELLY SAND**; coarse grained gravel, coarse grained sand; with silt	SW								
5	At 4 feet; Brown, moist, dense, **SANDY GRAVEL**; coarse grained sand, coarse grained gravel	GW			B5-6	10:35		0		
						10:35		0		
10										
15					B5-15	10:45		0		
	At 16 feet; Wet	▽								
20					B5-20	10:53		0		
	Total Depth = 20 feet bgs									
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: *Pit Stop Naches*	**JOB #** *16-102*	**Monitoring Well #** *MW-1*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA 98937*	**Approximate Elevation:** *1462 feet above mean sea level*		
Subcontractor / Driller: *ESN / Don*	**Equipment / Drilling Method:** *Geoprobe / Direct Push*		
Date: *January 21, 2016*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	3 inch asphalt surface underlain by;						N/A		None	
	Brown, moist, medium dense, **SILTY SAND**; fine grained sand	SM								
5	At 4 feet; Brown, moist, medium dense, **SANDY GRAVEL**; fine grained sand, coarse grained gravel	GW				11:08		0.0		
10						11:13		0.0		
					MW1-13					
15	At 14 feet; Wet				MW1-15	11:19				
	Total Depth = 15 feet									
20										
25										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- Groundwater level at time of drilling or date of measurement (AT)

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.01 slotted screen

Ecology Tag # BJW 759

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Pit Stop Naches*	**JOB #** *16-102*	**Monitoring Well #** *MW-2*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA 98937*	**Approximate Elevation:** *1462 feet above mean sea level*		
Subcontractor / Driller: *ESN / Don*	**Equipment / Drilling Method:** *Geoprobe / Direct Push*		
Date: *January 21, 2016*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	3 inch asphalt surface underlain by;						N/A		None	
	Brown, moist, medium dense, **SILTY SAND**; fine grained sand	SM								
5	At 4 feet; Brown, moist, medium dense, **SANDY GRAVEL**; fine grained sand, coarse grained gravel	GW				12:20		0.0		
					MW2-8			0.0		
10						12:30				
					MW2-13			0.0		
	At 13.5 feet; Wet									
15					MW2-15	12:40		662		
	Total Depth = 15 feet									
20										
25										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- Groundwater level at time of drilling or date of measurement (AT)

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.01 slotted screen

Ecology Tag # BJW 760

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Pit Stop Naches*	**JOB #** *16-102*	**Boring #** *MW-3*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA 98937*	**Approximate Elevation:** *1462 feet above mean sea level*		
Subcontractor / Driller: *ESN / Don*	**Equipment / Drilling Method:** *Geoprobe / Direct Push*		
Date: *January 21, 2016*	**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
	3 inch asphalt surface underlain by;						N/A		None	
	Brown, moist, medium dense, **SAND**; coarse grained sand	SP								
5	At 4.5 feet; Gray, moist, medium dense, **SANDY GRAVEL**; fine grained sand, coarse grained gravel	GW				13:46		0.0		
10					MW3-10	13:51		0.0		Soil too dense, unable to install well
15						14:01				
	Total Depth = 15 feet									
20										
25										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- Groundwater level at time of drilling or date of measurement (AT)

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.01 slotted screen

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Naches Pit Stop*	**JOB # *16-102***	**Monitoring Well #** *MW-4*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*	**Approximate Elevation:** *1461 feet above mean sea level*		
Subcontractor / Driller: Holt / Pete	**Equipment / Drilling Method:** *Sonic Drilling Rig*		
Date: *May 24, 2016*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	3 inch asphalt surface underlain by; Brown, moist, medium dense, **SILTY SAND**; fine grained sand	SW					N/A		None	
5	At 4 feet; Gray, dry, very dense, **GRAVEL**; coarse grained gravel	GP			MW4-5	11:16		1.3		
10					MW4-10	11:36		7.9		
	At 11 feet; Wet	▼		⊗						
15					MW4-15	11:44		0.6		
20					MW4-20	11:44		0.9		
	Total Depth = 20 feet									
25										

Explanation

- Sample Advance / Recovery
- ⊗ No Recovery
- - - - Contact located approximately
- ▼ AT Groundwater level at time of drilling or date of measurement

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.01 slotted screen

Ecology Tag # BJX 333

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Naches Pit Stop*	**JOB # *16-102***	**Monitoring Well #** *MW-5*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*	**Approximate Elevation:** *1461 feet above mean sea level*		
Subcontractor / Driller: Holt / Pete	**Equipment / Drilling Method:** *Sonic Drilling Rig*		
Date: *May 23, 2016*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	3 inch asphalt surface underlain by; Brown, moist, medium dense, **SILTY SAND**; fine grained sand	SW					N/A		None	
	At 2 feet; Gray, dry, very dense, **GRAVEL**; coarse grained gravel	GP								
5					MW5-5	11:13		0.0		
10					MW5-10	11:22		0.0		
	At 11 feet; Wet	▼		⊗						
15										
					MW5-16	11:28		5.0		
20										
	Total Depth = 20 feet									
25										

Explanation

- Sample Advance / Recovery
- ⊗ No Recovery
- - - - Contact located approximately
- ▼ AT Groundwater level at time of drilling or date of measurement

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.01 slotted screen

Ecology Tag # BJX 330

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Naches Pit Stop*	**JOB # *16-102***	**Monitoring Well #** *MW-6*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*	**Approximate Elevation:** *1461 feet above mean sea level*		
Subcontractor / Driller: Holt / Pete	**Equipment / Drilling Method:** *Sonic Drilling Rig*		
Date: *May 23, 2016*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	3 inch asphalt surface underlain by; Brown, moist, medium dense, **SILTY SAND**; fine grained sand	SW					N/A		None	
	At 2 feet; Gray, dry, very dense, **GRAVEL**; coarse grained gravel	GP								
5					MW6-5	13:53		1.3		
10					MW6-10	13:57		0.8		
15	At 15 feet; Wet	AT			MW6-15	14:03		1.2		
20	From 18 to 19 feet; Discolored gray soil				MW6-19	14:03		0.4		
	Total Depth = 20 feet									
25										

Explanation

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

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.01 slotted screen

Ecology Tag # BJX 331

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Naches Pit Stop*	**JOB # *16-102***	**Monitoring Well #** *MW-7*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*	**Approximate Elevation:** *1461 feet above mean sea level*		
Subcontractor / Driller: Holt / Pete	**Equipment / Drilling Method:** *Sonic Drilling Rig*		
Date: *May 24, 2016*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	3 inch asphalt surface underlain by; Brown, moist, medium dense, **SILTY SAND**; fine grained sand	SW	1–4				N/A		None	
5	At 4 feet; Gray, dry, very dense, **GRAVEL**; coarse grained gravel	GP	5		MW7-5a	8:24		139		
			6		MW7-6	8:50		71.4		
			7–9							
10			10		MW7-10	9:02		44.7		
			11–14	⊗						
15		▼	15		MW7-15	9:10		2.7		
	At 15 feet; Wet		16–19							
20			20		MW7-20	9:10		7.5		
	Total Depth = 20 feet									
	Concrete was encountered at 5 feet bgs, boring moved to the east									
25										

Explanation

- Sample Advance / Recovery
- ⊗ No Recovery
- - - - Contact located approximately
- ▼ AT Groundwater level at time of drilling or date of measurement

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.01 slotted screen

Ecology Tag # BJX 332

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Naches Pit Stop*	**JOB # *16-102***	**Monitoring Well #** *MW-8*	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*	**Approximate Elevation:** *1461 feet above mean sea level*		
Subcontractor / Driller: Holt / Pete	**Equipment / Drilling Method:** *Sonic Drilling Rig*		
Date: *May 24, 2016*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	3 inch asphalt surface underlain by; Brown, moist, medium dense, **SILTY SAND**; fine grained sand	SW					N/A		None	
5					MW8-5	13:07		3.2		
	At 5 feet; Gray, dry, very dense, **GRAVEL**; coarse grained gravel	GP								
10					MW8-10	13:15		20.2		
	At 10.5 feet; Wet	▼								
15					MW8-15	13:30		30.4		
20					MW8-20	13:30		4.9		
	Total Depth = 20 feet									
25										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- Groundwater level at time of drilling or date of measurement (AT)

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.01 slotted screen

Ecology Tag # BJX 334

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Naches Pit Stop*	**JOB # *16-102***	**Monitoring Well # *MW-9***	**PAGE 1 OF 1**
Location: *10121 Highway 12, Naches, WA*	**Approximate Elevation:** *1461 feet above sea level*		
Subcontractor / Driller: *Yellow Jacket / Casey*	**Equipment / Drilling Method:** *Sonic Drilling Rig*		
Date: *September 13, 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	Monitoring Well Construction
	Asphalt surface underlain by; Brown, moist, dense, **GRAVELLY SAND**; coarse grained gravel, coarse grained sand; with silt	SW								
5	At 4 feet; Brown, moist, dense, **SANDY GRAVEL**; coarse grained sand, coarse grained gravel	GW			MW9-5			0.8		
						11:27		0.7		
10					MW9-10			40.7		
						11:40				
	At 13 feet; Gray						Hydrocarbon Odor			
15					MW9-15					
	At 17 feet; Wet	▼								
							Hydrocarbon Odor			
20					MW9-20	12:08				
	Total Depth = 20 feet bgs									
25										

Explanation

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

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.02 slotted screen

Ecology Tag #

ESN NORTHWEST
Environmental
Services Network

February 2, 2016

Michael Chun
Associated Environmental Group, Inc.
605 11th Ave. SE, Suite 201
Olympia, WA 98501

Dear Mr. Chun:

Please find enclosed the analytical data report for the 10121 Hwy 12 Project in Naches, Washington. Probe services were conducted on January 21, 2016. Soil & water samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx and BTEX by Method 8260 on January 25 - 28, 2016.

The results of the analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Associated Environmental Group, Inc. 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,

Michael A. Korosec
President

1210 Eastside Street SE, Suite 200 ■ Olympia, Washington 98501 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.esnnw.com* E-Mail: *info@esnnw.com*

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
NACHES PROJECT
Client Project #16-102
Naches, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Soil by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (mg/kg)	Lube Oil Range Organics (mg/kg)
Method Blank	1/25/2016	1/25/2016	113	nd	nd
LCS	1/25/2016	1/25/2016	81	85%	---
MW1-I3	1/25/2016	1/25/2016	130	nd	nd
MW1-15	1/25/2016	1/25/2016	112	nd	nd
MW2-8	1/25/2016	1/25/2016	135	nd	nd
MW2-13	1/25/2016	1/25/2016	Int	**1,400**	nd
MW2-15	1/25/2016	1/25/2016	107	nd	nd
MW3-10	1/25/2016	1/25/2016	115	nd	nd
Reporting Limits				50	100

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
NACHES PROJECT
Client Project #16-102
Naches, Washington

ESN Northwest
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Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank	1/26/2016	1/26/2016	125	nd	nd
LCS	1/26/2016	1/26/2016	88	68%	---
MW-2	1/26/2016	1/26/2016	Int	**61,000**	nd
Reporting Limits				250	500

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
NACHES PROJECT
Client Project #16-102
Naches, Washington

ESN Northwest
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lab@esnnw.com

Analysis of Gasoline Range Organics & BTEX in Soil by Method NWTPH-Gx/8260

Sample Number	Date Prepared	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline Range Organics (mg/kg)	Surrogate Recovery (%)
Method Blank	1/28/2016	1/28/2016	nd	nd	nd	nd	nd	110
LCS	1/28/2016	1/28/2016	110%	112%	114%	115%	78%	105
LCSD	1/28/2016	1/28/2016	132%	119%	128%	117%	---	103
MW1-13	1/21/2016	1/28/2016	nd	nd	nd	nd	nd	113
MW1-15	1/21/2016	1/28/2016	nd	nd	nd	nd	nd	108
MW1-15 Duplicate	1/21/2016	1/28/2016	nd	nd	nd	nd	nd	114
MW2-8	1/21/2016	1/28/2016	nd	nd	nd	nd	nd	111
MW2-13	1/21/2016	1/28/2016	nd	nd	nd	nd	nd	108
MW2-15	1/21/2016	1/28/2016	nd	nd	nd	nd	nd	112
MW3-10	1/21/2016	1/28/2016	nd	nd	nd	nd	nd	115
Reporting Limits			0.02	0.05	0.05	0.15	10	

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS : 65% TO 135%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
NACHES PROJECT
Client Project #16-102
Naches, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Gasoline Range Organics & BTEX in Water by Method NWTPH-Gx/8260

Sample Number	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate Recovery (%)
Method Blank	1/27/2016	nd	nd	nd	nd	nd	109
LCS	1/27/2016	95%	88%	90%	89%	136%	104
LCSD	1/27/2016	107%	95%	100%	97%	---	100
MW-2	1/27/2016	nd	nd	nd	nd	**3000**	109
Trip Blank	1/27/2016	nd	nd	nd	nd	nd	107
Reporting Limits		1.0	1.0	1.0	3.0	100	

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: AEG

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

PHONE: 360 352 9835 FAX: 360 352 8164

CLIENT PROJECT #: 16-102 PROJECT MANAGER: Mike Chun

DATE: 1/21/16 PAGE 1 OF 1

PROJECT NAME: Naches

LOCATION: 10121 Highway 12, Naches, WA

COLLECTOR: Nicolas Pushkar DATE OF COLLECTION: 1/21/16

Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1. MW1-13	13	1119	Soil	VOA/Jar		X	X	X																
2. MW1-15	15	1119																						
3. MW2-8	8	1230																						
4. MW2-13	13	1240																				odor		
5. MW2-15	15	1240																				odor		
6. MW-2	-	1405	water	VOA/Amber																		odor		
7. MW3-10	10	1351	Soil	VOA/JAR																				
8.																								
9.																								
10.																								
11.																								
12.																								
13.																								
14.																								
15.																								
16.																								
17.																								
18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
	1/22/16 1052	Jennifer Turner	1/22/16
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR 5 DAY

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501

Phone: 360-459-4670
Fax: 360-459-3432

Website: www.esnnw.com
E-Mail: info@esnnw.com

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.

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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.

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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.

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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.

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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.

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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

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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

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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

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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

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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

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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.

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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.

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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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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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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

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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 per Nicolas via email. STD
2	B1-6	6	1012																	
3	B1-8	8	1032				X	X			X						X			
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

September 21, 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.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
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	9/18/17	nd	nd	nd	nd	nd	108
LCS	9/18/17	126%	121%				88
B4-5	9/18/17	nd	nd	nd	nd	nd	93
B4-14	9/18/17	0.021	nd	2.6	4.73	464	98
B5-6	9/18/17	nd	nd	nd	nd	nd	105
B5-6 Dup	9/18/17	nd	nd	nd	nd	nd	110
B5-15	9/18/17	nd	nd	nd	nd	nd	112
MW9-5	9/18/17	nd	nd	nd	nd	nd	105
MW9-15	9/18/17	nd	nd	nd	nd	nd	104
MW9-20	9/18/17	nd	nd	nd	nd	nd	100
B5-15 MS	9/18/17	126%	108%				75
B5-15 MSD	9/18/17	119%	118%				74
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

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
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	9/15/17	106	nd	nd
B4-5	9/15/17	80	nd	nd
B4-14	9/15/17	int	258	nd
B5-6	9/15/17	95	nd	nd
B5-15	9/15/17	103	nd	nd
MW9-5	9/15/17	106	nd	nd
MW9-5 Dup	9/15/17	110	nd	nd
MW9-15	9/15/17	103	nd	nd
MW9-20	9/15/17	101	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: Paul Burke

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
Client Project # 16-102

Analyses of Total Lead in Soil by EPA Method 7010 Series

Sample Number	Date Analyzed	Lead (mg/kg)
Method Blank	9/15/17	nd
B4-5	9/15/17	9.1
B4-14	9/15/17	nd
B5-6	9/15/17	nd
B5-15	9/15/17	nd
MW9-5	9/15/17	nd
MW9-15	9/15/17	nd
MW9-20	9/15/17	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 # L170914-4
Client Project # 16-102

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

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	9/15/17	100%
MW9-20 MS	9/15/17	97%
MW9-20 MSD	9/15/17	91%
RPD	9/15/17	6%

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

ANALYSES PERFORMED BY: Dirk Peterson

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
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	9/15/17	nd	nd	nd	nd	nd	98
LCS	9/15/17	87%	85%				100
B-5	9/15/17	nd	nd	nd	nd	nd	99
MW-9	9/15/17	nd	nd	nd	nd	nd	119
L170914-2 MS	9/15/17	99%	93%				108
L170914-2 MSD	9/15/17	101%	105%				116
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: Paul Burke

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
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	9/19/17	106	nd	nd
B-5	9/19/17	99	nd	nd
MW-9	9/19/17	101	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: Paul Burke

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
Client Project # 16-102

Analyses of Dissolved Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (µg/L)
Method Blank	9/15/17	nd
B-5	9/15/17	nd
MW-9	9/15/17	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 # L170914-4
Client Project # 16-102

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

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	9/15/17	102%

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
Client Project # 16-102

Analyses of Total Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (µg/L)
Method Blank	9/15/17	nd
B-5	9/15/17	nd
MW-9	9/15/17	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 # L170914-4
Client Project # 16-102

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

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	9/15/17	102%
MW-9 MS	9/15/17	95%
MW-9 MSD	9/15/17	95%
RPD	9/15/17	0%

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

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Date: 09/14/17 Page: 1 of 1

Client: AECOM
Address: 605 11th Ave SE, Suite 201
City: Olympia State: WA Zip: 98501
Phone: 360 352 9835 Fax: 360 352 8164
Client Project # 16-102

Project Manager: Nicolas Pushkar
Project Name: Naches Pit Stop
Location: 10121 Hwy 12 City, State: Naches, WA
Collector: Nicolas Pushkar Date of Collection: 09/13/17
Email: npushkar@aecom.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	Total Lead	Diss Lead	Field Notes
1	B4-5	5	943	soil		X	X			X							X			
2	B4-10	10	950																	
3	B4-14	14	1002			X	X			X							X			
4	B4-20	20	1012																	
5	B5-6	6	1035			X	X			X										
6	B5-15	15	1045			X	X			X							X			
7	B5-20	20	1053																	
8	B-5	—	1100	water		X	X			X							X	X		
9	MW9-5	5	1127	soil		X	X			X							X			
10	MW9-10	10	1140																	
11	MW9-15	15	1208			X	X			X							X			
12	MW9-20	20	1208			X	X			X							X			
13	MW-9	—	205	water		X	X			X							X	X		09/14/17
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	09/14/17	[signature]	09/14/17
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

September 27, 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.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4B
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	9/25/17	nd	nd	nd	nd	nd	93
LCS	9/25/17	97%	106%				100
B4-20	9/25/17	nd	nd	nd	nd	nd	95
B4-20 Dup	9/25/17	nd	nd	nd	nd	nd	97
B4-20 MS	9/25/17	101%	110%				102
B4-20 MSD	9/25/17	98%	103%				100
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 # L170914-4B
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	9/25/17	97	nd	nd
B4-20	9/25/17	69	nd	nd
B4-20 Dup	9/25/17	107	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: Paul Burke

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: 09/14/17 Page: 1 of 1

Client: AECOM
Project Manager: Nicolas Pushkar
Address: 605 11th Ave SE, Suite 201
Project Name: Naches P&R 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 Pushkar Date of Collection: 09/13/17
Client Project # 16-102
Email: npushkar@aecom.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	Total Lead	Diss Lead	Field Notes
1	B4-5	5	943	soil			X	X		X							X			
2	B4-10	10	950																	
3	B4-14	14	1002				X	X		X							X			
4	B4-20	20	1012				(X)	(X)		(X)										9-22-17 Added per Nicolas via email. STD
5	B5-6	6	1035				X	X		X										
6	B5-15	15	1045				X	X		X							X			
7	B5-20	20	1053																	
8	B-5	—	1100	water			X	X		X							X	X		
9	MW9-5	5	1127	soil			X	X		X							X			
10	MW9-10	10	1140																	
11	MW9-15	15	1208				X	X		X							X			
12	MW9-20	20	1208				X	X		X							X			
13	MW-9	—	805	water			X	X		X							X	X		09/14/17
14																				
15																				
16																				
17																				

Relinquished by: Date / Time
Received by: Date / Time
Relinquished by: 09/14/17
Received by: 09/14/17
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

June 6, 2016

Michael Chun
Associated Environmental Group, LLC
605 11th Avenue SE, Suite 201
Olympia, WA 98501

Dear Mr. Chun:

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
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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-2
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	6/2/16	nd	nd	nd	nd	nd	98
LCS	6/2/16	115%	114%				90
MW5-5	6/2/16	nd	nd	nd	nd	nd	67
MW5-10	6/2/16	nd	nd	nd	nd	nd	76
MW6-5	6/2/16	nd	nd	nd	nd	nd	74
MW6-10	6/2/16	nd	nd	nd	nd	nd	74
MW6-10 Dup	6/2/16	nd	nd	nd	nd	nd	79
MW8-5	6/2/16	nd	nd	nd	nd	nd	75
MW8-10	6/2/16	nd	nd	nd	nd	nd	75
MW8-10 Dup	6/2/16	nd	nd	nd	nd	nd	99
MW8-15	6/2/16	nd	nd	nd	nd	nd	75
MW8-20	6/2/16	nd	nd	nd	nd	nd	73
MW7-6 MS	6/2/16	96%	82%				77
MW7-6 MSD	6/2/16	93%	83%				73
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.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-2
Client Project # 16-102

Specific Halogenated and Aromatic Hydrocarbons by EPA 8260C in Soil

Sample Description		Method Blank	MW7-5a	MW7-6	MW7-10	MW4-5	MW4-10
Date Sampled		N/A	5/23/16	5/23/16	5/23/16	5/23/16	5/23/16
Date Analyzed	PQL (mg/kg)	6/2/16 (mg/kg)	6/2/16 (mg/kg)	6/2/16 (mg/kg)	6/2/16 (mg/kg)	6/2/16 (mg/kg)	6/2/16 (mg/kg)
Benzene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
Total Xylenes	0.15	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd	nd	nd	nd	nd
Total Naphthalenes	0.10	nd	nd	nd	nd	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	0.05	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		126	96	101	97	96	104
1,2-Dichloroethane-d4		120	102	110	103	105	119
Toluene-d8		98	72	72	95	98	66
4-Bromofluorobenzene		67	107	114	104	96	88

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

* ANALYZED BY SIM
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-2
Client Project # 16-102

QA/QC Data - EPA 8260C Analyses

Sample Identification: MW7-6							
	Matrix Spike			Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	
Benzene	0.5	0.48	96	0.5	0.46	92	4.3
Toluene	0.5	0.41	82	0.5	0.42	84	2.4
Surrogate Recovery							
Dibromofluoromethane			102			96	
1,2-Dichloroethane-d4			106			101	
Toluene-d8			77			73	
4-Bromofluorobenzene			103			93	

	Laboratory Control Sample		
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Benzene	0.5	0.57	114
Toluene	0.5	0.57	114
Surrogate Recovery			
Dibromofluoromethane			115
1,2-Dichloroethane-d4			107
Toluene-d8			90
4-Bromofluorobenzene			74

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-2
Client Project # 16-102

Analyses of Gasoline (NWTPH-Gx) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (mg/kg)
Method Blank	6/2/16	98	nd
MW7-5a	6/2/16	72	nd
MW7-6	6/2/16	72	nd
MW7-10	6/2/16	95	nd
MW4-5	6/2/16	98	nd
MW4-10	6/2/16	66	nd
Practical Quantitation Limit			10

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-2
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	5/31/16	100	nd	nd
Method Blank	6/1/16	108	nd	nd
MW5-5	5/31/16	113	nd	nd
MW5-10	5/31/16	120	nd	nd
MW6-5	5/31/16	106	nd	nd
MW6-10	5/31/16	122	nd	nd
MW7-5a	5/31/16	99	nd	nd
MW7-6	5/31/16	114	nd	nd
MW7-10	5/31/16	104	nd	nd
MW4-5	5/31/16	118	nd	nd
MW4-10	5/31/16	104	nd	nd
MW8-5	5/31/16	118	nd	nd
MW8-5 Dup	5/31/16	115	nd	nd
MW8-10	5/31/16	96	nd	nd
MW8-15	6/1/16	111	nd	nd
MW8-20	6/1/16	103	nd	nd
MW8-20 Dup	6/1/16	102	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.

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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-2
Client Project # 16-102

Analyses of Total Lead in Soil by EPA Method 7010 Series

Sample Number	Date Analyzed	Lead (mg/kg)
Method Blank	6/5/16	nd
MW7-5a	6/5/16	nd
MW7-6	6/5/16	nd
MW7-10	6/5/16	nd
MW4-5	6/5/16	nd
MW4-10	6/5/16	nd
MW4-10 Dup	6/5/16	nd
Practical Quantitation Limit		5.0

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-2
Client Project # 16-102

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

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	6/5/16	103%
MW4-10 MS	6/5/16	89%
MW4-10 MSD	6/5/16	84%
RPD	6/5/16	7%

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: 5-27-16 Page: 1 of 2

Client: AEG

Project Manager: Mike Chun

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 Pushkar Date of Collection: 5/23, 5/24

Client Project # 16-102

Email: npushkar@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	EDB/EDC/MTBE Naphthalene Total Lead	Field Notes
1	MW5-5	5	1113	soil	VOA/JAR	X	X			X									5/23
2	MW5-10	10	1122																
3	MW5-16	16	1128																hold
4	MW6-5	5	1353																
5	MW6-10	10	1357																
6	MW6-15	15	1403																hold
7	MW6-19	19	1403																hold
8	MW7-5a	5	824													X	X	X	5/24
9	MW7-6	6	850																
10	MW7-10	10	902																
11	MW7-15	15	910																hold
12	MW7-20	20	910																hold
13	MW4-5	5	1116																
14	MW4-10	10	1136																
15	MW4-15	15	1144																hold
16	MW4-20	20	1144																hold
17																			

Relinquished by:	Date / Time	Received by:	Date / Time
M PM	5/27 1404	Kimberly Ebey	5/27/16 1404
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	(Y) N
Temp.	-3 °C
Seals Intact?	(Y) N N/A
Total Number of Containers	60

Remarks:

TAT: 24HR 48HR (5-DAY)

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

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: 5-27-16 Page: 2 of 2

Client: AEA

Project Manager: Mike Chun

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 3164

Collector: Nicolas Rushkor Date of Collection: 5/24

Client Project # 16-102

Email: nrushkor@aegua.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			Field Notes
1	MW8-5	5	1307	Soil	VOA/JAR		X	X		X										
2	MW8-10	10	1315																	
3	MW8-15	15	1330																	
4	MW8-20	20	1330																	
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
MN RM	5/27 1404	Shirley Eley	5/27/16 1404
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y N
Temp.	-3 °C
Seals Intact?	Y N N/A
Total Number of Containers	60

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 court of law.*

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

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

June 22, 2016

Michael Chun
Associated Environmental Group, LLC
605 11th Avenue SE, Suite 201
Olympia, WA 98501

Dear Mr. Chun:

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.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3B
Client Project # 16-102

Analyses of Total Metals in Water by EPA Method 7010 Series

Sample Number	Date Analyzed	Cadmium µg/L	Chromium µg/L	Arsenic µg/L
Method Blank	6/21/16	nd	nd	nd
MW-4	6/21/16	nd	nd	nd
MW-7	6/21/16	nd	nd	nd
MW-7 Dup	6/21/16	nd	nd	nd
Practical Quantitation Limit		0.5	5.0	3.0

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

ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3B
Client Project # 16-102

QA/QC for Metals in Water by EPA Method 7010 Series

Sample Number	Date Analyzed	Cadmium (% Recovery)	Chromium (% Recovery)	Arsenic (% Recovery)
LCS	6/21/16	110%	115%	112%
MW-7 MS	6/21/16	105%	107%	91%
MW-7 MSD	6/21/16	100%	97%	88%
RPD	6/21/16	5%	10%	3%

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

ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3B
Client Project # 16-102

Analyses of Total Mercury in Water by EPA Method 7470

Sample Number	Date Analyzed	Mercury µg/L
Method Blank	6/21/16	nd
MW-4	6/21/16	nd
MW-7	6/21/16	nd
MW-7 Dup	6/21/16	nd
Practical Quantitation Limit		0.5

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

ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3B
Client Project # 16-102

QA/QC for Mercury by EPA Method 7470

Sample Number	Date Analyzed	Mercury (% Recovery)
LCS	6/21/16	102%
MW-7 MS	6/21/16	93%
MW-7 MSD	6/21/16	107%
RPD	6/21/16	14%

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

ANALYSES PERFORMED BY: Jamie Deyman

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: 5/27/16 Page: 1 of 1

Client: AEG
Project Manager: Mike Chun
Address: 605 11th Ave SE, Suite 201
Project Name: Naches Pit Stop
City: Olympia State: WA Zip: 98501
Location: 10121 Highway 12 City, State: Naches, WA
Phone: 360 352 9835 Fax: 360 352 8164
Collector: Nicolas Pushckor Date of Collection: 5/27/16
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 Metals *	RCRA 8 Metals	EDB/EDC/MTBE Naphthalenes	Total Lead	Field Notes
1	MW-1	—	601	water	VOA/Amber		X	X		X										
2	MW-5	—	652				X	X		X										
3	MW-2	—	715				X	X		X										
4	MW-6	—	802				X	X		X										
5	MW-7	—	842		VOA/Amber/Poly		X	X		X					X		X	X	X	* Total
6	MW-4	—	931				X	X		X					X		X	X	X	As, Cd, Cr, Hg
7	MW-8	—	1012		VOA/Amber		X	X		X										
8																				6-14-16
9																				Added As, Cd, Cr, Hg
10																				per Nicolas via email.
11																				STD
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
MM PM	5/27 1404	Kirsty Clay	5/27/16 1404
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	(Y) N
Temp.	-3 °C
Seals Intact?	(Y) N N/A
Total Number of Containers	30

Remarks:

TAT: 24HR 48HR (5-DAY)

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

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

June 7, 2016

Michael Chun
Associated Environmental Group, LLC
605 11th Avenue SE, Suite 201
Olympia, WA 98501

Dear Mr. Chun:

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
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FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3
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	5/31/16	nd	nd	nd	nd	nd	107
LCS	5/31/16	102%	116%				107
MW-1	5/31/16	nd	nd	nd	nd	nd	102
MW-5	5/31/16	nd	nd	nd	nd	nd	99
MW-2	5/31/16	nd	nd	nd	nd	nd	100
MW-6	5/31/16	nd	nd	nd	nd	nd	100
MW-8	5/31/16	nd	nd	nd	nd	nd	100
L160527-4 MS	5/31/16	92%	103%				119
L160527-4 MSD	5/31/16	93%	105%				132
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: Kodey Eley

Libby Environmental, Inc.

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Olympia, WA 98506
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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3
Client Project # 16-102

Analyses of Gasoline (NWTPH-Gx) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (µg/l)
Method Blank	5/31/16	107	nd
MW-7	5/31/16	100	nd
MW-4	5/31/16	101	nd
Practical Quantitation Limit			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: Kodey Eley

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3
Client Project # 16-102

Specific Halogenated and Aromatic Hydrocarbons by EPA 8260C in Water

Sample Description		Method Blank	MW-7	MW-4
Date Sampled		N/A	5/27/16	5/27/16
Date Analyzed	PQL (µg/l)	5/31/16 (µg/l)	5/31/16 (µg/l)	5/31/16 (µg/l)
Benzene	1.0	nd	nd	nd
Toluene	1.0	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd
Total Xylenes	2.0	nd	nd	nd
1,2-Dichloroethane (EDC)	1.0	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.01	nd	nd	nd
Total Naphthalenes	5.0	nd	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	5.0	nd	nd	nd
Surrogate Recovery				
Dibromofluoromethane		109	91	92
1,2-Dichloroethane-d4		97	95	99
Toluene-d8		107	100	101
4-Bromofluorobenzene		104	101	101

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

* ANALYZED BY SIM
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Kodey Eley

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3
Client Project # 16-102

QA/QC Data - EPA 8260C Analyses

Sample Identification: L160527-3							
	Matrix Spike			Matrix Spike Dup			RPD
	Spiked Conc. (µg/l)	Measured Conc. (µg/l)	Spike Recovery (%)	Spiked Conc. (µg/l)	Measured Conc. (µg/l)	Spike Recovery (%)	
Benzene	10	9.2	92	10	9.3	93	0.3
Toluene	10	10.3	103	10	10.5	105	1.4
Surrogate Recovery							
Dibromofluoromethane			125			127	
1,2-Dichloroethane-d4			129			134	
Toluene-d8			119			132	
4-Bromofluorobenzene			101			104	

Laboratory Control Sample			
	Spiked Conc. (µg/l)	Measured Conc. (µg/l)	Spike Recovery (%)
Benzene	10	10.2	102
Toluene	10	11.6	116
Surrogate Recovery			
Dibromofluoromethane			109
1,2-Dichloroethane-d4			127
Toluene-d8			107
4-Bromofluorobenzene			102

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Kodey Eley

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3
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	6/1/16	100	nd	nd
MW-1	6/1/16	97	nd	nd
MW-5	6/1/16	93	nd	nd
MW-2	6/1/16	83	nd	nd
MW-6	6/1/16	95	nd	nd
MW-7	6/1/16	103	nd	nd
MW-4	6/1/16	97	nd	nd
MW-8	6/1/16	100	nd	nd
MW-8 Dup	6/1/16	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: Kodey Eley

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3
Client Project # 16-102

Analyses of Total Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead µg/L
Method Blank	5/28/16	nd
MW-7	5/28/16	102
MW-4	5/28/16	84
Practical Quantitation Limit		5.0

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3
Client Project # 16-102

QA/QC for Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	5/28/16	115%
L160524-1 MS	5/28/16	83%
L160524-1 MSD	5/28/16	88%
RPD	5/28/16	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

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

Date: 5/27/16 Page: 1 of 1

Client: AEG

Project Manager: Mike Chun

Address: 605 11th Ave SE, Suite 201

Project Name: Naches Pit Stop

City: Olympia, State: WA Zip: 98501

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

Phone: 360 352 9835 Fax: 360 352 8164

Collector: Nicolas Pushckor Date of Collection: 5/27/16

Client Project # 16-62

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	EDB/EDC/MTBE	Naphthalenes	Total Lead	Field Notes
1	MW-1	—	601	water	VOA/Amber		X	X			X										
2	MW-5	—	652				X	X			X										
3	MW-2	—	715				X	X			X										
4	MW-6	—	802				X	X			X										
5	MW-7	—	842		VOA/Amber/Poly		X	X			X						X	X	X		
6	MW-4	—	931				X	X			X						X	X	X		
7	MW-8	—	1012		VOA/Amber		X	X			X										
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					

Relinquished by:	Date / Time	Received by:	Date / Time
MM PM	5/27 1404	Kodey Cleary	5/27/16 1404
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	(Y) N
Temp.	-3 °C
Seals Intact?	(Y) N N/A
Total Number of Containers	30

Remarks:

TAT: 24HR 48HR (5-DAY)

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

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

October 10, 2016

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.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160929-2
Client Project # 16-102

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

Sample Number	Date Analyzed	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	Gasoline (ug/l)	Surrogate Recovery (%)
Method Blank	10/4/16	nd	nd	nd	nd	nd	120
LCS	10/4/16	123%	117%				106
MW-5	10/4/16	nd	nd	nd	nd	nd	119
MW-2	10/4/16	nd	nd	nd	nd	nd	112
MW-6	10/4/16	nd	nd	nd	nd	nd	128
MW-1	10/4/16	nd	nd	nd	nd	nd	89
MW-7	10/4/16	nd	nd	nd	nd	nd	126
MW-4	10/4/16	nd	nd	nd	nd	nd	99
MW-8	10/4/16	nd	nd	nd	nd	nd	108
MW-8 Dup	10/4/16	nd	nd	nd	nd	nd	118
MW-8 MS	10/4/16	112%	104%				106
MW-8 MSD	10/4/16	114%	99%				102
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: Kodey Eley

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160929-2
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	10/3/16	90	nd	nd
MW-5	10/3/16	67	nd	nd
MW-2	10/3/16	93	nd	nd
MW-6	10/3/16	82	nd	nd
MW-1	10/3/16	92	nd	nd
MW-7	10/3/16	87	nd	nd
MW-4	10/3/16	90	nd	nd
MW-8	10/3/16	84	nd	nd
MW-8 Dup	10/3/16	85	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: Kodey Eley

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160929-2
Client Project # 16-102

Analyses of Total Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead µg/L
Method Blank	10/9/16	nd
MW-5	10/9/16	nd
MW-2	10/9/16	nd
MW-6	10/9/16	nd
MW-1	10/9/16	nd
MW-7	10/9/16	6.4
MW-4	10/9/16	nd
MW-8	10/9/16	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 # L160929-2
Client Project # 16-102

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

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	10/9/16	96%
L160927-1 MS	10/9/16	103%
L160927-1 MSD	10/9/16	101%
RPD	10/9/16	2%

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

ANALYSES PERFORMED BY: Dirk Peterson

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160929-2
Client Project # 16-102

Analyses of Dissolved Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead µg/L
Method Blank	10/9/16	nd
MW-5	10/9/16	nd
MW-2	10/9/16	nd
MW-6	10/9/16	nd
MW-1	10/9/16	nd
MW-7	10/9/16	nd
MW-4	10/9/16	nd
MW-8	10/9/16	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 # L160929-2
Client Project # 16-102

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

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	10/9/16	96%
L160927-1 MS	10/9/16	103%
L160927-1 MSD	10/9/16	101%
RPD	10/9/16	2%

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

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Chain of Custody Record

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Date: 9/29/16 Page: 1 of 1

Client: AEG
Address: 605 11th Ave SE, Suite 201
City: Olympia State: WA Zip: 98501
Phone: 360 352 9835 Fax: 360 352 8164
Client Project # 16-102

Project Manager: Nicolas Pushckor
Project Name: Naches Pit Stop
Location: 10121 Hwy 12 City, State: Naches, WA
Collector: Nicolas Pushckor Date of Collection: 9/28/16
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	Total Pb	Dissolved Pb	Field Notes
1	MW-5	—	941	water	VOA/Amber	X	X			X							⊗	⊗		10-5-16
2	MW-2	—	1016	water													⊗	⊗		Added Total & Diss
3	MW-6	—	1105														⊗	⊗		Pb to all samples
4	MW-1	—	1145														⊗	⊗		per Scott via Email
5	MW-7	—	1227														⊗	⊗		STD
6	MW-4	—	1323														⊗	⊗		
7	MW-8	—	1415														⊗	⊗		
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	9/29/16 230pm	[signature]	9/29/16 230pm
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition? (Y) N
Temp. 3.5 °C
Seals Intact? (Y) N N/A
Total Number of Containers 28

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

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

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Date: 5/27/16 Page: 1 of 1

Client: AEG

Project Manager: Mike Chun

Address: 605 11th Ave SE, Suite 201

Project Name: Naches Pit Stop

City: Olympia State: WA Zip: 98501

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

Phone: 360 352 9835 Fax: 360 352 8164

Collector: Nicolas Pushckor Date of Collection: 5/27/16

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 *	EDB/EDC/1,2DCA	Naphthalenes	Total Lead	Field Notes
1	MW-1	—	601	water	VOA/Amber		X	X			X										
2	MW-5	—	652				X	X			X										
3	MW-2	—	715				X	X			X										
4	MW-6	—	802				X	X			X										
5	MW-7	—	842		VOA/Amber/1L		X	X			X				X		X	X	X	X	* Total
6	MW-4	—	931				X	X			X				X		X	X	X		As, Cd, Cr, Hg
7	MW-8	—	1012		VOA/Amber		X	X			X										
8																					6-14-16
9																					Added As, Cd, Cr, Hg
10																					per Nicolas via email
11																					STD
12																					
13																					
14																					
15																					
16																					
17																					

Relinquished by:	Date / Time	Received by:	Date / Time
MM PM	5/27 1404	Kirsty Colby	5/27/16 1404
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	(Y) N
Temp.	−3 °C
Seals Intact?	(Y) N N/A
Total Number of Containers	30

Remarks:

TAT: 24HR 48HR (5-DAY)

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

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3B
Client Project # 16-102

Analyses of Total Metals in Water by EPA Method 7010 Series

Sample Number	Date Analyzed	Cadmium µg/L	Chromium µg/L	Arsenic µg/L
Method Blank	6/21/16	nd	nd	nd
MW-4	6/21/16	nd	nd	nd
MW-8	6/21/16	nd	nd	nd
MW-8 Dup	6/21/16	nd	nd	nd
Practical Quantitation Limit		0.5	5.0	3.0

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

ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3B
Client Project # 16-102

QA/QC for Metals in Water by EPA Method 7010 Series

Sample Number	Date Analyzed	Cadmium (% Recovery)	Chromium (% Recovery)	Arsenic (% Recovery)
LCS	6/21/16	110%	115%	112%
MW-8 MS	6/21/16	105%	107%	91%
MW-8 MSD	6/21/16	100%	97%	88%
RPD	6/21/16	5%	10%	3%

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

ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3B
Client Project # 16-102

Analyses of Total Mercury in Water by EPA Method 7470

Sample Number	Date Analyzed	Mercury µg/L
Method Blank	6/21/16	nd
MW-4	6/21/16	nd
MW-8	6/21/16	nd
MW-8 Dup	6/21/16	nd
Practical Quantitation Limit		0.5

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

ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L160527-3B
Client Project # 16-102

QA/QC for Mercury by EPA Method 7470

Sample Number	Date Analyzed	Mercury (% Recovery)
LCS	6/21/16	102%
MW-8 MS	6/21/16	93%
MW-8 MSD	6/21/16	107%
RPD	6/21/16	14%

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

ANALYSES PERFORMED BY: Jamie Deyman

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

April 3, 2018

Becky Dilba
Associated Environmental Group, LLC
605 11th Avenue SE, Suite 201
Olympia, WA 98501

Dear Ms. Dilba:

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 # L180329-2
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	3/30/18	nd	nd	nd	nd	nd	97
LCS	3/30/18	122%	115%				100
MW-5	3/30/18	nd	nd	nd	nd	nd	98
MW-1	3/30/18	nd	nd	nd	nd	nd	100
MW-6	3/30/18	nd	nd	nd	nd	nd	100
MW-2	3/30/18	nd	nd	nd	nd	nd	98
MW-5 MS	3/30/18	130%	122%				93
MW-5 MSD	3/30/18	123%	114%				100
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: Kodey Eley

Libby Environmental, Inc.

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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
Libby Project # L180329-2
Date Received 3/29/2018
Time Received 2:07 PM

Received By EB

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody is complete?	☑	Yes	☐	No		
2. How was the sample delivered?	☑	Hand Delivered	☐	Picked Up	☐	Shipped

Log In

3. Cooler or Shipping Container is present.	☑	Yes	☐	No	☐	N/A
4. Cooler or Shipping Container is in good condition.	☑	Yes	☐	No	☐	N/A
5. Cooler or Shipping Container has Custody Seals present.	☐	Yes	☑	No	☐	N/A
6. Was an attempt made to cool the samples?	☐	Yes	☑	No	☐	N/A
7. Temperature of cooler (0°C to 8°C recommended)	22.0 °C					
8. Temperature of sample(s) (0°C to 8°C recommended)	19.8 °C					
9. Did all containers arrive in good condition (unbroken)?	☑	Yes	☐	No		
10. Is it clear what analyses were requested?	☑	Yes	☐	No		
11. Did container labels match Chain of Custody?	☑	Yes	☐	No		
12. Are matrices correctly identified on Chain of Custody?	☑	Yes	☐	No		
13. Are correct containers used for the analysis indicated?	☑	Yes	☐	No		
14. Is there sufficient sample volume for indicated analysis?	☑	Yes	☐	No		
15. Were all containers properly preserved per each analysis?	☑	Yes	☐	No		
16. Were VOA vials collected correctly (no headspace)?	☑	Yes	☐	No	☐	N/A
17. Were all holding times able to be met?	☑	Yes	☐	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.

Chain of Custody Record

www.LibbyEnvironmental.com

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

Date: 3/29/18 Page: 1 of 1

Client: AEG
Project Manager: B. Dilba
Address: 605 11th Ave SE Suite 201
Project Name: Nuckles Pit Stop
City: Olympia State: WA Zip: 98501
Location: 10121 Highway 12, City, State: Nuckles, WA
Phone: 360.352.9835 Fax:
Collector: B. Dilba Date of Collection: 3/27/18
Client Project # 16-102
Email: bdilba@aeglwa.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			Field Notes
1	MW-5	—	1035	H2O	VOA x3		x	x												
2	MW-1	—	1104																	
3	MW-4	—	1204																	
4	MW-2	—	1245																	
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	3/29/18 1407	[signature]	3/29/18 1407
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

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

September 21, 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.

Chain of Custody Record

www.LibbyEnvironmental.com

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

Date: 09/14/17 Page: 1 of 1

Client: AECOM
Address: 605 11th Ave SE, Suite 201
City: Olympia State: WA Zip: 98501
Phone: 360 352 9835 Fax: 360 352 8164
Client Project # 16-102

Project Manager: Nicolas Pushkar
Project Name: Naches Pit Stop
Location: 10121 Hwy 12 City, State: Naches, WA
Collector: Nicolas Pushkar Date of Collection: 09/13/17
Email: npushkar@aecom.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	Total Lead	Diss Lead	Field Notes
1	B4-5	5	943	soil		X	X			X							X			
2	B4-10	10	950																	
3	B4-14	14	1002			X	X			X							X			
4	B4-20	20	1012																	
5	B5-6	6	1035			X	X			X										
6	B5-15	15	1045			X	X			X							X			
7	B5-20	20	1053																	
8	B-5	—	1100	water		X	X			X							X	X		
9	MW9-5	5	1127	soil		X	X			X							X			
10	MW9-10	10	1140																	
11	MW9-15	15	1208			X	X			X							X			
12	MW9-20	20	1208			X	X			X							X			
13	MW-9	—	205	water		X	X			X							X	X		09/14/17
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	09/14/17	[signature]	09/14/17
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.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
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	9/18/17	nd	nd	nd	nd	nd	108
LCS	9/18/17	126%	121%				88
B4-5	9/18/17	nd	nd	nd	nd	nd	93
B4-14	9/18/17	0.021	nd	2.6	4.73	464	98
B5-6	9/18/17	nd	nd	nd	nd	nd	105
B5-6 Dup	9/18/17	nd	nd	nd	nd	nd	110
B5-15	9/18/17	nd	nd	nd	nd	nd	112
MW9-5	9/18/17	nd	nd	nd	nd	nd	105
MW9-15	9/18/17	nd	nd	nd	nd	nd	104
MW9-20	9/18/17	nd	nd	nd	nd	nd	100
B5-15 MS	9/18/17	126%	108%				75
B5-15 MSD	9/18/17	119%	118%				74
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.

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Olympia, WA 98506
Phone: (360) 352-2110
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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
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	9/15/17	106	nd	nd
B4-5	9/15/17	80	nd	nd
B4-14	9/15/17	int	258	nd
B5-6	9/15/17	95	nd	nd
B5-15	9/15/17	103	nd	nd
MW9-5	9/15/17	106	nd	nd
MW9-5 Dup	9/15/17	110	nd	nd
MW9-15	9/15/17	103	nd	nd
MW9-20	9/15/17	101	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: Paul Burke

Libby Environmental, Inc.

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Olympia, WA 98506
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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
Client Project # 16-102

Analyses of Total Lead in Soil by EPA Method 7010 Series

Sample Number	Date Analyzed	Lead (mg/kg)
Method Blank	9/15/17	nd
B4-5	9/15/17	9.1
B4-14	9/15/17	nd
B5-6	9/15/17	nd
B5-15	9/15/17	nd
MW9-5	9/15/17	nd
MW9-15	9/15/17	nd
MW9-20	9/15/17	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
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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
Client Project # 16-102

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

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	9/15/17	100%
MW9-20 MS	9/15/17	97%
MW9-20 MSD	9/15/17	91%
RPD	9/15/17	6%

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
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	9/15/17	nd	nd	nd	nd	nd	98
LCS	9/15/17	87%	85%				100
B-5	9/15/17	nd	nd	nd	nd	nd	99
MW-9	9/15/17	nd	nd	nd	nd	nd	119
L170914-2 MS	9/15/17	99%	93%				108
L170914-2 MSD	9/15/17	101%	105%				116
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: Paul Burke

Libby Environmental, Inc.

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NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
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	9/19/17	106	nd	nd
B-5	9/19/17	99	nd	nd
MW-9	9/19/17	101	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: Paul Burke

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 # L170914-4
Client Project # 16-102

Analyses of Dissolved Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (µg/L)
Method Blank	9/15/17	nd
B-5	9/15/17	nd
MW-9	9/15/17	nd
Practical Quantitation Limit		5.0

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
Client Project # 16-102

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

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	9/15/17	102%

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

ANALYSES PERFORMED BY: Dirk Peterson

Libby Environmental, Inc.

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Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4
Client Project # 16-102

Analyses of Total Lead in Water by EPA 7010 Series

Sample Number	Date Analyzed	Lead (µg/L)
Method Blank	9/15/17	nd
B-5	9/15/17	nd
MW-9	9/15/17	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 # L170914-4
Client Project # 16-102

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

Sample Number	Date Analyzed	Lead (% Recovery)
LCS	9/15/17	102%
MW-9 MS	9/15/17	95%
MW-9 MSD	9/15/17	95%
RPD	9/15/17	0%

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 98506-2518

September 27, 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.

Chain of Custody Record

www.LibbyEnvironmental.com

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

Date: 09/14/17 Page: 1 of 1

Client: AECOM
Project Manager: Nicolas Pushkar
Address: 605 11th Ave SE, Suite 201
Project Name: Naches P&R 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 Pushkar Date of Collection: 09/13/17
Client Project # 16-102
Email: npushkar@aecom.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	Total Lead	Diss Lead	Field Notes
1	B4-5	5	943	soil			X	X		X							X			
2	B4-10	10	950																	
3	B4-14	14	1002				X	X		X							X			
4	B4-20	20	1012				(X)	(X)		(X)										9-22-17 Added per Nicolas via email. STD
5	B5-6	6	1035				X	X		X										
6	B5-15	15	1045				X	X		X							X			
7	B5-20	20	1053																	
8	B-5	—	1100	water			X	X		X							X	X		
9	MW9-5	5	1127	soil			X	X		X							X			
10	MW9-10	10	1140																	
11	MW9-15	15	1208				X	X		X							X			
12	MW9-20	20	1208				X	X		X							X			
13	MW-9	—	805	water			X	X		X							X	X		09/14/17
14																				
15																				
16																				
17																				

Relinquished by: Date / Time
Received by: Date / Time
Relinquished by: 09/14/17
Received by: 09/14/17
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
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

NACHES PIT STOP PROJECT
AEG, LLC
Naches, Washington
Libby Project # L170914-4B
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	9/25/17	nd	nd	nd	nd	nd	93
LCS	9/25/17	97%	106%				100
B4-20	9/25/17	nd	nd	nd	nd	nd	95
B4-20 Dup	9/25/17	nd	nd	nd	nd	nd	97
B4-20 MS	9/25/17	101%	110%				102
B4-20 MSD	9/25/17	98%	103%				100
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.

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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 # L170914-4B
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	9/25/17	97	nd	nd
B4-20	9/25/17	69	nd	nd
B4-20 Dup	9/25/17	107	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: Paul Burke

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Naches Pit Stop	
Facility/Site Address: 10121 Highway 12, Naches, Washington 98937-9785	
Facility/Site No: 505	VCP Project No.: CE0449

Step 2: IDENTIFY EVALUATOR		
Please identify below the person who conducted the evaluation and their contact information.		
Name: Scott Rose		Title: Senior Hydrogeologist
Organization: Associated Environmental Group		
Mailing address: 605 11th Ave SE, Suite 201		
City: Olympia	State: WA	Zip code: 98501
Phone: (360) 352-9835	Fax: (360) 352-8164	E-mail: srose@aegwa.com

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 2**.*

☐ No or Unknown *If you answered **"NO" or "UKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☒ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☐ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☐ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☐ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.

Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 15 W. Yakima Ave., Suite 200 Yakima, WA 98902
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

APPENDIX C

Supporting Documents

White Shield/Northwest Envirocon Figures & Data

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

4. Cool the sample in wet ice to approximately 4 degrees Centigrade.

5. Repack the samples for shipment to the laboratory in blue ice and a cooler.

6. Relinquish sample to courier for shipment to the laboratory.

4.3 Soil Chemistry

We collected 5 soil samples and submitted them to Materials Testing and Consulting in Mt. Vernon, Washington for laboratory analysis. Laboratory analysis of soil samples indicated that petroleum concentrations exceed action levels in Pits 1 & 4. In addition, we observed visible petroleum contamination in Pit 2 between depths of 11 and 13 feet. However, we did not submit a sample for laboratory analysis due to budget constraints. The analyses support the hypothesis that the petroleum release occurred at the abandoned dispenser island.

Pit 1

The soil sample collected from Pit 1 exhibited the highest degree of petroleum contamination. The analysis found:

- gasoline at a concentration of 12,467 parts per million (ppm),
- toluene at a concentration of 1.04 ppm,
- ethylbenzene at a concentration of 147.0 ppm and
- xylenes at a concentration of 1,316.8 ppm.

All of the constituents analyzed in this sample, with the exception of benzene, exceed action levels. The relative concentrations of benzene toluene, ethylbenzene and xylene suggest that the gasoline has been degraded and the volatile components may have migrated from the area of the test pit.

Pit 4

Laboratory analysis of the soil sample collected from Pit 4 at a depth of 7 feet found no detectable petroleum compounds. However the sample collected at a depth of 12 feet exhibited:

- gasoline at a concentration of 542.0 ppm,
- toluene at a concentration of 0.045 ppm,
- ethylbenzene at a concentration of 6.391 ppm and
- xylenes at concentrations of 57.248 ppm.

Compounds exceeding Action Levels in this sample consist of gasoline and xylenes. As in Pit 1, the relative concentrations of benzene toluene, ethylbenzene and xylene suggest that the gasoline has been degraded and the volatile components may have migrated from the area of the test pit.

Results of the analyses are shown in Appendix B. Comparison of the analyses results with Action Levels for Petroleum Releases indicates that corrective action for soil cleanup is required in the area of Pit 1 and Pit 4. Although no sample was collected immediately above the groundwater in Pit 2, corrective action for soil contamination is warranted.

4.4 Groundwater Sampling

Water sampling followed the same general protocol as the soil samples. The difference lies in filling the sample bottle. We filled the water bottle, placed the cap on the sample and inverted the bottle to ensure the absence of air space.

4.5 Groundwater Chemistry

We collected four groundwater samples and submitted them to Materials Testing and Consulting in Mt. Vernon, Washington for laboratory analysis. Results of the analyses find that the groundwater is contaminated by gasoline, diesel, benzene, toluene, ethylbenzene and xylenes. All of these contaminants exceed Action Levels. The sample collected from pit 1, adjacent to the abandoned dispenser island, exhibits the highest concentrations of petroleum hydrocarbons. The results for individual test pits are discussed below.

Pit 1

Analysis of the groundwater sample collected from Pit 1 found the following:

- gasoline at a concentration of 1,373 ppm,
- diesel at a concentration of 5,621 ppm,
- benzene at a concentration of 180 parts per billion (ppb),
- toluene at a concentration of 380 ppb,
- ethylbenzene at a concentration of 5,550 ppb and
- xylenes at a concentration of 38,400 ppb.

As discussed above, the relative concentrations of the BTEX compounds suggest that the petroleum is moderately weathered and is probably the result of an old release.

Pit 2

Analysis of the groundwater sample collected from Pit 2 found the following:

- gasoline at a concentration of 59 ppm,
- diesel at a concentration of 122 ppm,
- benzene at a concentration of 872 ppb,
- toluene at a concentration of 2,535 ppb,
- ethylbenzene at a concentration of 980 ppb,
- xylenes at a concentration of 6,360 ppb.

The relative concentrations of BTEX compounds suggests that the petroleum products found in this sample are relatively fresh. This may indicate a release in the vicinity of the underground storage tanks.

Pit 3

Analysis of the groundwater sample collected from Pit 3 found relatively low levels of diesel. However, the concentration of diesel slightly exceeds Action Levels. The analysis found:

- diesel at a concentration of 3.5 ppm.

No other petroleum constituents were detected.

Pit 4

Analysis of the groundwater sample collected from Pit 4, located at the southeast corner of the property, found:

- gasoline at a concentration of 23 ppm,
- benzene at a concentration of 11.8 ppb,
- toluene at a concentration of 117 ppb,
- ethylbenzene at a concentration of 96 ppb, and
- xylenes at concentrations of 3,209 ppb.

Although petroleum concentrations are substantially lower in this pit, the concentrations of petroleum constituents indicates that the contaminants have likely migrated off-site.

APPENDIX A

FIELD FORM FOR SITE ASSESSMENT OF UNDERGROUND STORAGE TANKS

WHITE SHIELD, INC.
ENVIRONMENTAL ENGINEERING CONSULTING
P.O. BOX 477
GRANDVIEW, WA
98930
(509) 882-1144

Project name: Pit Stop Project number: Bis-0191

NE NE? yes per DG 11-14-91

Location: S,E corner Naches & Hwy 12 ; NW 1/4 SW 1/4, Sec. 3, T. 14 N., R. 17 E., W.M.

Field Personnel: DAVEGREEN, RodHeit Weather: Mostly Cloudy, WARM Date: 5/10/91

Tank Contents: Regular gas Size: 8,000 gal Condition: NOT KNOWN

Tank Contents: Unleaded gas Size: 2,500 gal Condition: Not Known

Tank Contents: Unleaded gas Size: 2,500 gal Condition: Not Known, Previously Diesel

Tank Contents: _____ Size: _____ Condition: _____

Tank Contents: _____ Size: _____ Condition: _____

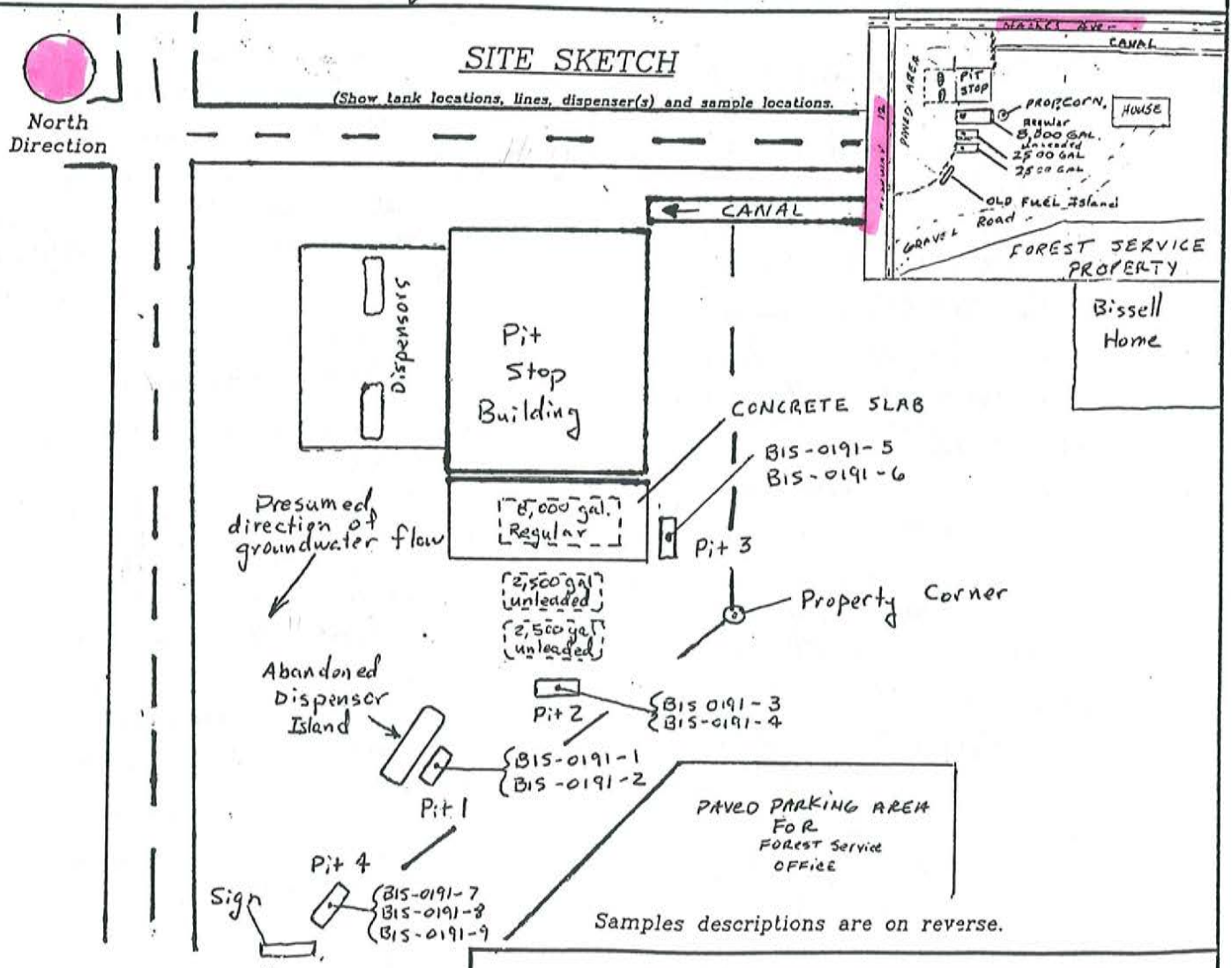
Ambient vapors: 4.2 T.O.V. Vapors in excavation: yes Odors: Diesel & Gasoline

Soil texture and structures: Very Poorly Sorted River Gravels up to 2' in Diameter Average 5" Approx. 10% – 15% over 1' Diameter

Visual contamination: Stained Grey ~ 1½' Above Ground Water Screening method: F.I.D.

SITE SKETCH

(Show tank locations, lines, dispenser(s) and sample locations.)



Samples descriptions are on reverse.

Depth to groundwater ~13'

Approximate scale: Not to Scale

I certify that the work performed and sampling methods used meet regulatory requirements as set forth by the U.S. Environmental Protection Agency and the Washington State Department of Ecology.

Site Assessor: _____ Date: 5-10-91

APPENDIX B

MTC *Analytical/Environmental Services*

Materials Testing & Consulting, Inc
P.O. Box 309
Mount Vernon, WA 98273
WSDOH Laboratory #46092090
(206)424-7560 · FAX (206)424-7550

12
Client: White Shield Inc.
P.O. Box 477
Grandview, WA 98930

Date: 5/17/91
Reference: 91-0144

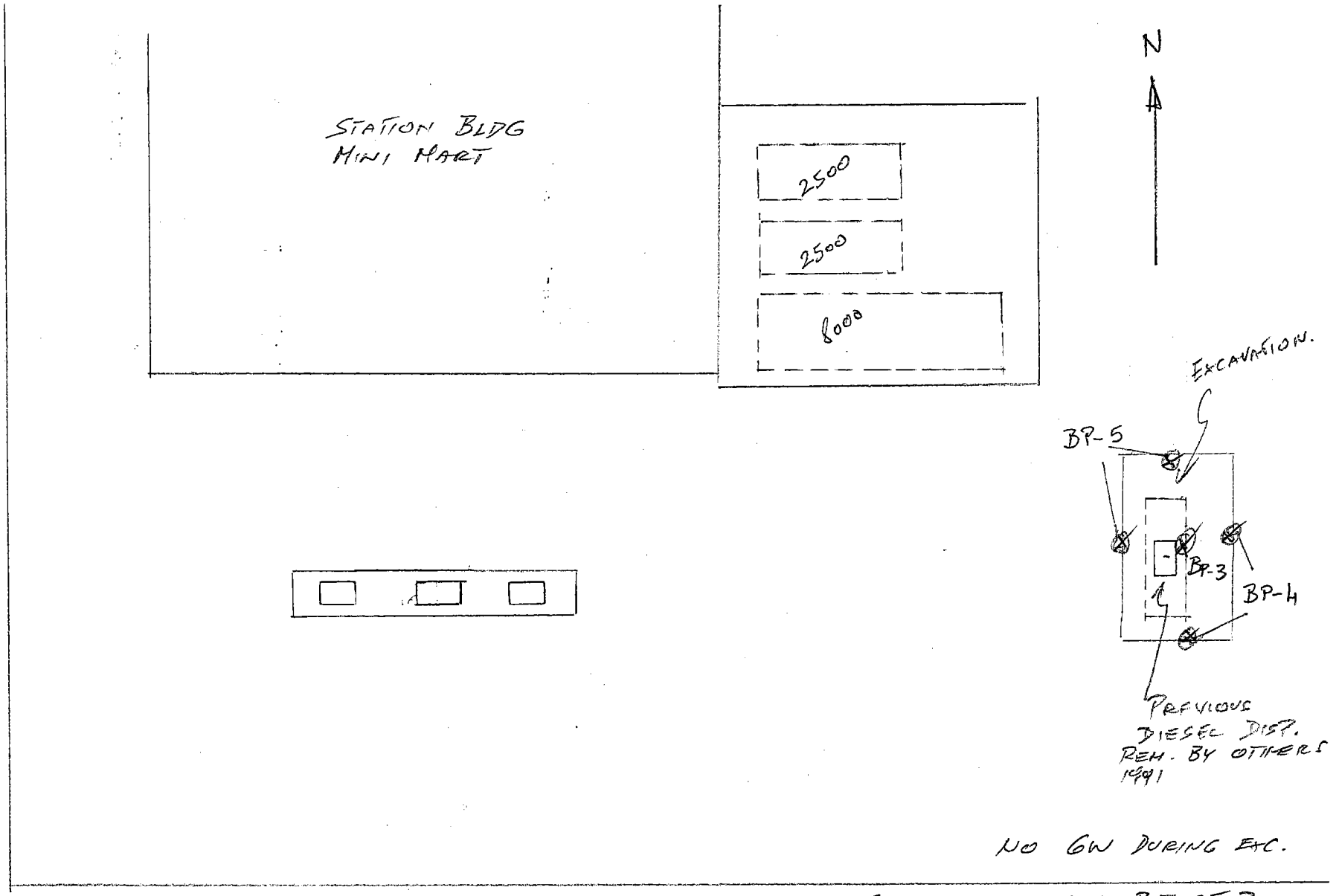
Attn: Mr. Dave Green

Project: Bissel-Naches

Data Report

Lab Number	Sample Description	ug/gm TPH	ng/gm Benzene	Toluene	Ethylbenzene	Xylenes
31-91-00543.0S	BIS-0191-1	12467-G	<100	1040	147000	1316800
31-91-00544.0W	BIS-0191-2	1373-G 5621-D	180	380	5560	38400
31-91-00545.0S	BIS-0191-3	1.1-G 6.6-D	<5	<5	<5	12
31-91-00546.0W	BIS-0191-4	59-G 122-D	872	2535	980	6360
31-91-00547.0S	BIS-0191-5	1.4-D	<5	<5	<5	<5
31-91-00548.0W	BIS-0191-6	3.5-D	<5	<5	<5	<5
31-91-00549.0S	BIS-0191-7	<1	<5	<5	<5	<5
31-91-00550.0S	BIS-0191-8	542-G	<25	45	6391	57248
31-91-00551.0W	BIS-0191-9	23-G	11.8	117	96	3209
	Methods:					
	BTEX/TPH SW846 8020/8015mod.					
	G- Gasoline D-Diesel	Soil/Water	Soil/Water	Soil/Water	Soil/Water	Soil/Water
	Method Reporting Limit (MRL)	0.05/0.01	5/1	5/1	5/1	5/1
	Maximum Contamination Levels	100/1	500/5	20000/20	40000/40	20000/20

Kurt W. Larsen
Sr. Enviromental Chemist



CLEANUP NACHES PIT-STOP.

6-12-98 COMP-S-WALLS

BP-1 — 730 mg/kg DIESEL

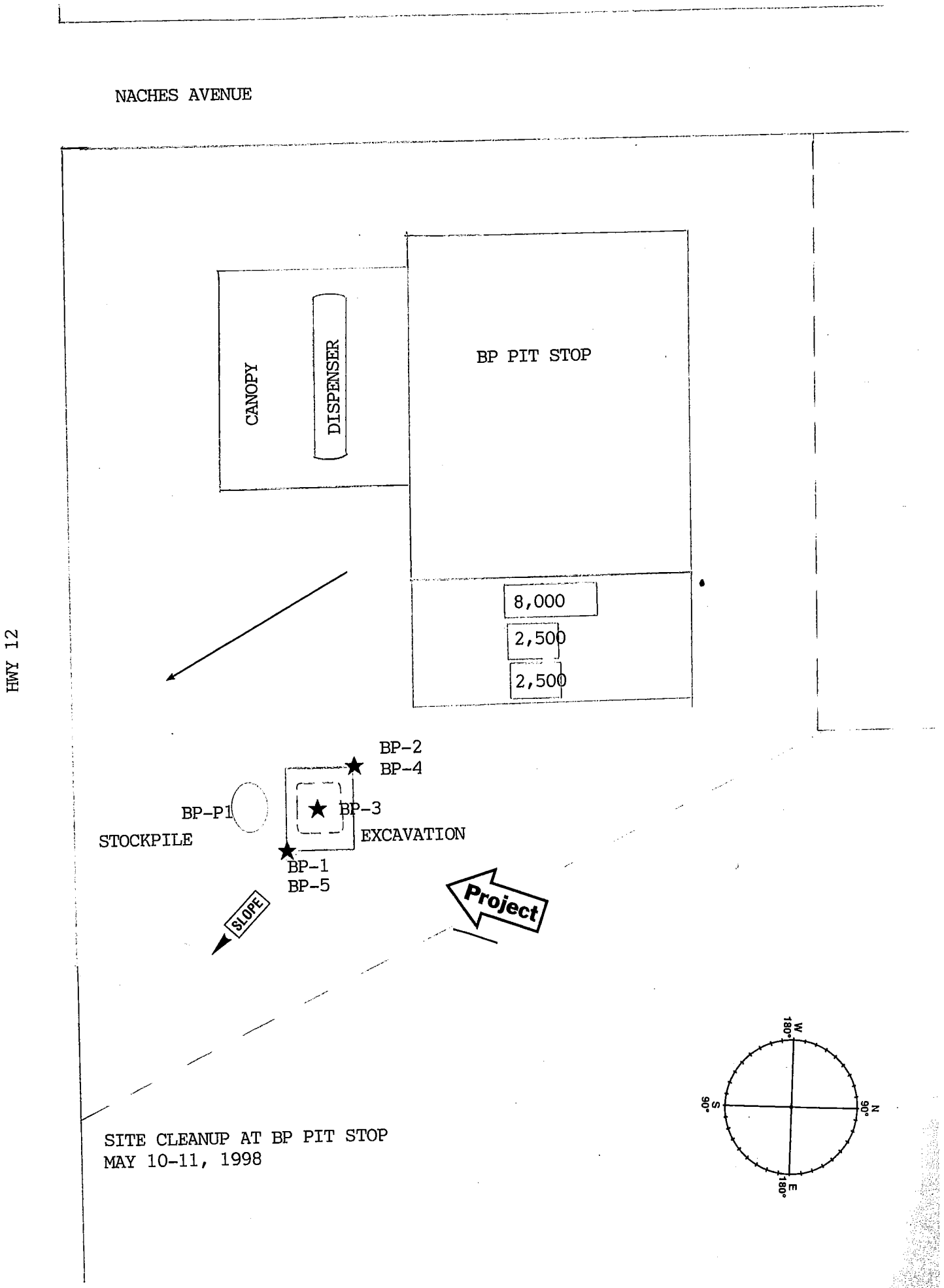
BP-2 — 190 mg/kg — " —

6-18-98

BP-3 — ND } COMP-S-WALLS

BP-4 — ND }

BP-5 — ND BOTTOM OF EXC.



SITE CLEANUP AT BP PIT STOP
MAY 10-11, 1998

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

May 27, 1998

Peter Trabusiner
Northwest Envirocon
210 N. Perry, Suite B
Kennewick, WA 99336

Re: Analytical Data for Project BP Pit Stop/Naches
Laboratory Reference No. 9805-140

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on May 22, 1998.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-HCID

Date Extracted: 5-22-98
Date Analyzed: 5-22-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	BP-1 E+S	BP-2 N+W	BP-3 CTR.
Lab ID:	05-140-01	05-140-02	05-140-03
Gas C7-C12:	ND	ND	ND
PQL:	29	28	27
Diesel Fuel C12-C24:	Diesel Fuel #2	Light Oil	ND
PQL:	58	56	54
Heavy Oil C24-C34:	ND	ND	ND
PQL:	120	110	110
Surrogate Recovery:			
o-Terphenyl	134%	113%	110%

Flags:

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-HCID

Date Extracted:	5-22-98
Date Analyzed:	5-22-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Client ID:	BP-P1 ST. PILE
Lab ID:	05-140-05
Gas C7-C12:	ND
PQL:	28
Diesel Fuel C12-C24:	Diesel Fuel #2
PQL:	57
Heavy Oil C24-C34:	ND
PQL:	110
Surrogate Recovery:	
o-Terphenyl	---
Flags:	F

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-22-98
Date Analyzed:	5-22-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0522S1
Gas C7-C12:	ND
PQL:	25
Diesel Fuel C12-C24:	ND
PQL:	50
Heavy Oil C24-C34:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	118%
Flags	

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-Dx

Date Extracted:	5-22-98
Date Analyzed:	5-22-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Client ID:	BP-P ST-PILE
Lab ID:	05-140-04
Diesel Fuel C12-C24:	ND
PQL:	28
Oil C24-C34:	ND
PQL:	57
Surrogate Recovery:	
o-Terphenyl	93%
Flags:	

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-22-98
Date Analyzed:	5-22-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0522S1
Diesel Fuel C12-C24:	ND
PQL:	25
Oil C24-C34:	ND
PQL:	50
Surrogate Recovery: o-Terphenyl	100%
Flags:	

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	5-21-98
Date Analyzed:	5-22-98
Matrix:	Soil
Units:	mg/Kg (ppm)

Lab ID:	05-137-04	05-137-04 DUP
Diesel Fuel C12-C24:	355	237
PQL:	25	25
RPD:	40	
Surrogate Recovery:		
o-Terphenyl	110%	92%

Flags:

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-Dx
SB/SBD QUALITY CONTROL

Date Extracted: 5-22-98
Date Analyzed: 5-22-98

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID:	SB0522S1	SB0522S1DUP
Diesel Fuel C12-C24:	97.9	92.2
PQL:	25	25
% Recovery	98	92
RPD:	6.0	
Surrogate Recovery: o-Terphenyl	120%	118%

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-Dx

Date Extracted: 5-26-98
Date Analyzed: 5-26-98

Matrix: Soil
Units: mg/Kg (ppm)

Client ID:	BP-1 E+S	BP-2 N+W	BP-P1 ST. PILE
Lab ID:	05-140-01	05-140-02	05-140-05
Diesel Fuel C12-C24:	730	190	4200
PQL:	29	28	28
Oil C24-C34:	72	91	86
PQL:	58	56	57
Surrogate Recovery:			
o-Terphenyl	141%	98%	---
Flags:	P	P	F,P

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-26-98
Date Analyzed:	5-26-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0526S1
Diesel Fuel C12-C24:	ND
PQL:	25
Oil C24-C34:	ND
PQL:	50
Surrogate Recovery:	
o-Terphenyl	110%
Flags:	

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	5-26-98	
Date Analyzed:	5-26-98	
Matrix:	Soil	
Units:	mg/Kg (ppm)	
Lab ID:	05-152-03	05-152-03 DUP
Diesel Fuel C12-C24:	ND	ND
PQL:	25	25
RPD:	N/A	
Surrogate Recovery:		
o-Terphenyl	86%	98%
Flags:		

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

NWTPH-Dx
SB/SBD QUALITY CONTROL

Date Extracted:	5-26-98	
Date Analyzed:	5-26-98	
Matrix:	Soil	
Units:	mg/Kg (ppm)	
Spike Level:	100 ppm	
Lab ID:	SB0526S1	SB0526S1 DUP
Diesel Fuel C12-C24:	87.0	87.2
PQL:	25	25
Percent Recovery:	87	87
RPD:	0.23	
Surrogate Recovery:		
o-Terphenyl	114%	118%

Flags:

Date of Report: May 27, 1998
Samples Submitted: May 22, 1998
Lab Traveler: 05-140
Project: BP Pit Stop/Naches

Date Analyzed: 5-22-98

% MOISTURE

Client ID	Lab ID	% Moisture
BP-1 E+S	05-140-01	14
BP-2 N+W	05-140-02	11
BP-3 CTR.	05-140-03	7.0
BP-P ST-. PILE	05-140-04	12
BP-P1 ST. PILE	05-140-05	12

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

D - Data from 1:____ dilution.

E - The value reported exceeds the quantitation range, and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeniety.. The sample was re-extracted and re-analyzed with similar results.

L - Quantitated from C7-C34 as diesel fuel #2.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) are present in the sample which are elevating the diesel result.

O - Hydrocarbons in the heavy oil range (>C24) are present in the sample which are elevating the diesel result.

P - Hydrocarbons in the diesel range (C12-C24) are present in the sample which are elevating the oil result.

Q - The RPD of the results between the two columns is greater than 25.

R - Hydrocarbons outside the defined gasoline range are present in the sample and are elevating the gasoline result.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

Y - Acid Cleaned.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected
MRL - Method Reporting Limit
PQL - Practical Quantitation

Chain of Custody

OnSite Environmental Inc.

14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: NWE
Project No.: N/A
Project Name: BP Pit Stop/Naches
Project Manager: P. Trabusiner

Turn Around Requested (Check One)
- ☐ Same Day
- ☒ 24 Hours
- ☐ 48 Hours
- ☒ Standard
- ☐ _____ (other)

Project Chemist: DAB

Laboratory No.

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	BP-1 E+S	5-19-98	11:15	Soil	1	X		(X)										X
2	BP-2 N+W	5-19	11:25	"	1	X		(X)										X
3	BP-3 CTR.	5-19	11:45	"	1	X												X
4	BP-P ST-PIPE	5-19	12:05	"	1			X										X
5	BP-P1 "	5-19	13:05	"	1	X		(X)										X

RELINQUISHED BY	DATE	RECEIVED BY	DATE
V. Trabusiner	5-21-98		5-21-98
FIRM NWE	TIME 15:00	FIRM Fedex	TIME 15:01
RELINQUISHED BY	DATE	RECEIVED BY Kristen Koch	DATE 5/22/98
FIRM	TIME	FIRM OSE	TIME 9:35
REVIEWED BY		DATE REVIEWED	

COMMENTS:
No P.O. If Needed
(X) Added by Peter 5/26/98 BC

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
Analytical Testing and Mobile Laboratory Services

June 4, 1998

Peter Trabusiner
Northwest Envirocon
210 N. Perry, Suite B
Kennewick, WA 99336

Re: Analytical Data for Project BP Pit Stop Naches
Laboratory Reference No. 9806-013

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on June 3, 1998.

The standard policy of OnSite Environmental Inc., is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Chemist

Enclosures

Date of Report: June 4, 1998
Samples Submitted: June 3, 1998
Lab Traveler: 06-013
Project: BP Pit Stop Naches

NWTPH-HCID

Date Extracted:	6-3-98
Date Analyzed:	6-3-98
Matrix:	Soil
Units:	mg/Kg (ppm)

Client ID:	BP-4 N+W	BP-5 E+S
Lab ID:	06-013-01	06-013-02
Gas C7-C12:	ND	ND
PQL:	30	30
Diesel Fuel C12-C24:	ND	ND
PQL:	60	60
Heavy Oil C24-C34:	ND	ND
PQL:	120	120
Surrogate Recovery:		
o-Terphenyl	95%	94%

Flags:

Date of Report: June 4, 1998
Samples Submitted: June 3, 1998
Lab Traveler: 06-013
Project: BP Pit Stop Naches

NWTPH-HCID
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-3-98
Date Analyzed:	6-3-98
Matrix:	Soil
Units:	mg/Kg (ppm)
Lab ID:	MB0603S1
Gas C7-C12:	ND
PQL:	25
Diesel Fuel C12-C24:	ND
PQL:	50
Heavy Oil C24-C34:	ND
PQL:	100
Surrogate Recovery:	
o-Terphenyl	96%

Flags

Date of Report: June 4, 1998
Samples Submitted: June 3, 1998
Lab Traveler: 06-013
Project: BP Pit Stop Naches

Date Analyzed: 6-3-98

% MOISTURE

Client ID	Lab ID	% Moisture
BP-4 N+W	06-013-01	17
BP-5 E+S	06-013-02	17

OnSite Environmental Inc.

DATA QUALIFIERS AND ABBREVIATIONS

A - Due to high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

D - Data from 1:____ dilution.

E - The value reported exceeds the quantitation range, and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

G - Insufficient sample quantity for duplicate analysis.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeniety. The sample was re-extracted and re-analyzed with similar results.

L - Quantitated from C7-C34 as diesel fuel #2.

M - Predominantly _____ range hydrocarbons present in the sample.

N - Hydrocarbons in the gasoline range (C7-toluene) are present in the sample which are elevating the diesel result.

O - Hydrocarbons in the heavy oil range (>C24) are present in the sample which are elevating the diesel result.

P - Hydrocarbons in the diesel range (C12-C24) are present in the sample which are elevating the oil result.

Q - The RPD of the results between the two columns is greater than 25.

R - Hydrocarbons outside the defined gasoline range are present in the sample and are elevating the gasoline result.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

Y - Acid Cleaned.

Z - Interferences were present which prevented the quantitation of the analyte below the detection limit reported.

ND - Not Detected
MRL - Method Reporting Limit
PQL - Practical Quantitation

Chain of Custody

OnSite Environmental Inc.
14924 NE 31st Circle • Redmond, WA 98052
Fax: (425) 885-4603 • Phone: (425) 883-3881

Company: NWE
Project No.: N/A
Project Name: BP PIT STOP NACHES
Project Manager: P. TRABUSINER

Turn Around Requested
(Check One)
- ☐ Same Day
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ Standard
- ☐ _____ (other)

Project Chemist: DAB
Laboratory No.

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8240/624/8260	Halogenated Volatiles by 8260	Semivolatiles by 8270/625	PAHs by 8270/625	PCB's by 8081/608	Total RCRA Metals (8)	TCLP Metals	VPH	EPH	% Moisture
1	BP-4 N+W	5-19-97	12:35	SOIL	1	X												X
2	BP-5 E+S	5-19-97	12:46	SOIL	1	X												X

RELINQUISHED BY: P. Trabusiner	DATE: 6-2-98	RECEIVED BY:	DATE: 6-2-98	COMMENTS:
FIRM: NWE	TIME: 14:02	FIRM: FEDEX	TIME: 14:03	
RELINQUISHED BY:	DATE:	RECEIVED BY: Kristen Koch	DATE: 6/3/98	
FIRM:	TIME:	FIRM: OSE	TIME: 9:15	
REVIEWED BY:		DATE REVIEWED:		