ASSOCIATED ENVIRONMENTAL GROUP, LLC

Subsurface Investigation Report

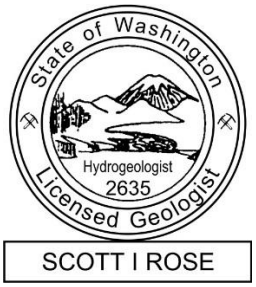
Conducted on:
Adams Street Building
6707 S Adams Street
Tacoma, Washington 98409

Prepared for:
Mr. Ed Honeycutt
Mr. Formal, Inc.
16113 NW 27th Court
Vancouver, Washington 98685-1615

Prepared & Reviewed by:

Rebecca Dilba, R.S.A.
Staff Geologist

Scott Rose, L.H.G.
Senior Hydrogeologist



AEG Project #: 15-171
Date of Report: April 28, 2016

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1.0 INTRODUCTION

Associated Environmental Group, LLC (AEG) has completed a subsurface investigation at the Adams Street Building, located at 6707 South Adams Street, in Tacoma, Washington (the Site). This subsurface investigation was performed to evaluate potential soil and groundwater contamination resulting from the historical usage of the Site as a dry cleaning operation.

For this investigation, AEG sampled and analyzed sub-slab soil gas at four locations within the building for contaminants of concern. AEG then oversaw advancement of 10 soil borings at the Site using a direct-push drilling rig, and completed four of those soil borings as groundwater monitoring wells. Soil and groundwater samples were collected from the soil borings and monitoring wells, and laboratory analyzed for chlorinated volatile organic compounds (VOCs) using EPA Method 8260CL.

1.1 Site and Vicinity Area Background

The Site is located on the east side of the intersection of South Adams Street and South 67th Street in Tacoma, Washington. The Site encompasses two parcels (identified as Pierce County parcel numbers 0220251163 and 0220251164) with a combined area of 1.29 acres, and is currently occupied by a vacant warehouse and the associated parking and storage area. Asphalt and gravel covers the parking area. The immediate vicinity of the Site includes commercial and industrial businesses with a railroad immediately adjacent to the east. Figure 1, *Site Area Map*, presents the general layout of the Site and vicinity. The Site's current layout is provided as Figure 2, *Site Map*.

The Site is currently vacant, and was historically a garment making shop, and later a tuxedo and formal attire rental shop known as Mr. Formal, with an on-Site dry cleaning facility. The dry cleaning area of the Site was located in the eastern part of the building. There is no known history of previous environmental investigation at the Site.

1.2 Site Geology and Hydrogeology

Subsurface soils encountered during AEG Site investigation activities consisted of various mixtures of dense sand and gravel. Due to probe refusal in the cobbly subsurface at this Site, the maximum depth explored to date was 19 feet below ground surface (bgs). Boring logs from AEG investigations are provided in Appendix B, *Supporting Documents, Boring Logs*.

During the subsurface investigation, groundwater was encountered at approximately 9 feet to 13 feet bgs. Groundwater encountered at the time of groundwater sampling activities was approximately 8 feet bgs in all monitoring wells. Groundwater gradients measured during this investigation indicates a westerly direction of shallow groundwater flow beneath the Site, with an approximate gradient of 0.0002 feet per foot. However, the direction of groundwater flow is variable given how flat the gradient is, as illustrated on Figure 9, *March 2016 Groundwater Contour Map,* and Figure 10, *April 2016 Groundwater Contour Map.*

1.3 Objectives and Scope of Work

The objective of this subsurface investigation was to attempt to delineate the lateral and vertical extents of soil and groundwater contamination at the Site sufficiently to set cleanup standards, and evaluate remedial alternatives.

Specific tasks performed included:

- Collecting four sub-slab soil gas samples from beneath the building floor, and analyzed for chlorinated VOCs;
- Conducting both public and private utilities locates for the Site and vicinity. The public rights of way locates were performed by the Underground Utilities Locate Center; Applied Professional Services (APS) provided private utility locates on the Site;
- Advancing six soil borings to a total depth of 15 feet bgs using a Geoprobe® direct-push drill rig;
- Advancing and installing four monitoring wells at selected locations to a depth of 15-20 feet bgs using a direct-push drill rig;
- Continuously logging the subsurface media during the investigation, and collecting soil samples at various depths to observe and document soil lithology, color, moisture content, and sensory evidence of impairment;
- Collecting soil samples for laboratory analyses at various depths based on the field observations;
- Collecting groundwater samples for laboratory analyses;
- Transporting and submitting selected groundwater and soil samples to Environmental Services Network NW, Inc. (ESN), a Washington State certified analytical laboratory, for laboratory analyses of chlorinated VOCs;

- Containing investigation-derived-wastes, including soil cuttings and decontamination wash fluids, in 55-gallon steel drums, and storing them on Site awaiting the results of laboratory analyses;
- Surveying the monitoring wells;
- Completing data analysis of laboratory analytical results and comparing data to Ecology's Model Toxics Control Act (MTCA) Method A cleanup levels for soil and groundwater; and
- Preparing this report presenting final documentation of the field activities and methodologies, and summarizing the analytical results, conclusions, and recommendations.

2.0 FIELD METHODOLOGY

AEG supervised the collection of four sub-slab soil-gas samples (B-1 through B-4) on November 25, 2015; advancement of six soil borings (B-5 through B-10) on January 15, 2016; and advancement of four soil borings, which were subsequently completed as monitoring wells MW-1, MW-2, MW-3, and MW-4, on February 23, 2016. The monitoring wells were advanced to a maximum depth of 15 to 19 feet bgs via a Geoprobe® direct-push drilling rig operated by ESN of Olympia, Washington. Soil samples were collected during the drilling that took place on January 15, and February 23, 2016 for field screening and laboratory analyses. Appendix B, *Supporting Documents, Boring Logs*, provides details of soil boring, sample recovery, and monitoring well completion.

On March 17, 2016, following proper well development, AEG sampled groundwater from each of the four monitoring wells. The locations of the wells and Site features are illustrated on Figure 2, *Site Map*. Photo documentation of the subsurface investigations is presented in Appendix A, *Site Photographs*.

2.1 Sub-Slab Soil Gas Sampling Procedures

AEG sampled soil gas from four locations (B-1, B-2, B-3, and B-4) using a roto-hammer to core through the concrete floor below the building foundation. Soil gas data was collected to evaluate whether vapor sources associated with a historical dry-cleaning operation were present beneath the building, and to determine whether further evaluation of soil and groundwater was warranted. A 1-inch hole was drilled in four locations in an area adjacent to the now removed dry-cleaning machine. A nylon tube was inserted and sealed to the concrete using a bentonite slurry and checked for leaks. Once purge volume of the line was removed, a Tedlar bag was hooked up to the line and air was pumped out using a low-flow peristaltic pump. Once the Tedlar bag had filled up with air, the Tedlar bag valve was closed, the line removed and the hole patched. The samples were transported to the ESN laboratory and analyzed for chlorinated VOCs using EPA Method 8260 CL.

2.2 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 VOC losses, soil sampling for VOCs and field preservation methods followed methods set forth by EPA's Method 5035A and Ecology's guidance, "*Collecting and Preparing Soil Samples for VOC Analysis*". Soil samples 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. A Photoionization Detector (PID) was used to detect VOC vapors in the soil cores.

Soil samples were selected for laboratory analysis based on field observations and PID readings. Soil samples were collected and placed into laboratory-provided, pre-weighed, 40-milliliter (ml) volatile organic analysis (VOA) glass vials. The soil samples were transported to the ESN laboratory in Olympia, Washington, for analyses following industry standard chain-of-custody procedures. ESN is a licensed Washington State analytical laboratory. A total of 27 soil samples were analyzed from the 10 soil borings.

Boring logs and soil laboratory analytical results are provided in Appendix B, *Supporting Documents, Boring Logs, Laboratory Datasheets*.

2.3 Groundwater Sampling Procedures – Soil Boring

Prior to decommissioning each soil boring, AEG sampled groundwater from the boring. Dedicated polyethylene tubing was inserted into the boring, and groundwater was purged using a peristaltic pump and EPA-approved low-flow purge techniques, until the discharge was relatively free of sediment. A groundwater sample was then collected from each boring and placed into laboratory-provided pre-weighed 40-ml VOA glass vials.

2.4 Monitoring Well Installation

Four monitoring wells were constructed at the Site. All four monitoring wells were constructed pursuant to Chapter 173-160 WAC, Ecology's *Minimum Standards for Construction and Maintenance of Wells*. Groundwater monitoring wells were constructed to a depth of between 15 and 20 feet bgs, with 10 feet of 1-inch diameter 0.010-inch slot PVC screen. The annular space around the well screen was filled with 10/20 Colorado sand to approximately 2 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.

2.5 Groundwater Sampling Procedures – Monitoring Well

On March 17, 2016, AEG sampled groundwater from all four monitoring wells. New, dedicated polyethylene tubing was installed in each of the wells to the center of the water column. Following EPA-approved low-flow purging and sampling techniques, groundwater from each well was purged until the sample was relatively free of sediment. During purging, a YSI-water quality multi-parameter instrument equipped with a flow-through cell was used to continuously monitor

field parameters of temperature, pH, conductivity, total dissolved solids, salinity, dissolved oxygen, and oxidation reduction potential in the purged groundwater. Groundwater from each well was purged through the dedicated polyethylene tubing until the sample was relatively free of sediment, and the field parameters became relatively stable. Groundwater samples were collected in laboratory provided 40-ml VOAs when three successive parameter measurements stabilized to within a maximum of 10 percent difference. Upon collection, the samples were placed in a chilled cooler for transport to the analytical laboratory.

2.6 Quality Controls

All soil and groundwater samples were collected in general accordance with industry protocols for the collection, documentation, and handling of samples. Descriptions of soil and sampling depths were carefully logged in the field, and the drillers and geologist confirmed sample depths as soil samples were collected. Boring location maps were completed prior to leaving the Site, to document sampling locations.

Soil samples were tightly packed into laboratory provided sampling jars to eliminate sample headspace. Groundwater samples were collected in the provided vials so that there were no bubbles in them. Upon sampling, all samples were placed immediately into chilled ice chests.

All samples were transported and submitted to the laboratory under industry standard chain-of-custody protocols. The laboratory report provided standard quality assurance/quality control (QA/QC), which included the following: surrogate recoveries for each sample; method blank results, laboratory control sample results, and laboratory control sample duplicate results. Laboratory QA/QC results were all within acceptable recovery limits.

2.7 Investigation-Derived Waste

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

3.0 ANALYTICAL RESULTS

Soil gas, soil, and groundwater were laboratory analyzed for chlorinated VOCs by EPA Method 8260CL. All analytical results obtained were compared to Ecology MTCA Method A cleanup levels for soil and groundwater, and Ecology MTCA Method B screening levels for sub-slab soil gas. Copies of the laboratory datasheets are provided in Appendix B, *Supporting Documents, Laboratory Datasheets.*

3.1 Soil Gas Samples

Sub-slab soil gas samples from borings B-1, B-2, and B-3 detected tetrachloroethylene (PCE) above the MTCA Method B sub-slab soil gas screening level of 321 micrograms per cubic meter (µg/m³), at 340 µg/m³, 1,200 µg/m³, and 570 µg/m³, respectively. B-2 is located adjacent to the location of the former dry-cleaning machine inside the building. Table 2, *Summary of Soil Gas Analytical Results,* presents a summary of analytical results compared to Ecology MTCA Method B screening levels.

3.2 Soil Results

Soil sample results indicated the presence of PCE in 6 of the 10 borings advanced at the Site. Trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), trans-1,2-dichloroethylene (trans-1,2-DCE), and vinyl chloride, daughter products of the anaerobic degradation of PCE, were not detected in any samples. PCE was found between 9 and 15 feet bgs. The depth at which each sample was obtained is designated within each sample number; i.e. B8-13.5 was obtained from boring B-8, at 13.5 feet bgs. A summary of results above MTCA Method A cleanup levels includes the following:

- PCE was detected above the MTCA Method A cleanup level of 0.05 milligrams per kilogram (mg/kg) in samples:
    - B6-9.5 (0.052 mg/kg);
    - B7-13 (0.054 mg/kg);
    - B8-13.5 (0.14 mg/kg);
    - MW3-5, MW3-9.5, MW3-13, MW3-15 (0.06 to 0.74 mg/kg); and
    - MW4-15 (0.28 mg/kg).
- All other samples were either below MTCA Method A levels or were below appropriate laboratory detection limits.

Table 1, *Summary of Soil Analytical Results*, presents analytical results compared to Ecology MTCA Method A cleanup levels for soil. Figure 2, *Site Map*, shows the locations of each boring and monitoring well.

3.3 Groundwater Results

PCE was the only contaminant of concern detected in groundwater during this investigation. Groundwater samples obtained on March 17, 2016 detected PCE in groundwater at monitoring well MW-3 at a concentration of 10 micrograms per liter (µg/L), above the MTCA Method A cleanup level of 5 µg/L. Groundwater samples obtained on January 15, 2016 from soil borings B-7 and B-8 also contained PCE at concentrations of 5.6 µg/L and 9.6 µg/L, respectively, above MTCA Method A cleanup levels.

PCE was detected in groundwater samples from monitoring well MW-4, but below MTCA Method A cleanup levels. Groundwater from monitoring well MW-1 and MW-2 did not contain PCE above laboratory detection limits.

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

4.0 CONCEPTUAL SITE MODEL (CSM)

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

4.1 Constituents (Contaminants) of Concern and Affected Media

PCE is the single contaminant of concern (COC) that has been detected at this Site. Soil, groundwater, and soil gas are the affected media. Contamination at the Site is likely the result of a leaking dry cleaning machine, and possible improper disposal of spent solvents from the dry cleaning operation.

PCE contamination in soil was detected above the MTCA Method A cleanup levels in soil samples from depths ranging from 5 to 15 feet bgs, the deepest samples recovered, in soil borings B-6, B-7, B-8, MW-3, and MW-4. The distribution of contaminants in soil at the Site is depicted in Figure 4, *Site Map with Geologic Cross Sections A-A' and B-B'*, Figure 5, *Geologic Cross Sections A-A'*, and Figure 6, *Geologic Cross Sections B-B'*. The approximate locations of PCE contamination above MTCA Method A cleanup levels detected in soil are also presented in Figure 7, *PCE Concentrations in Soil*.

Shallow soil gas impacts were detected beneath the sub-slab (approximately 1.5 feet bgs) in the area of the former dry cleaning machine.

Groundwater contamination was detected above MTCA Method A cleanup levels in borings B-7, B-8, and MW-3. Approximate locations of contamination above MTCA Method A cleanup levels in groundwater are presented in Figure 8, *PCE Concentrations in Groundwater*.

Based on groundwater gradients from the March 2016 groundwater event and measurements collected in April 2016 when the wells were surveyed, groundwater flow direction varies as the gradient is fairly flat. Groundwater gradients are illustrated in Figure 9, *March 2016 Groundwater Contour Map,* and Figure 10, *April 2016 Groundwater Contour Map*. The extent of groundwater contamination appears to be bounded to the north by MW-1, to the south by MW-2, and to the east by B-9 and B-10. PCE was not detected in borings B-10 or B-11, and was detected, but below MTCA Method A cleanup levels, in B5, B6, and MW-4.

4.2 Environmental Fate of PCE in the Subsurface

The density of PCE is greater than water. Upon release into the environment, chlorinated VOCs such as PCE can sink through the vadose zone, through the water table, and possibly penetrate

leaking aquitards. These chemicals can also exist as a residual non-mobile phase either sorbed to soil, or trapped in the pore spaces between soil particles. Unless remediated, residual chlorinated VOCs can act as a long-term source of groundwater contamination. At this Site, sorbed-phase PCE in soil has been detected, as has residual dissolved-phase PCE in groundwater. No free product has been detected.

Chlorinated VOCs and their associated compounds can be volatilized under the appropriate conditions. In the subsurface, volatilization releases contaminants into soil vapor where, if conditions are right, can migrate beneath or into structures. PCE was detected in soil gas beneath the Site building.

The most common anaerobic dechlorination pathway of PCE is the degradation to ethenes. In the sequential transformation of the chlorinated ethenes, chlorine is replaced using hydrogen as an electron donor. The occurrence of the lesser chlorinated ethenes (such as vinyl chloride and DCE) in groundwater is primarily a consequence of incomplete anaerobic reductive dechlorination of the more highly chlorinated ethenes (PCE and TCE). Vinyl chloride and DCE are toxic, and vinyl chloride is a known human carcinogen. However, at this Site, none of these daughter products have been detected, suggesting a more aerobic environment.

4.3 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.

4.3.1 Direct Contact and Incidental Ingestion

Direct contact with, or ingestion of, soil containing PCE is considered a potential exposure pathway at the Site. Soil impacts above cleanup levels are generally present in the central portion of the Site, especially beneath the building. This area of the Site is currently covered by asphalt and/or Site structures and, unless disturbed, is not available for potential direct contact or incidental ingestion. Direct contact with, or ingestion of, contaminated groundwater may not be considered a potential exposure pathway, as groundwater levels have been measured at the Site as shallow as 7.9 feet bgs, providing sufficient separation from ground surface to contaminated groundwater. With appropriate institutional controls, the direct contact and incidental ingestion pathways could remain incomplete.

4.3.2 Protection of Groundwater/Leaching

Shallow groundwater in the area of the Site is not used for drinking water. Water supplies at the Site and vicinity are supplied by the City of Tacoma, and are primarily sourced from South Tacoma. Nearby well logs from two deep water-bearing municipal wells show numerous

confining layers, and screened intervals between 244 and 285 feet bgs in the confined shallow aquifer, with static head of approximately 22 feet bgs at the time of drilling, to a screened interval of between 1074 and 1121 feet bgs in the confined deep aquifer, with static water levels of 143-151 feet bgs at the time of drilling.

In MW-4, PCE was detected in saturated soil at 15 feet bgs at 0.28 mg/kg, above the MTCA Method A cleanup level of 0.05 mg/kg. However, groundwater collected from this well detected PCE at only 2.0 µg/L, which is below the MTCA Method A cleanup level of 5 µg/L. The highest detection of PCE in shallow groundwater beneath the Site was 10 µg/L in MW-3. While these results confirm leaching to groundwater to be a complete pathway at this Site, they are not indicative of higher concentrations of PCE potentially present at depth.

4.3.3 Potential Air Exposure Pathways

PCE was detected in sub-slab soil gas above MTCA Method B screening levels beneath the building at the Site. Inhalation exposure via the soil-to-vapor pathway is considered a complete pathway at the Site.

4.4 Potential Human Receptors and Terrestrial Ecological Evaluation

Exposure to PCE in Site soil is considered a potential risk to utility workers or Site visitors who may be exposed to soil from the Site.

The majority of the Site is covered by asphalt paving or buildings, and it is not anticipated that ecological receptors would be at risk. Based upon WAC 173-340-7491(1)(b), the Site may be eligible for an exclusion from the additional requirements of terrestrial ecological evaluation. All soil contaminated with hazardous substances is, or will be, covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed to the soil contamination. Institutional controls can ensure that capping remains in place.

5.0 CLEANUP STANDARDS

The following sections identify remedial action objectives and preliminary cleanup standards for the Site, which were developed to address Ecology's requirements for cleanup. These requirements address conditions relative to potential human receptor impacts. Together, the remedial action objectives and cleanup standards provide the framework for evaluating remedial alternatives.

5.1 Remedial Action Objectives

The primary objective for a cleanup action focuses on substantially eliminating, reducing, and controlling unacceptable risks to human health and the environment posed by the COCs, to the greatest extent practicable.

5.2 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.

5.2.1 Cleanup Levels

MTCA Method A cleanup levels for soil and groundwater 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. The MTCA Method A cleanup levels for the Site COC are:

	Soil	Groundwater
• PCE:	0.05 mg/kg	5.0 µg/L

MTCA Method B cleanup levels are appropriate for soil gas at this Site. The MTCA Method B cleanup level for PCE in indoor air is:

	Indoor Air
• PCE:	9.62 µg/m³

5.2.2 Points of Compliance

For this Site, it is assumed that standard POCs will be applied.

- Soil – Direct Contact: For soil cleanup levels based on human exposure via direct contact, the POC is throughout the Site from the ground surface to 15 feet bgs.
- Soil – Leaching: For soil cleanup levels based on protection of groundwater, the POC is throughout the Site.
- Groundwater: For groundwater, the POC 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 POC is ambient and indoor air throughout the Site.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The conclusions derived during the subsurface investigation at the Adams Street Building are as follows:

- PCE was detected **above** the Ecology MTCA Method A soil cleanup level in soil samples collected from 9 to 15 feet bgs in areas near the former dry cleaning machine.
- PCE was detected in groundwater above the Ecology MTCA Method A groundwater cleanup level in groundwater samples collected from soil borings and groundwater monitoring wells.
- PCE was detected in sub-slab soil gas above Ecology MTCA Method B sub-slab screening levels in samples collected from underneath the building foundation.
- No other VOCs were detected in soil, air, or groundwater samples collected from the Site.
- The lateral extent of contamination appears to be defined:
    - To the north, in soil and groundwater by monitoring well MW-1;
    - To the east, in soil and groundwater by soil borings B-9 and B-10;
    - To the south, in soil and groundwater by monitoring well MW-2; and
    - To the west, in groundwater by monitoring well MW-4.
- Depth to water at the time of drilling was approximately 13 feet bgs; however, depth to water at the time of groundwater sampling from the wells was between 7.89 feet bgs and 8.72 feet bgs. Direction of groundwater flow varies as the groundwater gradient of 0.0002 feet per foot is fairly flat.
- Based on the analytical results, localized soil impacts from historical Site operations are present below the building, and near MW-4, to the west of the building.
- Due to building access limitations and available working vertical space (i.e., ceiling height) for a more powerful drill rig, the collection of deeper soil and groundwater samples inside the building is not feasible.

6.2 Recommendations

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

- Ecology provide an opinion on the completeness of the Site characterization, with the goal of obtaining a No Further Action determination.
- A feasibility study be conducted for the Site to determine the most cost-effective method for reducing shallow soil, soil gas, and groundwater contamination, especially beneath the location of the former dry cleaning machine and to the west of the building.

7.0 LIMITATIONS

This report summarizes the findings of the services authorized under our agreement with Mr. Ed Honeycutt. 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. Honeycutt 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.

8.0 REFERENCES

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

Assessor's Office – Pierce County Washington, *https://epip.co.pierce.wa.us/cfapps/atr/epip/land.cfm?parcel=3810000250*, Web. 07 December 2015.

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FIGURES

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

FILENAME	DRAWN BY		CHECKED BY		APPROVED BY		PROJECT NUMBER
15-171_15Q4.DWG	ICD	12/31/2015	DB	12/31/2015	DB	12/31/2015	15-171

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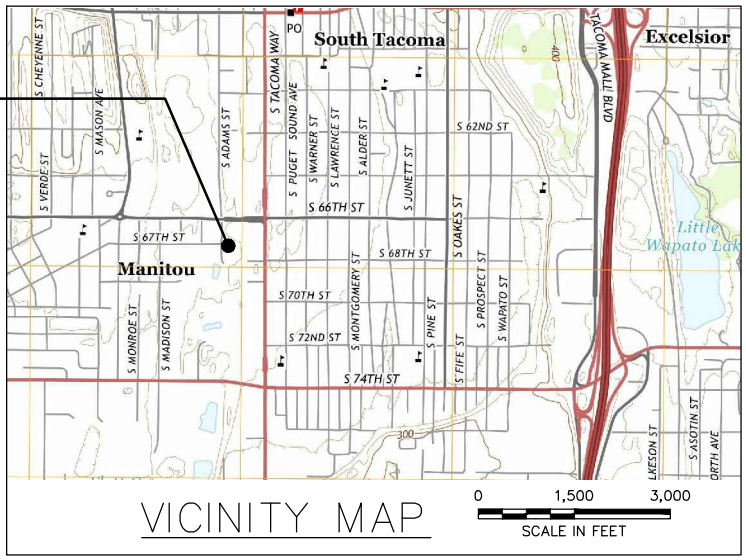
PROJECT LOCATION



VICINITY MAP

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.
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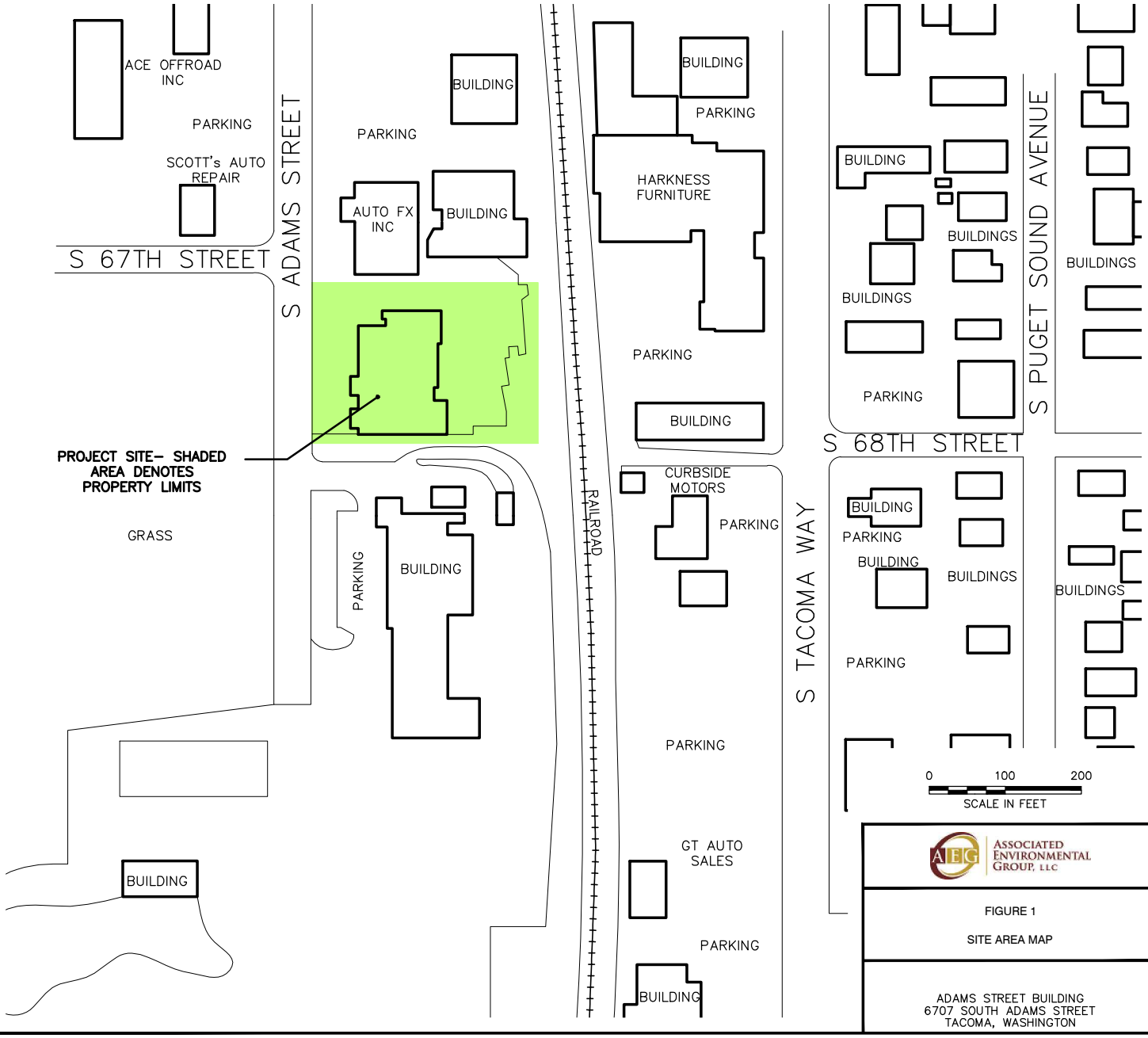

AEG ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 1

SITE AREA MAP

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
15-171_1504_4.DWG	ICD 3/01/2016	DB 3/01/2016	DB 3/01/2016	15-171

S ADAMS STREET

AUTO FX INC

BUILDING

GRAS

PARKING

MW-1

MW-2

MW-3

MW-4

B-1

B-2

B-3

B-4

B-5

B-6

B-7

B-8

B-9

B-10

FORMER STEAM CLEANING PAD

FORMER DRY CLEANING MACHINE

ADAMS STREET BUILDING

N

W E

S

LEGEND

B-1 ● SOIL BORING LOCATION

MW-1 ⊕ GROUNDWATER MONITORING WELL LOCATION

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
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REFERENCE

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0 15 30

SCALE IN FEET

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 2

SITE MAP

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
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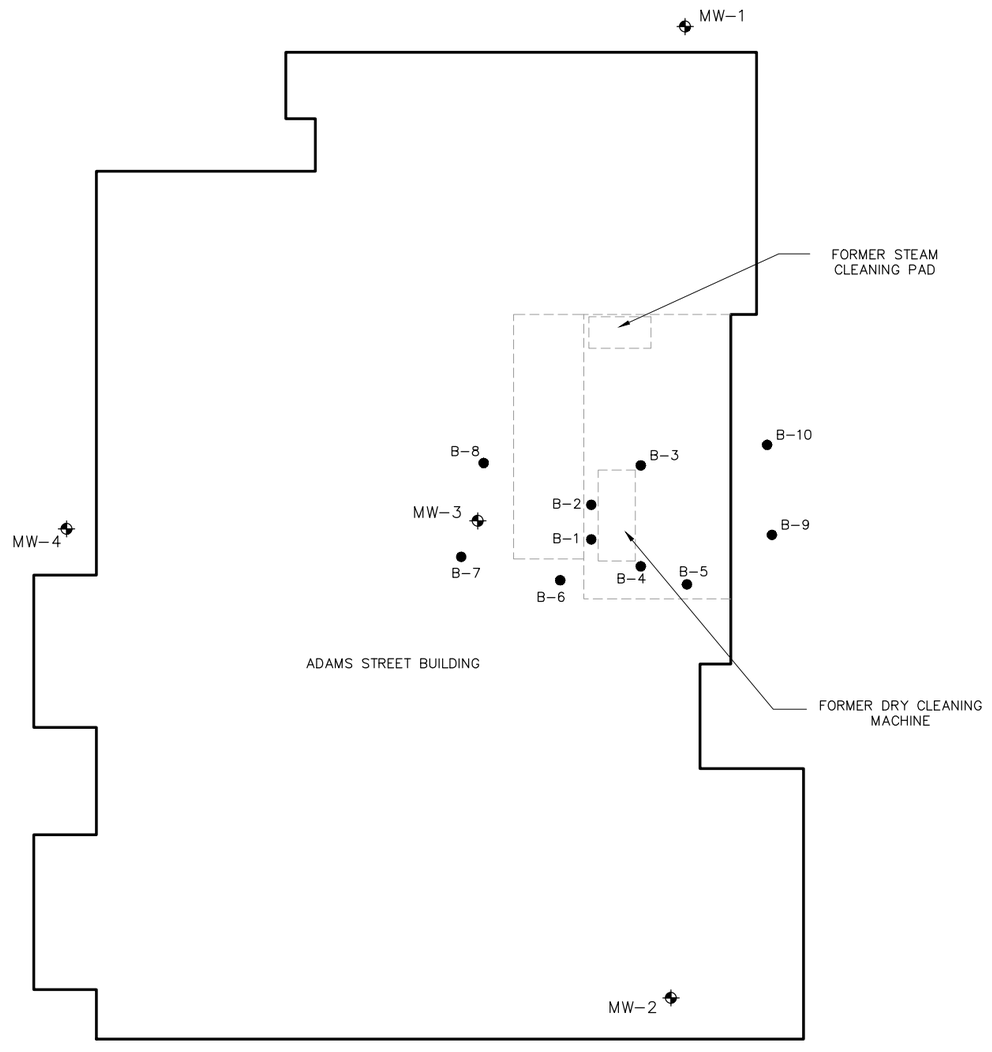

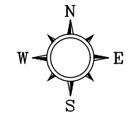

LEGEND

B-1 ●	SOIL BORING LOCATION
MW-1 ⊕	GROUNDWATER MONITORING WELL LOCATION

NOTES

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REFERENCE

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SCALE IN FEET

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 3

BUILDING PERIMETER

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
15-171_XSECTIONS.DWG	ICD 4/08/2016	DB 4/08/2016	DB 4/08/2016	15-171

S ADAMS STREET

AUTO FX INC

BUILDING

GRAS

PARKING

ADAMS STREET BUILDING

FORMER STEAM CLEANING PAD

FORMER DRY CLEANING MACHINE

B

B'

A

A'

MW-1

MW-2

MW-3

MW-4

B-1

B-2

B-3

B-4

B-5

B-6

B-7

B-8

B-9

B-10

N

W

E

S

LEGEND

B-1 ●	SOIL BORING LOCATION
MW-1 ⊕	GROUNDWATER MONITORING WELL LOCATION
A A'	LINE OF LITHOLOGIC CROSS SECTION AND PROJECTION LINE OR BORING/WELL

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 4

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

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

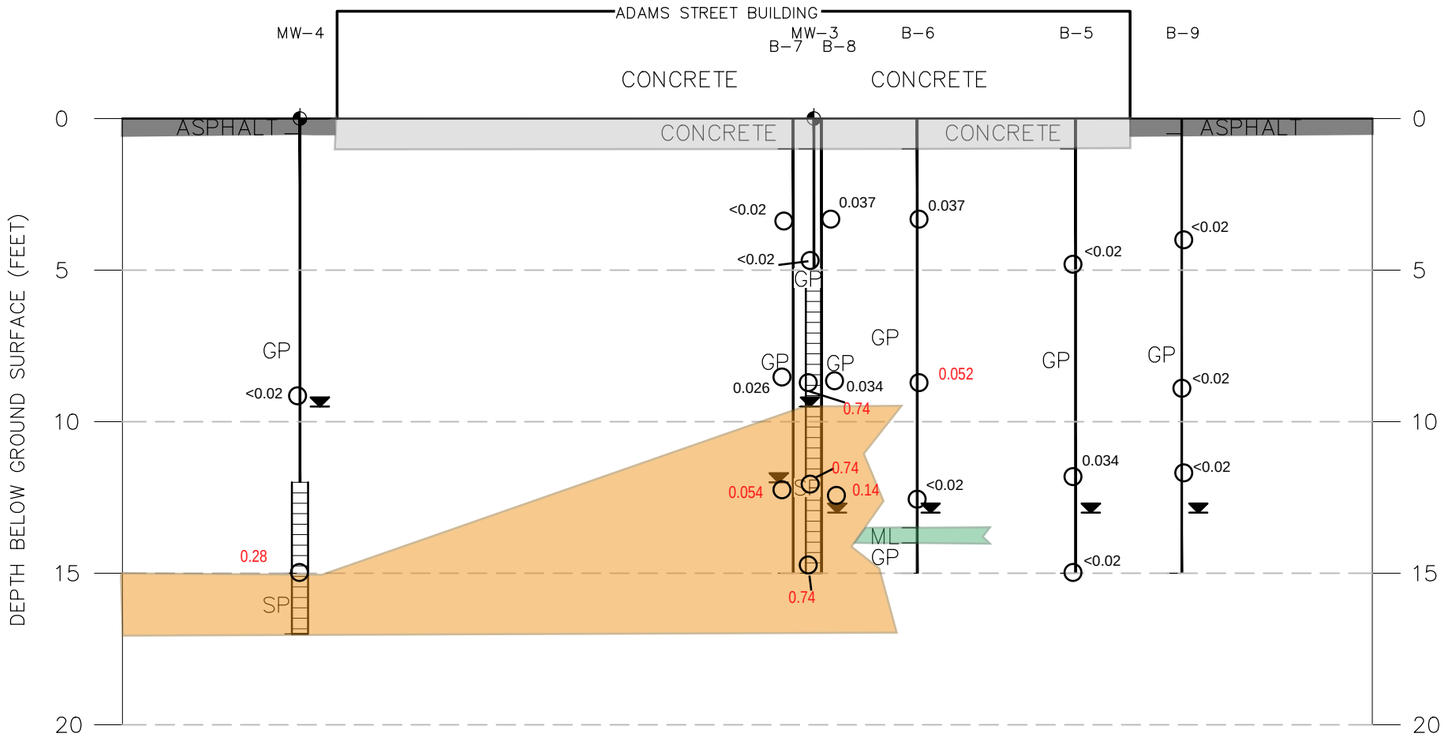
FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
15-171_XSECTIONS.DWG	ICD 4/08/2016	SL 4/08/2016	SL 4/08/2016	15-171

WEST

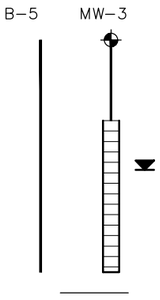
A

EAST

A'



LEGEND



- WELL, SOIL BORING
- GROUNDWATER LEVEL AT TIME OF DRILLING
- SCREENED INTERVAL
- MAXIMUM DEPTH EXPLORED
- SOIL CONTACT

SP	POORLY-GRADED SANDS, GRAVELLY SANDS, 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
○	SAMPLE LOCATION
0.05	PCE ABOVE MTCA IN SOIL (MG/KG)

0 10 20
HORIZONTAL SCALE

0 2.5 5
VERTICAL SCALE

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 5

GEOLOGIC CROSS SECTION A-A'

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
15-171_XSECTIONS.DWG	ICD 4/08/2016	SL 4/08/2016	SL 4/08/2016	15-171

NORTH

B

SOUTH

B'

ADAMS STREET BUILDING

MW-1 B-10 B-5 MW-2

ASPHALT ASPHALT CONCRETE CONCRETE

DEPTH BELOW GROUND SURFACE (FEET)

0 5 10 15 20

GP GP GP GP SP SP

<0.02 <0.02 <0.02 <0.02 <0.02 <0.02 0.034 <0.02

LEGEND

B-5 MW-3

– WELL, SOIL BORING

– GROUNDWATER LEVEL AT TIME OF DRILLING

– SCREENED INTERVAL

– MAXIMUM DEPTH EXPLORED

– SOIL CONTACT

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

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

SAMPLE LOCATION

0.05 PCE IN SOIL ABOVE MTCA (MG/KG)

0 10 20
HORIZONTAL SCALE

0 2.5 5
VERTICAL SCALE

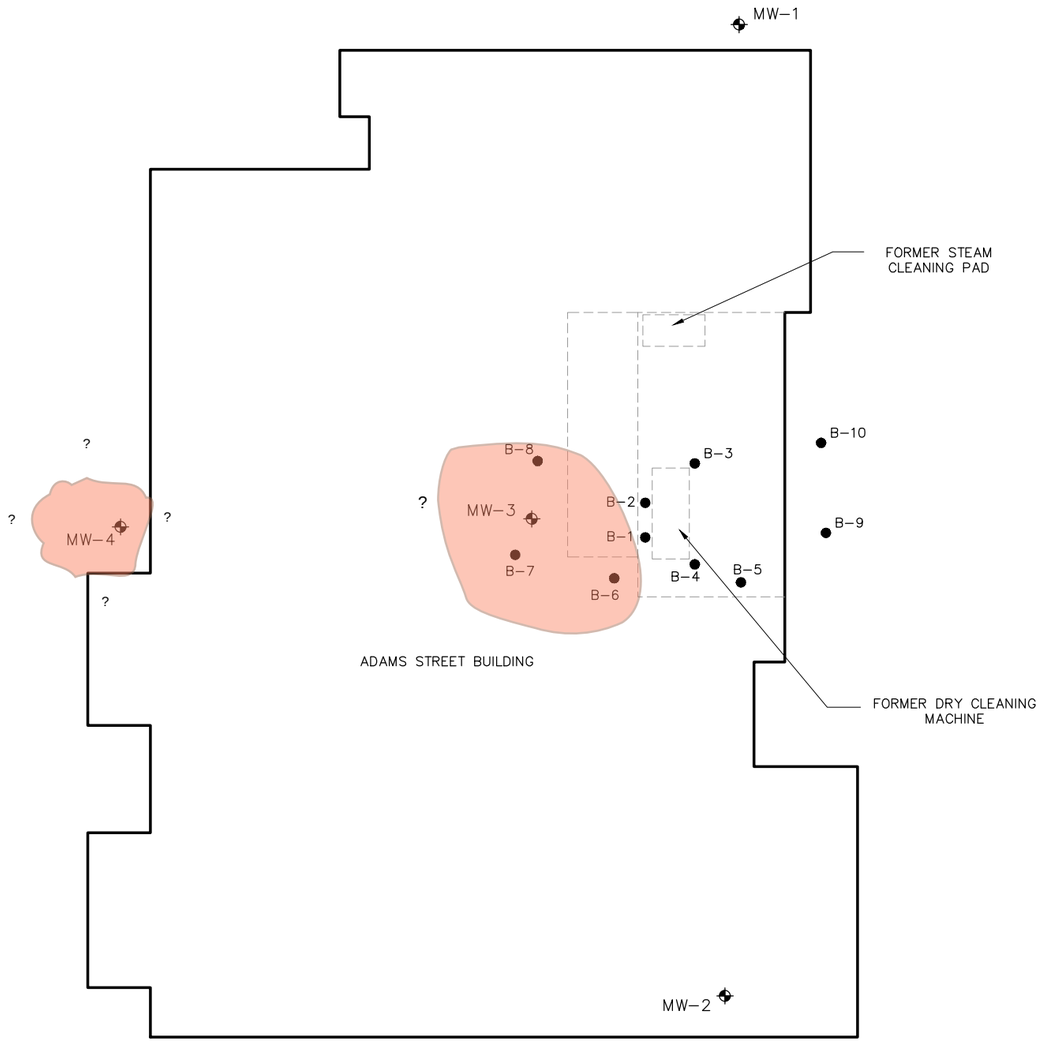
ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 6

GEOLOGIC CROSS SECTION B-B'

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

PROJECT NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	FILENAME
15-171	DB 3/01/2016	DB 3/01/2016	ICD 3/01/2016	15-171_1504_4.DWG



N
W E
S

LEGEND

- B-1 ● SOIL BORING LOCATION
- MW-1 ⊕ GROUNDWATER MONITORING WELL LOCATION
- ? EXTENT NOT KNOWN
- ASSUMED PCE SOIL CONTAIMNTION ABOVE MTCA

NOTES

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REFERENCE

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

0 12.5 25
SCALE IN FEET

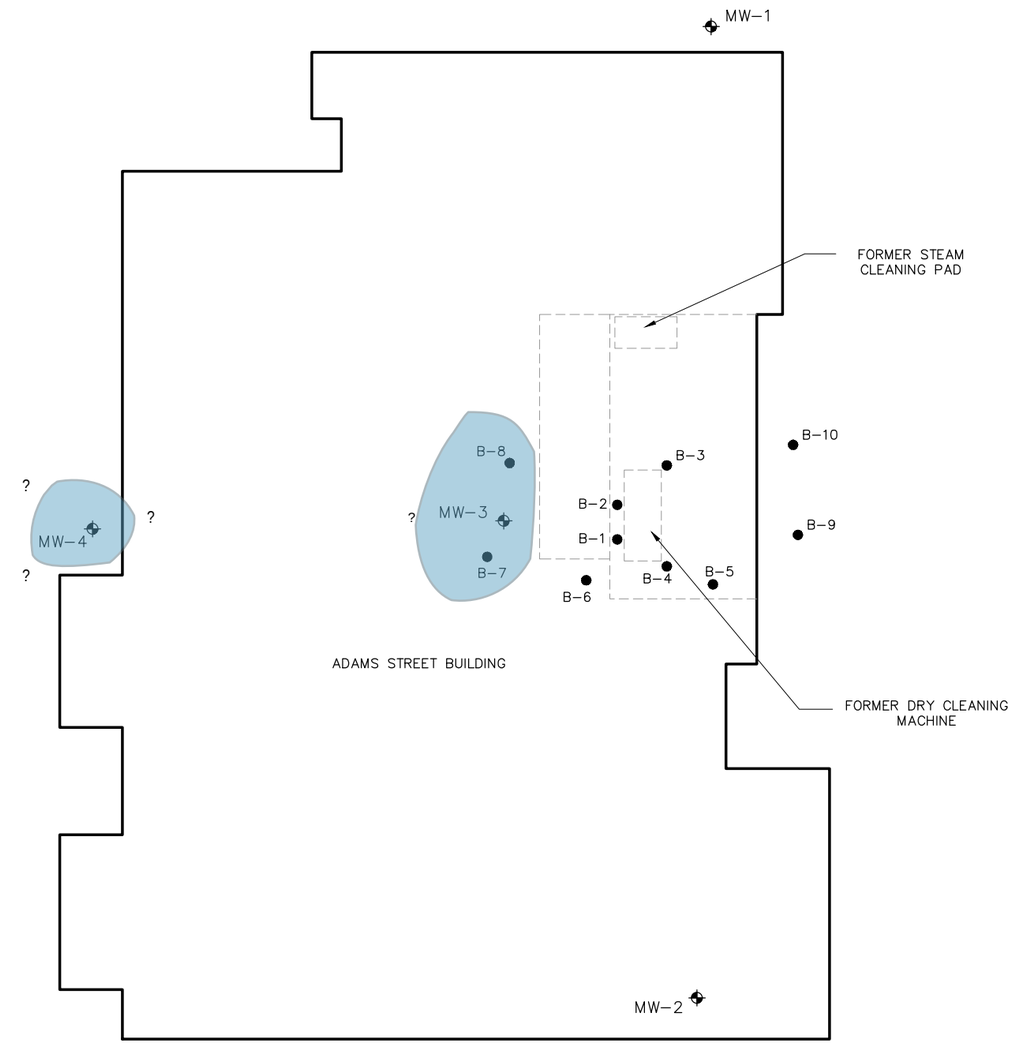
ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 7

PCE CONCENTRATIONS IN SOIL

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

PROJECT NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	FILENAME
15-171	DB 3/01/2016	DB 3/01/2016	ICD 3/01/2016	15-171_1504_4.DWG



N
W E
S

LEGEND

- B-1 ● SOIL BORING LOCATION
- MW-1 ⊕ GROUNDWATER MONITORING WELL LOCATION
- ? EXTENT UNKNOWN
- ASSUMED GROUNDWATER CONTAMINATION ABOVE MTCA

NOTES

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REFERENCE

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

0 12.5 25
SCALE IN FEET

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 8

PCE Concentrations in Groundwater

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
15-171_1504_4.DWG	ICD 3/01/2016	DB 3/01/2016	DB 3/01/2016	15-171

S ADAMS STREET

AUTO FX INC

BUILDING

PARKING

GRAS

MW-1 (90.86)

91.35

91.6

91.6

91.6

FORMER STEAM CLEANING PAD

FORMER DRY CLEANING MACHINE

ADAMS STREET BUILDING

B-8

B-3

B-10

B-2

B-1

B-9

MW-3 (91.79)

MW-4 (91.77)

B-7

B-6

B-4

B-5

MW-2 (91.23)

N

W

E

S

LEGEND

B-1 ●	SOIL BORING LOCATION
MW-1 ◆	GROUNDWATER MONITORING WELL LOCATION
(91.77)	GROUNDWATER ELEVATION FEET AMSL

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

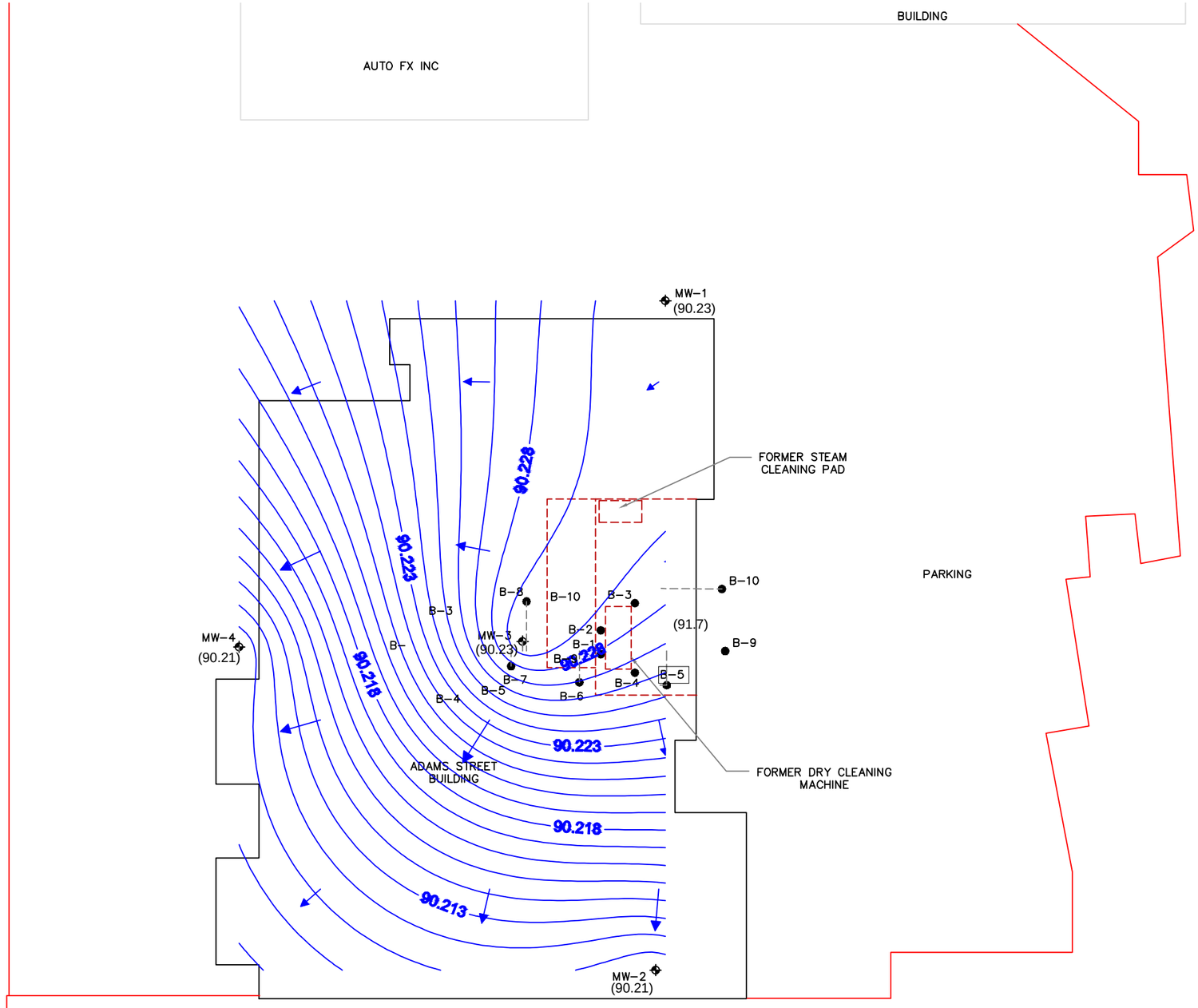
SCALE IN FEET

ASSOCIATED ENVIRONMENTAL GROUP, LLC

Figure 9
March 2016
Groundwater Contour Map

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
15-171_XSECTIONS.DWG	ICD 4/14/2016	DB 4/14/2016	DB 4/14/2016	15-171



N
W E
S

LEGEND

B-1 ●	SOIL BORING LOCATION
MW-1 ⊕	GROUNDWATER MONITORING WELL LOCATION
(91.7)	GROUNDWATER ELEVATION FEET AMSL

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 10
APRIL 2016 GROUNDWATER CONTOUR MAP

ADAMS STREET BUILDING
6707 SOUTH ADAMS STREET
TACOMA, WASHINGTON

TABLES

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Table 1 - Summary of Soil Analytical Results

Adams Street Building
Tacoma, Washington

Sample Number	Depth Collected (feet)	Date Collected	Volatile Organic Compounds (VOC) - Chlorinated				
			Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Vinyl Chloride
B5-5	5.0	1/15/2016	<0.02	<0.02	<0.05	<0.05	<0.02
B5-13	13.0	1/15/2016	**0.034**	<0.02	<0.05	<0.05	<0.02
B5-15	15.0	1/15/2016	<0.02	<0.02	<0.05	<0.05	<0.02
B6-4	4.0	1/15/2016	**0.037**	<0.02	<0.05	<0.05	<0.02
B6-9.5	9.5	1/15/2016	**0.052**	<0.02	<0.05	<0.05	<0.02
B6-13.5	13.5	1/15/2016	<0.02	<0.02	<0.05	<0.05	<0.02
B7-4	4.0	1/15/2016	<0.02	<0.02	<0.05	<0.05	<0.02
B7-9	9.0	1/15/2016	**0.026**	<0.02	<0.05	<0.05	<0.02
B7-13	13.0	1/15/2016	**0.054**	<0.02	<0.05	<0.05	<0.02
B8-4	4.0	1/15/2016	**0.037**	<0.02	<0.05	<0.05	<0.02
B8-9.5	9.5	1/15/2016	**0.034**	<0.02	<0.05	<0.05	<0.02
B8-13.5	13.5	1/15/2016	**0.14**	<0.02	<0.05	<0.05	<0.02
B9-4	4.0	1/15/2016	<0.02	<0.02	<0.05	<0.05	<0.02
B9-9	9.0	1/15/2016	<0.02	<0.02	<0.05	<0.05	<0.02
B9-13	13.0	1/15/2016	<0.02	<0.02	<0.05	<0.05	<0.02
B10-4.5	4.5	1/15/2016	<0.02	<0.02	<0.05	<0.05	<0.02
B10-10	10.0	1/15/2016	<0.02	<0.02	<0.05	<0.05	<0.02
MW1-10	10.0	2/23/2016	<0.02	<0.02	<0.05	<0.05	<0.02
MW1-13	13.0	2/23/2016	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-9.5	9.5	2/23/2016	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-15	15.0	2/23/2016	<0.02	<0.02	<0.05	<0.05	<0.02
MW3-5[1]	5.0	2/23/2016	**0.06**	<0.02	<0.05	<0.05	<0.02
MW3-9.5	9.5	2/23/2016	**0.06**	<0.02	<0.05	<0.05	<0.02
MW3-13	13.0	2/23/2016	**0.12**	<0.02	<0.05	<0.05	<0.02
MW3-15[1]	15.0	2/23/2016	**0.74**	<0.03	<0.06	<0.06	<0.02
MW4-9.5	9.5	2/23/2016	<0.02	<0.02	<0.05	<0.05	<0.02
MW4-15	15.0	2/23/2016	**0.28**	<0.02	<0.05	<0.05	<0.02
PQL (mg/kg)			0.02	0.02	0.05	0.05	0.02
MTCA Method A Cleanup Levels (mg/kg)			0.05	0.03	*	*	*

Notes:
mg/kg = milligrams per kilogram
-- = Not analyzed for constituent
< = Not detected at the listed laboratory detection limits
PQL = Practical Quantification Limit (laboratory detection limit)
Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level
Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels
* Method A Cleanup Level not established
[1]Sample was anaylzyed after hold time had already expired.

Table 2 - Summary of Soil Gas Analytical Results

Adams Street Building
Tacoma, Washington

Sample Number	Depth Collected (feet)	Date Collected	Volatile Organic Compounds (VOC) - Chlorinated				
			Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Vinyl Chloride
B-1	SUB-SLAB	12/9/2015	**340**	<10	<10	<10	<10
B-2	SUB-SLAB	12/9/2015	**1,200**	<10	<10	<10	<10
B-3	SUB-SLAB	12/9/2015	**570**	<10	<10	<10	<10
B-4	SUB-SLAB	12/9/2015	<10	<10	<10	<10	<10
PQL (µg/m³)			10	10	10	10	10
MTCA Method B Sub-Slab Screening Levels (µg/m³)			321	12.3	*	*	9.33

Notes:
µg/m³ = micrograms per cubic meter
-- = Not analyzed for constituent
< = Not detected at the listed laboratory detection limits
PQL = Practical Quantification Limit (laboratory detection limit)
Red Bold indicates the detected concentration exceeds Ecology MTCA Method B sub-slab screening level
Bold indicates the detected concentration is below Ecology MTCA Method B sub-slab screening levels
* Method B Sub-Slab Screening Level not established

Table 3 - Summary of Groundwater Analytical Results

Adams Street Building
Tacoma, Washington

Sample Number	Date Collected	Volatile Organic Compounds (VOC) - Chlorinated				
		Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	cis-1,2-Dichloroethylene	trans-1,2-Dichloroethylene	Vinyl Chloride
B5-W	1/15/2016	**1.0**	<1.0	<1.0	<1.0	<0.2
B6-W	1/15/2016	**2.3**	<1.0	<1.0	<1.0	<0.2
B7-W	1/15/2016	**5.6**	<1.0	<1.0	<1.0	<0.2
B8-W	1/15/2016	**9.6**	<1.0	<1.0	<1.0	<0.2
B9-W	1/15/2016	<1.0	<1.0	<1.0	<1.0	<0.2
B10-W	1/15/2016	<1.0	<1.0	<1.0	<1.0	<0.2
MW-1	3/17/2016	<1.0	<1.0	<1.0	<1.0	<0.2
MW-2	3/17/2016	<1.0	<1.0	<1.0	<1.0	<0.2
MW-3	3/17/2016	**10**	<1.0	<1.0	<1.0	<0.2
MW-4	3/17/2016	**2.0**	<1.0	<1.0	<1.0	<0.2
PQL (µg/L)		1.0	1.0	1.0	1.0	0.2
MTCA Method A Cleanup Levels (µg/L)		5.0	5.0	*	*	0.2

Notes:
µg/L = micrograms per liter
-- = Not analyzed for constituent
< = Not detected at the listed laboratory detection limits
PQL = Practical Quantification Limit (laboratory detection limit)
Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level
Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels
* Method A Cleanup Level not established

Table 4 - Summary of Groundwater Elevations

Adams Street Building
Tacoma, Washington

Well No./ TOC Elevation (feet)	Date	Depth to Water (feet)	Depth to Free Product (feet)	Free Product Thickness (feet)	Apparent Groundwater Elevation (feet)	Actual Groundwater Elevation (feet)	Change in Elevation (feet)
	3/17/2016	8.59	--	--	--	90.86	
MW-1	4/6/2016*	9.22	--	--	--	90.23	-0.63
99.45							
	3/17/2016	8.72	--	--	--	91.23	
MW-2	4/6/2016*	9.74	--	--	--	90.21	-1.02
99.95							
	3/17/2016	8.21	--	--	--	91.79	
MW-3	4/6/2016*	9.77	--	--	--	90.23	-1.56
100.00							
	3/17/2016	7.89	--	--	--	91.77	
MW-4	4/6/2016*	9.45	--	--	--	90.21	-1.56
99.66							

Notes:
TOC = Top of casing elevation relative to assigned benchmark.
-- = Not measured, not available, or not applicable
* = Measurements collected during well survey event; no samples collected.

APPENDIX A

Site Photographs

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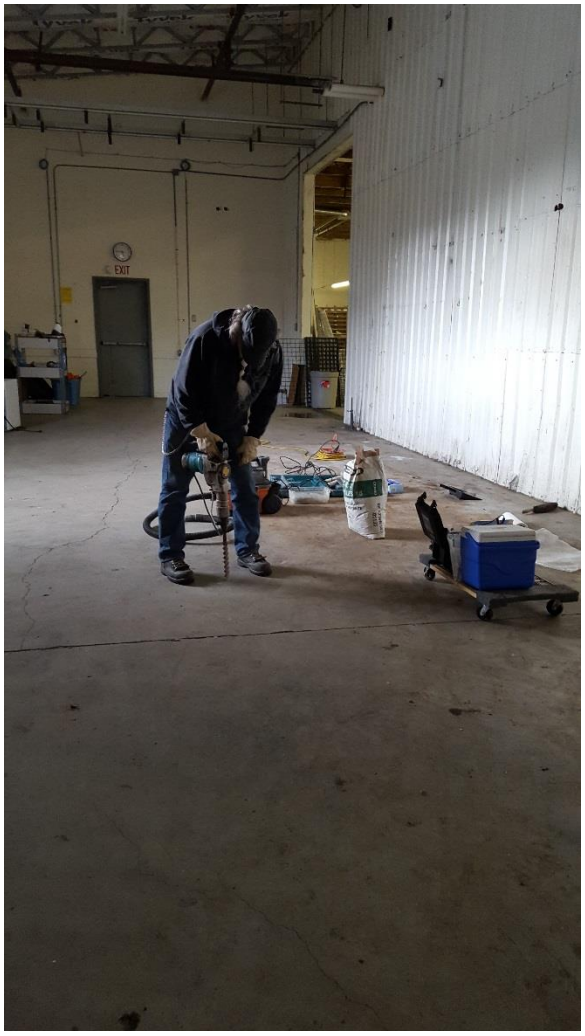
ASSOCIATED ENVIRONMENTAL GROUP, LLC

SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

			
Photo #1:	Outline of former drycleaning machine where soil gas samples were taken.	Photo #2:	Advancing B-3 for a soil gas sample.

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ASSOCIATED ENVIRONMENTAL GROUP, LLC

SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

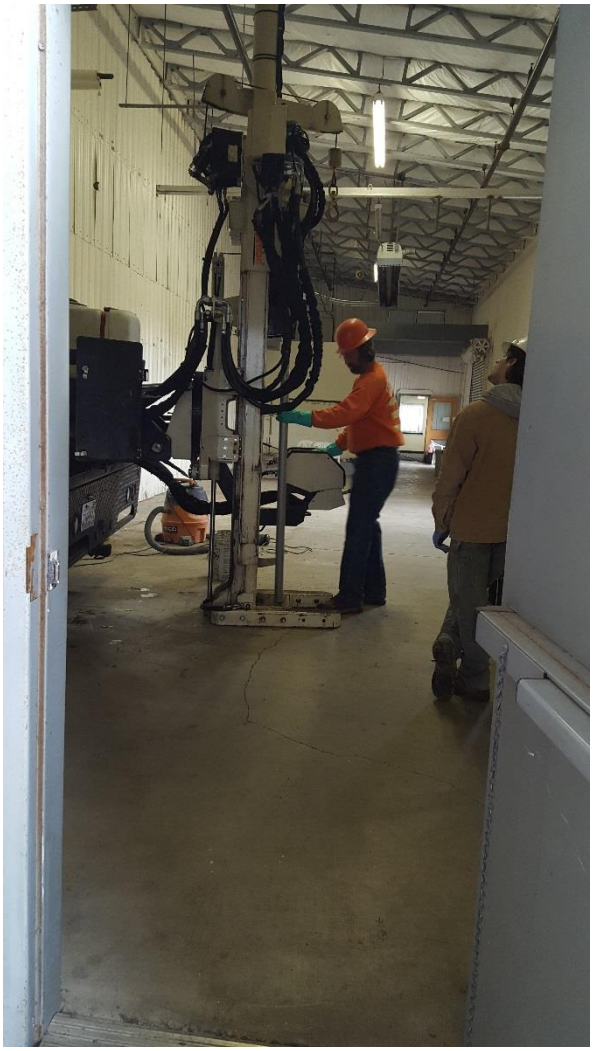

Photo #2:	Location of B-5, adjacent to the former drycleaning machine.

Photo #4:	Soil cores from B-5. No contamination observed.

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SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

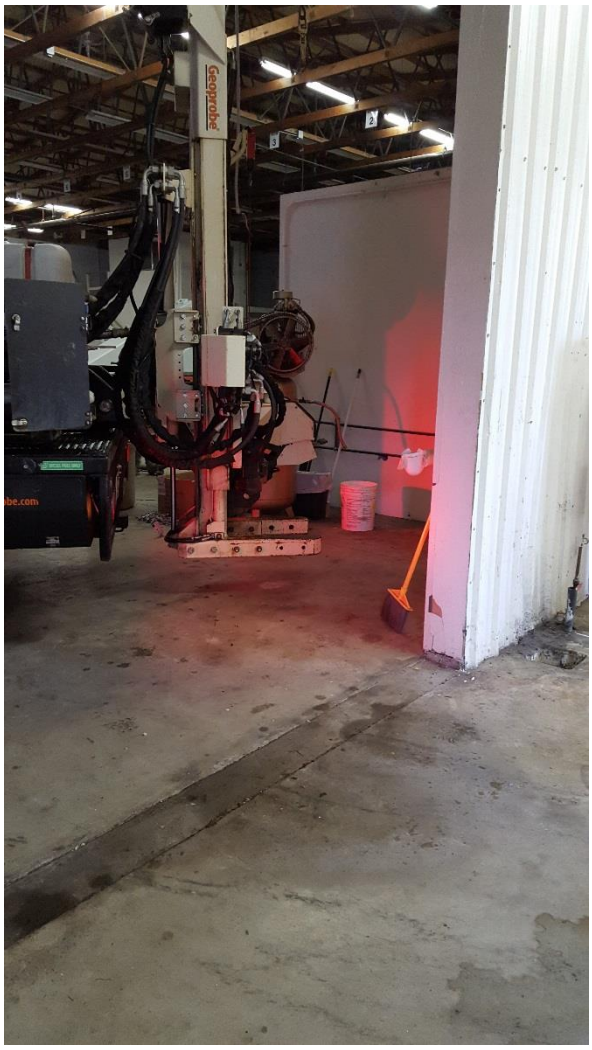

Photo #5:	Location of B-6, located west of B-5.	Photo #6:	Soil cores from B-6. No contamination observed.

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SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

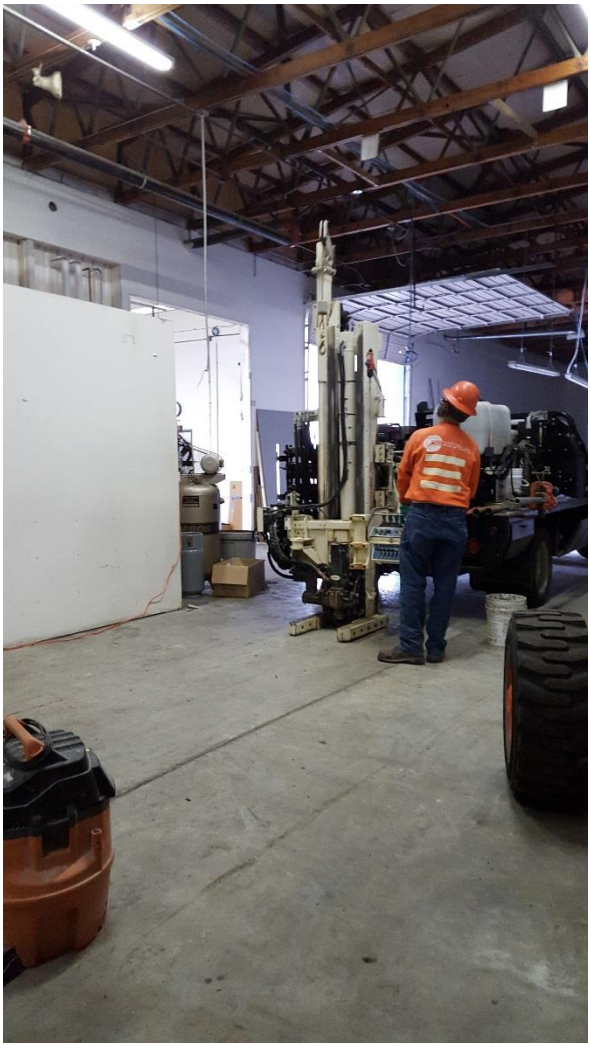

Photo #7:	Location of B-7, located northeast of B-6.

Photo #8:	Soil cores from B-7. No contamination observed.

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SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

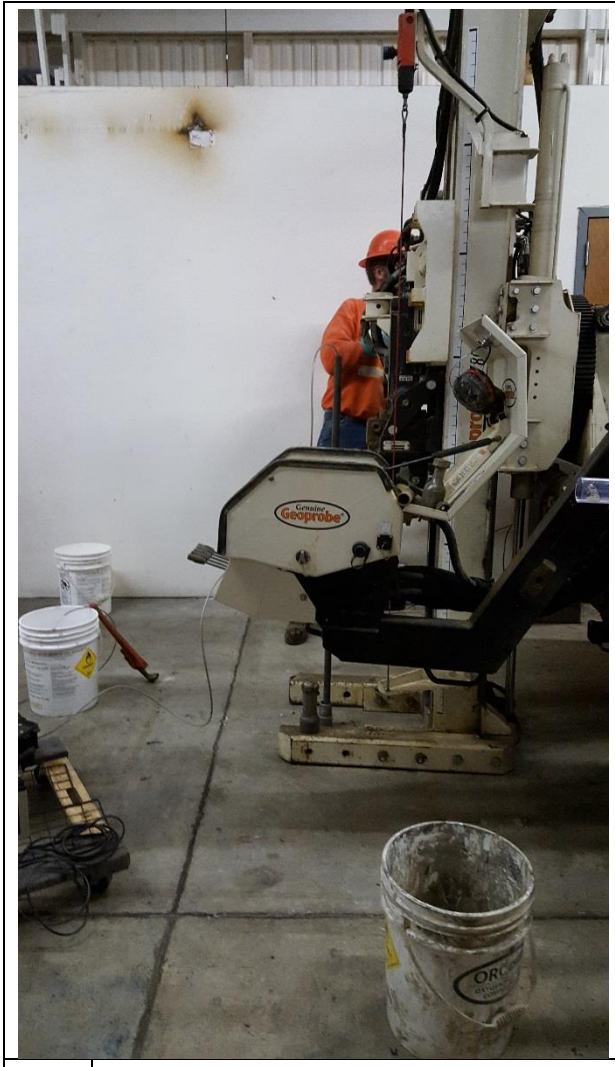			
Photo #9:	Location of B-8, located north of B-7.	Photo #10:	Soil cores from B-8. No contamination observed.

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SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

			
Photo #11:	Location of B-9, located south of B-5.	Photo #12:	Soil cores from B-9. No contamination observed.

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SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

			
Photo #33:	Location of B-10, located northeast of B-9.	Photo #14:	Soil cores from B-10. No contamination observed.

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SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

Photo #15:	Location of MW-1, located along the northeastern corner of the building.	Photo #16:	Soil cores from MW-1. No contamination observed.

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SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

Photo #47:	Location of MW-2, which is inside in the southeastern corner of the building.	Photo #18:	Soil cores from MW-2. No contamination observed.

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SITE PHOTOGRAPHIC RECORD

Project No.: 15-171 **Project Name: Adams Street Building**

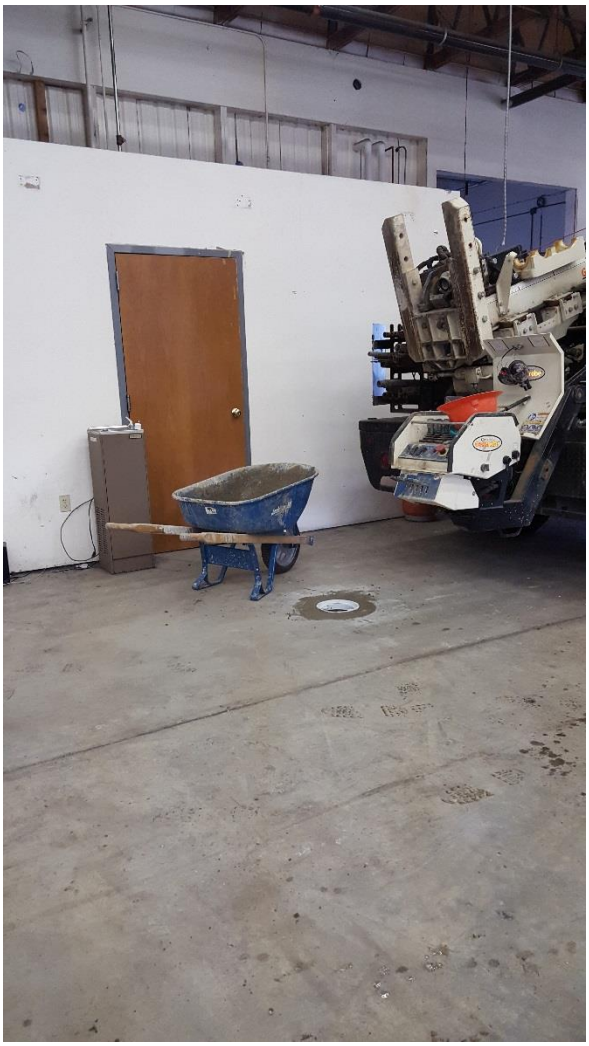		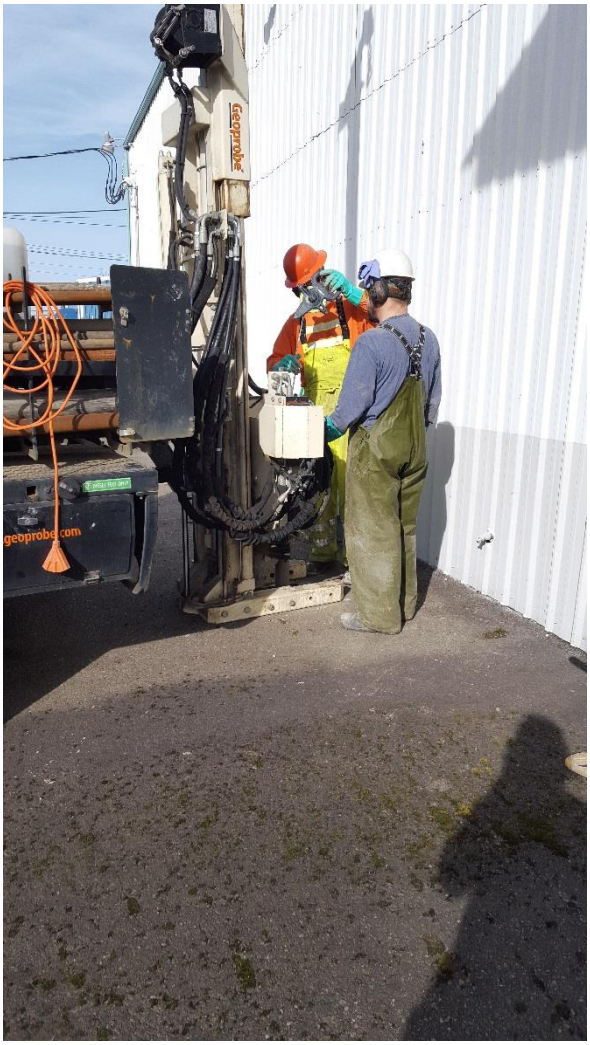	
Photo #19:	Location of MW-3, which is inside and located west of the drycleaning machine.	Photo #20:	Location of MW—4, located west along the building edge.

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

APPENDIX B

Supporting Documents
Boring Logs
Laboratory Datasheets

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

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT:	***Adams Street Bulding***	**JOB #** *15-171*	**BORING #** *B-5* **PAGE 1 OF 1**
Location:	*6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**	
Subcontractor / Driller:	**ESN/ Don**	**Equipment / Drilling Method:**	**Direct Push**
Date:	*January 15, 2016*	**Logged By:**	*B. Dilba*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	1 foot of concrete underlain by;		1			10:33	N/A			
			2							
			3							
	Gray, dry, dense, SANDY GRAVEL; fine to coarse gravel, medium to coarse sand	GP	4					0		
5			5		B5-5	10:35		0		
			6							
			7							
			8							
			9							
10	at 9.0 feet; moist		10			10:39		0		
			11							
			12							
		▽	13						No	
	Gray, wet, medium dense, SANDY GRAVEL; fine to medium gravel, fine to coarse sand		14		B5-13			0		
15			15		B5-15	10:48		0		
	TD = 15 Feet									

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:	***Adams Street Bulding***	**JOB #** *15-171*	**BORING #** *B-6* **PAGE 1 OF 1**
Location:	*6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**	
Subcontractor / Driller:	**ESN/ Don**	**Equipment / Drilling Method:**	**Direct Push**
Date:	*January 15, 2016*	**Logged By:**	*B. Dilba*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	1 foot of concrete underlain by;		1			11:28	N/A			
			2							
			3							
	Gray, dry, dense, SANDY GRAVEL; fine to coarse gravel, medium to coarse sand	GP	4					0		
5			5		B6-4	11:30		0		
			6							
			7							
			8							
			9							
10	at 9.0 feet; moist		10		B6-9	11:34		0		
			11							
			12							
		▽	13						No	
	Brown, wet, medium stiff, SILT	ML	14		B6-13					
15	Gray, wet, medium dense, SANDY GRAVEL; fine to medium gravel, fine to coarse sand	GP	15			11:42		0		
	TD = 15 Feet									

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:	***Adams Street Bulding***	**JOB #** *15-171*	**BORING #** *B-7* **PAGE 1 OF 1**
Location:	*6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**	
Subcontractor / Driller:	**ESN/ Don**	**Equipment / Drilling Method:**	**Direct Push**
Date:	*January 15, 2016*	**Logged By:**	*B. Dilba*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	1 foot of concrete underlain by;		1			12:19	N/A			
			2							
			3							
	Gray, dry, dense, SANDY GRAVEL; fine to coarse gravel, medium to coarse sand	GP	4							
5			5		B7-4	12:20		0		
			6							
			7							
			8							
			9		B7-9			0		
10	at 9.0 feet; moist		10			12:26				
			11							
		▽	12							
	Brown, wet, medium dense, SANDY GRAVEL; fine to medium gravel, fine to coarse sand	GP	13						No	
			14		B7-13			0		
15			15			12:32				
	TD = 15 Feet									

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:	***Adams Street Bulding***	**JOB #** *15-171*	**BORING #** *B-8* **PAGE 1 OF 1**
Location:	*6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**	
Subcontractor / Driller:	**ESN/ Don**	**Equipment / Drilling Method:**	**Direct Push**
Date:	*January 15, 2016*	**Logged By:**	*B. Dilba*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	1 foot of concrete underlain by;		1			13:01	N/A			
			2							
			3							
	Gray, dry, dense, SANDY GRAVEL; fine to coarse gravel, medium to coarse sand	GP	4							
5			5		B8-4	13:03		0		
			6							
			7							
			8							
			9							
10	at 9.5 feet; moist		10		B8-9.5	13:06		0		
			11							
			12							
		▽	13						No	
	Gray, wet, medium dense, SANDY GRAVEL; fine to medium gravel, fine to coarse sand	GP	14		B8-13.5					
15			15			13:11		0		
	TD = 15 Feet									

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:	***Adams Street Bulding***	**JOB #** *15-171*	**BORING #** *B-9* **PAGE 1 OF 1**
Location:	*6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**	
Subcontractor / Driller:	**ESN/ Don**	**Equipment / Drilling Method:**	**Direct Push**
Date:	*January 15, 2016*	**Logged By:**	*B. Dilba*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	6 inches of asphalt underlain by;		1			13:47	N/A			
			2							
			3							
	Gray, dry, dense, SANDY GRAVEL; fine to coarse gravel, medium to coarse sand	GP	4							
5			5		B9-4	13:48		0		
			6							
			7							
			8							
			9							
10	at 9.0 feet; moist		10		B9-9	13:52		0		
			11							
			12							
		▽	13						No	
	Gray, wet, medium dense, SANDY GRAVEL; fine to medium gravel, fine to coarse sand	GP	14		B9-13					
15			15			13:56		0		
	TD = 15 Feet									

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:	***Adams Street Bulding***	**JOB #** *15-171*	**BORING #** *B-10* **PAGE 1 OF 1**
Location:	*6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**	
Subcontractor / Driller:	**ESN/ Don**	**Equipment / Drilling Method:**	**Direct Push**
Date:	*January 15, 2016*	**Logged By:**	*B. Dilba*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	6 inches of asphalt underlain by;		1			14:18	N/A			
			2							
			3							
			4							
5	Gray, dry, dense, SANDY GRAVEL; fine to coarse gravel, medium to coarse sand	GP	5		B10-4.5	14:20		0		
			6							
			7							
			8							
			9							
10	at 9.0 feet; moist		10		B10-10	14:23		0		
			11							
			12							
		▽	13						No	
	Gray, wet, medium dense, SANDY GRAVEL; fine to medium gravel, fine to coarse sand	GP	14							
15			15			14:28		0		
	TD = 15 Feet									

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: *Adams Street Bulding*	**JOB #** *15-171*	**BORING #** *MW-1*	**PAGE 1 OF 1**
Location: *6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**		
Subcontractor / Driller: ESN/ Don	**Equipment / Drilling Method: Direct Push**		
Date: *February 23, 2016*	**Logged By:** *B. Dilba*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	6 inches of asphalt underlain by;					9:33	N/A	N/A		
	Brown, moist, medium dense, SANDY GRAVEL; fine to medium gravel, coarse sand	GP								
5		▽			MW1-5	9:35			No	
10	Brown, wet, medium dense, SAND W/ GRAVEL; fine to coarse grain sand, fine gravel	SP			MW1-10	9:40				
	Gray, wet, medium dense, SAND; medium to coarse sand	SP								
15					MW1-13	9:46				
					MW1-18					
20						9:55				
	TD = 20									

Explanation

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

Monitoring Well Construction

- Grout/Concrete 2' to 1'
- 3/4-inch bentonite chips 7' to 2'
- Silica sand 19' to 7'
- 2-inch diameter blank PVC casing from 9' to 0'
- 2-inch diameter PVC 0.01 slotted screen 9' to 19'

Ecology Tag #

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: ***Adams Street Bulding***	**JOB #** *15-171*	**BORING #** *MW-2*	**PAGE 1 OF 1**
Location: *6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**		
Subcontractor / Driller: ESN/ Don	**Equipment / Drilling Method: Direct Push**		
Date: *February 23, 2016*	**Logged By:** *B. Dilba*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	12" inches of concrete underlain by;					11:33	N/A	N/A		
5	Brown, dry, medium dense, SANDY GRAVEL; fine to medium gravel, coarse sand	GP			MW2-5	11:35				
10	at 9.5 feet: wet	▽			MW2-9.5	11:39			No	
15					MW2-15	11:44				
	Gray, wet, medium dense, SAND; medium to coarse sand	SP								
20					MW2-19	11:57				
	TD = 20									
25										

Explanation

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

Monitoring Well Construction

- Grout/Concrete 2' to 1'
- 3/4-inch bentonite chips 4' to 2'
- Silica sand 16' to 4'
- 2-inch diameter blank PVC casing from 6' to 2'
- 2-inch diameter PVC 0.01 slotted screen 16' to 6'

Ecology Tag #

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: ***Adams Street Bulding***	**JOB #** *15-171*	**BORING #** *MW-3*	**PAGE 1 OF 1**
Location: *6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**		
Subcontractor / Driller: ESN/ Don	**Equipment / Drilling Method: Direct Push**		
Date: *February 23, 2016*	**Logged By:** *B. Dilba*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	12" inches of concrete underlain by;									
5	Brown, dry, dense, SANDY GRAVEL; fine to coarse gravel, medium to coarse sand	GP								
10	Browm, wet, medium dense, SAND with Gravel; fine to coarse	SP								
	Brown, wet medium dense, SAND; fine to medium sand	SP								
15	TD = 15 Feet									

Explanation

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

Monitoring Well Construction

- Grout/Concrete 2' to 1'
- 3/4-inch bentonite chips 5' to 2'
- Silica sand 15' to 5'
- 2-inch diameter blank PVC casing from 7' to 0'
- 2-inch diameter PVC 0.01 slotted screen 16' to 7'

Ecology Tag #

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: ***Adams Street Bulding***	**JOB #** *15-171*	**BORING #** *MW-4*	**PAGE 1 OF 1**
Location: *6707 South Adams Street, Tacoma, WA*	**Approximate Elevation:**		
Subcontractor / Driller: ESN/ Don	**Equipment / Drilling Method: Direct Push**		
Date: *February 23, 2016*	**Logged By:** *B. Dilba*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	6" inches of asphalt underlain by;									
5	Brown, dry, medium dense, SANDY GRAVEL; fine to coarse gravel, medium to coarse sand	GP								
10	at 9.5 feet; wet	▽		X						
15	Brown, wet, medium dense, SAND; fine to coarse sand	SP		X						

Explanation

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

Monitoring Well Construction

- Grout/Concrete 2' to 1'
- 3/4-inch bentonite chips 10' to 2'
- Silica sand 17' to 10'
- 2-inch diameter blank PVC casing from 12' to 0'
- 2-inch diameter PVC 0.01 slotted screen 17' to 12'

Ecology Tag #

ESN NORTHWEST
Environmental
Services Network

December 23, 2015

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

Dear Ms. Dilba:

Please find enclosed the analytical data report for the Adams Street Building Project in Tacoma, Washington. Probe services were conducted on December 9, 2015. Soil vapor samples were analyzed for Chlorinated VOC's by Method 8260 on December 11, 2015.

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

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
PROJECT ADAMS ST BUILDING
PROJECT #15-171
Tacoma, Washington

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

Analyses of Volatile Organic Componds in Air by Method 8260

Sample ID	Molecular	Reporting	MB	LCS	LCSD	B1	B2	B3	B4
Date Sampled	Weight	Limits				12/09/15	12/09/15	12/09/15	12/09/15
Date Analyzed	g	ug/m3	12/11/15	12/11/15	12/11/15	12/11/15	12/11/15	12/11/15	12/11/15
Dichlorodifluoromethane	120.9	10	nd			nd	nd	nd	nd
Chloromethane	50.49	50	nd			nd	nd	nd	nd
Vinyl chloride	62.50	10	nd	102%	94%	nd	nd	nd	nd
Chloroethane	64.52	10	nd			nd	nd	nd	nd
Trichlorofluoromethane	137.4	10	nd			nd	nd	nd	nd
1,1-Dichloroethene	96.95	10	nd			nd	nd	nd	nd
Methylene chloride	84.93	100	nd			nd	nd	nd	nd
trans-1,2-Dichloroethene	96.95	10	nd			nd	nd	nd	nd
1,1-Dichloroethane	98.96	10	nd			nd	nd	nd	nd
cis-1,2-Dichloroethene	96.95	10	nd			nd	nd	nd	nd
2,2-Dichloropropane	113.0	10	nd			nd	nd	nd	nd
Chloroform	119.4	10	nd	120%	113%	nd	nd	nd	nd
Bromochloromethane	129.4	10	nd			nd	nd	nd	nd
1,1,1-Trichloroethane	133.4	10	nd			nd	nd	nd	nd
1,2-Dichloroethane (EDC)	98.96	10	nd			nd	nd	nd	nd
1,1-Dichloropropene	111.0	10	nd			nd	nd	nd	nd
Carbon tetrachloride	153.2	10	nd			nd	nd	nd	nd
Trichloroethene	131.4	10	nd	115%	105%	nd	nd	nd	nd
1,2-Dichloropropane	113.0	10	nd	118%	110%	nd	nd	nd	nd
Bromodichloromethane	163.8	10	nd			nd	nd	nd	nd
cis-1,3-Dichloropropene	111.0	10	nd			nd	nd	nd	nd
trans-1,3-Dichloropropene	111.0	10	nd			nd	nd	nd	nd
1,1,2-Trichloroethane	133.4	10	nd			nd	nd	nd	nd
1,3-Dichloropropane	113.0	10	nd			nd	nd	nd	nd
Dibromochloromethane	208.3	10	nd			nd	nd	nd	nd
Tetrachloroethene	165.8	10	nd	99%	90%	**340**	**1,200**	**570**	nd
Chlorobenzene	112.6	10	nd	109%	100%	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	167.9	10	nd			nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	167.9	10	nd			nd	nd	nd	nd
1,2,3-Trichloropropane	147.4	10	nd			nd	nd	nd	nd
1,3-Dichlorobenzene	147.0	10	nd			nd	nd	nd	nd
1,4-Dichlorobenzene	147.0	10	nd			nd	nd	nd	nd
1,2-Dichlorobenzene	147.0	10	nd			nd	nd	nd	nd
1,2,4-Trichlorobenzene	181.5	75	nd			nd	nd	nd	nd
Hexachloro-1,3-butadiene	260.8	100	nd			nd	nd	nd	nd
Surrogate recoveries									
Dibromofluoromethane			105%	102%	101%	94%	105%	104%	103%
Toluene-d8			103%	95%	93%	103%	102%	104%	104%
4-Bromofluorobenzene			104%	92%	93%	103%	103%	101%	102%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: AES
ADDRESS: 6051 A Ave SE Suite 201
PHONE: (360) 352-9835 FAX: —
CLIENT PROJECT #: 15-171 PROJECT MANAGER: B. Dilks

DATE: 12/9/15 PAGE 1 OF 1
PROJECT NAME: Adams St Building
LOCATION: 6707 S. Adams St. Tacoma
COLLECTOR: B. Dilks DATE OF COLLECTION: 12/9/15

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES: 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. B1	—	0915	Vapor	Tedlar				X																
2. B2	—	0935						X																
3. B3	—	0954						X																
4. B4	—	1007						X																
5.																								
6.																								
7.																								
8.																								
9.																								
10.																								
11.																								
12.																								
13.																								
14.																								
15.																								
16.																								
17.																								
18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	12/9/15	[signature]	12/9/15
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

ESN NORTHWEST
Environmental
Services Network

January 26, 2016

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

Dear Ms. Dilba:

Please find enclosed the analytical data report for the Adams St Building Project in Tacoma, Washington. Probe services were conducted on January 15, 2016. Soil and water samples were analyzed for Chlorinated VOC's by Method 8260 on January 19 - 22 , 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

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
PROJECT ADAMS ST BUILDING
PROJECT #15-171
Tacoma, Washington

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

Analysis of Chlorinated Volatile Organic Compounds in Soil by Method 8260C/5035

	RL	MB	LCS	LCSD	B5-5	B5-13	B5-15	B6-4	B6-9.5	B6-13.5	B7-4
Date extracted		01/19/16	01/19/16	01/19/16	01/15/16	01/15/16	01/15/16	01/15/16	01/15/16	01/15/16	01/15/16
Date analyzed	(mg/Kg)	01/19/16	01/19/16	01/19/16	01/19/16	01/19/16	01/19/16	01/19/16	01/19/16	01/19/16	01/19/16
% Moisture					4%	8%	12%	6%	6%	8%	4%
Dichlorodifluoromethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Chloromethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Vinyl chloride	0.02	nd	82%	83%	nd	nd	nd	nd	nd	nd	nd
Chloroethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	92%	104%	nd	nd	nd	nd	nd	nd	nd
Methylene chloride	0.05	nd			nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	102%	125%	nd	nd	nd	nd	nd	nd	nd
Bromochloromethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	121%	134%	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.05	nd	112%	128%	nd	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	114%	131%	nd	**0.034**	nd	**0.037**	**0.052**	nd	nd
Chlorobenzene	0.05	nd	117%	133%	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd	nd
Surrogate recoveries											
Dibromofluoromethane		101%	98%	101%	99%	94%	96%	97%	98%	98%	95%
Toluene-d8		107%	94%	97%	105%	101%	102%	102%	104%	102%	105%
4-Bromofluorobenzene		111%	102%	105%	108%	106%	109%	108%	111%	109%	111%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental C
PROJECT ADAMS ST BUILDING
PROJECT #15-171
Tacoma, Washington

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

Analysis of Chlorinated Volatile Organic Compounds in Soil by Method 8260C/5035

	RL	B7-9	B7-13	B8-4	B8-9.5	B8-13.5	B9-4	B9-9	B9-13	B10-4.5	B10-10
Date extracted		01/15/16	01/15/16	01/15/16	01/15/16	01/15/16	01/15/16	01/15/16	01/15/16	01/15/16	01/15/16
Date analyzed	(mg/Kg)	01/19/16	01/19/16	01/19/16	01/20/16	01/20/16	01/20/16	01/20/16	01/20/16	01/20/16	01/21/16
% Moisture		4%	9%	4%	2%	15%	5%	5%	7%	9%	5%
Dichlorodifluoromethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chloromethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Vinyl chloride	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chloroethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Methylene chloride	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Bromochloromethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	**0.026**	**0.054**	**0.037**	**0.034**	**0.14**	nd	nd	nd	nd	nd
Chlorobenzene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	0.05	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Surrogate recoveries											
Dibromofluoromethane		97%	95%	93%	95%	100%	104%	98%	98%	94%	100%
Toluene-d8		103%	103%	102%	102%	100%	100%	102%	100%	101%	102%
4-Bromofluorobenzene		109%	110%	107%	111%	113%	115%	113%	112%	111%	110%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT ADAMS ST BUILDING
PROJECT #15-171
Tacoma, Washington

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

Analysis of Chlorinated Volatile Organic Compounds in Water by Method 8260C/5030C

Analytical Results

Date analyzed	RL (ug/L)	MB 01/22/16	LCS 01/22/16	LCSD 01/22/16	B5-W 01/22/16	B6-W 01/22/16	B7-W 01/22/16	B8-W 01/22/16	B9-W 01/22/16	B10-W 01/22/16	Trip Blank 01/22/16
Dichlorodifluoromethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Chloromethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Vinyl chloride	0.2	nd	79%	79%	nd	nd	nd	nd	nd	nd	nd
Chloroethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	1.0	nd	75%	72%	nd	nd	nd	nd	nd	nd	nd
Methylene chloride	1.0	nd			nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Chloroform	1.0	nd	99%	101%	nd	nd	nd	nd	nd	nd	nd
Bromochloromethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	1.0	nd	94%	97%	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	1.0	nd	99%	99%	nd	nd	nd	nd	nd	nd	nd
Bromodichloromethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Dibromochloromethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	86%	91%	**1.0**	**2.3**	**5.6**	**9.6**	nd	nd	nd
Chlorobenzene	1.0	nd	91%	96%	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd			nd	nd	nd	nd	nd	nd	nd
Surrogate recoveries											
Dibromofluoromethane		102%	102%	98%	101%	103%	101%	105%	102%	104%	102%
Toluene-d8		103%	96%	95%	100%	103%	103%	102%	103%	102%	102%
4-Bromofluorobenzene		112%	103%	105%	114%	112%	114%	111%	112%	110%	113%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: AFG
ADDRESS: 605 11th Ave SE, Suite 201
PHONE: (360) 352-9835 FAX: —
CLIENT PROJECT #: 15-171 PROJECT MANAGER: B. Dilg

DATE: ~~1/15~~ 1/15/16 PAGE 1 OF 2
PROJECT NAME: Adams St Building
LOCATION: 6707 S. Adams St Tacoma, WA
COLLECTOR: B. Dilg DATE OF COLLECTION: 1/15

Sample Number	Depth	Time	Sample Type	Container Type	BTEX	NOTES	Total Number of Containers	Laboratory Note Number
1. B5-5	5	1035	Soil	VOA/jar	X			
2. B5-13	13	1048	"	"	"			
3. B5-15	15	1048	"	"	"			
4. B6-4	4	1130	"	"	"			
5. B6-9.5	9.5	1134	"	"	"			
6. B6-13.5	13.5	1142	"	"	"			
7. B7-4	4	1220	"	"	"			
8. B7-9	9	1226	"	"	"			
9. B7-13	13	1232	"	"	"			
10. B5-W	—	1115	H2O	VOA	"			
11. B6-W	—	1205	"	"	"			
12. B7-W	—	1254	"	"	"			
13. B8-4	4	1303	Soil	VOA/jar	"			
14. B8-9.5	9.5	1306	"	"	"			
15. B8-13.5	13.5	1311	"	"	"			
16. B8-W	—	1334	H2O	VOA	"			
17. B9-4	4	1344	Soil	VOA/jar	"			
18. B9	9	1352	Soil	"	"			

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	1/15/16 1552	[signature]	1.15.16 1552
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

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: AEG
ADDRESS: 6005 11th AVE SE Suite 201, Olympia, WA
PHONE: (360) 352-9835 FAX: —
CLIENT PROJECT #: 15-171 PROJECT MANAGER: B. Dilbeck

DATE: 1/15/16 PAGE 2 OF 2
PROJECT NAME: Adams St Buildings
LOCATION: 6707 S Adams St. Tacoma, WA
COLLECTOR: B. Dilbeck DATE OF COLLECTION: 1/15/16

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. B9-13	13	1356	Soil	VOA/jar					X															
2. B9-W	—	1415	H2O	VOA					X															
3. B10-4.5	4.5	1429	Soil	VOA/jar																				
4. B10-10	10	1423	Soil	"																				
5. B10-																								
6. B10-W	—	1449	H2O	VOA																				
7.																								
8.																								
9.																								
10.																								
11.																								
12.																								
13.																								
14.																								
15.																								
16.																								
17.																								
18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	1/15/16 1552	[signature]	1-15-16 1552
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

ESN NORTHWEST
Environmental
Services Network

March 9, 2016

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

Dear Ms. Dilba:

Please find enclosed the analytical data report for the Adams Street Building Project in Tacoma, Washington. Probe services were conducted on February 23, 2016. Soil samples were analyzed for VOC's by Method 8260 on March 3, 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

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
PROJECT ADAMS ST BUILDING
PROJECT #15-171
Tacoma, Washington

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

Analysis of Chlorinated Volatile Organic Compounds in Soil by Method 8260C/5035

	RL	MB	LCS	LCSD	MW1-10	MW1-13	MW2-9.5	MW2-15	MW3-9.5	MW3-13
Date extracted		03/03/16	03/03/16	03/03/16	02/23/16	02/23/16	02/23/16	02/23/16	02/23/16	02/23/16
Date analyzed	(mg/Kg)	03/03/16	03/03/16	03/03/16	03/03/16	03/03/16	03/03/16	03/03/16	03/03/16	03/03/16
% Moisture					4%	8%	5%	9%	7%	14%
Dichlorodifluoromethane	0.05	nd			nd	nd	nd	nd	nd	nd
Chloromethane	0.05	nd			nd	nd	nd	nd	nd	nd
Vinyl chloride	0.02	nd	107%	99%	nd	nd	nd	nd	nd	nd
Chloroethane	0.05	nd			nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd			nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	96%	89%	nd	nd	nd	nd	nd	nd
Methylene chloride	0.05	nd			nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.05	nd			nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.05	nd			nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.05	nd			nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd			nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	114%	109%	nd	nd	nd	nd	nd	nd
Bromochloromethane	0.05	nd			nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	0.05	nd			nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.05	nd			nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.05	nd			nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.05	nd			nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd			nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.05	nd	111%	106%	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.05	nd			nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.05	nd			nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	0.05	nd			nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.05	nd			nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd			nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.05	nd			nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	81%	75%	nd	nd	nd	nd	**0.06**	**0.12**
Chlorobenzene	0.05	nd	84%	80%	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd			nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd			nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.05	nd			nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.05	nd			nd	nd	nd	nd	nd	nd
4-Chlorotoluene	0.05	nd			nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd			nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.05	nd			nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	0.05	nd			nd	nd	nd	nd	nd	nd
Surrogate recoveries										
Dibromofluoromethane		111%	113%	112%	112%	111%	102%	107%	111%	106%
Toluene-d8		89%	84%	84%	92%	90%	90%	87%	89%	90%
4-Bromofluorobenzene		105%	97%	95%	102%	101%	105%	101%	106%	107%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT ADAMS ST BUILDING
PROJECT #15-171
Tacoma, Washington

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

Analysis of Chlorinated Volatile Organic Compounds in Soil by Method 8260C/5035

	RL	MW4-9.5	MW4-15
Date extracted		02/23/16	02/23/16
Date analyzed	(mg/Kg)	03/03/16	03/03/16
% Moisture		3%	20%
Dichlorodifluoromethane	0.05	nd	nd
Chloromethane	0.05	nd	nd
Vinyl chloride	0.02	nd	nd
Chloroethane	0.05	nd	nd
Trichlorofluoromethane	0.05	nd	nd
1,1-Dichloroethene	0.05	nd	nd
Methylene chloride	0.05	nd	nd
trans-1,2-Dichloroethene	0.05	nd	nd
1,1-Dichloroethane	0.05	nd	nd
cis-1,2-Dichloroethene	0.05	nd	nd
2,2-Dichloropropane	0.05	nd	nd
Chloroform	0.05	nd	nd
Bromochloromethane	0.05	nd	nd
1,1,1-Trichloroethane	0.05	nd	nd
1,2-Dichloroethane (EDC)	0.05	nd	nd
1,1-Dichloropropene	0.05	nd	nd
Carbon tetrachloride	0.05	nd	nd
Trichloroethene (TCE)	0.02	nd	nd
1,2-Dichloropropane	0.05	nd	nd
Bromodichloromethane	0.05	nd	nd
cis-1,3-Dichloropropene	0.05	nd	nd
trans-1,3-Dichloropropene	0.05	nd	nd
1,1,2-Trichloroethane	0.05	nd	nd
1,3-Dichloropropane	0.05	nd	nd
Dibromochloromethane	0.05	nd	nd
Tetrachloroethene (PCE)	0.02	nd	**0.28**
Chlorobenzene	0.05	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd
1,2,3-Trichloropropane	0.05	nd	nd
2-Chlorotoluene	0.05	nd	nd
4-Chlorotoluene	0.05	nd	nd
1,3-Dichlorobenzene	0.05	nd	nd
1,4-Dichlorobenzene	0.05	nd	nd
1,2-Dichlorobenzene	0.05	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd	nd
1,2,4-Trichlorobenzene	0.05	nd	nd
Hexachloro-1,3-butadiene	0.05	nd	nd
1,2,3-Trichlorobenzene	0.05	nd	nd

Surrogate recoveries		
Dibromofluoromethane	108%	107%
Toluene-d8	92%	88%
4-Bromofluorobenzene	103%	103%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: AEG

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

PHONE: (360)352-9835 FAX:

CLIENT PROJECT #: 15-171 PROJECT MANAGER: B. Pilloc

DATE: 2/23/16 PAGE _____ OF _____

PROJECT NAME: Adams St Bldg

LOCATION: 6707 S Adams St, Tacoma

COLLECTOR: B. Pilloc DATE OF COLLECTION: 2/23/16

Sample Number	Depth	Time	Sample Type	Container Type	BTEX	NOTES	Total Number of Containers	Laboratory Note Number
1. MW1-5	5	0935	Soil	Vial/Jar	X	Hold	3	
2. MW1-10	10	0940				~~Hold~~ Run		
3. MW1-13	13	0945						
4. MW1-18	18	0955				Hold		
5. MW2-5	5	1135				Hold		
6. MW2-9.5	9.5	1139				~~Hold~~ Run		
7. MW2-15	15	1144						
8. MW2-19	19	1157				Hold		
9. MW3-5	5	1258				Hold		
10. MW3-9.5	9.5	1302				~~Hold~~ Run		
11. MW3-13	13	1310						
12. MW3-15	15	1310				Hold		
13. MW4-5	5	1400				Hold		
14. MW4-9.5	9.5	1409						
15. MW4-15	15	1422				-		
16.								
17.								
18.								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	2/23/16 1600	[signature]	2.23.16 1600
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

ESN NORTHWEST
Environmental
Services Network

April 7, 2016

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

Dear Ms. Dilba:

Please find enclosed the analytical data report for the Adams St Building in Tacoma, Washington. Soil samples were analyzed for Chlorinated VOC's by Method 8260 on March 3, 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

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
PROJECT ADAMS ST BUILDING
PROJECT #15-171
Tacoma, Washington

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

Analysis of Chlorinated Volatile Organic Compounds in Soil by Method 8260C/5035

	RL	MB	LCS	LCSD	MW3-5	MW3-15
Date extracted		04/04/16	04/04/16	04/04/16	02/23/16	02/23/16
Date analyzed	(mg/Kg)	04/04/16	04/04/16	04/04/16	03/03/16	03/03/16
% Moisture					2%	12%
Dichlorodifluoromethane	0.05	nd			nd	nd
Chloromethane	0.05	nd			nd	nd
Vinyl chloride	0.02	nd	94%	97%	nd	nd
Chloroethane	0.05	nd			nd	nd
Trichlorofluoromethane	0.05	nd			nd	nd
1,1-Dichloroethene	0.05	nd	70%	65%	nd	nd
Methylene chloride	0.05	nd			nd	nd
trans-1,2-Dichloroethene	0.05	nd			nd	nd
1,1-Dichloroethane	0.05	nd			nd	nd
cis-1,2-Dichloroethene	0.05	nd			nd	nd
2,2-Dichloropropane	0.05	nd			nd	nd
Chloroform	0.05	nd	117%	113%	nd	nd
Bromochloromethane	0.05	nd			nd	nd
1,1,1-Trichloroethane	0.05	nd			nd	nd
1,2-Dichloroethane (EDC)	0.05	nd			nd	nd
1,1-Dichloropropene	0.05	nd			nd	nd
Carbon tetrachloride	0.05	nd			nd	nd
Trichloroethene (TCE)	0.02	nd			nd	nd
1,2-Dichloropropane	0.05	nd	139%	138%	nd	nd
Bromodichloromethane	0.05	nd			nd	nd
cis-1,3-Dichloropropene	0.05	nd			nd	nd
trans-1,3-Dichloropropene	0.05	nd			nd	nd
1,1,2-Trichloroethane	0.05	nd			nd	nd
1,3-Dichloropropane	0.05	nd			nd	nd
Dibromochloromethane	0.05	nd			nd	nd
Tetrachloroethene (PCE)	0.02	nd	112%	111%	**0.060**	**0.74**
Chlorobenzene	0.05	nd	111%	113%	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd			nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd			nd	nd
1,2,3-Trichloropropane	0.05	nd			nd	nd
2-Chlorotoluene	0.05	nd			nd	nd
4-Chlorotoluene	0.05	nd			nd	nd
1,3-Dichlorobenzene	0.05	nd			nd	nd
1,4-Dichlorobenzene	0.05	nd			nd	nd
1,2-Dichlorobenzene	0.05	nd			nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd			nd	nd
1,2,4-Trichlorobenzene	0.05	nd			nd	nd
Hexachloro-1,3-butadiene	0.05	nd			nd	nd
1,2,3-Trichlorobenzene	0.05	nd			nd	nd
Surrogate recoveries						
Dibromofluoromethane		103%	100%	100%	102%	104%
Toluene-d8		99%	86%	87%	90%	92%
4-Bromofluorobenzene		116%	105%	104%	113%	113%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: AEG

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

PHONE: (360)352-9835 FAX:

CLIENT PROJECT #: 15-171 PROJECT MANAGER: B. Bilby

DATE: 2/23/16 PAGE ____ OF ____

PROJECT NAME: Adams St Bldg

LOCATION: 6707 S Adams St, Tacoma

COLLECTOR: B. Bilby DATE OF COLLECTION: 2/23/16

Sample Number	Depth	Time	Sample Type	Container Type	BTEX	NOTES	Total Number of Containers	Laboratory Note Number
1. MW1-5	5	0935	Soil	Vial/Jar	X	Hold	3	
2. MW1-10	10	0940				~~Hold~~ Run		
3. MW1-13	13	0946						
4. MW1-18	18	0955				Hold		
5. MW2-5	5	1135				Hold		
6. MW2-9.5	9.5	1139				~~Hold~~ Run		
7. MW2-15	15	1144						
8. MW2-19	19	1157				Hold		
9. MW3-5	5	1258				Hold		
10. MW3-9.5	9.5	1302				~~Hold~~ Run		
11. MW3-13	13	1310						
12. MW3-15	15	1310				Hold		
13. MW4-5	5	1420				Hold		
14. MW4-9.5	9.5	1409						
15. MW4-15	15	1422						
16.								
17.								
18.								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	2/23/16 1600	[signature]	2-23-16 1600
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

ESN NORTHWEST
Environmental
Services Network

March 25, 2016

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

Dear Ms. Dilba:

Please find enclosed the analytical data report for the Adams St Building Project in Tacoma, Washington. Water samples were analyzed for Chlorinated VOC's by Method 8260 on March 23, 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

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
PROJECT ADAMS ST BUILDING
PROJECT #15-171
Tacoma, Washington

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

Analysis of Chlorinated Volatile Organic Compounds in Water by Method 8260C/5030C

Analytical Results

	RL	MB	LCS	LCSD	MW-2	MW-3	MW-4	MW-1
Date analyzed	(ug/L)	03/23/16	03/23/16	03/23/16	03/23/16	03/23/16	03/23/16	03/23/16
Dichlorodifluoromethane	1.0	nd			nd	nd	nd	nd
Chloromethane	1.0	nd			nd	nd	nd	nd
Vinyl chloride	0.2	nd	98%	107%	nd	nd	nd	nd
Chloroethane	1.0	nd			nd	nd	nd	nd
Trichlorofluoromethane	1.0	nd			nd	nd	nd	nd
1,1-Dichloroethene	1.0	nd	131%	136%	nd	nd	nd	nd
Methylene chloride	1.0	nd			nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd			nd	nd	nd	nd
1,1-Dichloroethane	1.0	nd			nd	nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd			nd	nd	nd	nd
2,2-Dichloropropane	1.0	nd			nd	nd	nd	nd
Chloroform	1.0	nd	122%	132%	nd	nd	nd	nd
Bromochloromethane	1.0	nd			nd	nd	nd	nd
1,1,1-Trichloroethane	1.0	nd			nd	nd	nd	nd
1,2-Dichloroethane (EDC)	1.0	nd			nd	nd	nd	nd
1,1-Dichloropropene	1.0	nd			nd	nd	nd	nd
Carbon tetrachloride	1.0	nd			nd	nd	nd	nd
Trichloroethene (TCE)	1.0	nd	121%	132%	nd	nd	nd	nd
1,2-Dichloropropane	1.0	nd			nd	nd	nd	nd
Bromodichloromethane	1.0	nd			nd	nd	nd	nd
cis-1,3-Dichloropropene	1.0	nd			nd	nd	nd	nd
trans-1,3-Dichloropropene	1.0	nd			nd	nd	nd	nd
1,1,2-Trichloroethane	1.0	nd			nd	nd	nd	nd
1,3-Dichloropropane	1.0	nd			nd	nd	nd	nd
Dibromochloromethane	1.0	nd			nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	105%	117%	nd	**10**	**2.0**	nd
Chlorobenzene	1.0	nd	104%	114%	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1.0	nd			nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1.0	nd			nd	nd	nd	nd
1,2,3-Trichloropropane	1.0	nd			nd	nd	nd	nd
2-Chlorotoluene	1.0	nd			nd	nd	nd	nd
4-Chlorotoluene	1.0	nd			nd	nd	nd	nd
1,3-Dichlorobenzene	1.0	nd			nd	nd	nd	nd
1,4-Dichlorobenzene	1.0	nd			nd	nd	nd	nd
1,2-Dichlorobenzene	1.0	nd			nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	1.0	nd			nd	nd	nd	nd
1,2,4-Trichlorobenzene	1.0	nd			nd	nd	nd	nd
Hexachloro-1,3-butadiene	1.0	nd			nd	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd			nd	nd	nd	nd
Surrogate recoveries								
Dibromofluoromethane		102%	106%	105%	101%	105%	108%	106%
Toluene-d8		99%	90%	91%	98%	100%	101%	99%
4-Bromofluorobenzene		108%	102%	102%	110%	110%	111%	113%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits
Acceptable Recovery limits: 65% TO 135%
Acceptable RPD limit: 35%
* Analysis of LCSD yielded high recovery for 1,1-Dicholoroethene, because this analyte was not detected in the samples, no further action was taken.

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: AEG

ADDRESS: 605 11th Ave SE, Suite 201

PHONE: _____ FAX: _____

CLIENT PROJECT #: 15-171 PROJECT MANAGER: B. Dilley

DATE: 3/17/16 PAGE 1 OF 1

PROJECT NAME: Adams St Building

LOCATION: 6707 S Adams St, Tacoma, WA

COLLECTOR: B. Dilley DATE OF COLLECTION: 3/17/16

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. mw-2	-	1010	H2O	VOAX2				X															2	
2. mw-3	-	1033	(	(				X															2	
3. mw-4	-	1058	)	)				X															2	
4. mw-1	-	1127	)	)				X															2	
5.																								
6.																								
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RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	3/17/16 1409	[signature]	3/17/16
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
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E-Mail: info@esnnw.com