



Site Closure Report

Conducted on:

4 Corners Cleaners

2386 SE Kent-Kangley Road
Maple Valley, Washington 98038-6848

Prepared for:

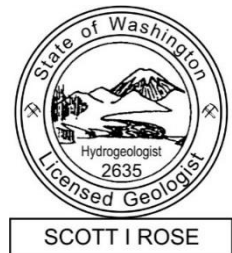
Mr. Chang Kim

23886 SE Kent-Kangley Road
Maple Valley, Washington 98038-6848

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AEG Atlas Project #: 17-126
Date of Report: July 24, 2024



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

REQUEST FOR OPINION FORM

Use this form to request a written opinion on your planned or completed independent remedial action under the Voluntary Cleanup Program (VCP). Attach to this form the plans or reports documenting the remedial action. Please submit only one form for each request.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are requesting a written opinion under the VCP. This information may be found on the VCP Agreement.

Facility/Site Name: Four Corners Cleaners New Location

Facility/Site Address: 23886 SE Ken-Kangley Roas, Maple Valley

Facility/Site No: 5867

VCP Project No.: NW3234

Step 2: REQUEST WRITTEN OPINION ON PLAN OR REPORT

What type of independent remedial action plan or report are you submitting to Ecology for review under the VCP? Please check all that apply.

- ☐ Remedial investigation plan
- ☐ Remedial investigation report
- ☐ Feasibility study report
- ☐ Property cleanup* plan (* cleanup of one or more parcels located within the Site)
- ☐ Property cleanup* report
- ☐ Site cleanup plan
- ☒ Site cleanup report
- ☐ Other – please specify:

Do you want Ecology to provide you with a written opinion on the planned or completed independent remedial action?

☒ Yes ☐ No

Please note that Ecology's opinion will be limited to:

- Whether the planned or completed remedial action at the site meets the substantive requirements of the Model Toxics Control Act (MTCA), and/or
- Whether further remedial action is necessary at the site under MTCA.

Step 3: REPRESENTATIONS AND SIGNATURE

The undersigned representative of the Customer hereby certifies that he or she is fully authorized to request services from Ecology under the Agreement for this VCP Project.

Name: Scott Rose

Title: Director of Technical Svcs

Signature:

Date: 7/24/24

Organization: AEG Atlas, LLC

Mailing address: 2633 Parkmont Lane SW, Suite A

City: Olympia

State: WA

Zip code: 98501

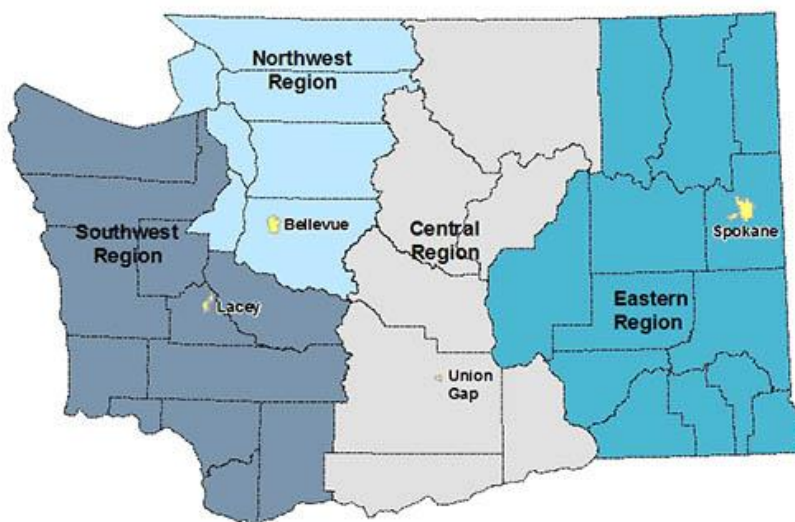
Phone: 360-352-9835

Fax:

E-mail: srose@aegwa.com

Step 4: SUBMITTAL

Please mail your completed form and the independent remedial action plan or report that you are requesting Ecology review to the site manager Ecology assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.

**Northwest Region:**

Attn: VCP Coordinator
3190 160th Ave. SE
Bellevue, WA 98008-5452

Central Region:

Attn: VCP Coordinator
1250 West Alder St.
Union Gap, WA 98903-0009

Southwest Region:

Attn: VCP Coordinator
P.O. Box 47775
Olympia, WA 98504-7775

Eastern Region:

Attn: VCP Coordinator
N. 4601 Monroe
Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

ECY 070-219 (revised July 2015)

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1.0 INTRODUCTION

This report presents the findings of a Remedial Investigation (RI) and cleanup activities conducted by AEG Atlas, LLC (AEG) at the 4 Corners Cleaners located at 23886 SE Kent-Kangley Road, Maple Valley, WA (Site). The purpose of this report is to document the completion of the RI, provide a summary of cleanup activities, and provide information to support a No Further Action (NFA) decision from the Washington State Department of Ecology (Ecology). The scope of work for this investigation was developed based on our professional judgment and experience in accordance with requirements in the Model Toxics Control Act (MTCA) Cleanup Regulations (Chapter 173-340 Washington Administrative Code [WAC]).

1.1 General Site Information

Site Name: 4 Corners Cleaners

Site Address: 23886 SE Kent-Kangley Road, Maple Valley, WA 98038-6848

King County Parcel No.: 510711-0010

Property Owner: ROIC Four Corner Square, LLC

The Site is located northwest of the intersection between SE Kent-Kangley Road and Highway 169 in Maple Valley, King County, Washington. The Site is positioned on an approximately 9.57-acre parcel with five retail buildings totaling 254,663 square feet. An “L” shaped building on the southwest portion of the parcel includes the 4 Corners Cleaners tenant space. The remainder of the parcel not covered by buildings is improved with asphalt-paved parking and driveways, and landscaped areas. The immediate vicinity of the Site is primarily commercial businesses. Figure 1, *Vicinity Map*, presents the general layout of the Site vicinity. The Site’s current layout can be seen in Figure 2, *Site Map*.

1.2 Site History

This Site History refers to activities performed at both the Site (current 4 Corners Cleaners) and the property situated to the east, which was enrolled in Ecology’s Voluntary Cleanup Program (VCP) under ID# NW2931, hereafter referred to as site NW2931, and was previously issued a NFA Determination, issued on March 2, 2015. Based on the site assessment results for site NW2931, the results for tetrachloroethene (PCE) and related daughter products were confirmed in soil. Impacts of these contaminants to the surface and subsurface soils occurred over time through releases from the operation of the former dry-cleaning facility. This property was redeveloped in 2012 and is currently an asphalt parking lot and Walgreens pharmacy. Refer to this letter for a summary of prior activities regarding site NW2931 (Appendix B, *No Further Action Letter - NW2931*).

The current 4 Corners Cleaners has had site assessments conducted on the Site from 2003 to 2014 that confirmed the presence of PCE and daughter products in the soil vapor. A NFA determination was issued for the current 4 Corners Cleaners (VCP# NW2932) on February 28, 2017. Refer to this letter for a summary of prior activities (Appendix B, *No Further Action Letter - NW2932*).

The current 4 Corners Cleaners switched to a hydrocarbon dry cleaning machine in 2017, which triggered a Phase II Environmental Site Assessment (ESA) from the tenant's environmental insurance. The results of this Phase II ESA and subsequent investigations are further summarized in Section 2.0, *Field Investigations*.

1.3 Site Use

The Site is located northwest of the intersection between SE Kent-Kangley Road and Highway 169 in Maple Valley, Washington, and operates within a single suite within the retail shopping center. Current tenants in the "L" shaped building along the southern portion of the property include: 4 Corners Cleaners, Bellissimo Lashes and Nails, Papa Murphy's Pizza, Allstate Insurance, Serena Hair Design, a chiropractic office, Smoke & Vape shop, Four Corners Family Dentist, Bike Masters, and Maple Valley Bar and Grill. Gravity Coffee, MOD Pizza, and a Verizon Retailer occupy the square building located in the southeast portion of the property. North of the "L" shaped building, and the 4 Corners Cleaners tenant space, is Johnsons Home & Garden, Dog Spaw, Subway, Discovery Playtown, and Grocery Outlet.

2.0 FIELD INVESTIGATIONS

This section includes summaries of environmental activities completed during the involvement of AEG at the Site and descriptions of prior activities are limited to the content of historical reports provided to AEG for review. Methods used during fieldwork are summarized in Section 2.2, *Field Methodologies*.

Analytical data provided in historical reports as compared to applicable MTCA cleanup levels are presented in Table 1, *Summary of Soil Analytical Results*, Table 2, *Summary of Groundwater Analytical Results*, and Table 3, *Summary of Sub-Slab Vapor Analytical Results*. Sampling and monitoring well locations are illustrated in Figure 2, *Site Map*. Laboratory reports, boring, and well logs are included in Appendix A, *Supporting Documents*.

2.1 Site Characterization History (Post NFA Letter)

2.1.1 Phase II Environmental Site Assessment – AEG, March 2017

On March 13, 2017, AEG supervised the advancement of three borings (B-1 through B-3) to a maximum depth of 2 feet below ground surface (bgs) inside the current dry-cleaning facility. One soil sample was collected from each boring. AEG returned to the Site on March 31, 2017, and collected soil vapor samples from 14 sub-slab vapor locations (SV-1 through SV-14). The soil vapor was sampled from directly beneath the slab. Based on the analytical results indicating impacts in soil and sub-slab vapor, AEG recommended the following:

- *Further Site characterization, including the installation of at least three groundwater monitoring wells to assess the depth of potential impacts in soil and groundwater, and to identify groundwater gradient and potential for off-property migration of PCE.*
- *Additional soil borings in the parking areas and near the entrance roadway to assess the potential source of the dichlorodifluoromethane, which is a refrigerant and not usually associated with dry cleaning operations.*
- *A Tier II Vapor assessment be performed to determine the lateral extent of VOCs present in sub-slab soil vapor, and whether those vapors may be impacting indoor air. AEG recommends advancing a soil vapor probes outside the building perimeter, and concurrently collecting one indoor air sample and one background ambient air sample.*

2.1.2 Remedial Investigation – AEG, July 2018

In July 2018, AEG returned to the Site to define the extent of contamination in soil and to determine if contamination was present in groundwater. AEG advanced 10 borings (B-4 through B-13) to a maximum depth of 35 feet bgs using a limited-access sonic drill rig, operated by Cascade Drilling. Soil and groundwater (where encountered) samples were collected from the borings and

analyzed for PCE and its daughter products. Soil sample B11-18 at 18 feet bgs reported PCE at 0.053 milligrams per kilogram (mg/kg), which was the only soil sample collected during this event that was above the MTCA Method A cleanup level for PCE (0.05 mg/kg). Deeper sample results from the same boring at 21 and 24 feet bgs (0.034 mg/kg and 0.046 mg/kg respectively) were below the MTCA cleanup level. Groundwater was encountered in six of the 10 borings (not including B-11), and no contaminants were detected.

2.1.3 SVE Pilot Test – AEG, December 2018

On December 4, 2018, for the purpose of performing a Soil Vapor Extraction (SVE) pilot test, eight temporary wells (T-1 through T-8) were installed at the Site with specific spacing used to determine the effectiveness of SVE as a remedial option. The temporary wells were completed with 10 feet of slotted screen from 5 to 15 feet bgs. The wells were sealed with bentonite for the top 5 feet of the boring and were installed to measure the radius of influence (ROI) and vacuum during the pilot test. No soil samples were collected during the temporary well installations. On December 5, 2018, AEG performed a SVE pilot test over one day at the Site using the temporary wells, with T-1 as the extraction point and field monitoring in wells T-2 through T-8.

2.2 Field Methodologies

AEG supervised the advancement of soil borings, temporary monitoring wells, permanent monitoring wells, and collected sub-slab soil vapor samples as described in Section 2.1, *Site Characterization History*. Soil samples were collected during drilling for field screening and laboratory analyses. Groundwater samples were collected following borehole completion and from groundwater monitoring wells during quarterly groundwater monitoring events. Sampling locations are illustrated in Figure 2, *Site Map*. Boring and well logs are presented in Appendix A, *Supporting Documents*.

2.2.1 Soil Sampling Procedures

Soil sampling methods for this work followed the protocols established by Ecology and the U.S. Environmental Protection Agency (EPA). To minimize volatile organic compound (VOC) losses, soil sampling and field preservation methods for VOCs followed methods set forth by EPA's Method 5035A, and Ecology's guidance, "*Collecting and Preparing Soil Samples for VOC Analysis*". Soil samples were collected from the boreholes via continuous soil cores in an acetate sleeve inside the drilling rod's core barrel. Soils were observed to document soil lithology, color, moisture content, and sensory evidence of contamination. Samples were transported via laboratory-provided pre-weighed 20-milliliter (ml) volatile organic analysis (VOA) glass vials and pre-weighed 4-ounce glass jars for analysis under chain-of-custody protocols.

2.2.2 Monitoring Well Construction

Groundwater monitoring wells at the Site were constructed pursuant to Ecology's *Minimum Standards for Construction and Maintenance of Wells*, Chapter 173-160 WAC. Groundwater monitoring wells at the Site were constructed up to 25 feet bgs, with 10 feet of 2-inch diameter 0.020-inch slotted PVC screen. The annular space around the well screen was filled with 10/20 Colorado sand to approximately 1.5 feet above the top of the well screen. To seal each well, bentonite chips were placed above the sand and a traffic-rated surface monument was placed over the well casing to protect it. The monitoring wells were properly developed after installation using high-flow pumping until turbidity decreased and stabilized.

2.2.3 Sub-Slab Vapor Sampling Procedures

For temporary sub-slab vapor samples, 3/8-inch diameter borings were drilled into the concrete slab using a rotary hammer drill. The borings were drilled into the subsurface material beneath the building slab where soil gas vapors accumulate. Upon clearing the boring, a stainless-steel sample port was inserted into the boring and sealed with either bentonite (for temporary points) or concrete (for permanent points). The bentonite or concrete seals were checked using a water dam technique before purging at least three volumes of the sample tubing. Samples were collected in evacuated 1-liter passivated stainless-steel canisters or evacuated 1-liter passivated glass amber bottles equipped with 10-minute regulators.

For permanently installed vapor pins, tubing was connected to the pins before purging at least three volumes of the sample tubing. Samples were collected in evacuated 1-liter passivated stainless-steel canisters or evacuated 1-liter passivated glass amber bottles equipped with 10-minute regulators.

2.2.4 Boring Groundwater, and Monitoring Well Groundwater Sampling Procedures

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

Groundwater monitoring wells were purged until the target field parameters stabilized. Groundwater samples were collected in laboratory-provided bottles. Upon collection, the samples were placed in a chilled cooler for transport to the analytical laboratory under chain-of-custody documentations.

2.2.5 Quality Controls

To ensure that quality information was obtained at the Site:

- All samples were collected in general accordance with industry protocols for the collection, documentation, and handling of samples.
- Descriptions of soil sampling depths were carefully logged in the field; the driller and Site geologist confirmed sample depths as soil samples were collected.
- Nitrile gloves were used in handling all sampling containers and sampling devices.
- Soil samples were tightly packed into jars to eliminate sample headspace.
- Groundwater samples were filled carefully in the sampling containers to prevent volatilization.
- Upon sampling, all samples were immediately placed into chilled ice chests.
- Upon sampling, all soil vapor samples were placed into a cooler.
- The samples were transported under a chain-of-custody to the analytical laboratory for analysis.

Analytical laboratories used for Site investigations provided standard quality assurance/quality control (QA/QC), which included:

- Surrogate recoveries for each sample.
- Method blank results.
- Laboratory control samples, and laboratory control duplicate samples, matrix or blank spiked analyses.
- Duplicate spiked analyses.

2.2.6 Investigation-Derived Waste

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

2.3 Analytical Results

Soil, groundwater, and vapor samples collected to date have been analyzed for the following analyses:

- PCE and daughter products using EPA Method 8260.
- VOCs using Method TO-15.

All analytical results were compared to MTCA Method A or B cleanup levels for soil and groundwater, and Method B sub-slab screening levels for sub-slab vapor. Copies of the laboratory datasheets are provided in Appendix A, *Supporting Documents, Laboratory Datasheets*.

2.3.1 Soil Results

Analytical results of the soil samples collected during the RI investigations indicated concentrations of PCE exceeding the MTCA Method A cleanup level of 0.05 mg/kg in four samples ranging in concentrations from 0.053 to 0.12 mg/kg. It should be noted that two of these samples (B11-18 and MW3-21) were collected below 15 feet bgs and are well below the MTCA Method B cleanup level of 480 mg/kg for PCE. One sample (MW3-18) contained TCE at 0.031 mg/kg exceeding the MTCA Method A cleanup level of 0.03 mg/kg, but below the Method B cleanup level of 12.0 mg/kg. No other chlorinated VOCs were detected at concentrations above their respective MTCA Method A cleanup levels in any of the other soil samples. Table 1, *Summary of Soil Analytical Results*, presents analytical results as compared to MTCA cleanup levels for soil. The distribution of soil concentrations in excess of MTCA Method A cleanup levels is illustrated in plan view on Figure 3, *Cross-Section Index Map and PCE Plume in Soil*, and in cross section on Figure 4, *Geologic Cross-Section A-A'*, and Figure 5, *Geologic Cross-Section B-B'*.

2.3.2 Groundwater Results

Analytical results of the groundwater samples collected to date have consistently been non-detect for all constituents analyzed. Table 2, *Summary of Groundwater Analytical Results*, present analytical results compared to MTCA cleanup levels for groundwater.

2.3.3 Soil Vapor Results

Analytical results of the sub-slab vapor samples collected during the RI investigations indicated the presence of PCE above the MTCA Method B sub-slab screening level of 320 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in all vapor samples, except SV-13. Concentrations of PCE ranged from 850 $\mu\text{g}/\text{m}^3$ in SV-6 to 6,300 $\mu\text{g}/\text{m}^3$ in SV-11, with the highest concentrations being near the current and former dry-cleaning machine. Table 3, *Summary of Sub-Slab Vapor Analytical Results*, presents analytical results as compared to MTCA Method B screening levels for sub-slab soil vapor.

3.0 CONCEPTUAL SITE MODEL

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

3.1 *Constituents of Concern and Affected Media*

The chlorinated VOC PCE and its anaerobic sequential degradation chain constituents, including trichloroethene (TCE), cis-1,2-dichloroethene (DCE), trans-1,2-DCE, and vinyl chloride, are the contaminants of concern (COCs) for the Site. Soil and soil vapor are the media affected. Groundwater was encountered at various depths from 25 to 33 feet bgs in six of the ten borings, and did not contain detectable concentrations of VOCs. Soil impacts at the Site are likely the result of use and storage of PCE formerly used in the dry cleaner machine and dry-cleaning process.

PCE exceeded the MTCA Method A cleanup level in AEG soil samples B1-22 (1.8 feet bgs) and B3-23 (1.9 feet bgs). Both borings were located inside the building. The vertical extent of PCE in these borings could not be determined due to the very dense soils encountered and the limitations of drilling in these soils inside the building. However, confirmation soil borings were able to target areas just below these depths to demonstrate compliance (see Section 5.3).

The distribution of soil concentrations in excess of MTCA Method A cleanup levels in is illustrated in plan view on Figure 3, *Cross-Section Index Map and PCE Plume in Soil*, and in cross section on Figure 5, *Geologic Cross Section A-A'*, and Figure 6, *Geologic Cross Section B-B'*.

3.2 *Site Geology and Hydrogeology*

The Site and vicinity are primarily underlain by Vashon till, a dense unconsolidated glacial deposit characterized by poorly sorted materials including gravel, sand, silt, and clay. A thin veneer of Vashon recession outwash deposits is also present, as recorded in well logs to depths of at least 20 feet bgs, overlying the till.

According to the U.S. Department of Agriculture Natural Resources Conservation Service soil survey, surface soils beneath the Site consist of soil unit Everett very gravelly sandy loam, consist of moderately deep soils and is somewhat excessively drained. Typically, the surface layer is slightly decomposed plant material. The upper part of the soil is very gravelly sandy loam and transitions to extremely cobbly coarse sand.

Soils encountered at the Site during subsurface investigations generally consisted of silt with gravel to approximately 5 feet bgs, underlain by dense, sandy gravel with fine- to coarse-sized gravels, and cobbles to about 35 feet bgs. Groundwater at the time of drilling was encountered at

various depths from 25 to 33 feet bgs. This is assumed to be a perched shallow groundwater-bearing zone. Based on the data collected during groundwater monitoring events conducted by AEG, the groundwater flow direction is generally to the north.

3.3 Environmental Fate of Chlorinated Solvents in the Subsurface

The density of PCE and its breakdown products is greater than water. Upon release into the environment, chlorinated VOCs 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 the soil or trapped in the pore spaces between the soil particles. At this Site, residual dissolved-phase PCE, TCE, DCE, and vinyl chloride have not been detected in groundwater; however, sorbed-phase PCE has been detected in soil, and PCE is present in soil gas. No dense non-aqueous phase liquid (DNAPL) has been detected.

Chlorinated VOCs and their associated compounds can be volatilized under the appropriate conditions. In the subsurface, volatilization releases COCs from soil and/or groundwater into soil vapor where, if conditions are right, can migrate beneath or into structures.

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.

3.4 Potential Exposure Pathways

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

3.4.1 Potential Soil Exposure Pathways

Potentially complete soil exposure pathways at the Site include:

- Contact (dermal contact, incidental ingestion) with hazardous substances in soil by visitors, residents, and workers (including excavation workers). Direct ingestion of, or dermal contact with, soil containing PCE is considered a potential exposure pathway. Impacted areas are currently covered by the building, asphalt, and landscaped areas, and unless disturbed, are not available for potential direct contact or ingestion. Soil impacts have been documented at and below 2 feet bgs.

3.4.2 Potential Groundwater Exposure Pathways

Potentially complete groundwater exposure pathways at the Site include:

- Contact (dermal, incidental ingestion) with hazardous substances dissolved in groundwater by visitors, residents, and workers (including excavation workers). Groundwater was not encountered in all borings at the Site; where it was encountered, depths ranged from about 25 to 33 feet bgs. Further, the Site is currently covered by asphalt, the Site building, and landscape areas and, unless disturbed, are not available for potential direct contact or ingestion.
- Consumption of hazardous substances in groundwater. Currently, drinking water is provided by the city. For the purpose of this CSM, consumption of hazardous substances in groundwater is considered a completed pathway.

3.4.3 Potential Air Exposure Pathways

Potentially complete air exposure pathways include:

- Inhalation of hazardous substances in soil vapor by visitors, residents, and workers (including excavation workers). Analytical results of the sub-slab vapor samples indicated the presence of PCE and TCE above their respective MTCA Method B screening levels for sub-slab vapor. However, no samples of the indoor air have been collected to date as the space is occupied by an active dry-cleaning operation. The sub-slab vapor data suggests that impacts present beneath the building may migrate into the building potentially impacting indoor air. For the purpose of this CSM and establishing cleanup standards, this pathway is considered potentially complete.

3.4.4 Terrestrial Ecological Evaluation

This Site qualifies for an exclusion from further terrestrial ecological evaluation based on the following:

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

A Terrestrial Ecological Evaluation Form was previously submitted with the March 2019, *Remedial Investigation / Feasibility Study Report*.

4.0 CLEANUP STANDARDS

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

4.1 Potentially Applicable Laws

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

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

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

4.2 Remedial Action Objectives

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

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

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

4.3 Cleanup Standards

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

4.3.1 Proposed Cleanup Levels

MTCA Method A cleanup levels for the soil exposure pathways are appropriate for this Site. MTCA Method B cleanup levels are appropriate for the air exposure pathway, and for constituents where MTCA Method A cleanup levels are not promulgated. These cleanup levels are based on the most stringent values for each exposure pathway and are considered appropriate for the Site COCs. Proposed MTCA cleanup levels for the Site COCs that have been measured at the Site include:

<u>Constituent</u>	<u>Soil</u>	<u>Groundwater</u>	<u>Indoor Air</u>
• PCE	0.05 mg/kg	5 µg/L	9.62 µg/m ³ *
• TCE	0.03 mg/kg	5 µg/L	0.37 µg/m ³ *
• cis-1,2- DCE	160 mg/kg*	16 µg/L*	18.3 µg/m ³ *
• trans-1,2- DCE	1,600 mg/kg*	160 µg/L*	18.3 µg/m ³ *
• Vinyl Chloride	0.67 mg/kg*	0.2 µg/L	0.28 µg/m ³ *

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

µg/m³ = micrograms per cubic meter

* Method B cleanup level (Method A cleanup level not established)

4.3.2 Points of Compliance

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

- Soil – Direct Contact: For soil cleanup levels based on human exposure via direct contact, the point of compliance is throughout the Site from the ground surface to 15 feet bgs.

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

5.0 SITE CLEANUP

AEG's Cleanup Action Plan (CAP) dated May 29, 2019, and ultimately approved by Ecology, included a summary of the proposed SVE remedy for the Site. The remedy consisted of installing and operating an active SVE system to extract and remove adsorbed vapor-phase PCE and other VOCs from subsurface soil beneath the building. The extracted soil vapors from the SVE system were to be treated using granular activated carbon (GAC) prior to discharge under a PSCAA permit.

5.1 System Installation

Five SVE wells were installed on August 9 and 10, 2019 by Cascade Drilling, LP (Cascade) using sonic drilling technology. Four SVE wells (SVE-1 through SVE-4) were installed outside the tenant space to 15 feet with slotted screens from 2 to 15 feet bgs. SVE-5 was installed inside the tenant space using vacuum extraction to a depth of 3 feet bgs and completed with slotted screen from 6 inches to 3 feet bgs. All wells were sealed at the surface with bentonite and concrete grout.

Sub-slab vapor monitoring points (VP-1 to VP-4) were installed by drilling through the existing concrete slab, placement, and sealing of the stainless steel VaporPin® sampling points. The vapor points were completed with accessible lids in locations for easy monitoring. Vapor monitoring points and SVE well locations are illustrated on Figure 2, *Site Map*.

The SVE system underground conveyance piping installation was completed in August through September 2019, and startup occurred on October 9, 2019. The system was constructed to meet the Site conditions and requirements of the property management company. The system started with GAC filters in-place to be in compliance with the required PSCAA regulations.

5.2 Operation & Maintenance

Following startup, on behalf of AEG, DH Environmental, Inc. (DHE) performed routine operations and maintenance (O&M) work to ensure the SVE system was operating normally. The only system shutdowns were the result of general power failures and intended shutdowns during sampling events.

On February 2, 2022, DHE replaced four non-functioning vacuum gauges (SVE 1, 2, 3, 4) on the SVE well manifold. Additionally, testing was conducted on SVE-4 to determine whether the well was under vacuum. Subsequent results determined the well-maintained adequate suction at the wellhead and water was noted in the SVE-4 manifold line. All five vacuum gauges had since properly functioned and provided accurate readings of the vacuum maintained on each well.

The system performance had been monitored by sampling a network of four sub-slab vapor pins installed throughout the inside of the business (VP-1 through VP-4). Ongoing monitoring of the sub-slab vapor monitoring points noted PCE continued to be present in sub-slab vapors in the southern half of the tenant space following the replacement and testing of the original four SVE wells. As such, on April 10, 2022, DHE mobilized to the Site to install three additional SVE wells (SVE-6, SVE-7, and SVE-8). The addition of these three wells provided additional air flow beneath the building foundation to mitigate the exposure to PCE vapors. These additional SVE well locations are illustrated on Figure 2, *Site Map*.

The analytical results of the past four sub-slab performance sampling events (May & October 2022, and March & October 2023) indicated that all constituents analyzed for were either non-detect or detected below MTCA Method B screening levels. Also, all results to date have been below MTCA Method B screening levels for commercial workers. Analytical results of the sub-slab analytical results are presented in Table 3, *Summary of Sub-Slab Vapor Analytical Results*. Analytical results of the SVE System analytical results are presented in Table 4, *Summary of SVE System Air Analytical Results*. Sample locations are illustrated on Figure 2, *Site Map*.

5.3 Confirmation Soil Sampling

As of the October 18, 2023, monitoring date, the SVE system had been operational at the Site for 1,199 days. Based on the October 2023 sub-slab vapor results, AEG scheduled confirmation soil sampling to evaluate the success of the SVE system in remediating PCE-impacted soil. On November 19 and 20, 2023, AEG advanced six soil borings (B-14 through B-19) using a limited-access, direct-push drill rig (inside the tenant space) and a hollow-stem auger rig (outside) in areas where COCs were previously detected above MTCA screening levels. Borings B-14 through B-16 were advanced inside the building near borings B-1 through B-3 where PCE-impacted soil was present during the initial 2017 investigation. Borings B-17 through B-19 were advanced in the area to the north of the store near B-11. A total of 10 soil samples collected from the borings were submitted for laboratory analysis.

Analytical results of soil sample B-17-20 indicated the presence of PCE at 0.089 milligrams per kilogram (mg/kg) at 20 feet bgs, which exceeds the MTCA Method A cleanup level of 0.05 mg/kg. Analytical results from all other soil samples were either non-detect or below MTCA Method A cleanup levels. Since the PCE exceedance detected in B-17-20 (0.089 mg/kg) is less than twice the MTCA Method A cleanup level of 0.05 mg/kg, and it was detected in less than 10% of the samples, the Site is in compliance with MTCA cleanup standards per WAC 173-340-740(7)(e). The detection in this sample was also well below the MTCA Method B cleanup level of 480 mg/kg for protection of direct contact exposure, and the boring is adjacent MW-3, which has consistently been non-detect in groundwater since it was installed.

Based on the confirmation soil sampling results, the SVE system was turned off on December 8, 2023.

5.4 Confirmation Groundwater Monitoring

Ecology issued an opinion on April 13, 2022, in response to work performed to that point. As part of their opinion, Ecology requested that quarterly groundwater monitoring resume when operation of the SVE system is complete. As such, groundwater monitoring of the four Site monitoring wells (MW-1, MW-2, MW-3, and MW-5) resumed on January 3, 2024, and sampled again on April 12 and July 2, 2024. Subcontractor Blaine Tech gauged the four monitoring wells and collected groundwater samples to be analyzed for PCE and breakdown products. Consistent with all groundwater sampling performed to date, analytical results of the groundwater samples were non-detect for all constituents analyzed. Analytical results of the groundwater samples collected to date are presented as compared to MTCA Method A cleanup levels in Table 2, *Summary of Groundwater Analytical Results*.

While one additional quarterly event is budgeted for this project, it is AEG's professional opinion that groundwater sampling to date, including three consecutive quarters of non-detect results after system shutdown, are sufficient to demonstrate groundwater meets MTCA cleanup standards. That said, another groundwater monitoring event is planned in October 2024 pending Ecology's opinion, and if needed, results will be shared with Ecology under separate cover.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

- A Phase II ESA conducted by AEG in 2017 discovered PCE-impacted soil and vapor that warranted further investigations to characterize the extent of impacted media. Subsequent investigations determined the extent of PCE-impacted soil and vapor. All constituents analyzed for in groundwater samples have consistently been non-detect.
- PCE was the only COC detected in soil above MTCA cleanup levels. PCE exceeded the MTCA Method A cleanup level in AEG soil samples B1-22 (1.8 feet bgs), and B3-23 (1.9 feet bgs). Both borings were located inside the building. The vertical extent of PCE in these borings could not be determined due to the very dense soils encountered and the limitations of drilling in these soils inside the building.
- In October 2019, AEG installed and began operating and monitoring the performance of the SVE system. Since startup, the SVE system has operated normally with shutdowns occurring as a result of general power failures and intended shutdowns during sampling events. As of the date of the last performance sampling event on October 18, 2023, the SVE system had been operational at the Site for 1,199 days. All constituents analyzed for during the last four sub-slab sampling events (May & October 2022, and March & October 2023) have been non-detect or detected below MTCA Method B screening levels. Also, all results to date have been below MTCA Method B screening levels for commercial workers.
- In November 2023, AEG advanced confirmation soil borings (B-14 through B-19) in areas where COCs were previously detected above MTCA cleanup levels. Analytical results of soil sample B-17-20 indicated the presence of PCE at 0.089 milligrams per kilogram (mg/kg) at 20 feet bgs, which exceeds the MTCA Method A cleanup level of 0.05 mg/kg. Analytical results from all other soil samples were either non-detect or below MTCA Method A cleanup levels. Since the PCE exceedance detected in B-17-20 (0.089 mg/kg) is less than twice the MTCA Method A cleanup level of 0.05 mg/kg, and it was detected in less than 10% of the samples, the Site is in compliance with MTCA cleanup standards per WAC 173-340-740(7)(e). The detection in this sample was also well below the MTCA Method B cleanup level of 480 mg/kg for protection of direct contact exposure, and the boring is adjacent MW-3, which has consistently been non-detect in groundwater since it was installed.
- Site COCs have been non-detect in all groundwater samples collected from the Site to date, including before and after operation of the SVE system.

6.2 Recommendations

Based on the work performed to date at the Site, MTCA cleanup standards have been achieved for all affected media, and continued operation of the SVE system does not appear to be warranted. AEG recommends Ecology review in consideration of an unrestricted No Further Action (NFA) determination.

7.0 LIMITATIONS

This report summarizes the findings of the services authorized under our agreement with Mr. Chang Kim. It has been prepared using generally accepted professional practices, related to the nature of the work accomplished. This report was prepared for the exclusive use of Mr. Chang Kim 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

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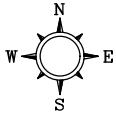
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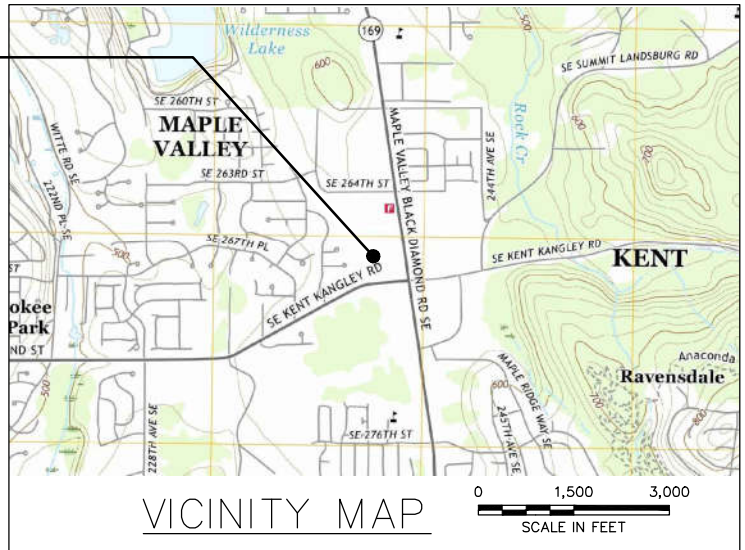
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FIGURES

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
17-126_1701.DWG	ICD	3/22/2017	CS	3/22/2017
				17-126



PROJECT LOCATION



NOTES

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

REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.
VICINITY IMAGE SOURCE: U.S. GEOLOGICAL SURVEY-2017, 7.5 MINUTE QUADRANGLE MAP
BLACK DIAMOND, WASHINGTON

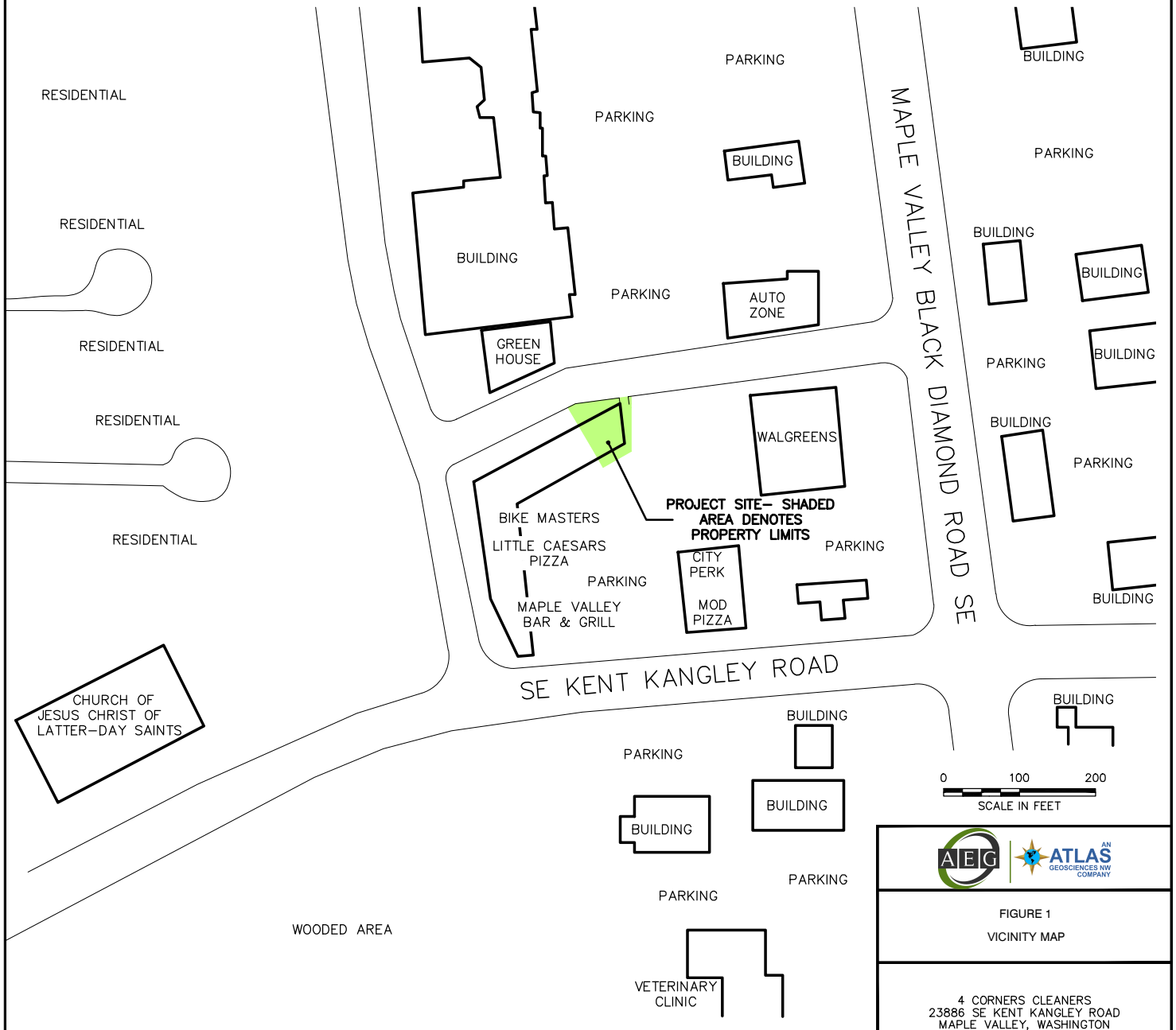


FIGURE 1
VICINITY MAP

4 CORNERS CLEANERS
23886 SE KENT KANGLEY ROAD
MAPLE VALLEY, WASHINGTON

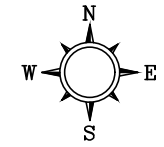
PROJECT
NUMBER 17-126

APPROVED BY
PH 7/17/2024

CHECKED BY
PH 7/17/2024

DRAWN BY
JGM 7/17/2024

FILENAME
17-126_VIC-SITE-0724.DWG



LEGEND

MW-1	MONITORING WELL LOCATION
B-1	SOIL BORING LOCATION
SV-1	SUB-SLAB VAPOR SAMPLE LOCATION
SVE-1	SOIL VAPOR EXTRACTION WELL LOCATION
VP-1	VAPOR MONITORING POINT LOCATION
UGE	UNDERGROUND ELECTRIC IINE
ST	STORM SEWER LINE
W	WATER LINE
G	GAS LINE
MANHOLE	MANHOLE

NOTES

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REFERENCE

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

0 7 14
SCALE IN FEET



FIGURE 2

SITE MAP

4 CORNERS CLEANERS
23886 SE KENT KANGLEY ROAD
MAPLE VALLEY, WASHINGTON

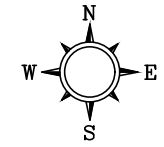
PROJECT
NUMBER 17-126

APPROVED BY
PH 3/20/2024

CHECKED BY
PH 3/20/2024

DRAWN BY
JGM 3/20/2024

FILENAME
17-126_XSECS.DWG



LEGEND

- | | | |
|-------|--|-------------------------------------|
| MW-1 | | MONITORING WELL LOCATION |
| B-1 | | SOIL BORING LOCATION |
| SV-1 | | SUB-SLAB VAPOR SAMPLE LOCATION |
| SVE-1 | | SOIL VAPOR EXTRACTION WELL LOCATION |
| VP-1 | | VAPOR MONITORING POINT LOCATION |

A—A'

LINE OF LITHOLOGIC CROSS SECTION
AND PROJECTION LINE TO
BORING/WELL

ESTIMATED EXTENT OF HISTORICAL
PCE PLUME IN SOIL

0 7 14
SCALE IN FEET



FIGURE 3

CROSS-SECTION INDEX MAP
AND PCE PLUME IN SOIL

4 CORNERS CLEANERS
23886 SE KENT KANGLEY ROAD
MAPLE VALLEY, WASHINGTON

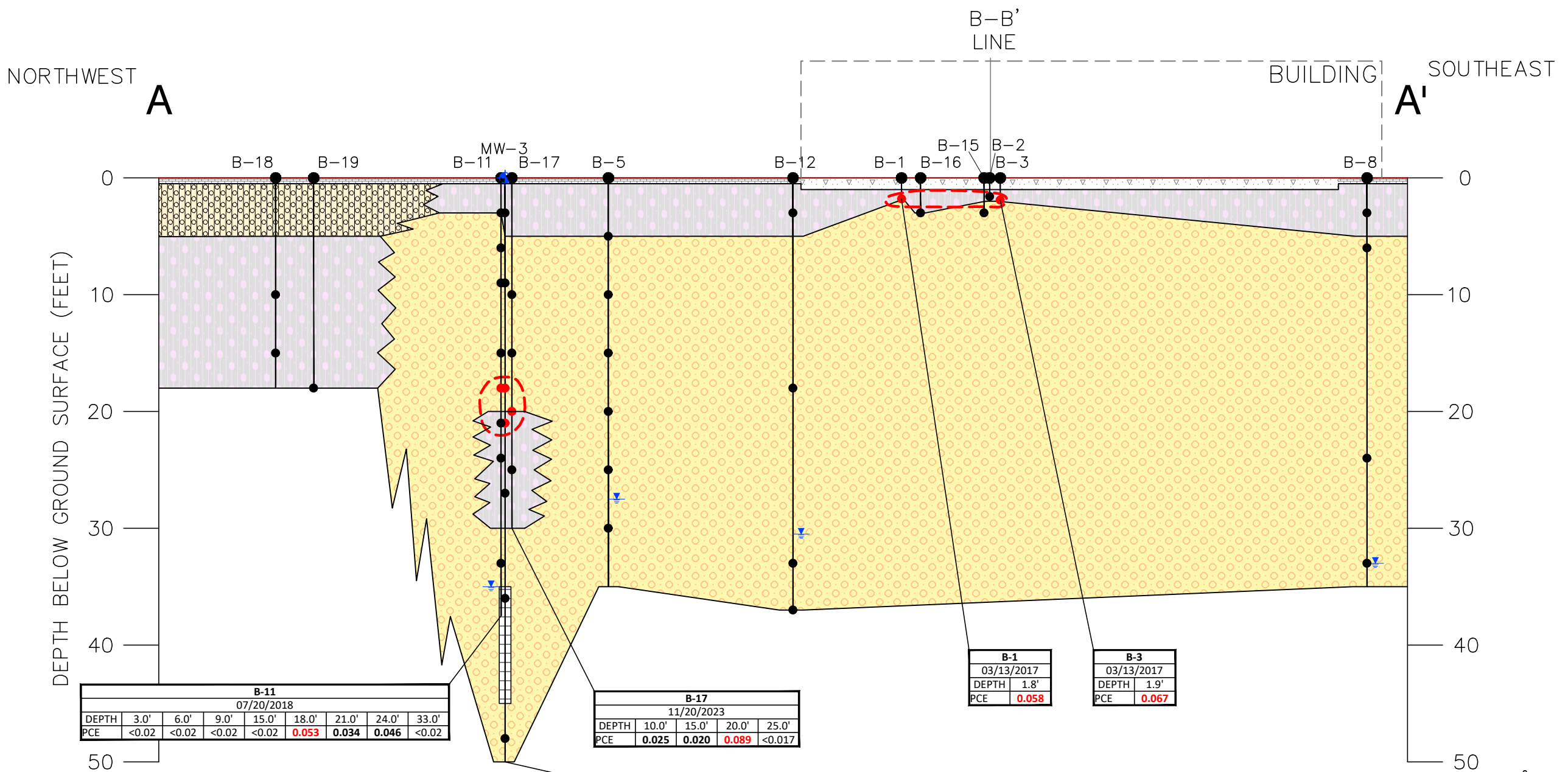
PROJECT NUMBER 17-126

APPROVED BY PH 3/20/2024

CHECKED BY PH 3/20/2024

DRAWN BY JGM 3/20/2024

FILENAME 17-126_XSECS.DWG



LEGEND

B-5 MW-3
- SOIL BORING, WELL

- GROUNDWATER LEVEL AT TIME OF DRILLING

- SCREENED INTERVAL

- SOIL SAMPLE LOCATION (< MTCA CLEANUP LEVELS)

- SOIL SAMPLE LOCATION (> MTCA CLEANUP LEVELS)

- MAXIMUM DEPTH EXPLORED

- SOIL CONTACT
ASPHALT

CONCRETE

SM= SILTY SANDS,
SAND-SILT MIXTURES

SP= POORLY-GRADED SANDS,
GRAVELLY SANDS

GM= SILTY GRAVELS,
GRAVEL-SAND-SILT MIXTURES

ESTIMATED EXTENT OF HISTORICAL
PCE PLUME IN SOIL

PCE TETRACHLOROETHENE (mg/kg)

TCE TRICHLOROETHENE (mg/kg)

< NOT DETECTED ABOVE LIMIT NOTED

mg/kg MILLIGRAMS PER KILOGRAM

DP DEPTH IN FEET

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

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

NOTES

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REFERENCE

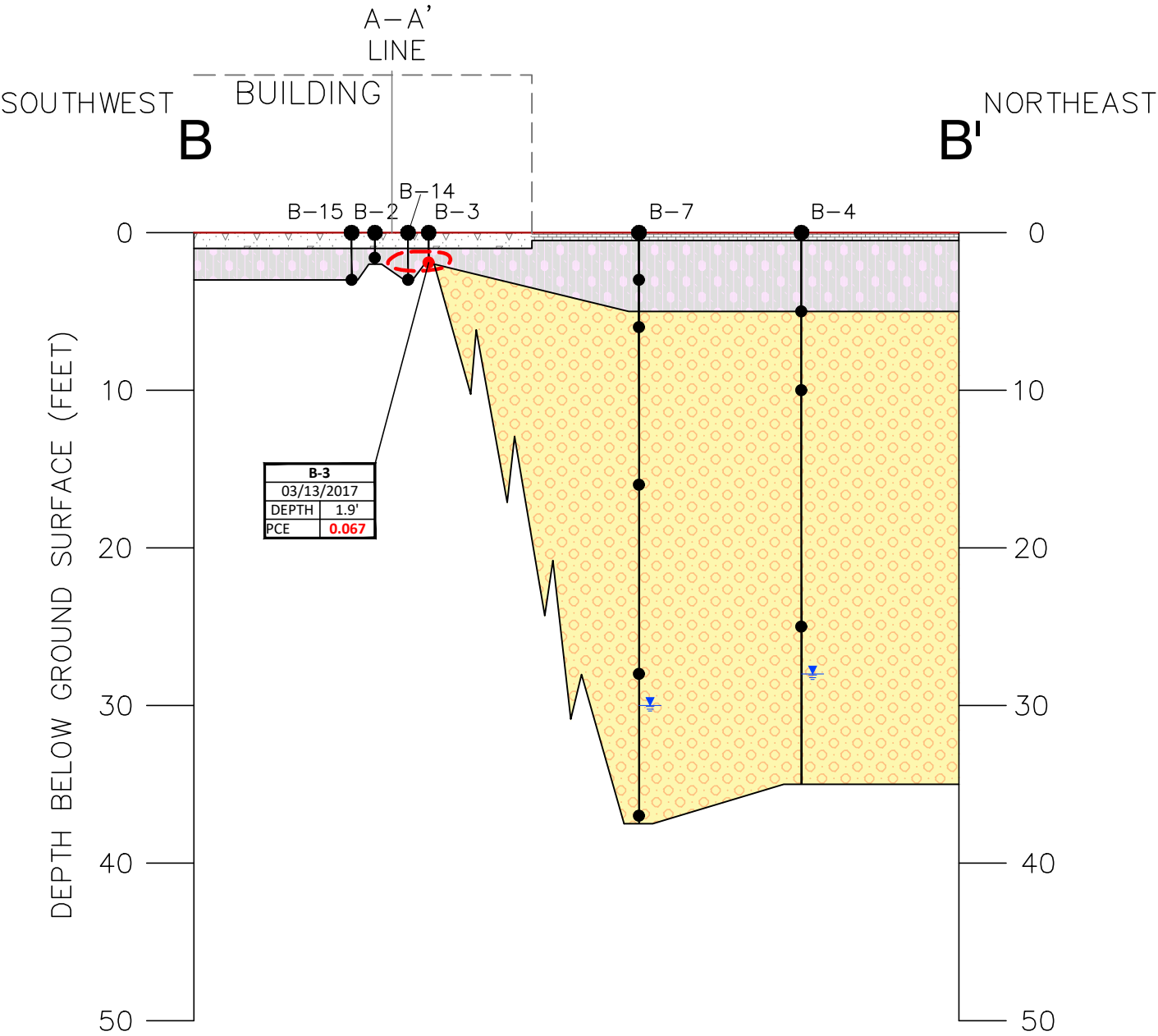
DRAWING CREATED FROM AERIAL PHOTOGRAPH
AND NOTES PROVIDED BY AEG ATLAS, LLC.



FIGURE 4

GEOLOGIC CROSS-SECTION A-A'

4 CORNERS CLEANERS
23886 SE KENT KANGLEY ROAD
MAPLE VALLEY, WASHINGTON



LEGEND

- B-15
- SOIL BORING
- GROUNDWATER LEVEL AT TIME OF DRILLING
- SCREENED INTERVAL
- SOIL SAMPLE LOCATION (< MTCA CLEANUP LEVELS)
- SOIL SAMPLE LOCATION (> MTCA CLEANUP LEVELS)
- MAXIMUM DEPTH EXPLORED

- SOIL CONTACT
- ASPHALT
- CONCRETE
- SM= SILTY SANDS, SAND-SILT MIXTURES
- SP= POORLY-GRADED SANDS, GRAVELLY SANDS
- GM= SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
- ESTIMATED EXTENT OF HISTORICAL PCE PLUME IN SOIL

PCE TETRACHLOROETHENE (mg/kg)
< NOT DETECTED ABOVE LIMIT NOTED
mg/kg MILLIGRAMS PER KILOGRAM
DP DEPTH IN FEET
BOLD VALUE INDICATES THE DETECTED CONCENTRATION IS BELOW ECOLOGY MTCA METHOD A CLEANUP LEVELS
RED BOLD VALUE INDICATES THE DETECTED CONCENTRATION EXCEEDS ECOLOGY MTCA METHOD A CLEANUP LEVELS

- NOTES
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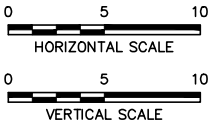
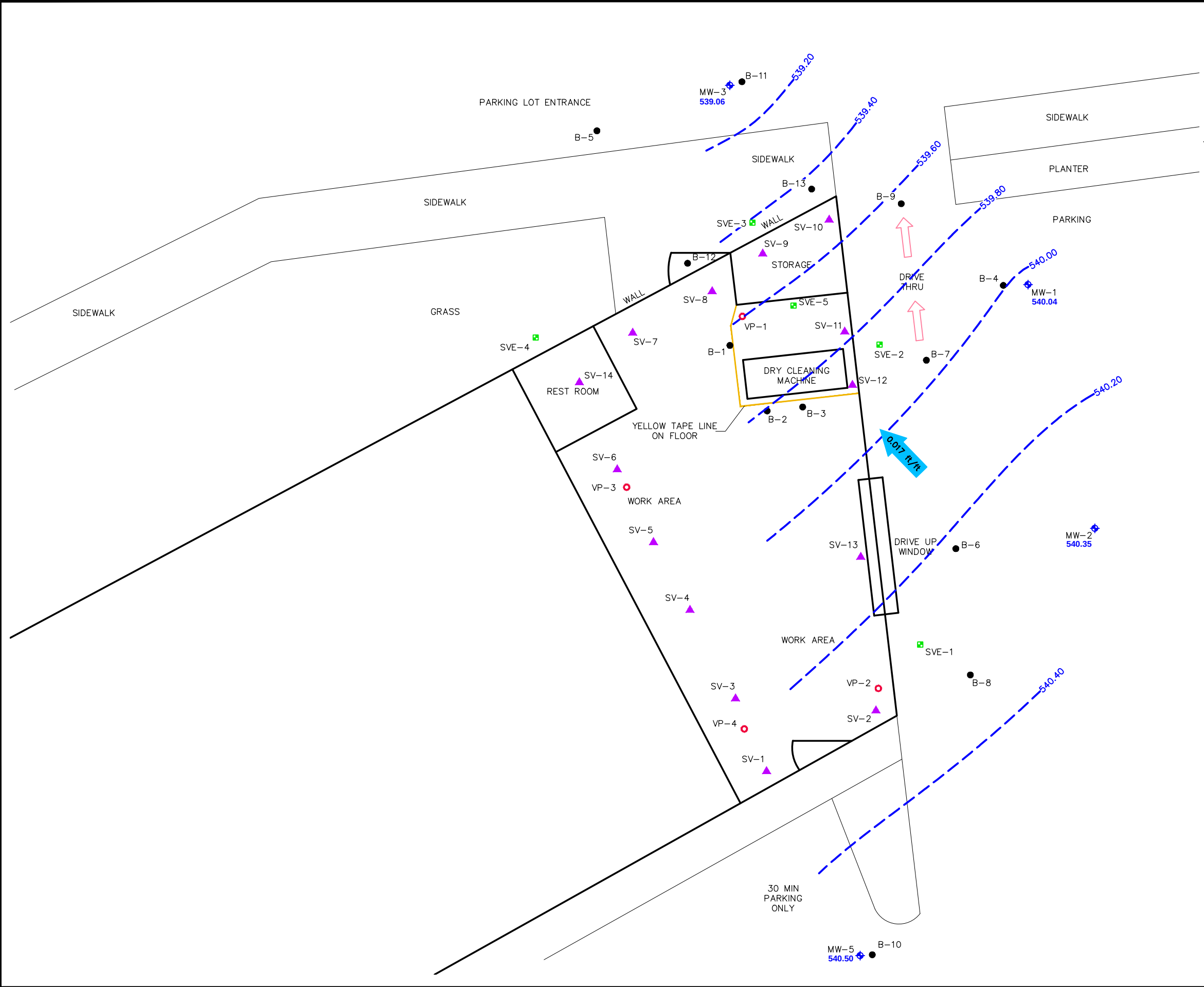


FIGURE 5

GEOLOGIC CROSS-SECTION B-B'

4 CORNERS CLEANERS
23886 SE KENT KANGLEY ROAD
MAPLE VALLEY, WASHINGTON



LEGEND

MW-1		MONITORING WELL LOCATION
B-1		SOIL BORING LOCATION
SV-1		SUB-SLAB VAPOR SAMPLE LOCATION
SVE-1		SOIL VAPOR EXTRACTION WELL LOCATION
VP-1		VAPOR MONITORING POINT LOCATION
540.04		GROUNDWATER ELEVATION (FEET)
540.00		INFERRED GROUNDWATER ELEVATION CONTOUR LINE (FEET)
		CONTOUR INTERVAL=0.20 FEET
		APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)

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

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FIGURE 6

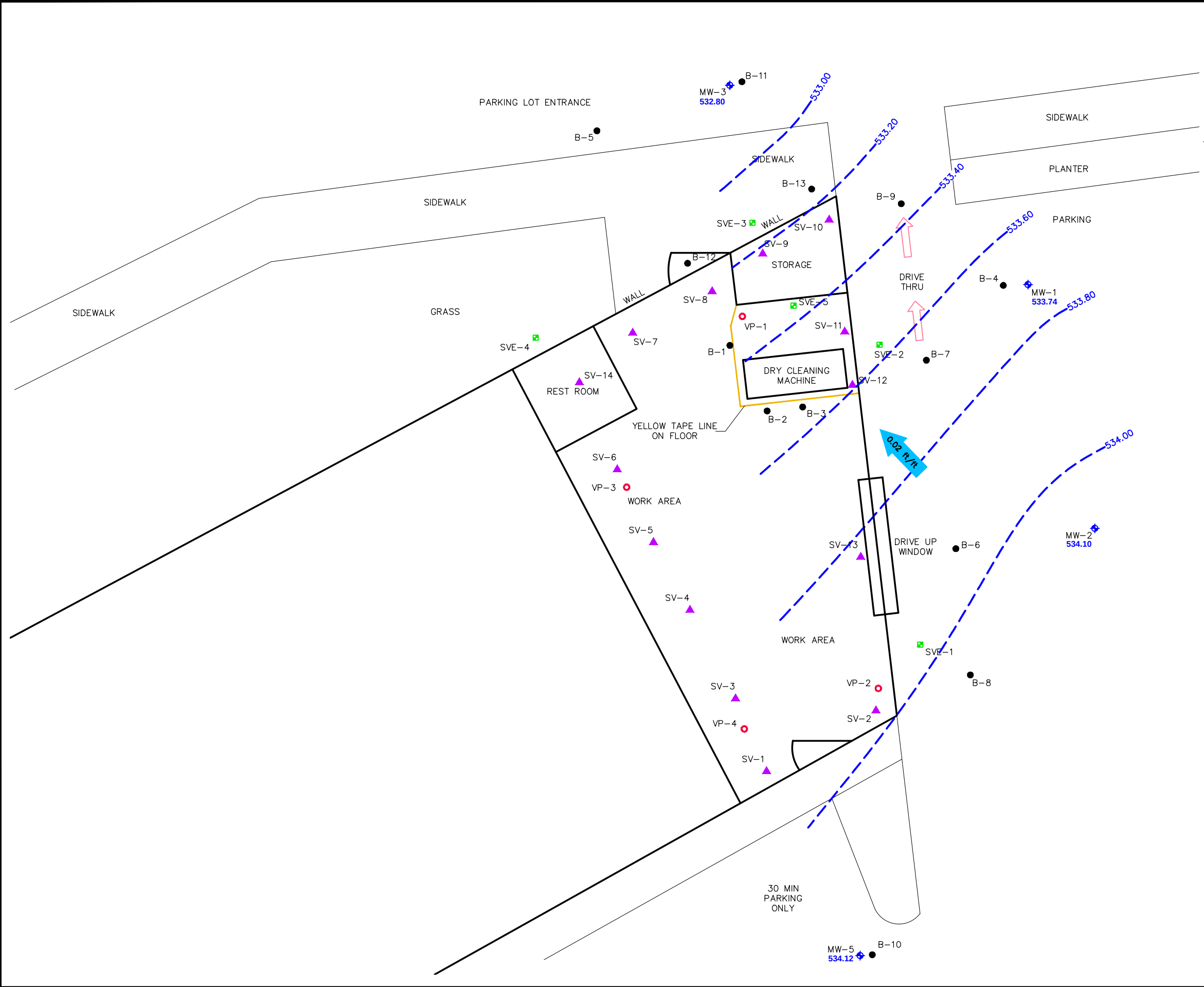
GROUNDWATER ELEVATION CONTOUR MAP

06/23/2020

4 CORNERS CLEANERS

23886 SE KENT KANGLEY ROAD

MAPLE VALLEY, WASHINGTON



LEGEND

MW-1

MONITORING WELL LOCATION

B-1

SOIL BORING LOCATION

SV-1

SUB-SLAB VAPOR SAMPLE LOCATION

SVE-1

SOIL VAPOR EXTRACTION WELL LOCATION

VP-1

VAPOR MONITORING POINT LOCATION

534.10

GROUNDWATER ELEVATION (FEET)

534.00

INFERRED GROUNDWATER ELEVATION CONTOUR LINE (FEET)

CONTOUR INTERVAL=0.20 FEET

0.02 ft/ft

APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)

NOTES

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REFERENCE

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

FIGURE 7

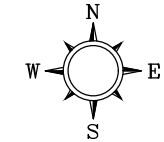
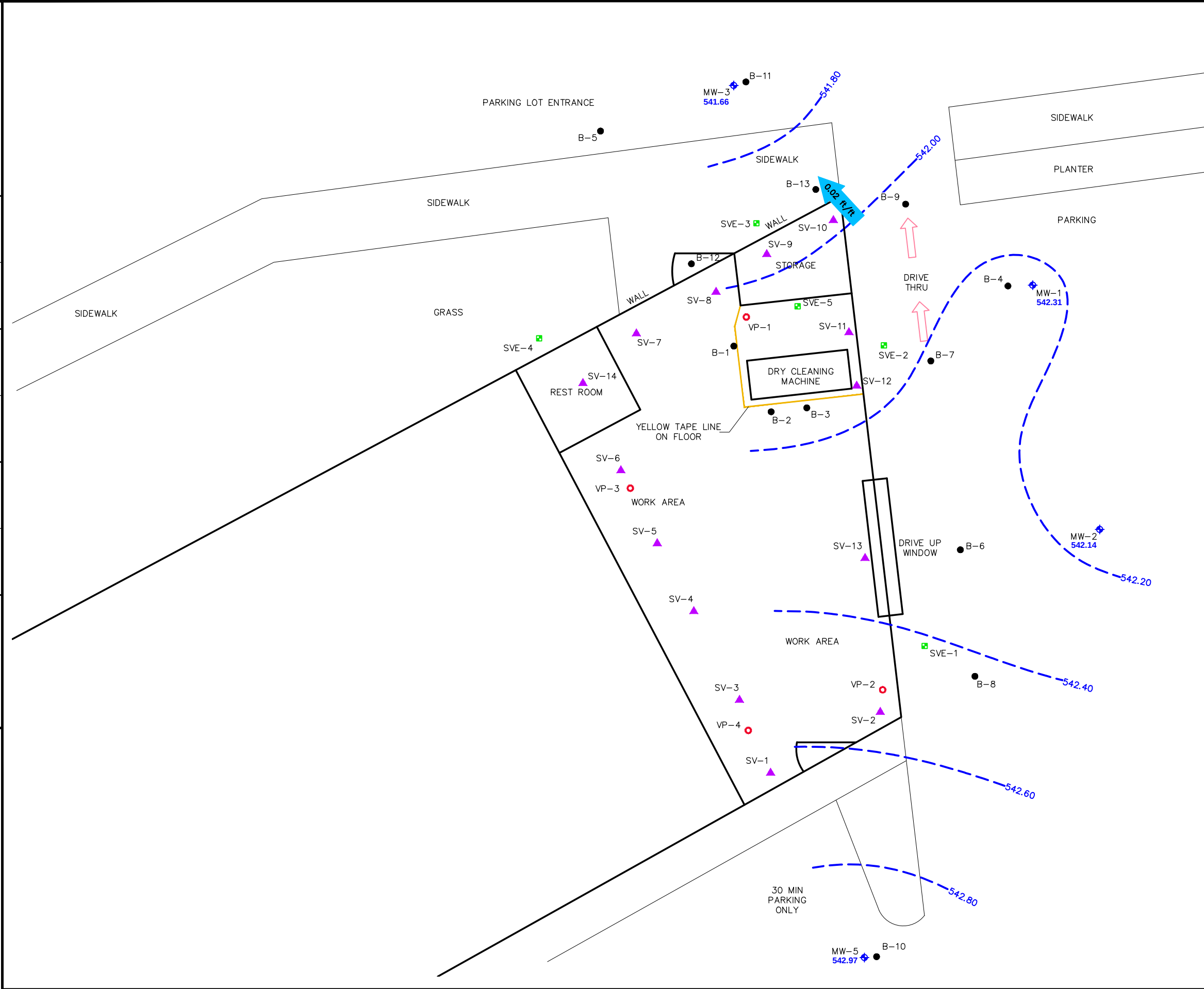
GROUNDWATER ELEVATION CONTOUR MAP

09/14/2020

4 CORNERS CLEANERS

23886 SE KENT KANGLEY ROAD

MAPLE VALLEY, WASHINGTON



LEGEND

MW-1	◆	MONITORING WELL LOCATION
B-1	●	SOIL BORING LOCATION
SV-1	▲	SUB-SLAB VAPOR SAMPLE LOCATION
SVE-1	■	SOIL VAPOR EXTRACTION WELL LOCATION
VP-1	○	VAPOR MONITORING POINT LOCATION
542.31		GROUNDWATER ELEVATION (FEET)
542.00	---	INFERRED GROUNDWATER ELEVATION CONTOUR LINE (FEET)
0.02 ft/ft	→	CONTOUR INTERVAL=0.20 FEET APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)

NOTES

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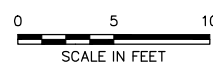
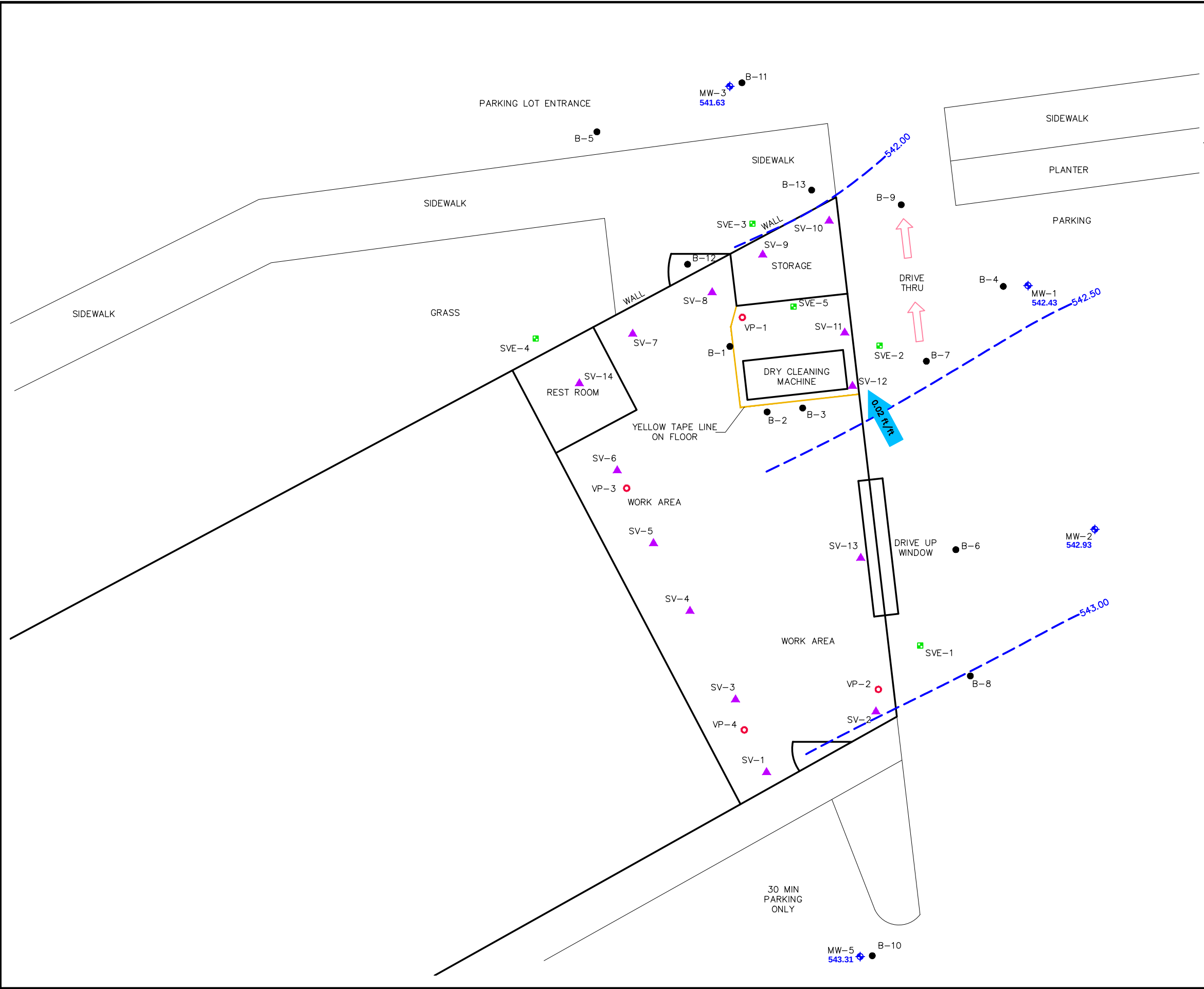


FIGURE 8

GROUNDWATER ELEVATION CONTOUR MAP
12/11/2020

4 CORNERS CLEANERS
23886 SE KENT KANGLEY ROAD
MAPLE VALLEY, WASHINGTON



N

W

E

S

LEGEND

MW-1

MONITORING WELL LOCATION

B-1

SOIL BORING LOCATION

SV-1

SUB-SLAB VAPOR SAMPLE LOCATION

SVE-1

SOIL VAPOR EXTRACTION WELL LOCATION

VP-1

VAPOR MONITORING POINT LOCATION

542.43

GROUNDWATER ELEVATION (FEET)

542.00

INFERRED GROUNDWATER ELEVATION CONTOUR LINE (FEET)

0.02 ft/ft

CONTOUR INTERVAL=0.50 FEET

APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)

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.

AEG

ATLAS

AN

GEOSCIENCES NW

COMPANY

FIGURE 9

GROUNDWATER ELEVATION CONTOUR MAP

03/19/2021

4 CORNERS CLEANERS

23886 SE KENT KANGLEY ROAD

MAPLE VALLEY, WASHINGTON

0

5

10

SCALE IN FEET

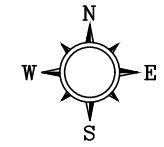
PROJECT
NUMBER 17-126

APPROVED BY
SR 8/18/2023

CHECKED BY
PH 8/18/2023

DRAWN BY
JGM 8/18/2023

FILENAME
17-126_VIC-SITE.DWG



LEGEND

MW-1	MONITORING WELL LOCATION
B-1	SOIL BORING LOCATION
SV-1	SUB-SLAB VAPOR SAMPLE LOCATION
SVE-1	SOIL VAPOR EXTRACTION WELL LOCATION
VP-1	VAPOR MONITORING POINT LOCATION
540.94	GROUNDWATER ELEVATION (FEET)
-540.00	INFERRED GROUNDWATER ELEVATION CONTOUR LINE (FEET)
0.025 ft/ft	APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)

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 ATLAS, LLC.

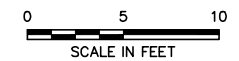


FIGURE 10

GROUNDWATER ELEVATION CONTOUR MAP
07/14/2022

4 CORNERS CLEANERS
23886 SE KENT KANGLEY ROAD
MAPLE VALLEY, WASHINGTON

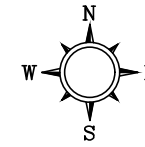
PROJECT
NUMBER 17-126

APPROVED BY
8/18/2023
SR

CHECKED BY
8/18/2023
EM

DRAWN BY
8/18/2023
JGM

FILENAME
17-126_VIC-SITE.DWG



LEGEND

- | | |
|------------|--|
| MW-1 | MONITORING WELL LOCATION |
| B-1 | SOIL BORING LOCATION |
| SV-1 | SUB-SLAB VAPOR SAMPLE LOCATION |
| SVE-1 | SOIL VAPOR EXTRACTION WELL LOCATION |
| VP-1 | VAPOR MONITORING POINT LOCATION |
| 543.29 | GROUNDWATER ELEVATION (FEET) |
| 542.00 | INFERRED GROUNDWATER ELEVATION CONTOUR LINE (FEET) |
| * | ELEVATION NOT USED IN CONTOURING POSSIBLE ANOMALOUS DATA |
| 0.03 ft/ft | APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft) |

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 ATLAS, LLC.

0 5 10
SCALE IN FEET



FIGURE 11

GROUNDWATER ELEVATION CONTOUR MAP
01/12/2023

4 CORNERS CLEANERS
23886 SE KENT KANGLEY ROAD
MAPLE VALLEY, WASHINGTON



N
W
E
S

LEGEND

MW-1

MONITORING WELL LOCATION

B-1

SOIL BORING LOCATION

SV-1

SUB-SLAB VAPOR SAMPLE LOCATION

SVE-1

SOIL VAPOR EXTRACTION WELL LOCATION

VP-1

VAPOR MONITORING POINT LOCATION

538.06

GROUNDWATER ELEVATION (FEET)

-542.00

INFERRED GROUNDWATER ELEVATION CONTOUR LINE (FEET)

0.025 ft/ft

APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)

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 ATLAS, LLC.

FIGURE 12

GROUNDWATER ELEVATION CONTOUR MAP

07/07/2023

4 CORNERS CLEANERS

23886 SE KENT KANGLEY ROAD

MAPLE VALLEY, WASHINGTON

TABLES

Table 1 - Summary of Soil Analytical Results
4 Corners Dry Cleaning (17-126)
Maple Valley, Washington

Sample Number	Depth Collected (feet)	Date Collected	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
B1-22	1.8	3/13/2017	0.058	<0.02	<0.05	<0.05	<0.02
B2-20	1.6	3/13/2017	0.044	<0.02	<0.05	<0.05	<0.02
B3-23	1.9	3/13/2017	0.067	<0.02	<0.05	<0.05	<0.02
B4-5	5.0	7/17/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B4-10	10.0	7/17/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B4-25	25.0	7/17/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B5-5	5.0	7/17/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B5-10	10.0	7/17/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B5-15	15.0	7/17/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B5-25	25.0	7/17/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B5-30	30.0	7/17/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B6-5	5.0	7/18/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B6-10	10.0	7/18/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B6-25	25.0	7/18/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B6-35	35.0	7/18/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B7-3	3.0	7/18/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B7-6	6.0	7/18/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B7-16	16.0	7/18/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B7-28	28.0	7/18/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B7-37	37.0	7/18/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B8-3	3.0	7/19/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B8-6	6.0	7/19/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B8-24	24.0	7/19/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B8-33	33.0	7/19/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B9-3	3.0	7/19/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B9-9	9.0	7/19/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B9-15	15.0	7/19/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B9-24	24.0	7/19/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B9-33	33.0	7/19/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B10-3	3.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B10-6	6.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B10-15	15.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B10-27	27.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B10-33	33.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02

Table 1 - Summary of Soil Analytical Results
 4 Corners Dry Cleaning (17-126)
 Maple Valley, Washington

Sample Number	Depth Collected (feet)	Date Collected	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
B11-3	3.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B11-6	6.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B11-9	9.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B11-15	15.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B11-18	18.0	7/20/2018	0.053	<0.02	<0.05	<0.05	<0.02
B11-21	21.0	7/20/2018	0.034	<0.02	<0.05	<0.05	<0.02
B11-24	24.0	7/20/2018	0.046	<0.02	<0.05	<0.05	<0.02
B11-33	33.0	7/20/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B12-3	3.0	7/23/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B12-18	18.0	7/23/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B12-33	33.0	7/23/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B12-37	37.0	7/23/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B13-3	3.0	7/23/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B13-18	18.0	7/23/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B13-35	35.0	7/23/2018	<0.02	<0.02	<0.05	<0.05	<0.02
B13-37	37.0	7/23/2018	<0.02	<0.02	<0.05	<0.05	<0.02
MW1-3	3.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW1-9	9.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW1-15	15.0	5/18/2020	0.019 J	<0.02	<0.05	<0.05	<0.02
MW1-18	18.0	5/18/2020	<0.02	0.011 J	<0.05	<0.05	<0.02
MW1-20	20.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW1-23	23.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW1-33	33.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW1-36	36.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW1-50	50.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-3	3.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-9	9.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-15	15.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-18	18.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-21	21.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-23	23.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-36	36.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-43	43.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW2-50	50.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02

Table 1 - Summary of Soil Analytical Results
4 Corners Dry Cleaning (17-126)
Maple Valley, Washington

Sample Number	Depth Collected (feet)	Date Collected	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
MW3-3	3.0	5/18/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW3-9	9.0	5/19/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW3-18	18.0	5/19/2020	<0.02	0.031	<0.05	<0.05	<0.02
MW3-21	21.0	5/19/2020	0.12	<0.02	<0.05	<0.05	<0.02
MW3-27	27.0	5/19/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW3-36	36.0	5/19/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW3-48	48.0	5/19/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW5-3	3.0	5/20/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW5-9	9.0	5/20/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW5-15	15.0	5/20/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW5-18	18.0	5/20/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW5-21	21.0	5/20/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW5-30	30.0	5/20/2020	<0.02	<0.02	<0.05	<0.05	<0.02
MW5-45	45.0	5/20/2020	<0.02	<0.02	<0.05	<0.05	<0.02
B-14-3	3.0	11/19/2023	0.024	<0.012	<0.017	<0.017	<0.012
B-15-3	3.0	11/19/2023	0.014	<0.011	<0.017	<0.017	<0.011
B-16-3	3.0	11/19/2023	0.012	<0.012	<0.018	<0.018	<0.012
B-17-10	10.0	11/20/2023	0.025	<0.016	<0.024	<0.024	<0.016
B-17-15	15.0	11/20/2023	0.020	<0.019	<0.029	<0.029	<0.019
B-17-20	20.0	11/20/2023	0.089	<0.013	<0.020	<0.020	<0.013
B-17-25	25.0	11/20/2023	<0.017	<0.017	<0.026	<0.026	<0.017
B-18-10	10.0	11/20/2023	0.013	<0.013	<0.019	<0.019	<0.013
B-18-15	15.0	11/20/2023	<0.066	<0.013	<0.020	<0.020	<0.013
B-19-18	18.0	11/20/2023	0.042	<0.011	<0.017	<0.017	<0.011
MTCA Method A Cleanup Levels			0.05	0.03	NL	NL	NL
MTCA Method B Cleanup Levels for Direct Contact Exposure			480	12.0	160	1,600	0.67

Notes:

All values are presented in milligrams per kilogram (mg/kg)

< = Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

NL = Not listed; no Method A cleanup has been established.

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

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

J = Indicates analyte was positively identified and reported result is an estimate.

PCE = Tetrachloroethene

TCE = Trichloroethene

DCE = Dichloroethene

Table 2 - Summary of Groundwater Analytical Results

4 Corners Cleaners (17-126)

Maple Valley, Washington

Sample Number	Date Collected	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
Boring Groundwater Data						
B4-W	7/17/2018	<1.0	<1.0	<1.0	<1.0	<0.2
B5-W	7/17/2018	<1.0	<1.0	<1.0	<1.0	<0.2
B6-W	7/18/2018	<1.0	<1.0	<1.0	<1.0	<0.2
B7-W	7/18/2018	<1.0	<1.0	<1.0	<1.0	<0.2
B8-W	7/19/2018	<1.0	<1.0	<1.0	<1.0	<0.2
B9-W	7/19/2018	<1.0	<1.0	<1.0	<1.0	<0.2
Monitoring Well Groundwater Data¹						
MW-1	6/23/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	9/14/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	12/11/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	3/19/2021	<1.0	<0.4	<1.0	<1.0	<0.2
	7/15/2022	<1.0	<0.4	<1.0	<1.0	<0.2
	1/12/2023	<1.0	<0.4	<1.0	<1.0	<0.2
	7/7/2023	<1.0	<0.4	<1.0	<1.0	<0.2
	1/3/2024	<1.0	<0.4	<1.0	<1.0	<0.2
	4/19/2024	Vehicle parked on well; inaccessible				
	7/2/2024	<1.0	<0.40	<1.0	<1.0	<0.20
MW-2	6/23/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	9/14/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	12/11/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	3/19/2021	<1.0	<0.4	<1.0	<1.0	<0.2
	7/15/2022	<1.0	<0.4	<1.0	<1.0	<0.2
	1/12/2023	<1.0	<0.4	<1.0	<1.0	<0.2
	7/7/2023	<1.0	<0.4	<1.0	<1.0	<0.2
	1/3/2024	<1.0	<0.4	<1.0	<1.0	<0.2
	4/19/2024	<1.0	<0.4	<1.0	<1.0	<0.2
	7/2/2024	<1.0	<0.40	<1.0	<1.0	<0.20
MW-3	6/23/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	9/14/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	12/11/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	3/19/2021	<1.0	<0.4	<1.0	<1.0	<0.2
	7/15/2022	<1.0	<0.4	<1.0	<1.0	<0.2
	1/12/2023	<1.0	<0.4	<1.0	<1.0	<0.2
	7/7/2023	<1.0	<0.4	<1.0	<1.0	<0.2
	1/3/2024	<1.0	<0.4	<1.0	<1.0	<0.2
	4/19/2024	<1.0	<0.4	<1.0	<1.0	<0.2
	7/2/2024	<1.0	<0.40	<1.0	<1.0	<0.20

Table 2 - Summary of Groundwater Analytical Results

4 Corners Cleaners (17-126)

Maple Valley, Washington

Sample Number	Date Collected	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
MW-5	6/23/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	9/14/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	12/11/2020	<1.0	<0.4	<1.0	<1.0	<0.2
	3/19/2021	<1.0	<0.4	<1.0	<1.0	<0.2
	7/15/2022	<1.0	<0.4	<1.0	<1.0	<0.2
	1/12/2023	<1.0	<0.4	<1.0	<1.0	<0.2
	7/7/2023	<1.0	<0.4	<1.0	<1.0	<0.2
	1/3/2024	<1.0	<0.4	<1.0	<1.0	<0.2
	4/19/2024	<1.0	<0.4	<1.0	<1.0	<0.2
	7/2/2024	<1.0	<0.40	<1.0	<1.0	<0.20
PQL		1.0	0.4/1.0	1.0	1.0	0.2
MTCA Method A Cleanup Levels		5	5	160*	16*	0.2

Notes:

All values present are micrograms per liter (µg/L)

-- = Not analyzed for constituent

< = Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level**Bold** indicates the detected concentration is below Ecology MTCA Method A cleanup levels

PCE = Tetrachloroethene

TCE = Trichloroethene

DCE = Dichloroethene

¹Refusal was consistently encountered throughout the area proposed for well MW-4; it was never installed.

* MTCA Method B cleanup level; Method A cleanup level not established

Table 3 - Summary of Sub-Slab Vapor Analytical Results
4 Corners Cleaners (17-126)
Maple Valley, Washington

Sample Number	Date Collected	PCE and Daughter Products				
		PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
SV-1	3/31/2017	1,600	<10	<10	<10	<10
SV-2	3/31/2017	1,800	<10	<10	<10	<10
SV-3	3/31/2017	1,500	<10	<10	<10	<10
SV-4	3/31/2017	790	<10	<10	<10	<10
SV-5	3/31/2017	940	<10	<10	<10	<10
SV-6	3/31/2017	850	<10	<10	<10	<10
SV-7	3/31/2017	1,700	<10	<10	<10	<10
SV-8	3/31/2017	1,100	<10	<10	<10	<10
SV-9	3/31/2017	2,800	<10	<10	<10	<10
SV-10	3/31/2017	2,100	<10	<10	<10	<10
SV-11	3/31/2017	6,300	<10	<10	<10	<10
SV-12	3/31/2017	2,600	<10	<10	<10	<10
SV-13	3/31/2017	180	<10	<10	<10	<10
SV-14	3/31/2017	2,600	<10	<10	<10	<10
SVE SYSTEM STARTUP OCTOBER 9, 2019						
VP-1 ¹	10/9/2019	586	4.48	<0.793	<0.793	<0.511
	12/16/2019	4.03	1.95	<0.793	<0.793	<0.511
	1/16/2020	264E	3.18	<0.793	<0.793	<0.511
	2/25/2020	198	3.92	<0.793	<0.793	<0.511
	3/16/2020	270	3.7	<2.7	<2.7	<1.7
	5/20/2020	570	4.3	<5.6	<5.6	<3.6
	7/8/2020	580	4.6	<2.8	<2.8	<1.8
	8/26/2020	42	<1.0	<1.5	<1.5	<0.97
	9/16/2020	<45	<0.71	<2.6	<2.6	<1.7
	12/17/2020	420	2.7	<8.3	<8.3	<5.4
	4/20/2021	150	1.8	<2.5	<2.5	<1.6
	6/21/2021	53	1.2	<2.8	<2.8	<1.8
	8/17/2021	68	<2.1	<7.9	<7.9	<5.1
	11/2/2021	240	1.8	<2.5	<2.5	<1.6
	5/9/2022	<28	<0.44	<1.6	<1.6	<1.0
	10/6/2022	<39	<0.62	<2.3	<2.3	<1.5
	3/23/2023	69	1.1	<2.3	<2.3	<1.5
	10/18/2023	130	2.1	<3.3	<3.3	<2.1

Table 3 - Summary of Sub-Slab Vapor Analytical Results
4 Corners Cleaners (17-126)
Maple Valley, Washington

Sample Number	Date Collected	PCE and Daughter Products				
		PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
VP-2 ¹	10/9/2019	<2.03	<1.07	<0.793	<0.793	<0.511
	12/16/2019	4.77	<1.07	<0.793	<0.793	<0.511
	1/16/2020	101	1.49	<0.793	<0.793	<0.511
	2/25/2020	72	<1.07	<0.793	<0.793	<0.511
	3/16/2020	66	<1.07	<2.7	<2.7	<1.7
	5/20/2020	230	<1.8	<2.7	<2.7	<1.7
	7/8/2020	170	<1.9	<2.8	<2.8	<1.8
	8/26/2020	120	<2.7	<4	<4	<2.6
	9/16/2020	<44	<0.7	<2.6	<2.6	<1.7
	12/17/2020	87	<1.1	<4.0	<4	<2.6
	4/20/2021	190	0.76	<2.3	<2.3	<1.5
	6/21/2021	86	0.78	<2.3	<2.3	<1.5
	8/17/2021	53	<0.75	<2.8	<2.8	<1.8
	11/2/2021	79	<0.73	<2.7	<2.7	<1.7
	5/9/2022	<35	0.90	<2	<2	<1.3
	10/6/2022	<38	<0.6	<2.2	<2.2	<1.4
	3/23/2023	<39	2.40	<2.3	<2.3	<1.5
	10/18/2023	<37	<0.58	<2.1	<2.1	<1.4
VP-3 ¹	10/9/2019	743	1.32	<0.793	<0.793	<0.511
	12/16/2019	2.53	<1.07	<0.793	<0.793	<0.511
	1/16/2020	423	<1.07	<0.793	<0.793	<0.511
	2/25/2020	457	1.13	<0.793	<0.793	<0.511
	3/16/2020	960	<9.4	<14	<14	<8.9
	5/20/2020	1,300	<9.4	<14	<14	<8.9
	7/8/2020	970	<3.8	<5.6	<5.6	<3.6
	8/26/2020	420	1.8	<1.6	<1.6	<1.6
	9/16/2020	720	<5.6	<21	<21	<13
	12/17/2020	690	<2.1	<7.9	<7.9	<5.1
	4/20/2021	890 ve	1.6	<2.3	<2.3	<1.5
	6/21/2021	830 ve	1.8	<2.6	<2.6	<1.7
	8/17/2021	720	2.6	<8.3	<8.3	<5.4
	11/2/2021	950	1.0	<2.7	<2.7	<1.7
	5/9/2022	65	1.1	<1.9	<1.9	<1.2
	10/6/2022	78	1.3	<2.3	<2.3	<1.5
	3/23/2023	260	<0.92	<3.4	<3.4	<2.2
	10/18/2023	190	<0.87	<3.2	<3.2	<2.1

Table 3 - Summary of Sub-Slab Vapor Analytical Results
4 Corners Cleaners (17-126)
Maple Valley, Washington

Sample Number	Date Collected	PCE and Daughter Products				
		PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
VP-4 ¹	7/8/2020	<32	<1.3	<1.9	<1.9	<1.2
	8/26/2020	290	<13	<19	<19	<13
	9/16/2020	56	<2.4	<3.4	<2.4	<1.5
	12/17/2020	400	<2.1	<7.9	<7.9	<5.1
	4/20/2021	340	1.2	<2.9	<2.9	<1.8
	6/21/2021	280	0.8	<2.5	<2.5	<1.6
	8/17/2021	72	<1.1	<3.9	<3.9	<2.5
	11/2/2021	370	<0.68	<2.5	<2.5	<1.6
	5/9/2022	<31	<0.49	<1.8	<1.8	<1.2
	10/6/2022	<37	<0.58	<2.1	<2.1	<1.4
	3/23/2023	<56	<0.89	<3.3	<3.3	<2.1
	10/18/2023	60	<5.2	<1.9	<1.9	<1.2
MTCA Method B Sub-Slab Screening Levels		320*	11.0*	610	610	9.50*
MTCA Method B Sub-Slab Screening Levels Commercial Worker		1,500*	95.0*	5,200	5,200	44.0*

Notes:

¹ - Collected from the permanent vapor monitoring point.

PCE = Tetrachloroethene

All values are presented in micrograms per cubic meter (µg/m³)

TCE = Trichloroethene

< = Not detected at the listed laboratory detection limits

DCE = Dichloroethene

ve = The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

* Cancer cleanup/screening level (all other constituents listed have non-cancer values)

Red Bold indicates the detected concentration exceeds MTCA Method B sub-slab screening levels.

Bold indicates the detected concentration is below MTCA Method B sub-slab screening levels.

Table 4 - Summary of SVE System Air Analytical Results
4 Corners Dry Cleaners (17-146)
Maple Valley, WA

Sample ID	Date Collected	TO-15 - Volatile Organic Compounds				
		Vinyl Chloride	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
INPUT	10/9/2019	<0.511	<0.793	2.19	4.48	10.3
OUTPUT (Post Carbon)	10/9/2019	<0.511	<0.793	<0.793	<1.07	<2.03
INPUT-1	12/16/2019	<0.511	<0.793	<0.793	<1.07	<2.03
INPUT-1	1/16/2020	<0.511	<0.793	<0.793	<1.07	155
INPUT-1	2/25/2020	<0.511	<0.793	<0.793	<1.07	31
OUTPUT (No Carbon)	3/16/2020	<0.069	<1.1	<1.1	1.0	16
OUTPUT (No Carbon)	7/17/2020	<1.2	<1.9	<1.9	<1.3	38
OUTPUT (No Carbon)	8/26/2020	<1.0	<1.6	<1.6	<1.1	4.6j
INFLUENT-121720 (No Carbon)	12/17/2020	<1.7	<2.7	<2.7	<0.86	73
SVE-OUT-42021 (No Carbon)	4/20/2021	<1.4	<2.1	<2.1	1.2	<37
SVE-IN-062121 (No Carbon)	6/21/2021	<1.6	<2.4	<2.4	<0.66	12
INF-08172021 (No Carbon)	8/17/2021	<1.5	<2.4	<2.4	0.74	29 j
INF-110221 (No Carbon)	11/2/2021	<1.7	<2.6	<2.6	<0.71	<45
SVE-IN (05/09/22)	5/9/2022	<1.2	<1.9	<1.9	<0.51	<32
SVE-IN (03/23/23)	3/23/2023	<2.1	<3.3	<3.3	<0.88	<56
SVE-IN (10/18/23)	10/18/2023	<1.9	<3	<3	<0.82	<52
MTCA Method B Sub-Slab Screening Levels		9.50*	610	610	11.0*	320*
MTCA Method B Sub-Slab Screening Levels Commercial Worker		44.0*	5,200	5,200	95.0*	1,500*

Notes:

All values presented in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

-- = Not analyzed for constituent

< = Not detected above laboratory limits

* Cancer cleanup/screening level (all other constituents listed have non-cancer values)

Bold indicates the detected concentration is below MTCA Method B screening levels

Red Bold indicates the detected concentration exceeds MTCA Method B screening levels

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

PCE = Tetrachloroethene

TCE = Trichloroethene

DCE = Dichloroethene

APPENDIX A

Supporting Documents
Boring and Well Logs
Laboratory Datasheets

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ATD

[illegible]

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-4	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA					Approximate Elevation:
Subcontractor / Driller:	Cascade/Jeffery Johnson			Equipment / Drilling Method: Sonic		
Date:	July 17, 2018			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
	Asphalt underlain by;					10:07				
			1							
			2							
			3							
	at 3.0 feet; brown, moist, medium stiff, <u>GRAVELY SILT</u> ; fine to medim grain gravel		4							
5			5		B4-5	10:18				
	at 5.0 feet; gray, dry, dense, <u>SANDY GRAVEL</u> ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6							
			7							
			8							
			9							
10			10		B4-10	10:18				
			11							
			12							
			13							
			14							
15			15		B4-15	10:34				
			16							
			17							
	at 17.5 feet; moist		18							
			19							
20			20		B4-20	10:57				
			21							
			22							
			23							
			24							
25			25		B4-25	10:57				

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB # 17-126	BORING # B-4	PAGE 2 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA		Approximate Elevation:	
Subcontractor / Driller:	Cascade/Jeffery Johnson		Equipment / Drilling Method: Sonic	
Date:	July 17, 2018		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
			26							
			27							
		▼	28							
			29							
30			30		B4-30	11:50				
			31							
			32							
			33							
			34							
35			35		B4-35	12:37				
			36							
			37							
			38							
			39							
40			40							
	Total Depth = 35 feet									
45										
50										

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



Groundwater level at time of drilling
or date of measurement

ATD

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-5	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA					Approximate Elevation:
Subcontractor / Driller:	Cascade/Jeffery Johnson			Equipment / Drilling Method: Sonic		
Date:	July 17, 2018			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
	Asphalt underlain by;					14:05				
			1							
			2							
			3							
	at 3.0 feet; brown, moist, medium stiff, <u>GRAVELY SILT</u> ; fine to medim grain gravel		4							
5			5		B5-5	14:10				
	at 5.0 feet; gray, dry, dense, <u>SANDY GRAVEL</u> ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6							
			7							
			8							
			9							
10			10		B5-10	14:20				
			11							
			12							
			13							
			14							
15			15		B5-15	14:30				
			16							
			17							
	at 17.5 feet; moist		18							
			19							
20			20		B5-20	14:37				
			21							
			22							
			23							
			24							
25			25		B5-25	14:50				

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-6	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA					Approximate Elevation:
Subcontractor / Driller:	Cascade/Jeffery Johnson			Equipment / Drilling Method: Sonic		
Date:	July 18, 2018			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
	Asphalt underlain by;		1			8:00				
			2							
			3							
	at 3.0 feet; brown, moist, medium stiff, GRAVELY SILT ; fine to medim grain gravel		4							
5			5		B6-5	8:38				
	at 5.0 feet; gray, dry, dense, SANDY GRAVEL ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6							
			7							
			8							
			9							
10			10		B6-10	8:38				
			11							
			12							
			13							
			14							
15			15		B6-15	8:45				
			16							
			17							
	at 17.5 feet; moist		18							
			19							
20			20		B6-20	8:56				
			21							
			22							
			23							
			24							
25			25		B6-25	9:05				

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB # 17-126	BORING # B-6	PAGE 2 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA			
Subcontractor / Driller:	Cascade/Jeffery Johnson		Equipment / Drilling Method: Sonic	
Date:	July 18, 2018		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
			26							
			27							
			28							
			29							
30			30		B6-30	9:30				
			31							
			32							
			33							
			34							
35			35		B6-35	9:30				
			36							
			37							
			38		B6-37.5	9:44				
	Total Depth = 37.5 feet bgs									

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



Groundwater level at time of drilling
or date of measurement

ATD

PROJECT:	4 Corners Cleaners	JOB # 17-126	BORING # B-7	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA		Approximate Elevation:	
Subcontractor / Driller: Cascade/Jeffery Johnson		Equipment / Drilling Method: Sonic		
Date:	July 18, 2018	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
	Asphalt underlain by;					10:50				
			1							
			2							
			3		B7-3					
	at 3.0 feet; brown, moist, medium stiff, <u>GRAVELY SILT</u> ; fine to medim grain gravel		4							
5			5							
	at 5.0 feet; gray, dry, dense, <u>SANDY GRAVEL</u> ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6		B7-6	11:03				
			7							
			8		B7-8					
			9							
10			10							
			11		B7-11	11:01				
			12							
			13		B7-13					
			14							
15			15							
			16		B7-16	11:09				
			17							
	at 17.5 feet; moist		18							
			19		B7-19	11:16				
20			20							
			21							
			22		B7-22	11:25				
			23							
			24							
25			25		B7-25	11:35				

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB # 17-126	BORING # B-7	PAGE 2 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA			
Subcontractor / Driller:	Cascade/Jeffery Johnson		Equipment / Drilling Method: Sonic	
Date:	July 18, 2018		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
			26							
			27							
			28		B7-28					
			29							
30			30							
			31		B7-31	11:37				
			32							
			33							
			34							
35			35							
			36							
			37		B7-37	11:48				
			38							
	Total Depth = 37.5 feet bgs									

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



Groundwater level at time of drilling
or date of measurement

ATD

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-8	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA					Approximate Elevation:
Subcontractor / Driller:	Cascade/Jeffery Johnson			Equipment / Drilling Method: Sonic		
Date:	July 19, 2018			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
	Asphalt underlain by;		1			8:43				
			2							
			3		B8-3					
	at 3.0 feet; brown, moist, medium stiff, GRAVELY SILT ; fine to medim grain gravel		4							
5			5							
	at 5.0 feet; gray, dry, dense, SANDY GRAVEL ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6		B8-6					
			7							
			8							
			9		B8-9					
10			10							
			11			8:50				
			12		B8-12					
			13							
			14							
15			15		B8-15					
	at 15.0 feet; moist		16			8:59				
			17							
			18		B8-18					
			19							
20			20							
			21		B8-21					
			22			9:05				
	at 22.0 feet; brown, wet, dense, SANDY GRAVEL ; fine to coarse grain sand, fine to coarse grain gravel with cobbles		23							
			24		B8-24					
25			25			9:13				

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement



Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
			26		B8-27	9:22				
			27							
			28							
			29		B8-30					
30			30							
			31							
			32		B8-33					
			33							
			34							
35			35							

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ATD

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-9	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA					Approximate Elevation:
Subcontractor / Driller:	Cascade/Jeffery Johnson			Equipment / Drilling Method: Sonic		
Date:	July 19, 2018		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
	Asphalt underlain by;		1			13:11				
			2							
			3		B9-3					
	at 3.0 feet; brown, moist, medium stiff, GRAVELY SILT ; fine to medim grain gravel		4							
5			5							
	at 5.0 feet; gray, dry, dense, SANDY GRAVEL ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6		B9-6					
			7							
			8							
			9		B9-9					
10			10			13:19				
			11							
			12		B9-12					
			13							
			14							
15			15		B9-15					
	at 15.0 feet; moist		16			13:26				
			17							
			18		B9-18					
			19							
20			20							
			21		B9-21					
			22			13:34				
	at 22.0 feet; brown, wet, dense, SANDY GRAVEL ; fine to coarse grain sand, fine to coarse grain gravel with cobbles		23							
			24		B9-24					
25			25			13:40				

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

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ATD

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-10	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA					Approximate Elevation:
Subcontractor / Driller:	Cascade/Jeffery Johnson			Equipment / Drilling Method: Sonic		
Date:	July 20, 2018			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
	Asphalt underlain by;		1			7:15				
			2							
			3		B10-3					
	at 3.0 feet; brown, moist, medium stiff, <u>GRAVELY SILT</u> ; fine to medim grain gravel		4							
5			5							
	at 5.0 feet; gray, dry, dense, <u>SANDY GRAVEL</u> ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6		B10-6					
			7							
			8							
			9		B10-9					
10			10							
			11			7:26				
			12		B10-12					
			13							
			14							
15			15		B10-15					
	at 15.0 feet; moist		16			7:36				
			17							
			18		B10-18					
			19							
20			20							
			21		B10-21					
			22							
	at 22.0 feet; brown, wet, dense, <u>SANDY GRAVEL</u> ; fine to coarse grain sand, fine to coarse grain gravel with cobbles		23							
			24		B10-24					
25			25			7:46				

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement



PROJECT: 4 Corners Cleaners		JOB # 17-126		BORING # B-10		PAGE 2 OF 2	
Location: 23886 SE Kent Kangley Road, Maple Valley, WA		Approximate Elevation:					
Subcontractor / Driller: Cascade/Jeffery Johnson		Equipment / Drilling Method: Sonic					
Date: July 20, 2018		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	
			26		B10-27	7:48					
			27								
			28								
			29								
30			30		B10-30						
			31								
			32								
					33		B10-33	7:55			
					34						
35					35						
					36						
					37						
			38								
	Total epth = 37.5 feet bgs										

Explanation

I

Sample Advance / Recovery

⊗

No Recovery

Contact located approximately

▼

ATD

Groundwater level at time of drilling or date of measurement

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-11	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA					Approximate Elevation:
Subcontractor / Driller:	Cascade/Jeffery Johnson			Equipment / Drilling Method: Sonic		
Date:	July 20, 2018			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
	Asphalt underlain by;		1			9:21				
			2							
			3		B11-3					
	at 3.0 feet; brown, moist, medium stiff, GRAVELY SILT ; fine to medim grain gravel		4							
5			5		B11-6					
	at 5.0 feet; gray, dry, dense, SANDY GRAVEL ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6							
			7							
			8		B11-9					
			9							
10			10			9:33				
			11		B11-12					
			12							
			13							
			14		B11-15					
15			15							
	at 15.0 feet; moist		16			9:33				
			17							
			18		B11-18	9:40				
			19							
20			20							
			21		B11-21					
			22			9:40				
	at 22.0 feet; brown, wet, dense, SANDY GRAVEL ; fine to coarse grain sand, fine to coarse grain gravel with cobbles		23							
			24		B11-24					
25			25			9:50				

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB # 17-126	BORING # B-11	PAGE 2 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA		Approximate Elevation:	
Subcontractor / Driller:	Cascade/Jeffery Johnson		Equipment / Drilling Method: Sonic	
Date:	July 20, 2018		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
			26							
			27							
			28		B11-28					
			29							
30			30		B11-30	9:50				
			31							
			32							
			33		B11-33	9:58				
			34							
35			35							
			36							
			37							
			38			10:01				
	Total Depth = 37.5 feet bgs									

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



Groundwater level at time of drilling
or date of measurement

ATD

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-12	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA					Approximate Elevation:
Subcontractor / Driller:	Cascade/Jeffery Johnson			Equipment / Drilling Method: Sonic		
Date:	July 23, 2018			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					
	Asphalt underlain by;					8:25									
			1		B12-3	8:25									
			2												
			3												
	at 3.0 feet; brown, moist, medium stiff, <u>GRAVELY SILT</u> ; fine to medim grain gravel		4												
5			5		B12-6	8:52									
	at 5.0 feet; gray, dry, dense, <u>SANDY GRAVEL</u> ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6												
			7		B12-9						8:58				
			8												
			9												
10			10		B12-12	9:02									
			11												
			12												
			13												
			14		B12-15						9:15				
15			15												
	at 15.0 feet; moist		16		B12-18	9:26									
			17												
			18												
			19												
20			20		B12-21						9:26				
			21												
			22		B12-24	9:26									
	at 22.0 feet; brown, moist, dense, <u>SANDY GRAVEL</u> ; fine to coarse grain sand, fine to coarse grain gravel with cobbles		23												
			24												
25			25												

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB # 17-126	BORING # B-12	PAGE 2 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA			
Subcontractor / Driller:	Cascade/Jeffery Johnson		Equipment / Drilling Method: Sonic	
Date:	July 23, 2018		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
			26							
			27		B12-27					
			28							
			29							
30			30		B12-30	9:27				
	at 30 feet; wet		31							
			32							
			33		B12-33	10:04				
			34							
35			35							
			36							
			37		B12-37					
			38							
	Total Depth = 37.0 feet		39							
40			40							
45										
50										

Explanation


Sample Advance / Recovery



No Recovery



Contact located approximately


 Groundwater level at time of drilling
or date of measurement

ATD

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-13	PAGE 1 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA					Approximate Elevation:
Subcontractor / Driller:	Cascade/Jeffery Johnson			Equipment / Drilling Method: Sonic		
Date:	July 23, 2018			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
	Asphalt underlain by;		1		B13-3	11:15				
			2							
			3							
	at 3.0 feet; brown, moist, medium stiff, <u>GRAVELY SILT</u> ; fine to medim grain gravel		4		B13-6	11:38				
5			5							
	at 5.0 feet; gray, dry, dense, <u>SANDY GRAVEL</u> ; fine to medium grain sand, fie to coarse grain gravel with cobbles		6							
			7		B13-9	11:44				
			8							
			9							
10			10		B13-12	11:52				
			11							
			12							
			13		B13-15	12:10				
			14							
15			15							
	at 15.0 feet; moist		16		B13-18					
			17							
			18							
			19		B13-21					
20	at 20.0 feet; wet		20							
			21							
			22		B13-24					
	at 22.0 feet; brown, moist, dense, <u>SANDY GRAVEL</u> ; fine to coarse grain sand, fine to coarse grain gravel with cobbles		23							
			24							
25			25							

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB # 17-126	BORING # B-13	PAGE 2 OF 2
Location:	23886 SE Kent Kangley Road, Maple Valley, WA			
Subcontractor / Driller:	Cascade/Jeffery Johnson		Equipment / Drilling Method: Sonic	
Date:	July 23, 2018		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
			26							
			27		B13-27					
			28							
			29							
30			30		B13-30	12:24				
			31							
			32							
			33							
			34							
35			35		B13-35	12:26				
			36							
			37							
			38							
	Total Depth = 37.0 feet bgs		39							
40			40							
45										
50										

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



Groundwater level at time of drilling
or date of measurement

ATD

LOG OF BOREHOLE

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-14	PAGE	1 OF 1
Location:	23886 SE Kent Kangley Road, Maple Valley, WA		Approximate Elevation:				
Subcontractor / Driller: Cascade/Josh Doty			Equipment / Drilling Method: Geoprobe 420M/Direct Push				
Date:	November 19, 2023		Logged By:	Paul Hitch			

[illegible]

Explanation



Sample Advance / Recovery



No Recovery

- - - - - Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

[illegible]

Groundwater level at time of drilling
or date of measurement

[illegible]

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-17	PAGE	1 OF 1
Location:	23886 SE Kent Kangley Road, Maple Valley, WA			Approximate Elevation:			
Subcontractor / Driller:	Cascade/Wes Kennedy			Equipment / Drilling Method:	Truck-Mounted HSA		
Date:	November 20, 2023			Logged By:	Paul Hitch		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	Asphalt underlain by									
5	Brown Silt, large cobble, moist	GM	5				7-10-12	0.0	N	
10	Brown Silt, large cobble, moist		10		B-17-10	9:50	13-15-50	0.0	N	
15	Brown Silt, wood debris, wet		15		B-17-15	9:55	8-6-11	0.0	N	
20	Brown Silty Sand, well graded, wet	SM	20		B-17-20	10:20	17-50	0.0	N	
25	Brown Silty Gravel, poorly graded, wet	GM	25		B-17-25	10:40	37-50	0.0	N	
30	Brown Sandy Gravel, well graded, wet		30				21-50	0.0	N	

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-18	PAGE	1 OF 1
Location:	23886 SE Kent Kangley Road, Maple Valley, WA			Approximate Elevation:			
Subcontractor / Driller:	Cascade/Wes Kennedy			Equipment / Drilling Method:	Truck-Mounted HSA		
Date:	November 20, 2023			Logged By:	Paul Hitch		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	Asphalt underlain by									
5	Brown Silty Sand, well graded gravel, moist	SM	5				50	0.0	N	
10	Brown Silty Gravel, well graded, moist	GM	10		B-18-10	12:30	50	0.0	N	
15	Brown Silty Gravel, well graded, moist		15		B-18-15	12:40	34-50	0.0	N	
	Refusal at 18 ft bgs									
20										
25										
30										

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	4 Corners Cleaners	JOB #	17-126	BORING #	B-19	PAGE	1 OF 1
Location:	23886 SE Kent Kangley Road, Maple Valley, WA			Approximate Elevation:			
Subcontractor / Driller:	Cascade/Wes Kennedy			Equipment / Drilling Method:	Truck-Mounted HSA		
Date:	November 20, 2023			Logged By:	Paul Hitch		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	Asphalt underlain by									
5	Brown Silty Sand, well graded gravel, moist	SM	5				50 for 4	0.0	N	
10	Brown Silty Gravel, well graded, moist	GM	10				27-50	0.0	N	
15	Brown Silty Gravel, well graded, moist		15				31-50	0.0	N	
18	Brown Silty Gravel, well graded, moist, <u>refusal</u>		18		B-19-18	14:20	50 for 6	0.0	N	
20										
25										
30										

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately

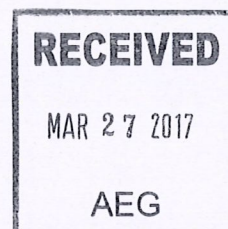


ATD

Groundwater level at time of drilling
or date of measurement

March 20, 2017

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



Dear Mr. Swift:

Please find enclosed the analytical data report for the 4 Corners Cleaners in Kent, Washington. Probe services were conducted on March 13, 2016. Soil samples were analyzed for Chlorinated VOC's by Method 8260 on March 15, 2017.

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,

A handwritten signature in cursive script that reads "Michael A. Korosec".

Michael A. Korosec
President

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT FOUR CORNERS CLEANERS
PROJECT #17-126
Kent, 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	B-3-23	B-2-20	B-1-22
Date extracted		03/15/17	03/15/17	03/15/17	03/13/17	03/13/17	03/13/17
Date analyzed	(mg/Kg)	03/15/17	03/15/17	03/15/17	03/15/17	03/15/17	03/15/17
% Moisture					5%	6%	6%
Dichlorodifluoromethane	0.05	nd			nd	nd	nd
Chloromethane	0.05	nd			nd	nd	nd
Vinyl chloride	0.02	nd	149*%	139*%	nd	nd	nd
Chloroethane	0.05	nd			nd	nd	nd
Trichlorofluoromethane	0.05	nd			nd	nd	nd
1,1-Dichloroethene	0.05	nd	83%	78%	nd	nd	nd
Methylene chloride	0.05	nd			nd	nd	nd
trans-1,2-Dichloroethene	0.05	nd			nd	nd	nd
1,1-Dichloroethane	0.05	nd			nd	nd	nd
cis-1,2-Dichloroethene	0.05	nd			nd	nd	nd
2,2-Dichloropropane	0.05	nd			nd	nd	nd
Chloroform	0.05	nd	84%	77%	nd	nd	nd
Bromochloromethane	0.05	nd			nd	nd	nd
1,1,1-Trichloroethane	0.05	nd			nd	nd	nd
1,2-Dichloroethane (EDC)	0.05	nd			nd	nd	nd
1,1-Dichloropropene	0.05	nd			nd	nd	nd
Carbon tetrachloride	0.05	nd			nd	nd	nd
Trichloroethene (TCE)	0.02	nd	96%	89%	nd	nd	nd
1,2-Dichloropropane	0.05	nd	94%	87%	nd	nd	nd
Bromodichloromethane	0.05	nd			nd	nd	nd
cis-1,3-Dichloropropene	0.05	nd			nd	nd	nd
trans-1,3-Dichloropropene	0.05	nd			nd	nd	nd
1,1,2-Trichloroethane	0.05	nd			nd	nd	nd
1,3-Dichloropropane	0.05	nd			nd	nd	nd
Dibromochloromethane	0.05	nd			nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	101%	96%	0.067	0.044	0.058
Chlorobenzene	0.05	nd	94%	91%	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd			nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd			nd	nd	nd
1,2,3-Trichloropropane	0.05	nd			nd	nd	nd
2-Chlorotoluene	0.05	nd			nd	nd	nd
4-Chlorotoluene	0.05	nd			nd	nd	nd
1,3-Dichlorobenzene	0.05	nd			nd	nd	nd
1,4-Dichlorobenzene	0.05	nd			nd	nd	nd
1,2-Dichlorobenzene	0.05	nd			nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd			nd	nd	nd
1,2,4-Trichlorobenzene	0.05	nd			nd	nd	nd
Hexachloro-1,3-butadiene	0.05	nd			nd	nd	nd
1,2,3-Trichlorobenzene	0.05	nd			nd	nd	nd
Surrogate recoveries							
Dibromofluoromethane		111%	115%	114%	127%	120%	123%
Toluene-d8		79%	75%	73%	82%	81%	81%
4-Bromofluorobenzene		120%	113%	113%	119%	122%	119%

Data Qualifiers and Analytical Comments

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

CHAIN-OF-CUSTODY RECORD

CLIENT: AEG, LLC DATE: 3/13/17 PAGE OF

ADDRESS: 605 - 11th Ave SE, Suite 201, Olympia, WA PROJECT NAME: 4 - Corvus Cleanup

PHONE: 360 - 352-5835 FAX: 360 - 352-8164 LOCATION: Kent - Maple Valley, WA

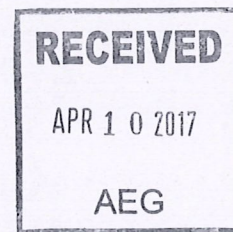
CLIENT PROJECT #: 17-126 PROJECT MANAGER: C. Swift COLLECTOR: C. Swift DATE OF COLLECTION: 3/13/17

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																		NOTES	Total Number of Containers	Laboratory	Mass Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
					TPH - HClD	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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
1.	B-3-23	23'	10:30	Soil	807					X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														</

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SAMPLE RECEIPT		LABORATORY NOTES:
<u>[Signature]</u>	<u>3/13/17/3:58</u>	<u>[Signature]</u>	<u>3/13/17 4:05</u>	TOTAL NUMBER OF CONTAINERS		
				CHAIN OF CUSTODY SEALS Y/N/NA		
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SEALS INTACT? Y/N/NA		
				RECEIVED GOOD COND./COLD		
				NOTES:	Turn Around Time: 24 HR 48 HR 5 DAY	

April 5, 2017

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 Four Corners Cleaners in Maple Valley, Washington. Probe services were conducted on March 31, 2017. Soil vapor samples were analyzed for Chlorinated VOC's by Method 8260 on April 1, 2017.

The results of the analyses are summarized in the attached table. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

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

Sincerely,

Michael A. Korosec
President

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT FOUR CORNERS CLEANERS
PROJECT #17-126
Maple Valley, 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 Vapor by Method 8260C

Analytical Results

	RL	MB	LCS	LCSD	SV1	SV2	SV3	SV4	SV5	SV6
Date analyzed	(ug/m3)	04/01/17	04/01/17	04/01/17	04/01/17	04/01/17	04/01/17	04/01/17	04/01/17	04/01/17
Dichlorodifluoromethane	10.0	nd			nd	8,600	12,000	15,000	8,200	7,200
Chloromethane	10.0	nd			nd	nd	nd	nd	nd	nd
Vinyl chloride	10.0	nd	130%	125%	nd	nd	nd	nd	nd	nd
Chloroethane	10.0	nd			nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	10.0	nd			nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	10.0	nd	83%	86%	nd	nd	nd	nd	nd	nd
Methylene chloride	10.0	nd			nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	10.0	nd			nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	10.0	nd			nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	10.0	nd			nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	10.0	nd			nd	nd	nd	nd	nd	nd
Chloroform	10.0	nd	103%	111%	nd	nd	nd	nd	nd	nd
Bromochloromethane	10.0	nd			nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	10.0	nd			nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	10.0	nd			nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	10.0	nd			nd	nd	nd	nd	nd	nd
Carbon tetrachloride	10.0	nd			nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	10.0	nd	93%	98%	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	10.0	nd			nd	nd	nd	nd	nd	nd
Bromodichloromethane	10.0	nd			nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	10.0	nd			nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	10.0	nd			nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	10.0	nd			nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	10.0	nd			nd	nd	nd	nd	nd	nd
Dibromochloromethane	10.0	nd			nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	10.0	nd	97%	97%	1,600	1,800	1,500	790	940	850
Chlorobenzene	10.0	nd	98%	100%	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	10.0	nd			nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	10.0	nd			nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	10.0	nd			nd	nd	nd	nd	nd	nd
2-Chlorotoluene	10.0	nd			nd	nd	nd	nd	nd	nd
4-Chlorotoluene	10.0	nd			nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	10.0	nd			nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	10.0	nd			nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	10.0	nd			nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	10.0	nd			nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	10.0	nd			nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	10.0	nd			nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	10.0	nd			nd	nd	nd	nd	nd	nd

Surrogate recoveries

Dibromofluoromethane	104%	112%	114%	102%	106%	106%	107%	108%	112%
Toluene-d8	105%	96%	94%	105%	107%	107%	107%	107%	110%
4-Bromofluorobenzene	104%	98%	100%	108%	107%	107%	104%	103%	101%

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 FOUR CORNERS CLEANERS
PROJECT #17-126
Maple Valley, Washington

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

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

Analytical Results

	RL	SV7	SV8	SV9	SV10	SV11	SV12	SV13	SV14
Date analyzed	(ug/m3)	04/01/17	04/01/17	04/01/17	04/01/17	04/01/17	04/01/17	04/01/17	04/01/17
Dichlorodifluoromethane	10.0	870	290	2,500	3,100	2,800	3,400	9,000	610
Chloromethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Vinyl chloride	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Chloroethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Methylene chloride	10.0	nd	nd	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Chloroform	10.0	nd	nd	310	31,000	nd	nd	nd	nd
Bromochloromethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Bromodichloromethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
trans-1,3-Dichloropropene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	10.0	nd	nd	nd	380	nd	nd	nd	nd
1,3-Dichloropropane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Dibromochloromethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	10.0	1,700	1,100	2,800	2,100	6,300	2,600	180	2,600
Chlorobenzene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	10.0	nd	nd	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	10.0	nd	nd	nd	nd	nd	nd	nd	nd

Surrogate recoveries

Dibromofluoromethane	107%	111%	108%	111%	102%	100%	103%	110%
Toluene-d8	104%	105%	103%	104%	112%	106%	106%	104%
4-Bromofluorobenzene	106%	104%	106%	105%	110%	104%	106%	106%

Data Qualifiers and Analytical Comments

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

CHAIN-OF-CUSTODY RECORD

CLIENT: REG DATE: 3/31/17 PAGE 1 OF 1

ADDRESS: 1605 11th Ave SE, Olympia PROJECT NAME: 4 Corners Cleaners

PHONE: (360) 352-9831 FAX: LOCATION: 23886 Kent-Kingway RD, Moundville

CLIENT PROJECT #: A-1210 PROJECT MANAGER: B. B. B. COLLECTOR: B. B. B. DATE OF COLLECTION: 3/31/17

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																NOTES	Total Number of Containers	Laboratory Note Number
					TPH - HCD	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		
1.																							
2. SV1		1247	ATL	100ml																			
3. SV2		1105																					
4. SV3		1109																					
5. SV4		1115																					
6. SV5		1121																					
7. SV6		1130																					
8. SV7		1140																					
9. SV8		1155																					
10. SV9		1204																					
11. SV10		1211																					
12. SV11		1218																					
13. SV12		1230																					
14. SV13		1234																					
15. SV14		1247																					
16.																							
17.																							
18.																							

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SAMPLE RECEIPT		LABORATORY NOTES:
	3/31/17	1354	1:54	TOTAL NUMBER OF CONTAINERS		
				CHAIN OF CUSTODY SEALS Y/N/NA		
				SEALS INTACT? Y/N/NA		
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	RECEIVED GOOD COND./COLD		Turn Around Time: 24 HR 48 HR 5 DAY
				NOTES:		



Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

December 12, 2018

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

Dear Ms. Dilba:

Please find enclosed the analytical data report for the 4 Corners Project located in Maple Valley, Washington.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry L. Chilcutt".

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

4 CORNERS PROJECT
AEG, LLC
Maple Valley, Washington
Libby Project # L181206-1
Client Project # 17-126

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

Specific Halogenated and Aromatic Hydrocarbons by EPA Method 8260C in Vapor

Sample Description		Method Blank	AS1	AS2	AS2 Dup
Date Sampled		n/a	12/5/18	12/5/18	12/5/18
Date Analyzed	PQL	12/7/18	12/7/18	12/7/18	12/7/18
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)	(µg/m ³)
Vinyl Chloride (VC)	5	nd	nd	nd	nd
1,1-Dichloroethene	100	nd	nd	nd	nd
trans-1,2-Dichloroethene	100	nd	nd	nd	nd
cis-1,2-Dichloroethene	100	nd	nd	nd	nd
Trichloroethene (TCE)	10	nd	nd	nd	nd
Tetrachloroethene (PCE)	25	nd	61	163	130
Surrogate Recovery					
Dibromofluoromethane		123	97	107	103
1,2-Dichloroethane-d4		132	89	80	98
Toluene-d8		106	88	91	102
4-Bromofluorobenzene		118	123	109	112

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Kodey Eley

Libby Environmental, Inc.

4 CORNERS PROJECT
AEG, LLC
Maple Valley, Washington
Libby Project # L181206-1
Client Project # 17-126

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

QA/QC Data - EPA 8260C Analyses

Laboratory Control Sample			
	Spiked Conc. (µg/m ³)	Measured Conc. (µg/m ³)	Spike Recovery (%)
1,1-Dichloroethene	10	10.1	101
Chlorobenzene	10	11.1	111
Trichloroethene (TCE)	10	12.3	123
Surrogate Recovery			
Dibromofluoromethane			114
1,2-Dichloroethane-d4			98
Toluene-d8			92
4-Bromofluorobenzene			110

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

ANALYSES PERFORMED BY: Kodey Eley

Libby Environmental, Inc.

4 CORNERS PROJECT

AEG, LLC

Libby Project # L181206-1

Date Received 12/6/2018

Time Received 11:38 AM

4139 Libby Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Received By EB

Sample Receipt Checklist

Chain of Custody

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

Log In

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

Discrepancies/ Notes

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

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments. _____

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506

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

Date: 12/6/18

Page: 1 of 1

Client: AEG

Project Manager: 4 corners

Address:

Project Name: B.D. 1bg

City: Olympia State: WA Zip: 18

Location: City, State: Maple Valley, WA

Phone: 360-352-9835 Fax:

Collector: B.D. 1bg Date of Collection: 12/5/18

Client Project # 17-120

Email: bdi1bg@aegwa.com



Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	Field Notes
1 AS1	-	1257	AK	Tedlar												
2 AS2	-	1352	AK	Tedlar												
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																

Relinquished by: [Signature] Date / Time: 12/5/18 1712 Received by: [Signature] Date / Time: 12/6/18 1138

Relinquished by: [Signature] Date / Time: Received by: [Signature] Date / Time:

Relinquished by: [Signature] Date / Time: Received by: [Signature] Date / Time:

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

Remarks:

TAT: 24HR 48HR 5-DAY



Libby Environmental, Inc.

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

January 27, 2020

Becky Dilba
Associated Environmental Group, LLC
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Ms. Dilba:

Please find enclosed the analytical data report for 4 Corners Cleaners Project located in Maple Valley, Washington.

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

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

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.



Fremont
Analytical

3600 Fremont Ave. N.

Seattle, WA 98103

T: (206) 352-3790

F: (206) 352-7178

info@fremontanalytical.com

Libby Environmental

Sherry Chilcutt

3322 South Bay Road NE

Olympia, WA 98506

RE: 4 Corners Cleaners

Work Order Number: 2001282

January 24, 2020

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 4 sample(s) on 1/17/2020 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method TO-15

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CLIENT: Libby Environmental
Project: 4 Corners Cleaners
Work Order: 2001282

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2001282-001	VP-2	01/16/2020 11:52 AM	01/17/2020 11:04 AM
2001282-002	VP-3	01/16/2020 2:00 PM	01/17/2020 11:04 AM
2001282-003	VP-1	01/16/2020 1:45 PM	01/17/2020 11:04 AM
2001282-004	Input-1	01/16/2020 2:08 PM	01/17/2020 11:04 AM

CLIENT: Libby Environmental
Project: 4 Corners Cleaners

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Air samples are reported in ppbv and ug/m3.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Libby Environmental

WorkOrder: 2001282

Project: 4 Corners Cleaners

Client Sample ID: VP-2

Date Sampled: 1/16/2020

Lab ID: 2001282-001A

Date Received: 1/17/2020

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/22/2020	AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/22/2020	AD
Tetrachloroethene (PCE)	62.4	423	3.00	20.3		EPA-TO-15	01/22/2020	AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/22/2020	AD
Trichloroethene (TCE)	0.277	1.49	0.200	1.07		EPA-TO-15	01/22/2020	AD
Vinyl chloride	<0.200	<0.511	0.200	0.511		EPA-TO-15	01/22/2020	AD
Surr: 4-Bromofluorobenzene	93.5 %Rec	--	70-130	--		EPA-TO-15	01/22/2020	AD



Client: Libby Environmental

WorkOrder: 2001282

Project: 4 Corners Cleaners

Client Sample ID: VP-3

Date Sampled: 1/16/2020

Lab ID: 2001282-002A

Date Received: 1/17/2020

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/22/2020	AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/22/2020	AD
Tetrachloroethene (PCE)	14.9	101	0.300	2.03		EPA-TO-15	01/22/2020	AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/22/2020	AD
Trichloroethene (TCE)	<0.200	<1.07	0.200	1.07		EPA-TO-15	01/22/2020	AD
Vinyl chloride	<0.200	<0.511	0.200	0.511		EPA-TO-15	01/22/2020	AD
Surr: 4-Bromofluorobenzene	96.7 %Rec	--	70-130	--		EPA-TO-15	01/22/2020	AD



Client: Libby Environmental

WorkOrder: 2001282

Project: 4 Corners Cleaners

Client Sample ID: VP-1

Date Sampled: 1/16/2020

Lab ID: 2001282-003A

Date Received: 1/17/2020

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793	E	EPA-TO-15	01/23/2020	AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/23/2020	AD
Tetrachloroethene (PCE)	38.9	264	0.300	2.03		EPA-TO-15	01/23/2020	AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/23/2020	AD
Trichloroethene (TCE)	0.592	3.18	0.200	1.07		EPA-TO-15	01/23/2020	AD
Vinyl chloride	<0.200	<0.511	0.200	0.511		EPA-TO-15	01/23/2020	AD
Surr: 4-Bromofluorobenzene	90.4 %Rec	--	70-130	--		EPA-TO-15	01/23/2020	AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: Libby Environmental

WorkOrder: 2001282

Project: 4 Corners Cleaners

Client Sample ID: Input-1

Date Sampled: 1/16/2020

Lab ID: 2001282-004A

Date Received: 1/17/2020

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/23/2020	AD
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/23/2020	AD
Tetrachloroethene (PCE)	22.9	155	0.300	2.03	E	EPA-TO-15	01/23/2020	AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	01/23/2020	AD
Trichloroethene (TCE)	<0.200	<1.07	0.200	1.07		EPA-TO-15	01/23/2020	AD
Vinyl chloride	<0.200	<0.511	0.200	0.511		EPA-TO-15	01/23/2020	AD
Surr: 4-Bromofluorobenzene	90.1 %Rec	--	70-130	--		EPA-TO-15	01/23/2020	AD

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Date: 1/24/2020

Work Order: 2001282
CLIENT: Libby Environmental
Project: 4 Corners Cleaners

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R56827	SampType: LCS	Units: ppbv				Prep Date: 1/22/2020			RunNo: 56827		
Client ID: LCSW	Batch ID: R56827	Analysis Date: 1/22/2020							SeqNo: 1132689		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	2.38	0.107	2.000	0	119	70	130				
1,1-Dichloroethene (DCE)	2.36	0.400	2.000	0	118	70	130				
trans-1,2-Dichloroethene	2.38	0.200	2.000	0	119	70	130				
cis-1,2-Dichloroethene	2.32	0.200	2.000	0	116	70	130				
Trichloroethene (TCE)	2.34	0.0649	2.000	0	117	70	130				
Tetrachloroethene (PCE)	2.34	0.200	2.000	0	117	70	130				
Surr: 4-Bromofluorobenzene	4.17		4.000		104	70	130				

Sample ID: MB-R56827	SampType: MBLK	Units: ppbv			Prep Date: 1/22/2020				RunNo: 56827		
Client ID: MBLKW	Batch ID: R56827	Analysis Date: 1/22/2020							SeqNo: 1132690		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.0268									
1,1-Dichloroethene (DCE)	ND	0.100									
trans-1,2-Dichloroethene	ND	0.0500									
cis-1,2-Dichloroethene	ND	0.0500									
Trichloroethene (TCE)	ND	0.0162									
Tetrachloroethene (PCE)	ND	0.0500									
Surr: 4-Bromofluorobenzene	0.848		1.000		84.8	70	130				

Sample ID: LCS-R56865		SampType: LCS		Units: ppbv		Prep Date: 1/23/2020			RunNo: 56865		
Client ID: LCSW		Batch ID: R56865					Analysis Date: 1/23/2020			SeqNo: 1133524	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	2.35	0.107	2.000	0	118	70	130				
1,1-Dichloroethene (DCE)	2.39	0.400	2.000	0	120	70	130				
trans-1,2-Dichloroethene	2.42	0.200	2.000	0	121	70	130				
cis-1,2-Dichloroethene	2.35	0.200	2.000	0	117	70	130				
Trichloroethene (TCE)	2.36	0.0649	2.000	0	118	70	130				
Tetrachloroethene (PCE)	2.33	0.200	2.000	0	116	70	130				

Work Order: 2001282
CLIENT: Libby Environmental
Project: 4 Corners Cleaners

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R56865		SampType: LCS			Units: ppbv		Prep Date: 1/23/2020			RunNo: 56865		
Client ID: LCSW		Batch ID: R56865			Analysis Date: 1/23/2020					SeqNo: 1133524		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Surr: 4-Bromofluorobenzene 4.20 4.000 105 70 130

Sample ID: 2001281-001AREP		SampType: REP			Units: ppbv		Prep Date: 1/23/2020			RunNo: 56865		
Client ID: BATCH		Batch ID: R56865			Analysis Date: 1/23/2020					SeqNo: 1133527		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Vinyl chloride	ND	0.107						0		30	
1,1-Dichloroethene (DCE)	ND	0.400						0		30	
trans-1,2-Dichloroethene	ND	0.200						0		30	
cis-1,2-Dichloroethene	ND	0.200						0		30	
Trichloroethene (TCE)	ND	0.0649						0		30	
Tetrachloroethene (PCE)	ND	0.200						0		30	
Surr: 4-Bromofluorobenzene	3.60		4.000		90.0	70	130		0		

Sample ID: MB-R56865	SampType: MBLK	Units: ppbv			Prep Date: 1/24/2020				RunNo: 56865		
Client ID: MBLKW	Batch ID: R56865	Analysis Date: 1/24/2020							SeqNo: 1133736		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	ND	0.0268									
1,1-Dichloroethene (DCE)	ND	0.100									
trans-1,2-Dichloroethene	ND	0.0500									
cis-1,2-Dichloroethene	ND	0.0500									
Trichloroethene (TCE)	ND	0.0162									
Tetrachloroethene (PCE)	ND	0.0500									
Surr: 4-Bromofluorobenzene	0.830		1.000		83.0	70	130				

Client Name: **LIBBY**
 Logged by: **Carissa True**

Work Order Number: **2001282**
 Date Received: **1/17/2020 11:04:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☐ No ☒ NA ☐
Air samples
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☐ Not Required ☒
 6. Was an attempt made to cool the samples? Yes ☐ No ☐ NA ☒
 7. Were all items received at a temperature of $>0^{\circ}\text{C}$ to 10.0°C * Yes ☐ No ☐ NA ☒
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☒ No ☐ NA ☐

Person Notified:	Kodev Elev	Date:	1/20/2020
By Whom:	Carissa True	Via:	☒ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Confirmation of report distribution.		
Client Instructions:	Report only to Libbv.		

19. Additional remarks:

Item Information

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Date: 1/16/20 Page: of:

Laboratory Project No (Internal): 2001282

Project Name: 4 Corners Chemicals

Project No: 17-126

Location: Maple Valley, Washington

Collected by: Charles Swift

Reports to (PM): B. D. Libby

Email (PM): C. Swift @ GigaLab.com

Special Remarks:

edits per K.E. 1/22/20 csg

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☐ OK to Dispose ☐ Hold (fees may apply)

Client: Libby

Address:

City, State, Zip:

Telephone:

Fax:

Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Internal	Field Initial Sample Pressure (^o Hg)	Field Final Sample Pressure (^o Hg)	Analysis											Internal
						Initial Evacuation Pressure (mtorr)			VOCs TO15 SCAN	VOCs TO15 SCAN II	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15	AP10 TO15	Helium	Major Gases GC	Comments	Final Pressure (^o Hg)	
VP-2	4680	1/16/20		1L	10 min	10mtorr	30	8											Start = 1:52 Stop = 2:03	10
	#2 CO	13:52				1/13/2020	1/16/20	1/16/20						X						
VP-3	4685	1/16/20		1L	10 min	10mtorr	30	10											Start = 2:00	12
	#2 CO	14:00				1/13/2020	1/16/20	1/16/18						X						
VP-1	5025	1/16/20		1L	10 min	10mtorr	30	10											Start = 1:45 Stop 1:55	11
	#2 CO	13:45				1/6/2020	1/16/20	1/16/17						X						
Input-1	3487	1/16/20		1L	10 min		28	7.5											Start - 2:08 Stop - 2:18	9
	#2 CO	14:08					1/16/20	1/16/18						X						

Red Breakdown

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas

** Container Codes: BV = 1 Liter Bottle Vac GL = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
	1/17/20 11:07		1/17/20 11:04
Relinquished	Date/Time	Received	Date/Time

Turn-Around Time:

- ☒ Standard
☐ 3 Day
☐ 2 Day
☐ Next Day

Same Day (specify)



Fremont

Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Date: 1/16/20 Page: of:

Laboratory Project No (Internal): 2001282

Project Name: 4 Corner Cleaners

Special Remarks:

Project No: 17-126

Location: Maple Valley, Washington
Collected by: Charles Swift

Reports to (PM): B. Dilke

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☐ OK to Dispose ☐ Hold (fees may apply)

Email (PM): C. Swift & Gigawa - CO2

Client: Libby

Address:

City, State, Zip:

Telephone:

Fax:

Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Internal	Field Initial Sample Pressure (" Hg)	Field Final Sample Pressure (" Hg)	Analysis										Comments	Internal	
						Initial Evacuation Pressure (mtorr)			VOCs TO15 SCAN	VOCs TO15 SCAN LL	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15	APH TO15	Helium	Major Gases 3C	Final Pressure ("Hg)			
1	4680 Canister	1/16/20 Date		1L	10 min	10mtorr Pressure	30 Pressure	8 Pressure												Start = 1:52 Stop = 2:03	10
	#2 CO Flow Reg	13:52 Time				1/13/2020 Date	1/16/20 Date	1/16/20 Date								X					
2	4685 Canister	1/16/20 Date		1L	10 min	10mtorr Pressure	30 Pressure	10 Pressure									X			Start = 2:00	12
	#2 CO Flow Reg	14:00 Time				1/13/2020 Date	1/16/20 Date	1/16/20 Date									X				
3	5025 Canister	1/16/20 Date		1L	10 min	10mtorr Pressure	30 Pressure	10 Pressure										X		Start = 1:45 Stop = 1:55	11
	#2 CO Flow Reg	13:45 Time				1/6/2020 Date	1/16/20 Date	1/16/20 Date									X				
4	3487 Canister	1/16/20 Date		1L	10 min		28 Pressure	7.5 Pressure										X		Start = 2:08 Stop = 2:18	9
	#2 CO Flow Reg	14:08 Time					1/16/20 Date	1/16/20 Date									X				
5																					
	Canister	Date					Pressure	Pressure	Pressure												
	Flow Reg	Time					Date	Date	Date												

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas

** Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished [Signature] Date/Time 1/17/20 11:07

Received [Signature] Date/Time 1/17/20 11:04

Relinquished Date/Time

Received Date/Time

x

x

Turn-Around Time:

☒ Standard

☐ 3 Day

☐ 2 Day

☐ Next Day

Same Day (specify)



Fremont

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Date: 1/16/20 Page: of:

Laboratory Project No (Internal): 2001282

Project Name: 4 Corners Chemicals

Special Remarks:

edits per K.E. 1/22/20 cgr

Project No: 17-126

Location: Maple Valley, Washington

Collected by: Charles Swift

Reports to (PM): B. D. Libby

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☐ OK to Dispose ☐ Hold (fees may apply)

Email (PM): C. Swift @ GigaLab.com

Client: Libby

Address:

City, State, Zip:

Telephone:

Fax:

Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Internal	Field Initial Sample Pressure (" Hg)	Field Final Sample Pressure (" Hg)	Analysis											Comments	Internal
						Initial Evacuation Pressure (mtorr)			VOCs TO15 SCAN	VOCs TO15 SCAN II	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15	APM TO15	Helium	Major Gases GC	Final Pressure ("Hg)			
UP-2	4680	1/16/20		1L	10 min	10mtorr	30	8											Start = 1:52 Stop = 2:03	10	
	#2 CO	13:52	1/13/2020			1/16/20	1/16/20														
UP-3	4685	1/16/20		1L	10 min	10mtorr	30	10											Start = 2:00	12	
	#2 CO	14:00	1/13/2020			1/16/20	1/16/18														
UP-1	5025	1/16/20		1L	10 min	10mtorr	30	10											Start = 1:45 Stop = 1:55	11	
	#2 CO	13:45	1/6/2020			1/16/20	1/16/17														
Input-1	3487	1/16/20		1L	10 min		28	7.5											Start = 2:08 Stop = 2:18	9	
	#2 CO	14:08				1/16/20	1/16/18														

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas

** Container Codes: BV = 1 Liter Bottle Vac GL = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished: [Signature] Date/Time: 1/17/20 11:07
Received: [Signature] Date/Time: 1/17/20 11:07

Turn-Around Time:

- ☒ Standard
☐ 3 Day
☐ 2 Day
☐ Next Day

Same Day (specify)



Libby Environmental, Inc.

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

March 6, 2020

Becky Dilba
Associated Environmental Group, LLC
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Ms. Dilba:

Please find enclosed the analytical data report for 4 Corners Cleaners Project located in Kent, Washington.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry L. Chilcutt".

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.



Fremont
Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Libby Environmental
Sherry Chilcutt
3322 South Bay Road NE
Olympia, WA 98506

RE: 4 Corners Cleaners
Work Order Number: 2002477

March 06, 2020

Attention Sherry Chilcutt:

Fremont Analytical, Inc. received 4 sample(s) on 2/28/2020 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method TO-15

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CLIENT: Libby Environmental
Project: 4 Corners Cleaners
Work Order: 2002477

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2002477-001	VP-1	02/25/2020 9:27 AM	02/28/2020 9:30 AM
2002477-002	VP-2	02/25/2020 9:36 AM	02/28/2020 9:30 AM
2002477-003	VP-3	02/25/2020 9:23 AM	02/28/2020 9:30 AM
2002477-004	Input	02/25/2020 9:34 AM	02/28/2020 9:30 AM

CLIENT: Libby Environmental**Project:** 4 Corners Cleaners

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Air samples are reported in ppbv and ug/m3.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Libby Environmental

WorkOrder: 2002477

Project: 4 Corners Cleaners

Client Sample ID: VP-1

Date Sampled: 2/25/2020

Lab ID: 2002477-001A

Date Received: 2/28/2020

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)			
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020 WC
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020 WC
Tetrachloroethene (PCE)	29.2	198	3.00	20.3		EPA-TO-15	03/03/2020 AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020 WC
Trichloroethene (TCE)	0.730	3.92	0.200	1.07		EPA-TO-15	02/29/2020 WC
Vinyl chloride	<0.200	<0.511	0.200	0.511		EPA-TO-15	02/29/2020 WC
Surr: 4-Bromofluorobenzene	101 %Rec	--	70-130	--		EPA-TO-15	02/29/2020 WC



Client: Libby Environmental

WorkOrder: 2002477

Project: 4 Corners Cleaners

Client Sample ID: VP-2

Date Sampled: 2/25/2020

Lab ID: 2002477-002A

Date Received: 2/28/2020

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>							
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)			
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020 WC
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020 WC
Tetrachloroethene (PCE)	10.6	72.0	0.300	2.03		EPA-TO-15	02/29/2020 WC
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020 WC
Trichloroethene (TCE)	<0.200	<1.07	0.200	1.07		EPA-TO-15	02/29/2020 WC
Vinyl chloride	<0.200	<0.511	0.200	0.511		EPA-TO-15	02/29/2020 WC
Surr: 4-Bromofluorobenzene	102 %Rec	--	70-130	--		EPA-TO-15	02/29/2020 WC



Client: Libby Environmental

WorkOrder: 2002477

Project: 4 Corners Cleaners

Client Sample ID: VP-3

Date Sampled: 2/25/2020

Lab ID: 2002477-003A

Date Received: 2/28/2020

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020	WC
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020	WC
Tetrachloroethene (PCE)	67.3	457	3.00	20.3		EPA-TO-15	03/03/2020	AD
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020	WC
Trichloroethene (TCE)	0.210	1.13	0.200	1.07		EPA-TO-15	02/29/2020	WC
Vinyl chloride	<0.200	<0.511	0.200	0.511		EPA-TO-15	02/29/2020	WC
Surr: 4-Bromofluorobenzene	101 %Rec	--	70-130	--		EPA-TO-15	02/29/2020	WC



Client: Libby Environmental

WorkOrder: 2002477

Project: 4 Corners Cleaners

Client Sample ID: Input

Date Sampled: 2/25/2020

Lab ID: 2002477-004A

Date Received: 2/28/2020

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m³)	(ppbv)	(ug/m³)				
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020	WC
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020	WC
Tetrachloroethene (PCE)	4.50	30.5	0.300	2.03		EPA-TO-15	02/29/2020	WC
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		EPA-TO-15	02/29/2020	WC
Trichloroethene (TCE)	<0.200	<1.07	0.200	1.07		EPA-TO-15	02/29/2020	WC
Vinyl chloride	<0.200	<0.511	0.200	0.511		EPA-TO-15	02/29/2020	WC
Surr: 4-Bromofluorobenzene	103 %Rec	--	70-130	--		EPA-TO-15	02/29/2020	WC



Date: 3/6/2020

Work Order: 2002477
CLIENT: Libby Environmental
Project: 4 Corners Cleaners

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R57711		SampType: LCS			Units: ppbv		Prep Date: 2/29/2020			RunNo: 57711		
Client ID: LCSW		Batch ID: R57711			Analysis Date: 2/29/2020			SeqNo: 1152260				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Vinyl chloride	1.97	0.107	2.000	0	98.5	70	130				
1,1-Dichloroethene (DCE)	1.96	0.400	2.000	0	98.0	70	130				
trans-1,2-Dichloroethene	1.99	0.200	2.000	0	99.5	70	130				
cis-1,2-Dichloroethene	2.00	0.200	2.000	0	100	70	130				
Trichloroethene (TCE)	1.97	0.0649	2.000	0	98.5	70	130				
Tetrachloroethene (PCE)	1.95	0.200	2.000	0	97.5	70	130				
Surr: 4-Bromofluorobenzene	3.96		4.000		99.0	70	130				

Sample ID: MB-R57711	SampType: MBLK			Units: ppbv	Prep Date: 2/29/2020				RunNo: 57711		
Client ID: MBLKW	Batch ID: R57711			Analysis Date: 2/29/2020				SeqNo: 1152261			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	ND	0.107									
1,1-Dichloroethene (DCE)	ND	0.400									
trans-1,2-Dichloroethene	ND	0.200									
cis-1,2-Dichloroethene	ND	0.200									
Trichloroethene (TCE)	ND	0.0649									
Tetrachloroethene (PCE)	ND	0.200									
Surr: 4-Bromofluorobenzene	3.80		4.000		95.0	70	130				

Sample ID: 2002477-001AREP		SampType: REP			Units: ppbv		Prep Date: 2/29/2020			RunNo: 57711		
Client ID: VP-1		Batch ID: R57711			Analysis Date: 2/29/2020			SeqNo: 1152267				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Vinyl chloride	ND	0.107						0		30	
1,1-Dichloroethene (DCE)	ND	0.400						0		30	
trans-1,2-Dichloroethene	ND	0.200						0		30	
cis-1,2-Dichloroethene	ND	0.200						0		30	
Trichloroethene (TCE)	0.740	0.0649						0.7300	1.36	30	
Tetrachloroethene (PCE)	42.5	0.200						40.79	4.11	30	E

Work Order: 2002477
CLIENT: Libby Environmental
Project: 4 Corners Cleaners

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID: 2002477-001AREP		SampType: REP			Units: ppbv		Prep Date: 2/29/2020			RunNo: 57711		
Client ID: VP-1		Batch ID: R57711						Analysis Date: 2/29/2020			SeqNo: 1152267	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	4.01		4.000		100	70	130		0			

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: LCS-R57781	SampType: LCS	Units: ppbv				Prep Date: 3/3/2020				RunNo: 57781		
Client ID: LCSW	Batch ID: R57781					Analysis Date: 3/3/2020				SeqNo: 1153802		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Tetrachloroethene (PCE)	1.92	0.200	2.000	0	95.8	70	130					
Surr: 4-Bromofluorobenzene	4.10		4.000		103	70	130					

Sample ID: MB-R57781	SampType: MBLK	Units: ppbv			Prep Date: 3/3/2020				RunNo: 57781		
Client ID: MBLKW	Batch ID: R57781	Analysis Date: 3/3/2020							SeqNo: 1153803		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	ND	0.0500									
Surr: 4-Bromofluorobenzene	0.894		1.000		89.4	70	130				

Sample ID: 2002477-001AREP		SampType: REP			Units: ppbv		Prep Date: 3/3/2020			RunNo: 57781		
Client ID: VP-1		Batch ID: R57781						Analysis Date: 3/3/2020			SeqNo: 1153805	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Tetrachloroethene (PCE)	33.9	2.00						29.16	14.9	30		
Surr: 4-Bromofluorobenzene	38.6		40.00		96.4	70	130		0			

Client Name: **LIBBY**
 Logged by: **Carissa True**

Work Order Number: **2002477**
 Date Received: **2/28/2020 9:30:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? UPS

Log In

3. Coolers are present? Yes ☐ No ☒ NA ☐
Air samples
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☒ Not Required ☐
 6. Was an attempt made to cool the samples? Yes ☐ No ☐ NA ☒
 7. Were all items received at a temperature of >2°C to 6°C * Yes ☐ No ☐ NA ☒
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Item Information

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont

Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Date: 2/26/2020 Page: 1 of: 1

Project Name: 4 coenars Cleaners

Project No: 17-126

Location: 23880 SE Kent Canyon RD, 98023

Collected by: B. Dilba

Reports to (PM):

Laboratory Project No (Internal):

Special Remarks:

PCB i Daughter Products
via TD-15

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☐ OK to Dispose ☐ Hold (fees may apply)

Client: Libby AEG, LLC

Address: 2633 Parkmont Lane SW Suite A

City, State, Zip: Olympia, WA 98501

Telephone: 360-352-9835

Fax:

Email (PM): bdilba@aegwa.com

Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	Analysis												Comments	Internal Final Pressure ("Hg)
						Initial Evacuation Pressure (mtorr)	Field Initial Sample Pressure (" Hg)	Field Final Sample Pressure (" Hg)	VOCs TO15 SCAN	VOCs TO15 SCAN LL	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15	APH TO15	Helium	Major Gases 3C		
<u>VP-1</u>	<u>4687</u>	<u>2/25/2020</u>		<u>1L</u>	<u>10 min</u>	<u>10mtorr</u>	<u>-30</u>	<u>-4</u>										<u>✓</u>	
		<u>0927</u>				<u>2/7/2020</u>	<u>2/25/2020</u>	<u>2/25/2020</u>											
<u>VP-2</u>	<u>4686</u>	<u>2/25/2020</u>		<u>1L</u>	<u>10 min</u>	<u>10mtorr</u>	<u>-30</u>	<u>-4</u>										<u>✓</u>	
		<u>0934</u>				<u>2/7/2020</u>	<u>2/25/2020</u>	<u>2/25/2020</u>											
<u>VP-3</u>	<u>4902</u>	<u>2/25/2020</u>		<u>1L</u>	<u>10 min</u>	<u>10mtorr</u>	<u>-30</u>	<u>-4</u>										<u>✓</u>	
		<u>0923</u>				<u>2/10/2020</u>	<u>2/25/2020</u>	<u>2/25/2020</u>											
<u>input</u>	<u>3486</u>	<u>2/25/2020</u>		<u>1L</u>	<u>10 min</u>	<u>10mtorr</u>	<u>-30</u>	<u>-4</u>										<u>✓</u>	
		<u>0934</u>				<u>2/18/2020</u>	<u>2/25/2020</u>	<u>2/25/2020</u>											

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas

** Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished AE 2/26/2020 1125

Received B. Dilba 2/26/2020 1130

Relinquished _____

Received _____

Turn-Around Time:

☒ Standard

☐ 3 Day

☐ 2 Day

☐ Next Day

Same Day _____
(specify)



Fremont

Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Laboratory Project No (Internal): **200 2477**

Date: **2/26/2020** Page: **1** of: **1**

Project Name: **4 corners cleanup**

Project No: **17-126**

Location: **23886 SE Kent Kennedy RD, 98023**

Collected by: **B. Dilbeck**

Reports to (PM): **Sherry Chilcutt**

Email (PM): **Libbyenv@gmail.com**

Special Remarks:

**PCB i. Dewater Products
via TD-15**

Air samples are disposed of one week after report is submitted to client unless otherwise requested. ☐ OK to Dispose ☐ Hold (fees may apply)

Client: **Libby**

Address: **3322 South Bay Rd**

City, State, Zip: **Olympia, WA 98506**

Telephone: **360 352 2110**

Fax:

Telephone: 360 352 2110						Email (PM): Libbyenv@gmail.com		Analysis												Internal		
Fax:						Internal	Initial Evacuation Pressure (mtorr)	Field Initial Sample Pressure (" Hg)	Field Final Sample Pressure (" Hg)	VOCs TO15 SCAN	VOCs TO15 SCAN LL	VOCs TO15 SIM	Siloxanes TO15	Sulfur TO15	Sulfur Ext. TO15	APH TO15	Helium	Major Gases 3C	PCB i. Dewater	Comments	Final Pressure ("Hg)	
Sample Name						Canister / Flow Reg Serial #	Sample Date & Time	Sample Type (Matrix) *	Container Type **	Fill Time / Flow Rate	10mtorr	-30	-4									-4
1						4687	2/25/2020		1L	10 min	Pressure	Pressure	Pressure									
VP-1						Canister	Date				2/7/2020	2/25/2020	2/25/2020									
						Flow Reg	Time				Date	Date	Date									
2						4686	2/25/2020		1L	10 min	10mtorr	-30	-4									-5
VP-2						Canister	Date				2/7/2020	2/25/2020	2/25/2020									
						Flow Reg	Time				Date	Date	Date									
3						4902	2/25/2020		1L	10 min	10mtorr	-30	-4									-5
VP-3						Canister	Date				2/10/2020	2/25/2020	2/25/2020									
						Flow Reg	Time				Date	Date	Date									
4						3486	2/25/2020		1L	10 min	10mtorr	-30	-4									-3
input						Canister	Date				2/18/2020	2/25/2020	2/25/2020									
						Flow Reg	Time				Date	Date	Date									
5							Date				Pressure	Pressure	Pressure									
						Flow Reg	Time				Date	Date	Date									
Sublab / Soil Gas																						Turn-Around Time:

* Matrix Codes: AA = Ambient Air IA = Indoor Air L = Landfill S = Subslab / Soil Gas
** Container Codes: BV = 1 Liter Bottle Vac 6L = 6L Canister 1L = 1L Canister CYL = High Pressure Cylinder F = Filter S = Sorbent Tube TB = Tedlar Bag

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished **AE** 2/26/2020 1125

Received **BZD** 2/26/2020 1130

Relinquished **BZD** 2/26/2020 1250

Received **N** 2/28/2020 0930

Shipped via ups

Turn-Around Time:

☒ Standard

☐ 3 Day

☐ 2 Day

☐ Next Day

Same Day (specify)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 2, 2020

Becky Dilba, Project Manager
AEG
605 11th Ave SE
Suite 201
Tacoma, WA 98501

Dear Ms Dilba:

Included are the amended results from the testing of material submitted on March 17, 2020 from the 4 Corners Cleaners 17-126, F&BI 003260 project. The tetrachloroethene reporting limit in sample Output was lowered.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: bdilba@aegwa.com
AEG0327R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
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Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 27, 2020

Becky Dilba, Project Manager
AEG
605 11th Ave SE
Suite 201
Tacoma, WA 98501

Dear Ms Dilba:

Included are the results from the testing of material submitted on March 17, 2020 from the 4 Corners Cleaners 17-126, F&BI 003260 project. There are 8 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: bdilba@aegwa.com
AEG0327R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 17, 2020 by Friedman & Bruya, Inc. from the AEG 4 Corners Cleaners 17-126, F&BI 003260 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
003260 -01	VP-1
003260 -02	VP-2
003260 -03	VP-3
003260 -04	Output

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1	Client:	AEG
Date Received:	03/17/20	Project:	4 Corners Cleaners 17-126
Date Collected:	03/16/20	Lab ID:	003260-01 1/6.8
Date Analyzed:	03/24/20	Data File:	032322.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	101	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.68
1,1-Dichloroethene	<2.7	<0.68
trans-1,2-Dichloroethene	<2.7	<0.68
cis-1,2-Dichloroethene	<2.7	<0.68
Trichloroethene	3.7	0.68
Tetrachloroethene	270	40

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2	Client:	AEG
Date Received:	03/17/20	Project:	4 Corners Cleaners 17-126
Date Collected:	03/16/20	Lab ID:	003260-02 1/6.8
Date Analyzed:	03/24/20	Data File:	032323.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.68
1,1-Dichloroethene	<2.7	<0.68
trans-1,2-Dichloroethene	<2.7	<0.68
cis-1,2-Dichloroethene	<2.7	<0.68
Trichloroethene	<1.8	<0.34
Tetrachloroethene	66	9.8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3	Client:	AEG
Date Received:	03/17/20	Project:	4 Corners Cleaners 17-126
Date Collected:	03/16/20	Lab ID:	003260-03 1/35
Date Analyzed:	03/24/20	Data File:	032324.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	111	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<8.9	<3.5
1,1-Dichloroethene	<14	<3.5
trans-1,2-Dichloroethene	<14	<3.5
cis-1,2-Dichloroethene	<14	<3.5
Trichloroethene	<9.4	<1.7
Tetrachloroethene	960	140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Output	Client:	AEG
Date Received:	03/17/20	Project:	4 Corners Cleaners 17-126
Date Collected:	03/16/20	Lab ID:	003260-04 1/2.7
Date Analyzed:	03/24/20	Data File:	032320.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	104	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.69	<0.27
1,1-Dichloroethene	<1.1	<0.27
trans-1,2-Dichloroethene	<1.1	<0.27
cis-1,2-Dichloroethene	<1.1	<0.27
Trichloroethene	1.0	0.19
Tetrachloroethene	16 j	2.3 j

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4 Corners Cleaners 17-126
Date Collected:	Not Applicable	Lab ID:	00-0716 mb
Date Analyzed:	03/23/20	Data File:	032311.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	105	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
Trichloroethene	<0.27	<0.05
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/27/20

Date Received: 03/17/20

Project: 4 Corners Cleaners 17-126, F&BI 003260

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 003260-04 1/2.7 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<0.69	<0.69	nm
1,1-Dichloroethene	ug/m3	<1.1	<1.1	nm
trans-1,2-Dichloroethene	ug/m3	<1.1	<1.1	nm
cis-1,2-Dichloroethene	ug/m3	<1.1	<1.1	nm
Trichloroethene	ug/m3	1.0	1.0	0
Tetrachloroethene	ug/m3	<18	<18	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	92	70-130
1,1-Dichloroethene	ug/m3	54	97	70-130
trans-1,2-Dichloroethene	ug/m3	54	96	70-130
cis-1,2-Dichloroethene	ug/m3	54	99	70-130
Trichloroethene	ug/m3	73	85	70-130
Tetrachloroethene	ug/m3	92	86	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

003260

SAMPLE CHAIN OF CUSTODY

NE 03/17/20

Report To B. DillbaCompany AEQAddress 2633 Parkmont Lane SW SuiteCity, State, ZIP OLY WA 98522Phone 360-352-9838 Email bdillba@aeqwa.comSAMPLERS (signature) [Signature]

Page # _____ of _____

PROJECT NAME & ADDRESS

PO #

4 corners Cleaners

17-124

NOTES:

INVOICE TO

AEQ

TURNAROUND TIME

☒ Standard☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Default: Clean after 3 days☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs <i>(see Page 12)</i>	APH	Helium	Notes
VP-1	01	2302	225	IA / SG	3/16/2020	-30	1030	0	1045			X			
VP-2	02	4178	243	IA / SG		-29	1032	0	1046			X			
VP-3	03	2305	220	IA / SG		-30	1033	0	1047			X			
airput	04	3600	201	IA / SG		-30	1034	0	1042			X			
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											
Samples received at 18°C															

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	Bruya alba	AEQ	3/17/2020	0818
Received by: <u>[Signature]</u>	Nhan Phan	FE BI	3/17/20	0818
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 30, 2020

Sherry Chilcutt
Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506

Dear Ms Chilcutt :

Included are the results from the testing of material submitted on April 13, 2020 from the 4 Corners Cleaners 17-126, F&BI 004132 project. There are 8 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: libbyenv@gmail.com
NAA0430R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 13, 2020 by Friedman & Bruya, Inc. from the Libby Labs 4 Corners Cleaners 17-126, F&BI 004132 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Libby Labs</u>
004132 -01	SVE-InPct-4920
004132 -02	HP-1
004132 -03	HP-3
004132 -04	HP-2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVE-InPct-4920	Client:	Libby Environmental
Date Received:	04/13/20	Project:	4 Corners Cleaners 17-126, F&BI 004132
Date Collected:	04/09/20	Lab ID:	004132-01 1/9.1
Date Analyzed:	04/27/20	Data File:	042712.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<2.3	<0.91
Chloroethane	<24	<9.1
1,1-Dichloroethene	<3.6	<0.91
trans-1,2-Dichloroethene	<3.6	<0.91
1,1-Dichloroethane	<3.7	<0.91
cis-1,2-Dichloroethene	<3.6	<0.91
1,2-Dichloroethane (EDC)	<0.37	<0.091
1,1,1-Trichloroethane	<5	<0.91
Trichloroethene	<2.4	<0.45
1,1,2-Trichloroethane	<0.99	<0.18
Tetrachloroethene	<62	<9.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	HP-1	Client:	Libby Environmental
Date Received:	04/13/20	Project:	4 Corners Cleaners 17-126, F&BI 004132
Date Collected:	04/09/20	Lab ID:	004132-02 1/19
Date Analyzed:	04/23/20	Data File:	042223.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	103	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<4.9	<1.9
Chloroethane	<50	<19
1,1-Dichloroethene	<7.5	<1.9
trans-1,2-Dichloroethene	<7.5	<1.9
1,1-Dichloroethane	<7.7	<1.9
cis-1,2-Dichloroethene	<7.5	<1.9
1,2-Dichloroethane (EDC)	<0.77	<0.19
1,1,1-Trichloroethane	<10	<1.9
Trichloroethene	<5.1	<0.95
1,1,2-Trichloroethane	<2.1	<0.38
Tetrachloroethene	620	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	HP-3	Client:	Libby Environmental
Date Received:	04/13/20	Project:	4 Corners Cleaners 17-126, F&BI 004132
Date Collected:	04/09/20	Lab ID:	004132-03 1/16
Date Analyzed:	04/23/20	Data File:	042224.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	106	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<4.1	<1.6
Chloroethane	<42	<16
1,1-Dichloroethene	<6.3	<1.6
trans-1,2-Dichloroethene	<6.3	<1.6
1,1-Dichloroethane	<6.5	<1.6
cis-1,2-Dichloroethene	<6.3	<1.6
1,2-Dichloroethane (EDC)	<0.65	<0.16
1,1,1-Trichloroethane	<8.7	<1.6
Trichloroethene	<4.3	<0.8
1,1,2-Trichloroethane	<1.7	<0.32
Tetrachloroethene	930	140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	HP-2	Client:	Libby Environmental
Date Received:	04/13/20	Project:	4 Corners Cleaners 17-126, F&BI 004132
Date Collected:	04/09/20	Lab ID:	004132-04 1/9.9
Date Analyzed:	04/23/20	Data File:	042221.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	107	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<2.5	<0.99
Chloroethane	<26	<9.9
1,1-Dichloroethene	<3.9	<0.99
trans-1,2-Dichloroethene	<3.9	<0.99
1,1-Dichloroethane	<4	<0.99
cis-1,2-Dichloroethene	<3.9	<0.99
1,2-Dichloroethane (EDC)	<0.4	<0.099
1,1,1-Trichloroethane	<5.4	<0.99
Trichloroethene	<2.7	<0.49
1,1,2-Trichloroethane	<1.1	<0.2
Tetrachloroethene	220	33

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Libby Environmental
Date Received:	Not Applicable	Project:	4 Corners Cleaners 17-126, F&BI 004132
Date Collected:	Not Applicable	Lab ID:	00-831 mb
Date Analyzed:	04/22/20	Data File:	042210.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MS

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.27	<0.05
1,1,2-Trichloroethane	<0.11	<0.02
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/30/20

Date Received: 04/13/20

Project: 4 Corners Cleaners 17-126, F&BI 004132

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 004176-01 1/3.0 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<0.77	<0.77	nm
Chloroethane	ug/m3	<7.9	<7.9	nm
1,1-Dichloroethene	ug/m3	<1.2	<1.2	nm
trans-1,2-Dichloroethene	ug/m3	<1.2	<1.2	nm
1,1-Dichloroethane	ug/m3	<1.2	<1.2	nm
cis-1,2-Dichloroethene	ug/m3	<1.2	<1.2	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.12	<0.12	nm
1,1,1-Trichloroethane	ug/m3	5.9	5.9	0
Trichloroethene	ug/m3	<0.81	<0.81	nm
1,1,2-Trichloroethane	ug/m3	<0.33	<0.33	nm
Tetrachloroethene	ug/m3	<20	<20	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Vinyl chloride	ug/m3	35	87	70-130
Chloroethane	ug/m3	36	90	70-130
1,1-Dichloroethene	ug/m3	54	100	70-130
trans-1,2-Dichloroethene	ug/m3	54	95	70-130
1,1-Dichloroethane	ug/m3	55	92	70-130
cis-1,2-Dichloroethene	ug/m3	54	100	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	100	70-130
1,1,1-Trichloroethane	ug/m3	74	97	70-130
Trichloroethene	ug/m3	73	83	70-130
1,1,2-Trichloroethane	ug/m3	74	82	70-130
Tetrachloroethene	ug/m3	92	86	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

ME 04-13-20

004132

Report To Libby Env

Company _____

Address _____

City, State, ZIP Olympia, WA

Phone _____ Email _____

SAMPLERS (signature) [Signature]

PROJECT NAME & ADDRESS
4 Corners Clean

PO #

23886-SE Kent/Kasky Rd

17-126

NOTES: Mop & V. H₂O, WA

INVOICE TO

Page # _____ of _____

TURNAROUND TIME

☒ Standard
☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Default: Clean after 3 days
☐ Archive (Fee may apply)

SAMPLE INFORMATION

SAMPLE INFORMATION																
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	PCE + DCE + P-Heptachlor	Notes
SE-IR-4920	01	3249	12	IA / (SG)	4/9/20	30	10:42	7	16:52						X	PCE
HP-1	02	7350	18	IA / (SG)	4/9/20	30	11:08	8	11:08						X	+
HP-3	03	3386	111	IA / (SG)	4/9/20	28	11:15	3	11:25						X	Daughter Products
HP-2	04	3252	12	IA / (SG)	4/9/20	30	11:32	8	11:38						X	
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												
										Samples received at 20°C						

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Chela Scott</u>	<u>AEG</u>	<u>4-9-20</u>	<u>15:43</u>
Received by: <u>[Signature]</u>	<u>Sherry Chelant</u>	<u>Libby Env</u>	<u>4-9-20</u>	<u>1549</u>
Relinquished by: <u>[Signature]</u>	<u>Sherry Chelant</u>	<u>Libby Env</u>	<u>4-9-20</u>	<u>1600</u>
Received by: _____				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 1, 2020

Becky Dilba, Project Manager
AEG
605 11th Ave SE
Suite 201
Tacoma, WA 98501

Dear Ms Dilba:

Included are the results from the testing of material submitted on May 26, 2020 from the 4 Corners Cleaners 17-126, F&BI 005309 project. There are 8 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG0601R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 26, 2020 by Friedman & Bruya, Inc. from the AEG 4 Corners Cleaners 17-126, F&BI 005309 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
005309 -01	VP-1
005309 -02	VP-2
005309 -03	VP-3
005309 -04	Output

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1	Client:	AEG
Date Received:	05/26/20	Project:	4 Corners Cleaners 17-126, F&BI 005309
Date Collected:	05/20/20	Lab ID:	005309-01 1/14
Date Analyzed:	05/27/20	Data File:	052638.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<3.6	<1.4
Chloroethane	<37	<14
1,1-Dichloroethene	<5.6	<1.4
trans-1,2-Dichloroethene	<5.6	<1.4
1,1-Dichloroethane	<5.7	<1.4
cis-1,2-Dichloroethene	<5.6	<1.4
1,2-Dichloroethane (EDC)	<0.57	<0.14
1,1,1-Trichloroethane	<7.6	<1.4
Trichloroethene	4.3	0.80
1,1,2-Trichloroethane	<1.5	<0.28
Tetrachloroethene	570	84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2	Client:	AEG
Date Received:	05/26/20	Project:	4 Corners Cleaners 17-126, F&BI 005309
Date Collected:	05/20/20	Lab ID:	005309-02 1/6.8
Date Analyzed:	05/27/20	Data File:	052637.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	107	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.68
Chloroethane	<18	<6.8
1,1-Dichloroethene	<2.7	<0.68
trans-1,2-Dichloroethene	<2.7	<0.68
1,1-Dichloroethane	<2.8	<0.68
cis-1,2-Dichloroethene	<2.7	<0.68
1,2-Dichloroethane (EDC)	<0.28	<0.068
1,1,1-Trichloroethane	<3.7	<0.68
Trichloroethene	<1.8	<0.34
1,1,2-Trichloroethane	<0.74	<0.14
Tetrachloroethene	230	34

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3	Client:	AEG
Date Received:	05/26/20	Project:	4 Corners Cleaners 17-126, F&BI 005309
Date Collected:	05/20/20	Lab ID:	005309-03 1/35
Date Analyzed:	05/27/20	Data File:	052639.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	112	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Vinyl chloride	<8.9	<3.5
Chloroethane	<92	<35
1,1-Dichloroethene	<14	<3.5
trans-1,2-Dichloroethene	<14	<3.5
1,1-Dichloroethane	<14	<3.5
cis-1,2-Dichloroethene	<14	<3.5
1,2-Dichloroethane (EDC)	<1.4	<0.35
1,1,1-Trichloroethane	<19	<3.5
Trichloroethene	<9.4	<1.7
1,1,2-Trichloroethane	<3.8	<0.7
Tetrachloroethene	1,300	190

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Output	Client:	AEG
Date Received:	05/26/20	Project:	4 Corners Cleaners 17-126, F&BI 005309
Date Collected:	05/20/20	Lab ID:	005309-04 1/6.9
Date Analyzed:	05/27/20	Data File:	052636.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.8	<0.69
Chloroethane	<18	<6.9
1,1-Dichloroethene	<2.7	<0.69
trans-1,2-Dichloroethene	<2.7	<0.69
1,1-Dichloroethane	<2.8	<0.69
cis-1,2-Dichloroethene	<2.7	<0.69
1,2-Dichloroethane (EDC)	<0.28	<0.069
1,1,1-Trichloroethane	<3.8	<0.69
Trichloroethene	<1.9	<0.34
1,1,2-Trichloroethane	<0.75	<0.14
Tetrachloroethene	<47	<6.9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4 Corners Cleaners 17-126, F&BI 005309
Date Collected:	Not Applicable	Lab ID:	00-1154 mb
Date Analyzed:	05/26/20	Data File:	052619.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	106	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.27	<0.05
1,1,2-Trichloroethane	<0.11	<0.02
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/01/20

Date Received: 05/26/20

Project: 4 Corners Cleaners 17-126, F&BI 005309

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 005310-01 1/3.0 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	63	61	3
Chloroethane	ug/m3	<7.9	<7.9	nm
1,1-Dichloroethene	ug/m3	<1.2	<1.2	nm
trans-1,2-Dichloroethene	ug/m3	<1.2	<1.2	nm
1,1-Dichloroethane	ug/m3	<1.2	<1.2	nm
cis-1,2-Dichloroethene	ug/m3	<1.2	<1.2	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.12	<0.12	nm
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	nm
Trichloroethene	ug/m3	<0.81	<0.81	nm
1,1,2-Trichloroethane	ug/m3	<0.33	<0.33	nm
Tetrachloroethene	ug/m3	<20	<20	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Vinyl chloride	ug/m3	35	84	70-130
Chloroethane	ug/m3	36	86	70-130
1,1-Dichloroethene	ug/m3	54	95	70-130
trans-1,2-Dichloroethene	ug/m3	54	90	70-130
1,1-Dichloroethane	ug/m3	55	86	70-130
cis-1,2-Dichloroethene	ug/m3	54	92	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	93	70-130
1,1,1-Trichloroethane	ug/m3	74	92	70-130
Trichloroethene	ug/m3	73	84	70-130
1,1,2-Trichloroethane	ug/m3	74	89	70-130
Tetrachloroethene	ug/m3	92	89	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

005309

SAMPLE CHAIN OF CUSTODY

ME 05-26-20

Report To Betty D. 154Company MEC

Address _____

City, State, ZIP _____

Phone _____

Email betty@mecc.comSAMPLERS (signature) [Signature]

PROJECT NAME & ADDRESS

PO #

NOTES:

4 Cores Cleaners

INVOICE TO

MEC

Page # _____ of _____

TURNAROUND TIME

☒ Standard☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Default: Clean after 3 days☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. (°Hg)	Field Initial Time	Final Vac. (°Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
VP-1	01	3385	243	IA / <u>SG</u>	5/26/20	-28	1216	0	1227						PCR: 12 Aug 1998
VP-2	02	41183	241	IA / <u>SG</u>		-30	1218	0	1228						
VP-3	03	2296	28	IA / <u>SG</u>		-28	1219	0	1229						
VP-4	04	2433	230	IA / SG		-30	1154	40	1220						
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											

Samples received at 22 C

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COCC\COCTO-15.DOC

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Relinquished by: [Signature]Received by: [Signature]Relinquished by: [Signature]

Received by: _____

Robert Baker

MEC

5/26/2009

James B. 1024

F&B

5/26 0928



Libby Environmental, Inc.

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

June 3, 2020

Becky Dilba
Associated Environmental Group, LLC
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Ms. Dilba:

Please find enclosed the analytical data report for the 4 Corners Cleaners Project located in Maple Valley, Washington.

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

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

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG, LLC
Maple Valley, Washington
Libby Project # L200521-1
Client Project # 17-126

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

Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		Method Blank	MW1-3	MW1-9	MW1-18	MW1-23	MW1-33
Date Sampled		N/A	5/18/2020	5/18/2020	5/18/2020	5/18/2020	5/18/2020
Date Analyzed	PQL (mg/kg)	5/26/2020 (mg/kg)	5/26/2020 (mg/kg)	5/26/2020 (mg/kg)	5/26/2020 (mg/kg)	5/26/2020 (mg/kg)	5/26/2020 (mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	0.011 J	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		96	97	97	99	8	98
1,2-Dichloroethane-d4		95	101	101	105	103	104
Toluene-d8		102	101	98	101	97	100
4-Bromofluorobenzene		91	82	80	76	74	91

"J" Indicates analyte was positively identified. Reported result is an estimate.

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG, LLC
Maple Valley, Washington
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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		MW1-33	MW1-36	MW1-50	MW2-3	MW2-9	MW2-18
		Dup					
Date Sampled		5/18/2020	5/18/2020	5/18/2020	5/18/2020	5/18/2020	5/18/2020
Date Analyzed	PQL	5/26/2020	5/26/2020	5/26/2020	5/26/2020	5/26/2020	5/26/2020
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		98	93	97	98	99	96
1,2-Dichloroethane-d4		107	95	107	105	107	101
Toluene-d8		100	97	99	100	98	97
4-Bromofluorobenzene		79	71	72	92	67	78

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		MW2-24	MW2-36	MW2-43	MW2-50	MW2-50 Dup	MW3-3
Date Sampled		5/18/2020	5/18/2020	5/18/2020	5/18/2020	5/18/2020	5/18/2020
Date Analyzed	PQL	5/26/2020	5/26/2020	5/26/2020	5/26/2020	5/26/2020	5/26/2020
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		96	94	98	98	99	100
1,2-Dichloroethane-d4		102	102	106	107	106	109
Toluene-d8		87	95	98	99	99	100
4-Bromofluorobenzene		87	70	77	71	88	74

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		MW3-9	MW3-18	MW3-27	MW3-36	MW3-36 Dup	MW3-48
Date Sampled		5/19/2020	5/19/2020	5/19/2020	5/19/2020	5/19/2020	5/19/2020
Date Analyzed	PQL	5/27/2020	5/27/2020	5/27/2020	5/27/2020	5/27/2020	5/27/2020
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	0.031	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		100	96	98	97	97	96
1,2-Dichloroethane-d4		108	106	104	108	105	104
Toluene-d8		99	97	98	98	108	96
4-Bromofluorobenzene		79	69	66	83	68	76

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		MW5-3	MW5-9	MW5-30	MW5-45	MW5-45 Dup	Method Blank
Date Sampled		5/20/2020	5/20/2020	5/20/2020	5/20/2020	5/20/2020	NA
Date Analyzed	PQL	5/27/2020	5/27/2020	5/27/2020	5/27/2020	5/27/2020	5/27/2020
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		100	101	102	98	101	97
1,2-Dichloroethane-d4		104	107	108	109	109	108
Toluene-d8		101	101	101	100	100	102
4-Bromofluorobenzene		66	69	67	66	66	75

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT

AEG, LLC

Maple Valley, Washington

Libby Project # L200521-1

Client Project # 17-126

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QA/QC for Volatile Organic Compounds by EPA Method 8260D in Soil

Matrix Spike Sample Identification: MW1-36

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Vinyl Chloride (VC)	0.25	0.21	0.21	84	84	0.0	65-135	
1,1-Dichloroethene	0.25	0.23	0.24	92	96	4.3	65-135	
trans-1,2-Dichloroethene	0.25	0.21	0.21	84	84	0.0	65-135	
cis-1,2-Dichloroethene	0.25	0.24	0.24	96	96	0.0	65-135	
Trichloroethene (TCE)	0.25	0.24	0.23	96	92	4.3	65-135	
Tetrachloroethene (PCE)	0.25	0.18	0.21	72	84	15.4	65-135	
Surrogate Recovery (%)				MS	MSD			
Dibromofluoromethane				97	98		65-135	
1,2-Dichloroethane-d4				106	104		65-135	
Toluene-d8				102	101		65-135	
4-Bromofluorobenzene				92	78		65-135	

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Paul Burke

Laboratory Control Sample

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Vinyl Chloride (VC)	0.25	0.20	80	80-120	
1,1-Dichloroethene	0.25	0.22	88	80-120	
trans-1,2-Dichloroethene	0.25	0.23	92	80-120	
cis-1,2-Dichloroethene	0.25	0.25	100	80-120	
Trichloroethene (TCE)	0.25	0.25	100	80-120	
Tetrachloroethene (PCE)	0.25	0.22	88	80-120	
Surrogate Recovery					
Dibromofluoromethane			115	65-135	
1,2-Dichloroethane-d4			116	65-135	
Toluene-d8			118	65-135	
4-Bromofluorobenzene			96	65-135	

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT

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Libby Project # L200521-1

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QA/QC for Volatile Organic Compounds by EPA Method 8260D in Soil

Matrix Spike Sample Identification: MW5-45

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Vinyl Chloride (VC)	0.25	0.17	0.17	68	68	0.0	65-135	
1,1-Dichloroethene	0.25	0.19	0.19	76	76	0.0	65-135	
trans-1,2-Dichloroethene	0.25	0.18	0.18	72	72	0.0	65-135	
cis -1,2-Dichloroethene	0.25	0.22	0.22	88	88	0.0	65-135	
Trichloroethene (TCE)	0.25	0.21	0.20	84	80	4.9	65-135	
Tetrachloroethene (PCE)	0.25	0.19	0.17	76	68	11.1	65-135	
Surrogate Recovery (%)				MS	MSD			
Dibromofluoromethane				102	99		65-135	
1,2-Dichloroethane-d4				106	107		65-135	
Toluene-d8				102	101		65-135	
4-Bromofluorobenzene				71	71		65-135	

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Paul Burke

Laboratory Control Sample

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Vinyl Chloride (VC)	0.25	0.21	84	80-120	
1,1-Dichloroethene	0.25	0.21	84	80-120	
trans-1,2-Dichloroethene	0.25	0.23	92	80-120	
cis -1,2-Dichloroethene	0.25	0.27	108	80-120	
Trichloroethene (TCE)	0.25	0.26	104	80-120	
Tetrachloroethene (PCE)	0.25	0.21	84	80-120	
Surrogate Recovery					
Dibromofluoromethane			116	65-135	
1,2-Dichloroethane-d4			126	65-135	
Toluene-d8			121	65-135	
4-Bromofluorobenzene			85	65-135	

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		Method Blank	MW1-15	MW1-20	MW2-15	MW2-21	MW3-21
Date Sampled		N/A	5/18/2020	5/18/2020	5/18/2020	5/18/2020	5/19/2020
Date Analyzed	PQL (mg/kg)	6/1/2020 (mg/kg)	6/1/2020 (mg/kg)	6/1/2020 (mg/kg)	6/1/2020 (mg/kg)	6/1/2020 (mg/kg)	6/1/2020 (mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	0.019 J	nd	nd	nd	0.063
Surrogate Recovery							
Dibromofluoromethane		91	88	92	93	90	94
1,2-Dichloroethane-d4		86	87	84	91	89	93
Toluene-d8		101	100	87	88	82	74
4-Bromofluorobenzene		86	96	94	92	93	91

"J" Indicates analyte was positively identified. Reported result is an estimate.

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

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Client Project # 17-126

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Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		MW3-21	MW5-15	MW5-18	MW5-21
		Dup			
Date Sampled		5/19/2020	5/20/2020	5/20/2020	5/20/2020
Date Analyzed	PQL	6/1/2020	6/1/2020	6/1/2020	6/1/2020
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl Chloride (VC)	0.02	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.02	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd
Trichloroethene (TCE)	0.02	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	0.12	nd	nd	nd
Surrogate Recovery					
Dibromofluoromethane		93	93	93	95
1,2-Dichloroethane-d4		92	91	95	94
Toluene-d8		75	79	74	76
4-Bromofluorobenzene		93	94	90	94

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT

AEG, LLC

Maple Valley, Washington

Libby Project # L200521-1

Client Project # 17-126

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Soil

Matrix Spike Sample Identification: L200529-1

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Vinyl Chloride (VC)	0.25	0.20	0.21	80	84	4.9	65-135	
1,1-Dichloroethene	0.25	0.23	0.24	93	96	3.0	65-135	
trans-1,2-Dichloroethene	0.25	0.25	0.26	100	104	3.9	65-135	
cis-1,2-Dichloroethene	0.25	0.26	0.28	104	112	7.4	65-135	
Trichloroethene (TCE)	0.25	0.26	0.27	104	108	3.8	65-135	
Tetrachloroethene (PCE)	0.25	0.26	0.26	104	104	0.0	65-135	
Surrogate Recovery (%)				MS	MSD			
Dibromofluoromethane				93	96		65-135	
1,2-Dichloroethane-d4				91	97		65-135	
Toluene-d8				100	100		65-135	
4-Bromofluorobenzene				79	87		65-135	

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Paul Burke

Laboratory Control Sample

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Vinyl Chloride (VC)	0.25	0.22	88	80-120	
1,1-Dichloroethene	0.25	0.22	88	80-120	
trans-1,2-Dichloroethene	0.25	0.25	100	80-120	
cis-1,2-Dichloroethene	0.25	0.26	104	80-120	
Trichloroethene (TCE)	0.25	0.25	100	80-120	
Tetrachloroethene (PCE)	0.25	0.25	100	80-120	
Surrogate Recovery					
Dibromofluoromethane			93	65-135	
1,2-Dichloroethane-d4			93	65-135	
Toluene-d8			100	65-135	
4-Bromofluorobenzene			92	65-135	

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

4 CORNERS CLEANERS PROJECT

Phone: (360) 352-2110

AEG, LLC

FAX: (360) 352-4154

Libby Project # L200521-1

Email: libbyenv@gmail.com

Date Received 5/21/2020

Time Received 9:30 AM

Received By KD

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☐ Yes | ☒ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>16.2 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>12.7 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.

Libby Environmental, Inc.

3322 South Bay Road NE

Ph: 360-352-2110

Olympia, WA 98506

Fax: 360-352-4154

Chain of Custody Record

www.LibbyEnvironmental.com

Client: **AEG**

Address:

City:

State:

Zip:

Phone:

Fax:

Client Project # **17-126**

Date: **5/21/2020**

Page: **1**

of **4**

Project Manager: **B. Dilley**

Project Name: **4 corners Cleaners**

Location: **23880 SE Kent-Kingley Rd** City, State: **Wash. WA**

Collector: **B. Dilley**

Date of Collection: **5/18/2020**

Email: **bdilley@aequa.com**



Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	PAH 8270	Semi Vol 8270	Field Notes
1 MWI-3	3	917	Sol	VIA 7/100	X											
2 MWI-6	6	927														
3 MWI-9	9	927			X											
4 MWI-12	944	927														
5 MWI-15	945	927			X											
6 MWI-18	945	927			X											
7 MWI-20	954	927			X											
8 MWI-23	954	927			X											
9 MWI-26	1004	927														
10 MWI-30	1004	927														
11 MWI-33	1042	927			X											
12 MWI-36	1043	927			X											
13 MWI-42	1117	927														
14 MWI-50	1118	927			X											
15 MWI-2-3		1325			X											
16 MWI-6		1318														
17 MWI-9		1328			X											

Relinquished by: **[Signature]** **5/21/2020**

Date / Time

Received by: **[Signature]**

Date / Time

5/21/20 0930

Sample Receipt

Good Condition? **Y** **N**

Cooler Temp. °C

Sample Temp. °C

Total Number of Containers

Remarks:

5-29-2020
ADD-ON REQUEST
PER BECKY VIA EMAIL.
STD

TAT: 24HR 48HR 5 DAY

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506

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

Chain of Custody Record

www.LibbyEnvironmental.com

Client: **AEC**

Address:

City: State: Zip:

Phone: Fax:

Client Project # **17-126**

Date: **5/14/2020**

Page: **2** of **4**

Project Manager: **B. D. Hughes**

Project Name: **4 corners Cleanings**

Location: City, State:

Collector: **b.d.h**

Date of Collection: **5/18/2020**

Email: **b.d.h @ aecua.com**



Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Field Notes
1 MW2-12		1337															
2 MW2-15		1340			X												
3 MW2-18		1344			✓												
4 MW2-21		1349			X												
5 MW2-24		1349			✓												
6 MW2-27		1354															
7 MW2-30		1355															
8 MW2-33		1431															
9 MW2-36		1439			✓												
10 MW2-40		1439															
11 MW2-43		1503			X												
12 MW2-46		1504															
13 MW2-50		1505			✓												
14																	
15																	
16																	
17																	

Relinquished by: [Signature]	Date / Time: 5/14/2020	Received by: [Signature]	Date / Time: 5/14/20 0930	Sample Receipt		Remarks: 5-29-2020 ADD-ONS REQUEST PER BECKY VIA EMAIL STD
Relinquished by:	Date / Time:	Received by:	Date / Time:	Good Condition?	Y N	
				Cooler Temp.	°C	
				Sample Temp.	°C	
Relinquished by:	Date / Time:	Received by:	Date / Time:	Total Number of Containers		TAT: 24HR 48HR 5-DAY

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

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE

Ph: 360-352-2110

Olympia, WA 98506

Fax: 360-352-4154

Client: **TEC**

Date: **5/21/2020**

Page: **3** of **4**

Address:

Project Manager: **B. Alb**

City: State: Zip:

Project Name: **Y Enners**

Phone: Fax:

Location: City, State:

Client Project # **17-126**

Collector: **D. Alb**

Date of Collection: **5/19/2020 - 5/20**

Email:

Sample Number	Depth	Time	Sample Type	Container Type	LIBBY ENVIRONMENTAL														Field Notes
					VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270			
1 MW3-3		852			X														5/15
2 MW3-6		855																	5/15
3 MW3-9		855			Y														
4 MW3-12		905																	
5 MW3-15		905																	
6 MW3-18		905			Y														
7 MW3-21		918			X														
8 MW3-24		919																	
9 MW3-27		1010			Y														
10 MW3-30		1010																	
11 MW3-33		1023																	
12 MW3-36		1029			X													5/26	
13 MW3-39		1029																	
14 MW3-43	1056	1056																	
15 MW3-48					X														
16 MWS-3		843			X														
17 MWS-6 MWS-1		850			X														

Relinquished by: [Signature] 5/21/2020	Date / Time	Received by: [Signature] 5/21/20 0930	Date / Time	Sample Receipt		Remarks: 5-29-2020 ADD-ON REQUEST PER BECKY VIA EMAIL. STD TAT: 24HR 48HR 5 DAY
Relinquished by:	Date / Time	Received by:	Date / Time	Good Condition?	Y N	
				Cooler Temp.	°C	
				Sample Temp.	°C	
Relinquished by:	Date / Time	Received by:	Date / Time	Total Number of Containers		

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

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506

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

Chain of Custody Record

www.LibbyEnvironmental.com

Client: REG

Address:

City: State: Zip:

Phone: Fax:

Client Project # 126

Date: 5/21/2020 Page: 2 of 4

Project Manager: B. Dillon

Project Name: Swan Connors

Location: City, State:

Collector: B. Dillon Date of Collection: 5/20

Email:

Sample Number	Depth	Time	Sample Type	Container Type															Field Notes
					VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270			
1 MWS-9		1006			X														
2 MWS-15		1011			X														
3 MWS-18		1013			X														
4 MWS-21		1016			X														
5 MWS-24		1017																	
6 MWS-27		1023																	
7 MWS-30		1028			X														
8 MWS-33		1036																	
9 MWS-36		1037																	
10 MWS-40		1037																	
11 MWS-45		1103			X														
12 MWS-45		1454																	
13 MWS-45		1455																	
14 MWS-45		1459																	
15 MWS-45		1520																	
16 MWS-45		1523																	
17 MWS-45 Extra		1528																	

Relinquished by: <u>[Signature]</u>	Date / Time: <u>5/21/2020</u>	Received by: <u>[Signature]</u>	Date / Time: <u>5/21/20 0938</u>	Sample Receipt Good Condition? Y N Cooler Temp. °C Sample Temp. °C		Remarks: <u>5-29-2020</u> <u>ADD-ONS REQUEST PER BECKY VIA EMAIL. STD</u> TAT: 24HR 48HR 5-DAY
Relinquished by:	Date / Time:	Received by:	Date / Time:			
Relinquished by:	Date / Time:	Received by:	Date / Time:	Total Number of Containers		

FRIEDMAN & BRUYA, INC.

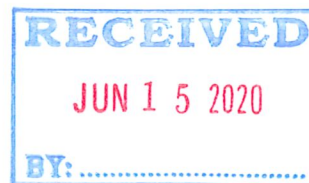
ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 1, 2020

Becky Dilba, Project Manager
AEG
605 11th Ave SE
Suite 201
Tacoma, WA 98501



Dear Ms Dilba:

Included are the results from the testing of material submitted on May 26, 2020 from the 4 Corners Cleaners 17-126, F&BI 005309 project. There are 8 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
AEG0601R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 26, 2020 by Friedman & Bruya, Inc. from the AEG 4 Corners Cleaners 17-126, F&BI 005309 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
005309 -01	VP-1
005309 -02	VP-2
005309 -03	VP-3
005309 -04	Output

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1	Client:	AEG
Date Received:	05/26/20	Project:	4 Corners Cleaners 17-126, F&BI 005309
Date Collected:	05/20/20	Lab ID:	005309-01 1/14
Date Analyzed:	05/27/20	Data File:	052638.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	96	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Vinyl chloride	<3.6	<1.4
Chloroethane	<37	<14
1,1-Dichloroethene	<5.6	<1.4
trans-1,2-Dichloroethene	<5.6	<1.4
1,1-Dichloroethane	<5.7	<1.4
cis-1,2-Dichloroethene	<5.6	<1.4
1,2-Dichloroethane (EDC)	<0.57	<0.14
1,1,1-Trichloroethane	<7.6	<1.4
Trichloroethene	4.3	0.80
1,1,2-Trichloroethane	<1.5	<0.28
Tetrachloroethene	570	84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: VP-2	Client: AEG
Date Received: 05/26/20	Project: 4 Corners Cleaners 17-126, F&BI 005309
Date Collected: 05/20/20	Lab ID: 005309-02 1/6.8
Date Analyzed: 05/27/20	Data File: 052637.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: bat/MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	107	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Vinyl chloride	<1.7	<0.68
Chloroethane	<18	<6.8
1,1-Dichloroethene	<2.7	<0.68
trans-1,2-Dichloroethene	<2.7	<0.68
1,1-Dichloroethane	<2.8	<0.68
cis-1,2-Dichloroethene	<2.7	<0.68
1,2-Dichloroethane (EDC)	<0.28	<0.068
1,1,1-Trichloroethane	<3.7	<0.68
Trichloroethene	<1.8	<0.34
1,1,2-Trichloroethane	<0.74	<0.14
Tetrachloroethene	230	34

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: VP-3	Client: AEG
Date Received: 05/26/20	Project: 4 Corners Cleaners 17-126, F&BI 005309
Date Collected: 05/20/20	Lab ID: 005309-03 1/35
Date Analyzed: 05/27/20	Data File: 052639.D
Matrix: Air	Instrument: GCMS7
Units: ug/m3	Operator: bat/MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	112	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<8.9	<3.5
Chloroethane	<92	<35
1,1-Dichloroethene	<14	<3.5
trans-1,2-Dichloroethene	<14	<3.5
1,1-Dichloroethane	<14	<3.5
cis-1,2-Dichloroethene	<14	<3.5
1,2-Dichloroethane (EDC)	<1.4	<0.35
1,1,1-Trichloroethane	<19	<3.5
Trichloroethene	<9.4	<1.7
1,1,2-Trichloroethane	<3.8	<0.7
Tetrachloroethene	1,300	190

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Output	Client:	AEG
Date Received:	05/26/20	Project:	4 Corners Cleaners 17-126, F&BI 005309
Date Collected:	05/20/20	Lab ID:	005309-04 1/6.9
Date Analyzed:	05/27/20	Data File:	052636.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	97	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Vinyl chloride	<1.8	<0.69
Chloroethane	<18	<6.9
1,1-Dichloroethene	<2.7	<0.69
trans-1,2-Dichloroethene	<2.7	<0.69
1,1-Dichloroethane	<2.8	<0.69
cis-1,2-Dichloroethene	<2.7	<0.69
1,2-Dichloroethane (EDC)	<0.28	<0.069
1,1,1-Trichloroethane	<3.8	<0.69
Trichloroethene	<1.9	<0.34
1,1,2-Trichloroethane	<0.75	<0.14
Tetrachloroethene	<47	<6.9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4 Corners Cleaners 17-126, F&BI 005309
Date Collected:	Not Applicable	Lab ID:	00-1154 mb
Date Analyzed:	05/26/20	Data File:	052619.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/MS

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	106	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.27	<0.05
1,1,2-Trichloroethane	<0.11	<0.02
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/01/20

Date Received: 05/26/20

Project: 4 Corners Cleaners 17-126, F&BI 005309

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 005310-01 1/3.0 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	63	61	3
Chloroethane	ug/m3	<7.9	<7.9	nm
1,1-Dichloroethene	ug/m3	<1.2	<1.2	nm
trans-1,2-Dichloroethene	ug/m3	<1.2	<1.2	nm
1,1-Dichloroethane	ug/m3	<1.2	<1.2	nm
cis-1,2-Dichloroethene	ug/m3	<1.2	<1.2	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.12	<0.12	nm
1,1,1-Trichloroethane	ug/m3	<1.6	<1.6	nm
Trichloroethene	ug/m3	<0.81	<0.81	nm
1,1,2-Trichloroethane	ug/m3	<0.33	<0.33	nm
Tetrachloroethene	ug/m3	<20	<20	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	84	70-130
Chloroethane	ug/m3	36	86	70-130
1,1-Dichloroethene	ug/m3	54	95	70-130
trans-1,2-Dichloroethene	ug/m3	54	90	70-130
1,1-Dichloroethane	ug/m3	55	86	70-130
cis-1,2-Dichloroethene	ug/m3	54	92	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	93	70-130
1,1,1-Trichloroethane	ug/m3	74	92	70-130
Trichloroethene	ug/m3	73	84	70-130
1,1,2-Trichloroethane	ug/m3	74	89	70-130
Tetrachloroethene	ug/m3	92	89	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

005309

SAMPLE CHAIN OF CUSTODY

ME 05-26-20

Report To Becky D. 159Company AEC

Address _____

City, State, ZIP _____

Phone _____ Email bdilba@acqva.comSAMPLERS (signature) [Signature]

Page # _____ of _____

PROJECT NAME & ADDRESS

PO #

4 corners Clearers17-126

NOTES:

INVOICE TO

AEC

TURNAROUND TIME

☒ Standard☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Default: Clean after 3 days☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
<u>VP-1</u>	<u>01</u>	<u>3385</u>	<u>243</u>	IA / <u>SG</u>	<u>5/20/2020</u>	<u>-28</u>	<u>1216</u>	<u>0</u>	<u>1227</u>						
<u>VP-2</u>	<u>02</u>	<u>4183</u>	<u>241</u>	IA / <u>SG</u>		<u>-30</u>	<u>1218</u>	<u>0</u>	<u>1228</u>						
<u>VP-3</u>	<u>03</u>	<u>2296</u>	<u>28</u>	IA / <u>SG</u>		<u>-28</u>	<u>1219</u>	<u>0</u>	<u>1229</u>						
<u>OUTLET</u>	<u>04</u>	<u>2433</u>	<u>230</u>	IA / SG		<u>-30</u>	<u>1156</u>	<u>40</u>	<u>1220</u>						
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											

Samples received at 22 °CFriedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Wesley Baker</u>	<u>AEC</u>	<u>5/26/2020</u>	<u>0917</u>
Received by: <u>[Signature]</u>	<u>James B. 10/15</u>	<u>F&B</u>	<u>5/26</u>	<u>0950</u>
Relinquished by:				
Received by:				



Libby Environmental, Inc.

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

June 29, 2020

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

Dear Mr. Rose:

Please find enclosed the analytical data report for the 4 Corners Cleaners Project located in Maple Valley, Washington.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry L. Chilcutt".

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG, LLC
Maple Valley, Washington
Libby Project # L200623-3
Client Project # 17-126

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

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method Blank	MW-1	MW-1 Dup	MW-2	MW-3	MW-5
Date Sampled		N/A	6/23/2020	6/23/2020	6/23/2020	6/23/2020	6/23/2020
Date Analyzed	PQL (µg/L)	6/27/2020 (µg/L)	6/27/2020 (µg/L)	6/27/2020 (µg/L)	6/27/2020 (µg/L)	6/27/2020 (µg/L)	6/27/2020 (µg/L)
Vinyl Chloride (VC)	0.2	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.5	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		130	134	132	129	128	134
1,2-Dichloroethane-d4		126	133	123	123	120	119
Toluene-d8		97	94	85	95	88	98
4-Bromofluorobenzene		91	96	92	92	97	96

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG, LLC
Maple Valley, Washington
Libby Project # L200623-3
Client Project # 17-126

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

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Water

Matrix Spike Sample Identification: L206026-2								
	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Vinyl Chloride (VC)	5.0	3.9	4.3	78	86	9.8	65-135	
1,1-Dichloroethene	5.0	4.4	4.7	88	94	6.6	65-135	
trans-1,2-Dichloroethene	5.0	3.7	4.5	74	90	19.3	65-135	
cis -1,2-Dichloroethene	5.0	3.5	3.8	70	76	8.2	65-135	
Trichloroethene (TCE)	5.0	4.0	4.3	80	86	7.2	65-135	
Tetrachloroethene (PCE)	5.0	5.5	6.1	109	121	10.5	65-135	
Surrogate Recovery (%)				MS	MSD			
Dibromofluoromethane				131	129		65-135	
1,2-Dichloroethane-d4				119	118		65-135	
Toluene-d8				103	103		65-135	
4-Bromofluorobenzene				102	105		65-135	

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Vinyl Chloride (VC)	5.0	4.9	98	80-120	
1,1-Dichloroethene	5.0	5.8	116	80-120	
trans-1,2-Dichloroethene	5.0	5.2	104	80-120	
cis -1,2-Dichloroethene	5.0	4.6	92	80-120	
Trichloroethene (TCE)	5.0	4.8	96	80-120	
Tetrachloroethene (PCE)	5.0	6.0	120	80-120	
Surrogate Recovery					
Dibromofluoromethane			130	65-135	
1,2-Dichloroethane-d4			131	65-135	
Toluene-d8			91	65-135	
4-Bromofluorobenzene			89	65-135	

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

4 CORNERS CLEANERS PROJECT

AEG, LLC

Libby Project # L200623-3

Date Received 6/25/2020

Time Received 2:31 PM

Received By KD

Sample Receipt Checklist

Chain of Custody

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

Log In

3. Cooler or Shipping Container is present. ☒ Yes ☐ No ☐ N/A
4. Cooler or Shipping Container is in good condition. ☒ Yes ☐ No ☐ N/A
5. Cooler or Shipping Container has Custody Seals present. ☐ Yes ☒ No ☐ N/A
6. Was an attempt made to cool the samples? ☒ Yes ☐ No ☐ N/A
7. Temperature of cooler (0°C to 8°C recommended) 2.1 °C
8. Temperature of sample(s) (0°C to 8°C recommended) 4.6 °C
9. Did all containers arrive in good condition (unbroken)? ☒ Yes ☐ No
10. Is it clear what analyses were requested? ☒ Yes ☐ No
11. Did container labels match Chain of Custody? ☒ Yes ☐ No
12. Are matrices correctly identified on Chain of Custody? ☒ Yes ☐ No
13. Are correct containers used for the analysis indicated? ☒ Yes ☐ No
14. Is there sufficient sample volume for indicated analysis? ☒ Yes ☐ No
15. Were all containers properly preserved per each analysis? ☒ Yes ☐ No
16. Were VOA vials collected correctly (no headspace)? ☒ Yes ☐ No ☐ N/A
17. Were all holding times able to be met? ☒ Yes ☐ No

Discrepancies/ Notes

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

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments. _____

Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Ph: 360-352-2110

Fax: 360-352-4154

Chain of Custody Record

www.LibbyEnvironmental.com

Client: AEH

Address: 2633 Parkmont Ln SW, Suite A

City: Olympia State: WA Zip: 98502

Phone: (360) 352-9835 Fax: (360) 352-8164

Client Project # 17-126

Date: 6/23/20

Page: 1 of 1

Project Manager: Scott Rose

Project Name: 4 Corners Cleaners

Location: 23886 SE Kent-Kangley Rd. City, State: Maple Valley, WA

Collector: Patrick Ho

Date of Collection: 6/23/20

Email: SRose@AEGW4.com



Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Field Notes
1		1133	W	VOAs	X											
2		1200	W	VOAs	X											
3		1250	W	VOAs	X											
4		1225	W	VOAs	X											
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																

Relinquished by: <u>Patrick Ho</u>	Date / Time <u>6/23/20 1431</u>	Received by: <u>[Signature]</u>	Date / Time <u>6/25/20 1431</u>	Sample Receipt Good Condition? <u>Y</u> <u>N</u> Cooler Temp. <u> </u> °C Sample Temp. <u> </u> °C Total Number of Containers <u> </u>		Remarks: TAT: 24HR 48HR 5 DAY
Relinquished by:	Date / Time	Received by:	Date / Time			
Relinquished by:	Date / Time	Received by:	Date / Time			

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

Distribution: White - Lab, Yellow - Originator

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

July 21, 2020

Becky Dilba, Project Manager
AEG
605 11th Ave SE
Suite 201
Olympia, WA 98501

Dear Ms Dilba:

Included are the results from the testing of material submitted on July 13, 2020 from the 4 Corners Cleaners, F&BI 007192 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG0721R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on July 13, 2020 by Friedman & Bruya, Inc. from the AEG 4 Corners Cleaners, F&BI 007192 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
007192 -01	VP-1
007192 -02	VP-2
007192 -03	VP-3
007192 -04	VP-4
007192 -05	Output

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1	Client:	AEG
Date Received:	07/13/20	Project:	4 Corners Cleaners, F&BI 007192
Date Collected:	07/08/20	Lab ID:	007192-01 1/7.1
Date Analyzed:	07/17/20	Data File:	071629.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	BAT

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	113	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.8	<0.71
Chloroethane	<19	<7.1
1,1-Dichloroethene	<2.8	<0.71
trans-1,2-Dichloroethene	<2.8	<0.71
1,1-Dichloroethane	<2.9	<0.71
cis-1,2-Dichloroethene	<2.8	<0.71
1,2-Dichloroethane (EDC)	<0.29	<0.071
1,1,1-Trichloroethane	<3.9	<0.71
Trichloroethene	4.6	0.85
1,1,2-Trichloroethane	<0.77	<0.14
Tetrachloroethene	580	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2	Client:	AEG
Date Received:	07/13/20	Project:	4 Corners Cleaners, F&BI 007192
Date Collected:	07/08/20	Lab ID:	007192-02 1/7.0
Date Analyzed:	07/17/20	Data File:	071628.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	BAT

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.8	<0.7
Chloroethane	<18	<7
1,1-Dichloroethene	<2.8	<0.7
trans-1,2-Dichloroethene	<2.8	<0.7
1,1-Dichloroethane	<2.8	<0.7
cis-1,2-Dichloroethene	2.8	0.71
1,2-Dichloroethane (EDC)	<0.28	<0.07
1,1,1-Trichloroethane	<3.8	<0.7
Trichloroethene	<1.9	<0.35
1,1,2-Trichloroethane	<0.76	<0.14
Tetrachloroethene	170	25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3	Client:	AEG
Date Received:	07/13/20	Project:	4 Corners Cleaners, F&BI 007192
Date Collected:	07/08/20	Lab ID:	007192-03 1/14
Date Analyzed:	07/17/20	Data File:	071630.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	BAT

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	89	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<3.6	<1.4
Chloroethane	<37	<14
1,1-Dichloroethene	<5.6	<1.4
trans-1,2-Dichloroethene	<5.6	<1.4
1,1-Dichloroethane	<5.7	<1.4
cis-1,2-Dichloroethene	<5.6	<1.4
1,2-Dichloroethane (EDC)	<0.57	<0.14
1,1,1-Trichloroethane	<7.6	<1.4
Trichloroethene	<3.8	<0.7
1,1,2-Trichloroethane	<1.5	<0.28
Tetrachloroethene	970	140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4	Client:	AEG
Date Received:	07/13/20	Project:	4 Corners Cleaners, F&BI 007192
Date Collected:	07/08/20	Lab ID:	007192-04 1/4.7
Date Analyzed:	07/17/20	Data File:	071627.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	BAT

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.2	<0.47
Chloroethane	<12	<4.7
1,1-Dichloroethene	<1.9	<0.47
trans-1,2-Dichloroethene	<1.9	<0.47
1,1-Dichloroethane	<1.9	<0.47
cis-1,2-Dichloroethene	<1.9	<0.47
1,2-Dichloroethane (EDC)	<0.19	<0.047
1,1,1-Trichloroethane	<2.6	<0.47
Trichloroethene	<1.3	<0.23
1,1,2-Trichloroethane	<0.51	<0.094
Tetrachloroethene	<32	<4.7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Output	Client:	AEG
Date Received:	07/13/20	Project:	4 Corners Cleaners, F&BI 007192
Date Collected:	07/08/20	Lab ID:	007192-05 1/4.7
Date Analyzed:	07/17/20	Data File:	071626.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	BAT

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	106	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.2	<0.47
Chloroethane	<12	<4.7
1,1-Dichloroethene	<1.9	<0.47
trans-1,2-Dichloroethene	<1.9	<0.47
1,1-Dichloroethane	<1.9	<0.47
cis-1,2-Dichloroethene	<1.9	<0.47
1,2-Dichloroethane (EDC)	<0.19	<0.047
1,1,1-Trichloroethane	<2.6	<0.47
Trichloroethene	<1.3	<0.23
1,1,2-Trichloroethane	<0.51	<0.094
Tetrachloroethene	38	5.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4 Corners Cleaners, F&BI 007192
Date Collected:	Not Applicable	Lab ID:	00-1616 mb
Date Analyzed:	07/16/20	Data File:	071612.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	BAT

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	110	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.27	<0.05
1,1,2-Trichloroethane	<0.11	<0.02
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/20

Date Received: 07/13/20

Project: 4 Corners Cleaners, F&BI 007192

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 007179-02 1/3.2 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<0.82	<0.82	nm
Chloroethane	ug/m3	<8.4	<8.4	nm
1,1-Dichloroethene	ug/m3	<1.3	<1.3	nm
trans-1,2-Dichloroethene	ug/m3	<1.3	<1.3	nm
1,1-Dichloroethane	ug/m3	<1.3	<1.3	nm
cis-1,2-Dichloroethene	ug/m3	<1.3	<1.3	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.13	<0.13	nm
1,1,1-Trichloroethane	ug/m3	<1.7	<1.7	nm
Trichloroethene	ug/m3	<0.86	<0.86	nm
1,1,2-Trichloroethane	ug/m3	<0.35	<0.35	nm
Tetrachloroethene	ug/m3	<22	<22	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Vinyl chloride	ug/m3	35	91	70-130
Chloroethane	ug/m3	36	88	70-130
1,1-Dichloroethene	ug/m3	54	97	70-130
trans-1,2-Dichloroethene	ug/m3	54	92	70-130
1,1-Dichloroethane	ug/m3	55	88	70-130
cis-1,2-Dichloroethene	ug/m3	54	93	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	96	70-130
1,1,1-Trichloroethane	ug/m3	74	95	70-130
Trichloroethene	ug/m3	73	86	70-130
1,1,2-Trichloroethane	ug/m3	74	86	70-130
Tetrachloroethene	ug/m3	92	87	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

007192

SAMPLE CHAIN OF CUSTODY

ME 07-13-20

Report To B. B. B. B. B.Company MEG

Address _____

City, State, ZIP _____

Phone _____ Email b.b.b.b.b. @ meg.comSAMPLERS (signature) [Signature]

PROJECT NAME & ADDRESS

PO #

4 corners cleaners

NOTES:

U

INVOICE TO

MEG

Page # _____ of _____

TURNAROUND TIME

☒ Standard☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Default: Clean after 3 days☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 VOCs	APH	Helium	Notes
VP-1	01	3250	35	IA / SG	7/8/2020	-28	1055	-0	1104			+			
VP-2	02	2300	07	IA / SG		-30	1056	-0	1106			+			
VP-3	03	3066	105	IA / SG		-30	1104	-0	1109			+			
VP-4	04	3259	104	IA / SG		-29	1100	-0	1102			+			
outlet	05	3311	117	IA / SG		-30	1105	-0	1114			+			
				IA / SG											
				IA / SG											
				IA / SG											

Samples received at 22 °CFriedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>B. B. B.</u>	<u>MEG</u>	<u>7/13/2020</u>	<u>10:14</u>
Received by: <u>[Signature]</u>	<u>S. Bhatnagar</u>	<u>F&B, Inc</u>	<u>7/13/20</u>	<u>10:14A</u>
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

September 4, 2020

Charlie Swift, Project Manager
AEG
605 11th Ave SE
Suite 201
Olympia, WA 98501

Dear Mr Swift:

Included are the amended results from the testing of material submitted on August 20, 2020 from the 4-Corners Cleaners Maple Valley PO 17-126, F&BI 008293 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG0902R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

September 2, 2020

Charlie Swift, Project Manager
AEG
605 11th Ave SE
Suite 201
Olympia, WA 98501

Dear Mr Swift:

Included are the results from the testing of material submitted on August 20, 2020 from the 4-Corners Cleaners Maple Valley PO 17-126, F&BI 008293 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG0902R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 20, 2020 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaners Maple Valley PO 17-126, F&BI 008293 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
008293 -01	4CC-Inlet SVE
008293 -02	M-1
008293 -03	M-3
008293 -04	M-2
008293 -05	M-4

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	4CC-Inlet SVE	Client:	AEG
Date Received:	08/20/20	Project:	4-Corners Cleaners Maple Valley
Date Collected:	08/26/20	Lab ID:	008293-01 1/4
Date Analyzed:	08/27/20	Data File:	082623.D
Matrix:	Air	Instrument:	GCMS12
Units:	ug/m3	Operator:	VM

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	98	70	130

	Concentration		
Compounds:	ug/m3	ppbv	
Vinyl chloride	<1	<0.4	
Chloroethane	<11	<4	
1,1-Dichloroethene	<1.6	<0.4	
trans-1,2-Dichloroethene	<1.6	<0.4	
1,1-Dichloroethane	<1.6	<0.4	
cis-1,2-Dichloroethene	<1.6	<0.4	
1,2-Dichloroethane (EDC)	2.5	0.62	
1,1,1-Trichloroethane	<2.2	<0.4	
Trichloroethene	<1.1	<0.2	
1,1,2-Trichloroethane	<0.44	<0.08	
Tetrachloroethene	4.6 j	1.4 j	

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: M-1	Client: AEG
Date Received: 08/20/20	Project: 4-Corners Cleaners Maple Valley
Date Collected: 08/26/20	Lab ID: 008293-02 1/3.8
Date Analyzed: 08/27/20	Data File: 082624.D
Matrix: Air	Instrument: GCMS12
Units: ug/m3	Operator: VM

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	88	70	130

	Concentration	
Compounds:	ug/m3 ppbv	
Vinyl chloride	<0.97	<0.38
Chloroethane	<10	<3.8
1,1-Dichloroethene	<1.5	<0.38
trans-1,2-Dichloroethene	<1.5	<0.38
1,1-Dichloroethane	<1.5	<0.38
cis-1,2-Dichloroethene	<1.5	<0.38
1,2-Dichloroethane (EDC)	<0.15	<0.038
1,1,1-Trichloroethane	<2.1	<0.38
Trichloroethene	<1	<0.19
1,1,2-Trichloroethane	<0.41	<0.076
Tetrachloroethene	42	6.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	M-3	Client:	AEG
Date Received:	08/20/20	Project:	4-Corners Cleaners Maple Valley
Date Collected:	08/26/20	Lab ID:	008293-03 1/4
Date Analyzed:	08/27/20	Data File:	082625.D
Matrix:	Air	Instrument:	GCMS12
Units:	ug/m3	Operator:	VM

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1	<0.4
Chloroethane	<11	<4
1,1-Dichloroethene	<1.6	<0.4
trans-1,2-Dichloroethene	<1.6	<0.4
1,1-Dichloroethane	<1.6	<0.4
cis-1,2-Dichloroethene	<1.6	<0.4
1,2-Dichloroethane (EDC)	<0.16	<0.04
1,1,1-Trichloroethane	<2.2	<0.4
Trichloroethene	1.8	0.33
1,1,2-Trichloroethane	<0.44	<0.08
Tetrachloroethene	420	61

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	M-2	Client:	AEG
Date Received:	08/20/20	Project:	4-Corners Cleaners Maple Valley
Date Collected:	08/26/20	Lab ID:	008293-04 1/10
Date Analyzed:	08/27/20	Data File:	082626.D
Matrix:	Air	Instrument:	GCMS12
Units:	ug/m3	Operator:	VM

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	99	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<2.6	<1
Chloroethane	<26	<10
1,1-Dichloroethene	<4	<1
trans-1,2-Dichloroethene	<4	<1
1,1-Dichloroethane	<4	<1
cis-1,2-Dichloroethene	<4	<1
1,2-Dichloroethane (EDC)	<0.4	<0.1
1,1,1-Trichloroethane	<5.5	<1
Trichloroethene	<2.7	<0.5
1,1,2-Trichloroethane	<1.1	<0.2
Tetrachloroethene	120	18

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	M-4	Client:	AEG
Date Received:	08/20/20	Project:	4-Corners Cleaners Maple Valley
Date Collected:	08/26/20	Lab ID:	008293-05 1/49
Date Analyzed:	08/27/20	Data File:	082627.D
Matrix:	Air	Instrument:	GCMS12
Units:	ug/m3	Operator:	VM

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	102	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<9 j	<3.6 j
Chloroethane	<130	<49
1,1-Dichloroethene	<19	<4.9
trans-1,2-Dichloroethene	<19	<4.9
1,1-Dichloroethane	<20	<4.9
cis-1,2-Dichloroethene	<19	<4.9
1,2-Dichloroethane (EDC)	<2	<0.49
1,1,1-Trichloroethane	<27	<4.9
Trichloroethene	<9 j	<1.7 j
1,1,2-Trichloroethane	<5.3	<0.98
Tetrachloroethene	290 j	43 j

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners Maple Valley
Date Collected:	Not Applicable	Lab ID:	00-1927 MB
Date Analyzed:	08/26/20	Data File:	082609.D
Matrix:	Air	Instrument:	GCMS12
Units:	ug/m3	Operator:	VM

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.27	<0.05
1,1,2-Trichloroethane	<0.11	<0.02
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/02/20

Date Received: 08/20/20

Project: 4-Corners Cleaners Maple Valley PO 17-126, F&BI 008293

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 008378-07 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<0.26	<0.26	nm
Chloroethane	ug/m3	<2.6	<2.6	nm
1,1-Dichloroethene	ug/m3	<0.4	<0.4	nm
trans-1,2-Dichloroethene	ug/m3	<0.4	<0.4	nm
1,1-Dichloroethane	ug/m3	<0.4	<0.4	nm
cis-1,2-Dichloroethene	ug/m3	<0.4	<0.4	nm
1,2-Dichloroethane (EDC)	ug/m3	0.057	0.057	0
1,1,1-Trichloroethane	ug/m3	<0.55	<0.55	nm
Trichloroethene	ug/m3	<0.27	<0.27	nm
1,1,2-Trichloroethane	ug/m3	<0.11	<0.11	nm
Tetrachloroethene	ug/m3	<6.8	<6.8	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Vinyl chloride	ug/m3	35	93	70-130
Chloroethane	ug/m3	36	93	70-130
1,1-Dichloroethene	ug/m3	54	99	70-130
trans-1,2-Dichloroethene	ug/m3	54	97	70-130
1,1-Dichloroethane	ug/m3	55	92	70-130
cis-1,2-Dichloroethene	ug/m3	54	94	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	86	70-130
1,1,1-Trichloroethane	ug/m3	74	83	70-130
Trichloroethene	ug/m3	73	93	70-130
1,1,2-Trichloroethane	ug/m3	74	93	70-130
Tetrachloroethene	ug/m3	92	86	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

008293

SAMPLE CHAIN OF CUSTODY ^{ME}

08-20-20

Report To Charles SwiftCompany AEGL, LLCAddress 2637 Pendleton, SeilaCity, State, ZIP Olympic, WA 98502Phone 360-952-5888 Email CS@AEGL.comPage # 1 of 1

TURNAROUND TIME

☒ Standard☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Default: Clean after 3 days☐ Archive (Fee may apply)

PROJECT NAME & ADDRESS

PO #

NOTES:

4- Coopers Glen-1
People Delly17-126

INVOICE TO

SEF-SyllinAEGL

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. (Hg)	Field Initial Time	Final Vac. (Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
4C-1641 SUE	01	3675	25	IA / <u>SG</u>	8/5/20	30	13:14	8.5	13:18						X
4M-1	02	4175	231	IA / <u>SG</u>	8/5/20	50	14:00	7.0	14:00						X
4M-3	03	4176	203	IA / <u>SG</u>	8/5/20	30	14:10	8.8	14:16						X
4M-2	04	2295	224	IA / <u>SG</u>	8/5/20	20	14:10	18.5	14:15						X
4M-4	05	2294	221	IA / <u>SG</u>	8/5/20	20	14:18	9.0	14:18						X
				IA / SG											
				IA / SG											
				IA / SG											

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Relinquished by: Charles SwiftCharles SwiftAEGL8/13/20Received by: Charles SwiftCharles SwiftAEGL8/13/200600Relinquished by: Charles SwiftCharles SwiftAEGL8/13/200600Received by: Charles SwiftCharles SwiftAEGL8/13/200600



Libby Environmental, Inc.

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

September 18, 2020

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

Dear Mr. Rose:

Please find enclosed the analytical data report for the 4 Corners Cleaners Project located in Maple Valley, Washington.

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

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

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT

AEG, LLC

Maple Valley, Washington

Libby Project # L200914-1

Client Project # 17-126

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method	MW-1	MW-2	MW-3	MW-5	MW-5 Dup
		Blank					
Date Sampled		N/A	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020
Date Analyzed	PQL	9/15/2020	9/15/2020	9/15/2020	9/15/2020	9/15/2020	9/15/2020
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Vinyl Chloride (VC)	0.2	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.5	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		101	101	104	104	107	106
1,2-Dichloroethane-d4		106	118	118	118	117	119
Toluene-d8		98	99	99	99	99	99
4-Bromofluorobenzene		95	93	95	95	97	94

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG, LLC
Maple Valley, Washington
Libby Project # L200914-1
Client Project # 17-126

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

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Water

Matrix Spike Sample Identification: L200911-1								
	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Vinyl Chloride (VC)	5.0	4.7	4.7	94	94	0.0	65-135	
1,1-Dichloroethene	5.0	4.6	4.9	92	98	6.3	65-135	
trans-1,2-Dichloroethene	5.0	5.8	5.9	116	118	1.7	65-135	
cis -1,2-Dichloroethene	5.0	5.5	5.6	110	112	1.8	65-135	
Trichloroethene (TCE)	5.0	5.7	5.6	114	112	1.8	65-135	
Tetrachloroethene (PCE)	5.0	4.5	4.8	90	95	5.4	65-135	
Surrogate Recovery (%)				MS	MSD			
Dibromofluoromethane				105	108		65-135	
1,2-Dichloroethane-d4				112	121		65-135	
Toluene-d8				98	100		65-135	
4-Bromofluorobenzene				99	100		65-135	

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Vinyl Chloride (VC)	5.0	5.6	112	80-120	
1,1-Dichloroethene	5.0	4.4	88	80-120	
trans-1,2-Dichloroethene	5.0	5.7	114	80-120	
cis -1,2-Dichloroethene	5.0	5.1	103	80-120	
Trichloroethene (TCE)	5.0	5.2	104	80-120	
Tetrachloroethene (PCE)	5.0	5.0	100	80-120	
Surrogate Recovery					
Dibromofluoromethane			100	65-135	
1,2-Dichloroethane-d4			111	65-135	
Toluene-d8			99	65-135	
4-Bromofluorobenzene			98	65-135	

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

4 CORNERS CLEANERS PROJECT

AEG, LLC

Libby Project # L200914-1

Date Received 9/14/2020

Time Received 2:45 PM

Received By KD

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☒ Yes | ☐ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>-1.0 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>4.0 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments. _____

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE

Ph: 360-352-2110

Olympia, WA 98506

Fax: 360-352-4154

Date: 9/14/20

Page: 1 of 1

Client: AEG

Project Manager: Scott Rose

Address: 2633 Parkmont Lane SW, Suite A

Project Name: 4 Corners Cleaners

City: Olympia

State: WA Zip: 98502

Location: 23886 SE Kent-Kangley Rd. City, State: Maple Valley, WA

Phone: (360) 352-9835

Fax: (360) 352-8164

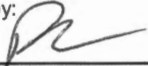
Collector: HP

Date of Collection: 9/14/20

Client Project # 17-126

Email: SROSE @ AEGWA.COM

Sample Number	Depth	Time	Sample Type	Container Type														Field Notes
					VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	PCE / TCE Daughter Prod. (8260)	
1 MW-1		0842	GW	VOA's													X	
2 MW-2		0817	GW	VOA's													X	
3 MW-3		0912	GW	VOA's													X	
4 MW-5		0749	GW	VOA's													X	
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		

Relinquished by: 	Date / Time: 9/14/20 1445	Received by: 	Date / Time: 9/14/20 1445	Sample Receipt Good Condition? Y N Cooler Temp. °C Sample Temp. °C Total Number of Containers	Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:		
Relinquished by:	Date / Time:	Received by:	Date / Time:		
Relinquished by:	Date / Time:	Received by:	Date / Time:		

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

Distribution: White - Lab, Yellow - Originator

TAT: 24HR 48HR 5-DAY

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 2, 2020

Charles Swift, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Swift:

Included are the amended results from the testing of material submitted on September 17, 2020 from the 4-Corners Cleaners PO 17-126, F&BI 009309 project. The tetrachloroethene concentration was lowered in the Effluent-091620 sample.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG0928R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

September 28, 2020

Charles Swift, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Swift:

Included are the results from the testing of material submitted on September 17, 2020 from the 4-Corners Cleaners PO 17-126, F&BI 009309 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG0928R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 17, 2020 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaners PO 17-126, F&BI 009309 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
009309 -01	Effluent-091620
009309 -02	VP-1-091620
009309 -03	VP-3-091620
009309 -04	VP-2-091620
009309 -05	VP-4-091620

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Effluent-091620	Client:	AEG
Date Received:	09/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 009309
Date Collected:	09/16/20	Lab ID:	009309-01 1/6.3
Date Analyzed:	09/21/20	Data File:	092118.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.6	<0.63
Chloroethane	<17	<6.3
1,1-Dichloroethene	<2.5	<0.63
trans-1,2-Dichloroethene	<2.5	<0.63
1,1-Dichloroethane	<2.5	<0.63
cis-1,2-Dichloroethene	<2.5	<0.63
1,2-Dichloroethane (EDC)	2.0	0.50
1,1,1-Trichloroethane	<3.4	<0.63
Trichloroethene	0.71	0.13
1,1,2-Trichloroethane	<0.34	<0.063
Tetrachloroethene	23	3.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1-091620	Client:	AEG
Date Received:	09/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 009309
Date Collected:	09/16/20	Lab ID:	009309-02 1/6.6
Date Analyzed:	09/21/20	Data File:	092114.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	105	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.66
Chloroethane	<17	<6.6
1,1-Dichloroethene	<2.6	<0.66
trans-1,2-Dichloroethene	<2.6	<0.66
1,1-Dichloroethane	<2.7	<0.66
cis-1,2-Dichloroethene	<2.6	<0.66
1,2-Dichloroethane (EDC)	<0.27	<0.066
1,1,1-Trichloroethane	<3.6	<0.66
Trichloroethene	<0.71	<0.13
1,1,2-Trichloroethane	<0.36	<0.066
Tetrachloroethene	<45	<6.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3-091620	Client:	AEG
Date Received:	09/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 009309
Date Collected:	09/16/20	Lab ID:	009309-03 1/52
Date Analyzed:	09/21/20	Data File:	092119.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<13	<5.2
Chloroethane	<140	<52
1,1-Dichloroethene	<21	<5.2
trans-1,2-Dichloroethene	<21	<5.2
1,1-Dichloroethane	<21	<5.2
cis-1,2-Dichloroethene	<21	<5.2
1,2-Dichloroethane (EDC)	<2.1	<0.52
1,1,1-Trichloroethane	<28	<5.2
Trichloroethene	<5.6	<1
1,1,2-Trichloroethane	<2.8	<0.52
Tetrachloroethene	720	110

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2-091620	Client:	AEG
Date Received:	09/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 009309
Date Collected:	09/16/20	Lab ID:	009309-04 1/6.5
Date Analyzed:	09/21/20	Data File:	092116.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	107	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.65
Chloroethane	<17	<6.5
1,1-Dichloroethene	<2.6	<0.65
trans-1,2-Dichloroethene	<2.6	<0.65
1,1-Dichloroethane	<2.6	<0.65
cis-1,2-Dichloroethene	<2.6	<0.65
1,2-Dichloroethane (EDC)	<0.26	<0.065
1,1,1-Trichloroethane	<3.5	<0.65
Trichloroethene	<0.7	<0.13
1,1,2-Trichloroethane	<0.35	<0.065
Tetrachloroethene	<44	<6.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4-091620	Client:	AEG
Date Received:	09/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 009309
Date Collected:	09/16/20	Lab ID:	009309-05 1/6.0
Date Analyzed:	09/21/20	Data File:	092117.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	107	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.5	<0.6
Chloroethane	<16	<6
1,1-Dichloroethene	<2.4	<0.6
trans-1,2-Dichloroethene	<2.4	<0.6
1,1-Dichloroethane	<2.4	<0.6
cis-1,2-Dichloroethene	<2.4	<0.6
1,2-Dichloroethane (EDC)	<0.24	<0.06
1,1,1-Trichloroethane	<3.3	<0.6
Trichloroethene	<0.64	<0.12
1,1,2-Trichloroethane	<0.33	<0.06
Tetrachloroethene	56	8.3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners PO 17-126, F&BI 009309
Date Collected:	Not Applicable	Lab ID:	00-2105 MB
Date Analyzed:	09/21/20	Data File:	092110.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	107	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.11	<0.02
1,1,2-Trichloroethane	<0.055	<0.01
Tetrachloroethene	<3.4	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/28/20

Date Received: 09/17/20

Project: 4-Corners Cleaners PO 17-126, F&BI 009309

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 009309-02 1/6.6 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.7	<1.7	nm
Chloroethane	ug/m3	<17	<17	nm
1,1-Dichloroethene	ug/m3	<2.6	<2.6	nm
trans-1,2-Dichloroethene	ug/m3	<2.6	<2.6	nm
1,1-Dichloroethane	ug/m3	<2.7	<2.7	nm
cis-1,2-Dichloroethene	ug/m3	<2.6	<2.6	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.27	<0.27	nm
1,1,1-Trichloroethane	ug/m3	<3.6	<3.6	nm
Trichloroethene	ug/m3	<0.71	0.82	nm
1,1,2-Trichloroethane	ug/m3	<0.36	<0.36	nm
Tetrachloroethene	ug/m3	<45	<45	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Vinyl chloride	ug/m3	35	97	70-130
Chloroethane	ug/m3	36	96	70-130
1,1-Dichloroethene	ug/m3	54	95	70-130
trans-1,2-Dichloroethene	ug/m3	54	96	70-130
1,1-Dichloroethane	ug/m3	55	99	70-130
cis-1,2-Dichloroethene	ug/m3	54	94	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	96	70-130
1,1,1-Trichloroethane	ug/m3	74	94	70-130
Trichloroethene	ug/m3	73	100	70-130
1,1,2-Trichloroethane	ug/m3	74	103	70-130
Tetrachloroethene	ug/m3	92	93	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

ME 09-17-20

5

- ☐ Default: Clean after 3 days
- ☐ Archive (Fee may apply)

ANALYSIS REQUESTED

Samples received at 21°C

TIME

210

1225

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 4, 2020

Becky Dilba, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Ms Dilba:

Included are the results from the testing of material submitted on October 23, 2020 from the 4 corners cleaners, F&BI 010418 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG1104R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 23, 2020 by Friedman & Bruya, Inc. from the AEG 4 corners cleaners, F&BI 010418 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
010418 -01	Output
010418 -02	UP-1
010418 -03	UP-2
010418 -04	UP-3
010418 -05	UP-4

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Output	Client:	AEG
Date Received:	10/23/20	Project:	4 corners cleaners, F&BI 010418
Date Collected:	10/22/20	Lab ID:	010418-01 1/3.2
Date Analyzed:	10/30/20	Data File:	102925.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	86	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.82	<0.32
Chloroethane	<8.4	<3.2
1,1-Dichloroethene	<1.3	<0.32
trans-1,2-Dichloroethene	<1.3	<0.32
1,1-Dichloroethane	<1.3	<0.32
cis-1,2-Dichloroethene	<1.3	<0.32
1,2-Dichloroethane (EDC)	1.3	0.32
1,1,1-Trichloroethane	<1.7	<0.32
Trichloroethene	0.64	0.12
1,1,2-Trichloroethane	<0.17	<0.032
Tetrachloroethene	<22	<3.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	UP-1	Client:	AEG
Date Received:	10/23/20	Project:	4 corners cleaners, F&BI 010418
Date Collected:	10/23/20	Lab ID:	010418-02 1/7.2
Date Analyzed:	10/26/20	Data File:	102621.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	107	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.8	<0.72
Chloroethane	<19	<7.2
1,1-Dichloroethene	<2.9	<0.72
trans-1,2-Dichloroethene	<2.9	<0.72
1,1-Dichloroethane	<2.9	<0.72
cis-1,2-Dichloroethene	<2.9	<0.72
1,2-Dichloroethane (EDC)	<0.29	<0.072
1,1,1-Trichloroethane	<3.9	<0.72
Trichloroethene	0.81	0.15
1,1,2-Trichloroethane	<0.39	<0.072
Tetrachloroethene	130	20

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	UP-2	Client:	AEG
Date Received:	10/23/20	Project:	4 corners cleaners, F&BI 010418
Date Collected:	10/23/20	Lab ID:	010418-03 1/7.1
Date Analyzed:	10/26/20	Data File:	102622.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	102	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.8	<0.71
Chloroethane	<19	<7.1
1,1-Dichloroethene	<2.8	<0.71
trans-1,2-Dichloroethene	<2.8	<0.71
1,1-Dichloroethane	<2.9	<0.71
cis-1,2-Dichloroethene	<2.8	<0.71
1,2-Dichloroethane (EDC)	<0.29	<0.071
1,1,1-Trichloroethane	<3.9	<0.71
Trichloroethene	<0.76	<0.14
1,1,2-Trichloroethane	<0.39	<0.071
Tetrachloroethene	71	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	UP-3	Client:	AEG
Date Received:	10/23/20	Project:	4 corners cleaners, F&BI 010418
Date Collected:	10/23/20	Lab ID:	010418-04 1/15
Date Analyzed:	10/26/20	Data File:	102623.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	102	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<3.8	<1.5
Chloroethane	<40	<15
1,1-Dichloroethene	<5.9	<1.5
trans-1,2-Dichloroethene	<5.9	<1.5
1,1-Dichloroethane	<6.1	<1.5
cis-1,2-Dichloroethene	<5.9	<1.5
1,2-Dichloroethane (EDC)	<0.61	<0.15
1,1,1-Trichloroethane	<8.2	<1.5
Trichloroethene	<1.6	<0.3
1,1,2-Trichloroethane	<0.82	<0.15
Tetrachloroethene	740	110

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	UP-4	Client:	AEG
Date Received:	10/23/20	Project:	4 corners cleaners, F&BI 010418
Date Collected:	10/23/20	Lab ID:	010418-05 1/4.7
Date Analyzed:	10/26/20	Data File:	102619.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	105	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.2	<0.47
Chloroethane	<12	<4.7
1,1-Dichloroethene	<1.9	<0.47
trans-1,2-Dichloroethene	<1.9	<0.47
1,1-Dichloroethane	<1.9	<0.47
cis-1,2-Dichloroethene	<1.9	<0.47
1,2-Dichloroethane (EDC)	<0.19	<0.047
1,1,1-Trichloroethane	3.2	0.59
Trichloroethene	<0.51	<0.094
1,1,2-Trichloroethane	<0.26	<0.047
Tetrachloroethene	130	20

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4 corners cleaners, F&BI 010418
Date Collected:	Not Applicable	Lab ID:	00-2621 MB
Date Analyzed:	10/26/20	Data File:	102610.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	103	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.11	<0.02
1,1,2-Trichloroethane	<0.055	<0.01
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/04/20

Date Received: 10/23/20

Project: 4 corners cleaners, F&BI 010418

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m ³	35	91	70-130
Chloroethane	ug/m ³	36	89	70-130
1,1-Dichloroethene	ug/m ³	54	97	70-130
trans-1,2-Dichloroethene	ug/m ³	54	94	70-130
1,1-Dichloroethane	ug/m ³	55	95	70-130
cis-1,2-Dichloroethene	ug/m ³	54	99	70-130
1,2-Dichloroethane (EDC)	ug/m ³	55	94	70-130
1,1,1-Trichloroethane	ug/m ³	74	93	70-130
Trichloroethene	ug/m ³	73	106	70-130
1,1,2-Trichloroethane	ug/m ³	74	106	70-130
Tetrachloroethene	ug/m ³	92	104	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

ME 10/23/20

010418

Report To

Becky Dubbs

Company

AEC

Address

City, State, ZIP

Phone

Email bdubbs@aec.com

SAMPLERS (signature)

R

PROJECT NAME & ADDRESS

4 corners cleanups

PO #

NOTES:

INVOICE TO

AEC

Page # of

TURNAROUND TIME

☒ Standard☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Default: Clean after 3 days☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Re: daughters	Notes
Output	01	2293	200	IA / <u>SG</u>	10/23/2020	-28	943	-3	1008							
UP-1	02	4135	204	IA / <u>SG</u>		-28	1000	0	1017							
UP-2	03	2294	221	IA / <u>SG</u>		-30	950	0	1002							
UP-3	04	3667	228	IA / <u>SG</u>		-28	949	0	958							
UP-4	05	4173	220	IA / <u>SG</u>		-30	951	0	109							
				IA / SG												
				IA / SG												
				IA / SG												
Samples received at 16 °C																

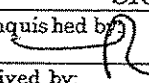
Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\GOC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Becky Dubbs	AEC	10/23/2020	11:38
Received by: 	Khoi Hoang	FBI	10/23/20	11:38
Relinquished by:				
Received by:				



Libby Environmental, Inc.

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

December 14, 2020

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

Dear Mr. Rose:

Please find enclosed the analytical data report for the 4 Corners Cleaner Project located in Maple Valley, Washington.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry L. Chilcutt".

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

4 CORNERS CLEANER PROJECT
AEG, LLC
Maple Valley, Washington
Libby Project # L201211-7
Client Project # 17-126

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

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method	MW-1	MW-2	MW-3	MW-5
		Blank				
Date Sampled		N/A	12/11/2020	12/11/2020	12/11/2020	12/11/2020
Date Analyzed	PQL	12/13/2020	12/13/2020	12/13/2020	12/13/2020	12/13/2020
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Vinyl Chloride (VC)	0.2	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.5	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd	nd	nd	nd
Surrogate Recovery						
Dibromofluoromethane		122	126	109	127	125
1,2-Dichloroethane-d4		111	113	132	109	112
Toluene-d8		101	69	84	65	100
4-Bromofluorobenzene		98	100	97	101	102

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4 CORNERS CLEANER PROJECT

AEG, LLC

Maple Valley, Washington

Libby Project # L201211-7

Client Project # 17-126

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Water

Matrix Spike Sample Identification: L201208-4					
Date Analyzed: 12/13/2020					
	Spiked Conc. (µg/L)	MS Response (µg/L)	MS Recovery (%)	Limits Recovery (%)	Data Flag
Vinyl Chloride (VC)	5.0	3.6	72	65-135	
1,1-Dichloroethene	5.0	4.4	88	65-135	
trans-1,2-Dichloroethene	5.0	4.2	84	65-135	
cis -1,2-Dichloroethene	5.0	6.4	128	65-135	
Trichloroethene (TCE)	5.0	4.0	80	65-135	
Tetrachloroethene (PCE)	5.0	4.2	84	65-135	
Surrogate Recovery (%)			MS		
Dibromofluoromethane			130	65-135	
1,2-Dichloroethane-d4			128	65-135	
Toluene-d8			89	65-135	
4-Bromofluorobenzene			114	65-135	

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4 CORNERS CLEANER PROJECT

AEG, LLC

Maple Valley, Washington

Libby Project # L201211-7

Client Project # 17-126

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Laboratory Control Sample

Date Analyzed: 12/13/2020

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Vinyl Chloride (VC)	5.0	4.7	94	80-120	
1,1-Dichloroethene	5.0	4.1	82	80-120	
trans-1,2-Dichloroethene	5.0	4.1	82	80-120	
cis -1,2-Dichloroethene	5.0	5.7	114	80-120	
Trichloroethene (TCE)	5.0	5.4	108	80-120	
Tetrachloroethene (PCE)	5.0	5.1	102	80-120	
Surrogate Recovery					
Dibromofluoromethane			124	65-135	
1,2-Dichloroethane-d4			125	65-135	
Toluene-d8			107	65-135	
4-Bromofluorobenzene			113	65-135	

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4 CORNERS CLEANER PROJECT

AEG, LLC

Libby Project # L201211-7

Date Received 12/11/2020 14:20

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Received By JC

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☒ Yes | ☐ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>0.8 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>2.3 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments. _____

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE

Ph: 360-352-2110

Olympia, WA 98506

Fax: 360-352-4154

Client: **AEG**

Date: **12/11/20**

Page: **1** of **1**

Project Manager: **Scott Rose**

Address: **605 11th Ave SE Suite 201**

Project Name: **4 corners cleaner**

City: **Olympia** State: **WA** Zip: **98501**

Location: **2886 SE Kent-Kangley Rd** City, State: **Made valley WA**

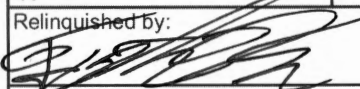
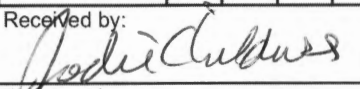
Phone: **360-352-9835** Fax:

Collector: **Foster Koetzel** Date of Collection: **12/11/20**

Client Project # **17-126**

Email: **SRose@AEGWA.com**

																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Relinquished by: 	Date / Time: 12/11/20 1420	Received by: 	Date / Time: 12/11/20 1420	Sample Receipt:	Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:	Good Condition?	
				Cold?	
				Seals Intact?	
Relinquished by:	Date / Time:	Received by:	Date / Time:	Total Number of Containers:	TAT: 24HR 48HR 5-DAY

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 28, 2020

Charlie Swift, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Swift:

Included are the results from the testing of material submitted on December 17, 2020 from the 4-Corners Cleaners PO 17-126, F&BI 012313 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG1228R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 17, 2020 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaners PO 17-126, F&BI 012313 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
012313 -01	VP-4-121720
012313 -02	VP-2-121720
012313 -03	VP-3-121720
012313 -04	VP-1-121720
012313 -05	Influent-121720

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4-121720	Client:	AEG
Date Received:	12/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 012313
Date Collected:	12/17/20	Lab ID:	012313-01 1/20
Date Analyzed:	12/22/20	Data File:	122153.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	107	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<5.1	<2
Chloroethane	<53	<20
1,1-Dichloroethene	<7.9	<2
trans-1,2-Dichloroethene	<7.9	<2
1,1-Dichloroethane	<8.1	<2
cis-1,2-Dichloroethene	<7.9	<2
1,2-Dichloroethane (EDC)	<0.81	<0.2
1,1,1-Trichloroethane	<11	<2
Trichloroethene	<2.1	<0.4
1,1,2-Trichloroethane	<1.1	<0.2
Tetrachloroethene	400	59

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2-121720	Client:	AEG
Date Received:	12/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 012313
Date Collected:	12/17/20	Lab ID:	012313-02 1/10
Date Analyzed:	12/22/20	Data File:	122152.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	108	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<2.6	<1
Chloroethane	<26	<10
1,1-Dichloroethene	<4	<1
trans-1,2-Dichloroethene	<4	<1
1,1-Dichloroethane	<4	<1
cis-1,2-Dichloroethene	<4	<1
1,2-Dichloroethane (EDC)	<0.4	<0.1
1,1,1-Trichloroethane	<5.5	<1
Trichloroethene	<1.1	<0.2
1,1,2-Trichloroethane	<0.55	<0.1
Tetrachloroethene	87	13

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3-121720	Client:	AEG
Date Received:	12/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 012313
Date Collected:	12/17/20	Lab ID:	012313-03 1/20
Date Analyzed:	12/22/20	Data File:	122155.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<5.1	<2
Chloroethane	<53	<20
1,1-Dichloroethene	<7.9	<2
trans-1,2-Dichloroethene	<7.9	<2
1,1-Dichloroethane	<8.1	<2
cis-1,2-Dichloroethene	<7.9	<2
1,2-Dichloroethane (EDC)	<0.81	<0.2
1,1,1-Trichloroethane	<11	<2
Trichloroethene	<2.1	<0.4
1,1,2-Trichloroethane	<1.1	<0.2
Tetrachloroethene	690	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1-121720	Client:	AEG
Date Received:	12/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 012313
Date Collected:	12/17/20	Lab ID:	012313-04 1/21
Date Analyzed:	12/22/20	Data File:	122154.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	108	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<5.4	<2.1
Chloroethane	<55	<21
1,1-Dichloroethene	<8.3	<2.1
trans-1,2-Dichloroethene	<8.3	<2.1
1,1-Dichloroethane	<8.5	<2.1
cis-1,2-Dichloroethene	<8.3	<2.1
1,2-Dichloroethane (EDC)	<0.85	<0.21
1,1,1-Trichloroethane	<11	<2.1
Trichloroethene	2.7	0.50
1,1,2-Trichloroethane	<1.1	<0.21
Tetrachloroethene	420	62

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Influent-121720	Client:	AEG
Date Received:	12/17/20	Project:	4-Corners Cleaners PO 17-126, F&BI 012313
Date Collected:	12/17/20	Lab ID:	012313-05 1/6.7
Date Analyzed:	12/22/20	Data File:	122151.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	110	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.67
Chloroethane	<18	<6.7
1,1-Dichloroethene	<2.7	<0.67
trans-1,2-Dichloroethene	<2.7	<0.67
1,1-Dichloroethane	<2.7	<0.67
cis-1,2-Dichloroethene	<2.7	<0.67
1,2-Dichloroethane (EDC)	<0.27	<0.067
1,1,1-Trichloroethane	<3.7	<0.67
Trichloroethene	0.86	0.16
1,1,2-Trichloroethane	<0.37	<0.067
Tetrachloroethene	73	11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners PO 17-126, F&BI 012313
Date Collected:	Not Applicable	Lab ID:	00-2829 MB
Date Analyzed:	12/21/20	Data File:	122132.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
4-Bromofluorobenzene	101	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.11	<0.02
1,1,2-Trichloroethane	<0.055	<0.01
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/28/20

Date Received: 12/17/20

Project: 4-Corners Cleaners PO 17-126, F&BI 012313

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 012334-02 1/3.3 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<0.84	<0.84	nm
Chloroethane	ug/m3	<8.7	<8.7	nm
1,1-Dichloroethene	ug/m3	<1.3	<1.3	nm
trans-1,2-Dichloroethene	ug/m3	<1.3	<1.3	nm
1,1-Dichloroethane	ug/m3	<1.3	<1.3	nm
cis-1,2-Dichloroethene	ug/m3	<1.3	<1.3	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.13	<0.13	nm
1,1,1-Trichloroethane	ug/m3	<1.8	<1.8	nm
Trichloroethene	ug/m3	<0.35	<0.35	nm
1,1,2-Trichloroethane	ug/m3	<0.18	<0.18	nm
Tetrachloroethene	ug/m3	<22	<22	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Vinyl chloride	ug/m3	35	98	70-130
Chloroethane	ug/m3	36	99	70-130
1,1-Dichloroethene	ug/m3	54	100	70-130
trans-1,2-Dichloroethene	ug/m3	54	107	70-130
1,1-Dichloroethane	ug/m3	55	102	70-130
cis-1,2-Dichloroethene	ug/m3	54	107	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	103	70-130
1,1,1-Trichloroethane	ug/m3	74	108	70-130
Trichloroethene	ug/m3	73	110	70-130
1,1,2-Trichloroethane	ug/m3	74	110	70-130
Tetrachloroethene	ug/m3	92	109	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

012313
 Report To AEG, LLC
 Company Chloric SwiG
 Address 2633 Portman Ln, Suite A
 City, State, ZIP Olympia, WA 98502
 Phone 360-352-5811 Email _____

ME 12/17/20

SAMPLERS (signature) <u>[Signature]</u>		Page # _____ of _____
PROJECT NAME & ADDRESS <u>4-Corner Clean</u>		PO # <u>17-126</u>
NOTES:		INVOICE TO <u>AEG, LLC</u>
		TURNAROUND TIME ☒ Standard ☐ RUSH Rush charges authorized by: _____ SAMPLE DISPOSAL ☐ Default: Clean after 3 days ☐ Archive (Fee may apply)

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	REF/TEL +	Notes
HP-4-121720	01	8538	259	IA / (SG)	12/17/20	27	11:30	8	11:39						X	
HP-2-121720	02	8267	242	IA / (SG)	12/17/20	28	11:45	8	11:59						X	
HP-3-121720	03	4177	256	IA / (SG)	12/17/20	29	11:55	8	12:05						X	
HP-1-121720	04	4183	241	IA / (SG)	12/17/20	30	12:00	8	12:10						X	
				IA / SG												
Influent-121720	05	4175	109	IA / (SG)	12/17/20	29	1:20	8	1:30						X	
				IA / SG												
				IA / SG												

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Chloric SwiG</u>	<u>AEG, LLC</u>	<u>12/17/20</u>	<u>15:00</u>
Received by: <u>[Signature]</u>	<u>Eric Young</u>	<u>FCB</u>	<u>12/17/20</u>	<u>15:00</u>
Relinquished by:				
Received by:				
Samples received at <u>17°C</u>				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 29, 2021

Charles Swift, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Swift:

Included are the results from the testing of material submitted on April 21, 2021 from the 4-Corners Cleaners 17-126, F&BI 104382 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG0429R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 21, 2021 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaners 17-126, F&BI 104382 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
104382 -01	SVE-09T-42021
104382 -02	VP-3-42021
104382 -03	VP-1-42021
104382 -04	VP-2-42021
104382 -05	VP-4-42021

The tetrachloroethene concentration in sample VP-3-42021 exceeded the calibration range of the instrument. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVE-09T-42021	Client:	AEG
Date Received:	04/21/21	Project:	4-Corners Cleaners 17-126, F&BI 104382
Date Collected:	04/20/21	Lab ID:	104382-01 1/5.4
Date Analyzed:	04/23/21	Data File:	042325.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.4	<0.54
Chloroethane	<14	<5.4
1,1-Dichloroethene	<2.1	<0.54
trans-1,2-Dichloroethene	<2.1	<0.54
1,1-Dichloroethane	<2.2	<0.54
cis-1,2-Dichloroethene	<2.1	<0.54
1,2-Dichloroethane (EDC)	0.74	0.18
1,1,1-Trichloroethane	<2.9	<0.54
Trichloroethene	1.2	0.23
1,1,2-Trichloroethane	<0.29	<0.054
Tetrachloroethene	<37	<5.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3-42021	Client:	AEG
Date Received:	04/21/21	Project:	4-Corners Cleaners 17-126, F&BI 104382
Date Collected:	04/20/21	Lab ID:	104382-02 1/5.7
Date Analyzed:	04/24/21	Data File:	042326.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.5	<0.57
Chloroethane	<15	<5.7
1,1-Dichloroethene	<2.3	<0.57
trans-1,2-Dichloroethene	<2.3	<0.57
1,1-Dichloroethane	<2.3	<0.57
cis-1,2-Dichloroethene	<2.3	<0.57
1,2-Dichloroethane (EDC)	<0.23	<0.057
1,1,1-Trichloroethane	<3.1	<0.57
Trichloroethene	1.6	0.30
1,1,2-Trichloroethane	<0.31	<0.057
Tetrachloroethene	890 ve	130 ve

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1-42021	Client:	AEG
Date Received:	04/21/21	Project:	4-Corners Cleaners 17-126, F&BI 104382
Date Collected:	04/20/21	Lab ID:	104382-03 1/6.3
Date Analyzed:	04/24/21	Data File:	042327.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.6	<0.63
Chloroethane	<17	<6.3
1,1-Dichloroethene	<2.5	<0.63
trans-1,2-Dichloroethene	<2.5	<0.63
1,1-Dichloroethane	<2.5	<0.63
cis-1,2-Dichloroethene	<2.5	<0.63
1,2-Dichloroethane (EDC)	<0.25	<0.063
1,1,1-Trichloroethane	<3.4	<0.63
Trichloroethene	1.8	0.34
1,1,2-Trichloroethane	<0.34	<0.063
Tetrachloroethene	150	22

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2-42021	Client:	AEG
Date Received:	04/21/21	Project:	4-Corners Cleaners 17-126, F&BI 104382
Date Collected:	04/20/21	Lab ID:	104382-04 1/5.9
Date Analyzed:	04/24/21	Data File:	042328.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.5	<0.59
Chloroethane	<16	<5.9
1,1-Dichloroethene	<2.3	<0.59
trans-1,2-Dichloroethene	<2.3	<0.59
1,1-Dichloroethane	<2.4	<0.59
cis-1,2-Dichloroethene	<2.3	<0.59
1,2-Dichloroethane (EDC)	<0.24	<0.059
1,1,1-Trichloroethane	<3.2	<0.59
Trichloroethene	0.76	0.14
1,1,2-Trichloroethane	<0.32	<0.059
Tetrachloroethene	190	28

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4-42021	Client:	AEG
Date Received:	04/21/21	Project:	4-Corners Cleaners 17-126, F&BI 104382
Date Collected:	04/20/21	Lab ID:	104382-05 1/7.2
Date Analyzed:	04/24/21	Data File:	042329.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.8	<0.72
Chloroethane	<19	<7.2
1,1-Dichloroethene	<2.9	<0.72
trans-1,2-Dichloroethene	<2.9	<0.72
1,1-Dichloroethane	<2.9	<0.72
cis-1,2-Dichloroethene	<2.9	<0.72
1,2-Dichloroethane (EDC)	<0.29	<0.072
1,1,1-Trichloroethane	4.9	0.91
Trichloroethene	1.2	0.22
1,1,2-Trichloroethane	<0.39	<0.072
Tetrachloroethene	340	50

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners 17-126, F&BI 104382
Date Collected:	Not Applicable	Lab ID:	01-838 MB
Date Analyzed:	04/23/21	Data File:	042311.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.11	<0.02
1,1,2-Trichloroethane	<0.055	<0.01
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/29/21

Date Received: 04/21/21

Project: 4-Corners Cleaners 17-126, F&BI 104382

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 104394-01 1/5.4 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.4	<1.4	nm
Chloroethane	ug/m3	<14	<14	nm
1,1-Dichloroethene	ug/m3	<2.1	<2.1	nm
trans-1,2-Dichloroethene	ug/m3	<2.1	<2.1	nm
1,1-Dichloroethane	ug/m3	16	16	0
cis-1,2-Dichloroethene	ug/m3	<2.1	<2.1	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.22	<0.22	nm
1,1,1-Trichloroethane	ug/m3	910	900	1
Trichloroethene	ug/m3	1.4	1.4	0
1,1,2-Trichloroethane	ug/m3	<0.29	<0.29	nm
Tetrachloroethene	ug/m3	96	96	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Vinyl chloride	ug/m3	35	97	70-130
Chloroethane	ug/m3	36	118	70-130
1,1-Dichloroethene	ug/m3	54	100	70-130
trans-1,2-Dichloroethene	ug/m3	54	97	70-130
1,1-Dichloroethane	ug/m3	55	109	70-130
cis-1,2-Dichloroethene	ug/m3	54	96	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	116	70-130
1,1,1-Trichloroethane	ug/m3	74	112	70-130
Trichloroethene	ug/m3	73	114	70-130
1,1,2-Trichloroethane	ug/m3	74	123	70-130
Tetrachloroethene	ug/m3	92	115	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

Report To Charlie Seifert
 Company AEGLLC
 Address 2631 Palmetto, Suite A
 City, State, ZIP Olympia, WA 98502
 Phone 360-352-9815 Email CSeifert@aegea.com

ME 04-21-21

Page # _____ of _____

SAMPLERS (signature)

PROJECT NAME & ADDRESS

PO #

4-Cornier Chambers
 23886-SE Kent-Kingsley Rd

17-126

NOTES:

INVOICE TO

Soil Gas Samples

AEGLLC

TURNAROUND TIME

☐ Standard☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Default: Clean after 3 days☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	PCE/TCE +	Perfluor	Notes
SVE-09T-42021	01	2257	203	IA / <u>SG</u>	4/20/21	28	15:50	5	15:58			X			X		
HP-3-42021	02	3667	270	IA / <u>SG</u>	4/20/21	29	16:10	5	16:20			X			X		PCE/TCE
HP-1-42021	03	2305	204	IA / <u>SG</u>	4/20/21	29	16:05	5	16:15			X			X		Perfluor
HP-2-42021	04	3387	231	IA / <u>SG</u>	4/20/21	70	16:26	5	16:36			X			X		
HP-4-42021	05	2299	228	IA / <u>SG</u>	4/20/21	28	16:45	5	16:57			X			X		
				IA / SG													
				IA / SG													
				IA / SG													

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Charles Seifert</u>	<u>AEGLLC</u>	<u>4/21/21</u>	<u>11:30</u>
Received by: <u>[Signature]</u>	<u>Michael E. Loh</u>	<u>FLB</u>	<u>4/21/21</u>	<u>1400</u>
Relinquished by:				
Received by:				

Samples received at 19°C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 28, 2021

Charles Swift, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Swift:

Included are the results from the testing of material submitted on June 22, 2021 from the 4-Corner Dry Cleaner 17-126, F&BI 106380 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
AEG0628R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 22, 2021 by Friedman & Bruya, Inc. from the AEG 4-Corner Dry Cleaner 17-126, F&BI 106380 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
106380 -01	VP-1
106380 -02	VP-2
106380 -03	VP-3
106380 -04	VP-4
106380 -05	SVE-IN-062121

The tetrachloroethene concentration for sample VP-3 exceeded the calibration range. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1	Client:	AEG
Date Received:	06/22/21	Project:	4-Corner Dry Cleaner 17-126, F&BI 106380
Date Collected:	06/21/21	Lab ID:	106380-01 1/7
Date Analyzed:	06/22/21	Data File:	062218.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.8	<0.7
1,1-Dichloroethene	<2.8	<0.7
trans-1,2-Dichloroethene	<2.8	<0.7
cis-1,2-Dichloroethene	<2.8	<0.7
Trichloroethene	1.2	0.22
Tetrachloroethene	53	7.8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2	Client:	AEG
Date Received:	06/22/21	Project:	4-Corner Dry Cleaner 17-126, F&BI 106380
Date Collected:	06/21/21	Lab ID:	106380-02 1/5.8
Date Analyzed:	06/22/21	Data File:	062220.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.5	<0.58
1,1-Dichloroethene	<2.3	<0.58
trans-1,2-Dichloroethene	<2.3	<0.58
cis-1,2-Dichloroethene	<2.3	<0.58
Trichloroethene	0.78	0.14
Tetrachloroethene	86	13

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3	Client:	AEG
Date Received:	06/22/21	Project:	4-Corner Dry Cleaner 17-126, F&BI 106380
Date Collected:	06/21/21	Lab ID:	106380-03 1/6.5
Date Analyzed:	06/22/21	Data File:	062221.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.65
1,1-Dichloroethene	<2.6	<0.65
trans-1,2-Dichloroethene	<2.6	<0.65
cis-1,2-Dichloroethene	<2.6	<0.65
Trichloroethene	1.8	0.33
Tetrachloroethene	830 ve	120 ve

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4	Client:	AEG
Date Received:	06/22/21	Project:	4-Corner Dry Cleaner 17-126, F&BI 106380
Date Collected:	06/21/21	Lab ID:	106380-04 1/6.2
Date Analyzed:	06/23/21	Data File:	062222.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.6	<0.62
1,1-Dichloroethene	<2.5	<0.62
trans-1,2-Dichloroethene	<2.5	<0.62
cis-1,2-Dichloroethene	<2.5	<0.62
Trichloroethene	0.80	0.15
Tetrachloroethene	280	41

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVE-IN-062121	Client:	AEG
Date Received:	06/22/21	Project:	4-Corner Dry Cleaner 17-126, F&BI 106380
Date Collected:	06/21/21	Lab ID:	106380-05 1/6.1
Date Analyzed:	06/23/21	Data File:	062223.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.6	<0.61
1,1-Dichloroethene	<2.4	<0.61
trans-1,2-Dichloroethene	<2.4	<0.61
cis-1,2-Dichloroethene	<2.4	<0.61
Trichloroethene	<0.66	<0.12
Tetrachloroethene	12	1.8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corner Dry Cleaner 17-126, F&BI 106380
Date Collected:	Not Applicable	Lab ID:	01-1230 MB
Date Analyzed:	06/22/21	Data File:	062211.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	89	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
Trichloroethene	<0.11	<0.02
Tetrachloroethene	<0.68	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/28/21

Date Received: 06/22/21

Project: 4-Corner Dry Cleaner 17-126, F&BI 106380

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 106380-01 1/7 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.8	<1.8	nm
1,1-Dichloroethene	ug/m3	<2.8	<2.8	nm
trans-1,2-Dichloroethene	ug/m3	<2.8	<2.8	nm
cis-1,2-Dichloroethene	ug/m3	<2.8	<2.8	nm
Trichloroethene	ug/m3	1.2	1.2	0
Tetrachloroethene	ug/m3	53	52	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	84	70-130
1,1-Dichloroethene	ug/m3	54	88	70-130
trans-1,2-Dichloroethene	ug/m3	54	86	70-130
cis-1,2-Dichloroethene	ug/m3	54	85	70-130
Trichloroethene	ug/m3	73	91	70-130
Tetrachloroethene	ug/m3	92	111	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

106380

SAMPLE CHAIN OF CUSTODY

ME 06/22/21

Report To

Company

Address

City, State, ZIP

Phone

Email

SAMPLERS (signature)

PROJECT NAME & ADDRESS

PO #

NOTES:

INVOICE TO

Page # of

TURNAROUND TIME

☒ Standard☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Default: Clean after 3 days☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
HP-1	01	2259	299	IA / SG	6/21/21	28	12:50	6	12:56						
HP-2	02	2305	240	IA / SG	6/21/21	29	12:55	6	13:01						13:01
HP-3	03	3675	225	IA / SG	6/21/21	28	11:05	6	13:10						13:10
HP-4	04	2423	203	IA / SG	6/21/21	29	1:18	5.5	13:18						13:18
SHE-IN-062121	05	2302	221	IA / SG	6/21/21	30	1:25	6	13:31						13:31
				IA / SG											
				IA / SG											
				IA / SG											

Samples received at 25°C

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [Signature]	Charles Swift	AEGLLC	6/21/21	3:31
Received by: [Signature]	Will Radford	FBI	6/22/21	13:57
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

August 27, 2021

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on August 19, 2021 from the 4 Corners Cleaners 17-126, F&BI 108316 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: AEG A/P
AEG0827R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 19, 2021 by Friedman & Bruya, Inc. from the AEG 4 Corners Cleaners 17-126, F&BI 108316 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
108316 -01	INF-08172021
108316 -02	VP-1-081721
108316 -03	VP-3-081721
108316 -04	VP-2-081721
108316 -05	VP-4-081721

Tetrachloroethene in sample INF-08172021 was reported below the standard reporting limit. The data were qualified accordingly.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	INF-08172021	Client:	AEG
Date Received:	08/19/21	Project:	4 Corners Cleaners 17-126, F&BI 108316
Date Collected:	08/17/21	Lab ID:	108316-01 1/6
Date Analyzed:	08/25/21	Data File:	082428.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.5	<0.6
Chloroethane	<16	<6
1,1-Dichloroethene	<2.4	<0.6
trans-1,2-Dichloroethene	<2.4	<0.6
1,1-Dichloroethane	<2.4	<0.6
cis-1,2-Dichloroethene	<2.4	<0.6
1,2-Dichloroethane (EDC)	0.85	0.21
1,1,1-Trichloroethane	<3.3	<0.6
Trichloroethene	0.74	0.14
1,1,2-Trichloroethane	<0.33	<0.06
Tetrachloroethene	29 j	4.3 j

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1-081721	Client:	AEG
Date Received:	08/19/21	Project:	4 Corners Cleaners 17-126, F&BI 108316
Date Collected:	08/17/21	Lab ID:	108316-02 1/20
Date Analyzed:	08/25/21	Data File:	082432.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	82	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<5.1	<2
Chloroethane	<53	<20
1,1-Dichloroethene	<7.9	<2
trans-1,2-Dichloroethene	<7.9	<2
1,1-Dichloroethane	<8.1	<2
cis-1,2-Dichloroethene	<7.9	<2
1,2-Dichloroethane (EDC)	<0.81	<0.2
1,1,1-Trichloroethane	<11	<2
Trichloroethene	<2.1	<0.4
1,1,2-Trichloroethane	<1.1	<0.2
Tetrachloroethene	68	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3-081721	Client:	AEG
Date Received:	08/19/21	Project:	4 Corners Cleaners 17-126, F&BI 108316
Date Collected:	08/17/21	Lab ID:	108316-03 1/21
Date Analyzed:	08/25/21	Data File:	082433.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	84	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<5.4	<2.1
Chloroethane	<55	<21
1,1-Dichloroethene	<8.3	<2.1
trans-1,2-Dichloroethene	<8.3	<2.1
1,1-Dichloroethane	<8.5	<2.1
cis-1,2-Dichloroethene	<8.3	<2.1
1,2-Dichloroethane (EDC)	<0.85	<0.21
1,1,1-Trichloroethane	<11	<2.1
Trichloroethene	2.6	0.48
1,1,2-Trichloroethane	<1.1	<0.21
Tetrachloroethene	720	110

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2-081721	Client:	AEG
Date Received:	08/19/21	Project:	4 Corners Cleaners 17-126, F&BI 108316
Date Collected:	08/17/21	Lab ID:	108316-04 1/7
Date Analyzed:	08/25/21	Data File:	082430.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	81	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.8	<0.7
Chloroethane	<18	<7
1,1-Dichloroethene	<2.8	<0.7
trans-1,2-Dichloroethene	<2.8	<0.7
1,1-Dichloroethane	<2.8	<0.7
cis-1,2-Dichloroethene	<2.8	<0.7
1,2-Dichloroethane (EDC)	<0.28	<0.07
1,1,1-Trichloroethane	<3.8	<0.7
Trichloroethene	<0.75	<0.14
1,1,2-Trichloroethane	<0.38	<0.07
Tetrachloroethene	53	7.7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4-081721	Client:	AEG
Date Received:	08/19/21	Project:	4 Corners Cleaners 17-126, F&BI 108316
Date Collected:	08/17/21	Lab ID:	108316-05 1/9.9
Date Analyzed:	08/25/21	Data File:	082431.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	83	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<2.5	<0.99
Chloroethane	<26	<9.9
1,1-Dichloroethene	<3.9	<0.99
trans-1,2-Dichloroethene	<3.9	<0.99
1,1-Dichloroethane	<4	<0.99
cis-1,2-Dichloroethene	<3.9	<0.99
1,2-Dichloroethane (EDC)	<0.4	<0.099
1,1,1-Trichloroethane	<5.4	<0.99
Trichloroethene	<1.1	<0.2
1,1,2-Trichloroethane	<0.54	<0.099
Tetrachloroethene	72	11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4 Corners Cleaners 17-126, F&BI 108316
Date Collected:	Not Applicable	Lab ID:	01-1858 MB
Date Analyzed:	08/24/21	Data File:	082412.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.11	<0.02
1,1,2-Trichloroethane	<0.055	<0.01
Tetrachloroethene	<3.4	<0.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/27/21

Date Received: 08/19/21

Project: 4 Corners Cleaners 17-126, F&BI 108316

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 108361-01 1/5.7 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.5	<1.5	nm
Chloroethane	ug/m3	<15	<15	nm
1,1-Dichloroethene	ug/m3	<2.3	<2.3	nm
trans-1,2-Dichloroethene	ug/m3	<2.3	<2.3	nm
1,1-Dichloroethane	ug/m3	<2.3	<2.3	nm
cis-1,2-Dichloroethene	ug/m3	<2.3	<2.3	nm
1,2-Dichloroethane (EDC)	ug/m3	<0.23	<0.23	nm
1,1,1-Trichloroethane	ug/m3	<3.1	<3.1	nm
Trichloroethene	ug/m3	<0.61	<0.61	nm
1,1,2-Trichloroethane	ug/m3	<0.31	<0.31	nm
Tetrachloroethene	ug/m3	<39	<39	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Vinyl chloride	ug/m3	35	79	70-130
Chloroethane	ug/m3	36	89	70-130
1,1-Dichloroethene	ug/m3	54	93	70-130
trans-1,2-Dichloroethene	ug/m3	54	94	70-130
1,1-Dichloroethane	ug/m3	55	94	70-130
cis-1,2-Dichloroethene	ug/m3	54	97	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	109	70-130
1,1,1-Trichloroethane	ug/m3	74	109	70-130
Trichloroethene	ug/m3	73	91	70-130
1,1,2-Trichloroethane	ug/m3	74	86	70-130
Tetrachloroethene	ug/m3	92	106	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

108316

8/19/21 ME

Report To Scott Rose

Company AEG US

Address 7817 Lakeland Ln Sika

City, State, ZIP Olympia, WA 98504

Phone 360-3529888 Email SRose@aegeus.com

SAMPLERS (signature) [Signature]

PROJECT NAME & ADDRESS

PO #

4-Corner Cleaners

17-126

NOTES:

INVOICE TO

PCE/TCE & Dugthens

AEG

Page # 1 of 1

TURNAROUND TIME

☒ Standard

☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Default: Clean after 3 days

☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	PCE/TCE + Dugthens Product	Notes
INF-08172021	01	8531	259	IA / <u>SG</u>	08/17/21	29	13:17	8	14:08			X			X	
VP-1-081721	02	8536	243	IA / <u>SG</u>	8/17/21	28	14:10	8	14:18			X			X	
VP-3-081721	03	8267	258	IA / <u>SG</u>	8/17/21	28	14:20	8	14:25			X			X	
VP-2-081721	04	8532	301	IA / <u>SG</u>	08/17/21	28	14:25	8	14:45			X			X	
VP-4-081721	05	8535	307	IA / <u>SG</u>	08/17/21	28	14:55	8	15:03			X			X	
				IA / SG												
				IA / SG												
				IA / SG						Samples received at <u>29°C</u>						

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Charles East</u>	<u>AEG</u>	<u>8/17/21</u>	<u>5:00</u>
Received by: <u>[Signature]</u>	<u>Will Radford</u>	<u>FB I</u>	<u>8/19/21</u>	<u>15:29</u>
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 12, 2021

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on November 2, 2021 from the 4-Corners Cleaners 17-126, F&BI 111022 project. There are 10 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: AEG A/P
AEG1112R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 2, 2021 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaners 17-126, F&BI 111022 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
111022 -01	INF-110221
111022 -02	VP-1-110221
111022 -03	VP-3-110221
111022 -04	VP-2-110221
111022 -05	VP-4-110221

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	INF-110221	Client:	AEG
Date Received:	11/02/21	Project:	4-Corners Cleaners 17-126, F&BI 111022
Date Collected:	11/02/21	Lab ID:	111022-01 1/6.6
Date Analyzed:	11/03/21	Data File:	110321.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	85	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.66
Chloroethane	<17	<6.6
1,1-Dichloroethene	<2.6	<0.66
trans-1,2-Dichloroethene	<2.6	<0.66
1,1-Dichloroethane	<2.7	<0.66
cis-1,2-Dichloroethene	<2.6	<0.66
1,2-Dichloroethane (EDC)	<0.27	<0.066
1,1,1-Trichloroethane	<3.6	<0.66
Trichloroethene	<0.71	<0.13
1,1,2-Trichloroethane	<0.36	<0.066
Tetrachloroethene	<45	<6.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1-110221	Client:	AEG
Date Received:	11/02/21	Project:	4-Corners Cleaners 17-126, F&BI 111022
Date Collected:	11/02/21	Lab ID:	111022-02 1/6.4
Date Analyzed:	11/03/21	Data File:	110322.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	85	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.6	<0.64
Chloroethane	<17	<6.4
1,1-Dichloroethene	<2.5	<0.64
trans-1,2-Dichloroethene	<2.5	<0.64
1,1-Dichloroethane	<2.6	<0.64
cis-1,2-Dichloroethene	<2.5	<0.64
1,2-Dichloroethane (EDC)	<0.26	<0.064
1,1,1-Trichloroethane	<3.5	<0.64
Trichloroethene	1.8	0.33
1,1,2-Trichloroethane	<0.35	<0.064
Tetrachloroethene	240	35

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3-110221	Client:	AEG
Date Received:	11/02/21	Project:	4-Corners Cleaners 17-126, F&BI 111022
Date Collected:	11/02/21	Lab ID:	111022-03 1/6.7
Date Analyzed:	11/03/21	Data File:	110323.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	85	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.67
Chloroethane	<18	<6.7
1,1-Dichloroethene	<2.7	<0.67
trans-1,2-Dichloroethene	<2.7	<0.67
1,1-Dichloroethane	<2.7	<0.67
cis-1,2-Dichloroethene	<2.7	<0.67
1,2-Dichloroethane (EDC)	<0.27	<0.067
1,1,1-Trichloroethane	<3.7	<0.67
Trichloroethene	1.0	0.19
1,1,2-Trichloroethane	<0.37	<0.067
Tetrachloroethene	950 ve	140 ve

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2-110221	Client:	AEG
Date Received:	11/02/21	Project:	4-Corners Cleaners 17-126, F&BI 111022
Date Collected:	11/02/21	Lab ID:	111022-04 1/6.8
Date Analyzed:	11/03/21	Data File:	110324.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	86	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.7	<0.68
Chloroethane	<18	<6.8
1,1-Dichloroethene	<2.7	<0.68
trans-1,2-Dichloroethene	<2.7	<0.68
1,1-Dichloroethane	<2.8	<0.68
cis-1,2-Dichloroethene	<2.7	<0.68
1,2-Dichloroethane (EDC)	<0.28	<0.068
1,1,1-Trichloroethane	<3.7	<0.68
Trichloroethene	<0.73	<0.14
1,1,2-Trichloroethane	<0.37	<0.068
Tetrachloroethene	79	12

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4-110221	Client:	AEG
Date Received:	11/02/21	Project:	4-Corners Cleaners 17-126, F&BI 111022
Date Collected:	11/02/21	Lab ID:	111022-05 1/6.3
Date Analyzed:	11/04/21	Data File:	110325.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	83	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.6	<0.63
Chloroethane	<17	<6.3
1,1-Dichloroethene	<2.5	<0.63
trans-1,2-Dichloroethene	<2.5	<0.63
1,1-Dichloroethane	<2.5	<0.63
cis-1,2-Dichloroethene	<2.5	<0.63
1,2-Dichloroethane (EDC)	<0.25	<0.063
1,1,1-Trichloroethane	8.5	1.6
Trichloroethene	<0.68	<0.13
1,1,2-Trichloroethane	<0.34	<0.063
Tetrachloroethene	370	54

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners 17-126, F&BI 111022
Date Collected:	11/03/21	Lab ID:	01-2408 MB
Date Analyzed:	11/03/21	Data File:	110310.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	86	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Trichloroethene	<0.11	<0.02
1,1,2-Trichloroethane	<0.055	<0.01
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/21

Date Received: 11/02/21

Project: 4-Corners Cleaners 17-126, F&BI 111022

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 111043-01 1/5.7 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.5	<1.5	nm
Chloroethane	ug/m3	<15	<15	nm
1,1-Dichloroethene	ug/m3	<2.3	<2.3	nm
trans-1,2-Dichloroethene	ug/m3	<2.3	<2.3	nm
1,1-Dichloroethane	ug/m3	<2.3	<2.3	nm
cis-1,2-Dichloroethene	ug/m3	<2.3	<2.3	nm
1,2-Dichloroethane (EDC)	ug/m3	0.35	0.35	0
1,1,1-Trichloroethane	ug/m3	<3.1	<3.1	nm
Trichloroethene	ug/m3	<0.61	<0.61	nm
1,1,2-Trichloroethane	ug/m3	<0.31	<0.31	nm
Tetrachloroethene	ug/m3	<39	<39	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/12/21

Date Received: 11/02/21

Project: 4-Corners Cleaners 17-126, F&BI 111022

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	85	70-130
Chloroethane	ug/m3	36	96	70-130
1,1-Dichloroethene	ug/m3	54	96	70-130
trans-1,2-Dichloroethene	ug/m3	54	91	70-130
1,1-Dichloroethane	ug/m3	55	93	70-130
cis-1,2-Dichloroethene	ug/m3	54	89	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	92	70-130
1,1,1-Trichloroethane	ug/m3	74	100	70-130
Trichloroethene	ug/m3	73	109	70-130
1,1,2-Trichloroethane	ug/m3	74	112	70-130
Tetrachloroethene	ug/m3	92	117	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

111022

SAMPLE CHAIN OF CUSTODY

ME

11/2/24

of

Report To

Scott Rave

Company

AEG LLC

Address

2633 Parkview Lane, Suite A

City, State, ZIP

Denville, NJ 07834

Phone

610-352-4835 Email: SRAVE@AEGLLC.COM

SAMPLES (signature)

Project Name & Address

4-Corner, Denville

PO #

NOTES:

AEGITCE + DRUGS/TESTS

INVOICE TO

AEG

TURNAROUND TIME

☒ Standard
☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Default: Clean after 3 days
☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. (Hg)	Field Initial Time	Final Vac. (Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs *	APH	Helium	Notes
INC - 110221	01	3387	280	IA / SG	11/02/21	28"	1238	28"	1243	☒	☒	☒			
VP-1-110221	02	2300	301	IA / (SG)	11/02/21	29.5"	1212	28"	1216	☒	☒	☒			
VP-3-110221	03	2298	242	IA / (SG)	11/02/21	29"	1227	28"	1231	☒	☒	☒			
VP-2-110221	04	2439	243	IA / (SG)	11/02/21	28.5"	1150	28"	1153	☒	☒	☒			
VP-4-110221	05	3667	244	IA / (SG)	11/02/21	28.5"	1130	28"	1134	☒	☒	☒			
				IA / SG											
				IA / SG											
				IA / SG											

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Friedman & Bruja, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS \COC\COCTO-15.DOC

Relinquished by:

[Signature]

Anthony, Richard

ONE/ONEG

11/02/21

16:20

Received by:

[Signature]

Khai Hoang

FBC

11/2/21

16:25

Received by:

[Signature]

Khai Hoang

FBC

11/2/21

16:25



Libby Environmental, Inc.

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

March 23, 2021

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

Dear Mr. Rose:

Please find enclosed the analytical data report for the 4 Corners Cleaners Project located in Maple Valley, Washington.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry L. Chilcutt".

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

4 Corners Cleaners PROJECT
AEG, LLC
Maple Valley WA
Libby Project # L210319-4
Client Project # 17-126

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

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method	MW-1	MW-2	MW-3	MW-5	MW-5 Dup
		Blank					
Date Sampled		N/A	3/19/2021	3/19/2021	3/19/2021	3/19/2021	3/19/2021
Date Analyzed	PQL	3/22/2021	3/22/2021	3/22/2021	3/22/2021	3/22/2021	3/22/2021
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Vinyl Chloride (VC)	0.2	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.5	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		103	115	98	107	92	111
1,2-Dichloroethane-d4		100	99	99	100	96	103
Toluene-d8		89	92	94	90	88	93
4-Bromofluorobenzene		84	79	80	84	66	65

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4 Corners Cleaners PROJECT
AEG, LLC
Maple Valley WA
Libby Project # L210319-4
Client Project # 17-126

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

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Water

Matrix Spike Sample Identification: MW-5								
Date Analyzed: 3/22/2021								
	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Vinyl Chloride (VC)	5.0	4.2	4.4	84	88	4.7	65-135	
1,1-Dichloroethene	5.0	4.7	4.2	94	84	11.2	65-135	
trans-1,2-Dichloroethene	5.0	5.0	4.5	99	91	8.8	65-135	
cis -1,2-Dichloroethene	5.0	5.2	5.0	103	99	4.0	65-135	
Trichloroethene (TCE)	5.0	4.4	4.3	88	85	2.8	65-135	
Tetrachloroethene (PCE)	5.0	5.9	5.3	117	107	9.3	65-135	
Surrogate Recovery (%)				MS	MSD			
Dibromofluoromethane				101	93		65-135	
1,2-Dichloroethane-d4				99	96		65-135	
Toluene-d8				96	92		65-135	
4-Bromofluorobenzene				91	91		65-135	

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Paul Burke

Laboratory Control Sample

Date Analyzed: 3/22/2021					
	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Vinyl Chloride (VC)	5.0	4.9	98	80-120	
1,1-Dichloroethene	5.0	4.9	98	80-120	
trans-1,2-Dichloroethene	5.0	4.8	95	80-120	
cis -1,2-Dichloroethene	5.0	5.1	102	80-120	
Trichloroethene (TCE)	5.0	4.8	96	80-120	
Tetrachloroethene (PCE)	5.0	5.6	112	80-120	
Surrogate Recovery					
Dibromofluoromethane			112	65-135	
1,2-Dichloroethane-d4			95	65-135	
Toluene-d8			93	65-135	
4-Bromofluorobenzene			94	65-135	

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4 Corners Cleaners PROJECT
AEG, LLC
Libby Project # L210319-4
Date Received 3/19/21 14:11

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

Received By JC

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☒ Yes | ☐ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>0.1 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>4.9 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments. _____

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE

Ph: 360-352-2110

Olympia, WA 98506

Fax: 360-352-4154

Client: AEG

Address: 2633 PARKMONT LANE SW, SUITE A

City: OLYMPIA

State: WA Zip: 98502

Phone: (360) 890-2205

Fax:

Client Project # 17-126

Date: 3/14/21

Page: 1 of 1

Project Manager: SCOTT ROSE

Project Name: 4 CORNERS CLEANERS

Location: 23806 SE KENT-KANGLEY RD City, State: MALPE VALLEY, WA

Collector: Andrew Liser

Date of Collection: 3/14/21

Email: SROSE@AEGWA.COM



Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Field Notes
1 MW-1	—	1016	Grab	VDA	X												
2 MW-2	—	0948	Grab	VDA	X												
3 MW-3	—	0846	Grab	VDA	X												
4 MW-5	—	0916	Grab	VDA	X												
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

Relinquished by: <u>[Signature]</u>	Date / Time: <u>3/14/21 1411</u>	Received by: <u>[Signature]</u>	Date / Time: <u>3/19/21 1411</u>	Sample Receipt Good Condition? <u>Y</u> <u>N</u> Cooler Temp. <u>°C</u> Sample Temp. <u>°C</u> Total Number of Containers <u> </u>	Remarks: TAT: 24HR 48HR 5 DAY
Relinquished by:	Date / Time:	Received by:	Date / Time:		
Relinquished by:	Date / Time:	Received by:	Date / Time:		
Relinquished by:	Date / Time:	Received by:	Date / Time:		

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

Distribution: White - Lab, Yellow - Originator



Libby Environmental, Inc.

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

July 21, 2022

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

Dear Mr. Rose:

Please find enclosed the analytical data report for the 4 Corners Cleaners project located in Maple Valley, Washington.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry L. Chilcutt".

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT

AEG, LLC

Maple Valley, Washington

Libby Project # L22G056

Client Project # 17-126

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method Blank	MW-1	MW-2	MW-3	MW-5	MW-5 Dup
Date Sampled		N/A	7/15/2022	7/15/2022	7/15/2022	7/15/2022	7/15/2022
Date Analyzed	PQL	7/19/2022	7/19/2022	7/19/2022	7/19/2022	7/19/2022	7/19/2022
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Vinyl Chloride (VC)	0.2	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.5	nd	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		120	130	108	122	121	121
1,2-Dichloroethane-d4		130	130	128	127	126	124
Toluene-d8		86	88	51 S	86	89	90
4-Bromofluorobenzene		78	83	86	83	79	80

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

"S" Spike compound recovery is outside acceptance limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG, LLC
Maple Valley, Washington
Libby Project # L22G056
Client Project # 17-126

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

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Water

Matrix Spike Sample Identification: MW-5								
Date Analyzed: 7/19/2022								
	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Vinyl Chloride (VC)	5.0	3.4	3.9	69	78	12.3	65-135	
1,1-Dichloroethene	5.0	5.4	6.0	109	120	9.6	65-135	
trans-1,2-Dichloroethene	5.0	6.2	6.2	125	123	1.3	65-135	
cis-1,2-Dichloroethene	5.0	5.9	5.9	117	117	0.0	65-135	
Trichloroethene (TCE)	5.0	4.8	5.1	97	101	4.8	65-135	
Tetrachloroethene (PCE)	5.0	5.7	6.3	113	127	11.2	65-135	
Surrogate Recovery (%)				MS	MSD			
Dibromofluoromethane				122	136	65-135		
1,2-Dichloroethane-d4				132	102	65-135		
Toluene-d8				92	78	65-135		
4-Bromofluorobenzene				110	100	65-135		

ACCEPTABLE RPD IS 35%

"S" Spike recovery outside accepted recovery limits.

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

Date Analyzed: 7/19/2022					
	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Vinyl Chloride (VC)	5.0	5.2	103	80-120	
1,1-Dichloroethene	5.0	4.8	96	80-120	
trans-1,2-Dichloroethene	5.0	5.1	102	80-120	
cis-1,2-Dichloroethene	5.0	4.8	97	80-120	
Trichloroethene (TCE)	5.0	4.2	84	80-120	
Tetrachloroethene (PCE)	5.0	4.8	95	80-120	
Surrogate Recovery					
Dibromofluoromethane			178	65-135	S
1,2-Dichloroethane-d4			135	65-135	
Toluene-d8			88	65-135	
4-Bromofluorobenzene			109	65-135	

"S" Spike compound recovery is outside acceptance limits.

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

4 CORNERS CLEANERS PROJECT

AEG, LLC

Libby Project # L22G056

Date Received 7/18/22 11:50

Received By JC

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☒ Yes | ☐ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>0.4 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>2.1 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.

www.LibbyEnvironmental.com

Page: 1 of 1

Email: Srose@AEGWA.com

TAT: 24HR 48HR 5-DAY



Libby Environmental, Inc.

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

January 18, 2023

Scott Rose
AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Scott Rose:

Please find enclosed the analytical data report for the 4 Corners Cleaners project located in Maple Valley, Washington.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry L. Chilcutt".

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG an Atlas Geosciences NW Company
Maple Valley, Washington
Libby Project # L23A043
Client Project # 17-126

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

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method	MW-1	MW-2	MW-3	MW-5
		Blank				
Date Sampled		N/A	1/12/2023	1/12/2023	1/12/2023	1/12/2023
Date Analyzed	PQL	1/15/2023	1/15/2023	1/15/2023	1/15/2023	1/15/2023
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Vinyl Chloride (VC)	0.2	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.5	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd	nd	nd	nd
Surrogate Recovery		Acceptable				
		Limits (%)				
Dibromofluoromethane	27-188	107	105	106	111	109
1,2-Dichloroethane-d4	17-212	99	98	101	105	102
Toluene-d8	41-142	96	95	95	94	96
4-Bromofluorobenzene	47-167	90	90	91	85	93

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG an Atlas Geosciences NW Company
Maple Valley, Washington
Libby Project # L23A043
Client Project # 17-126

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

QA/QC for Volatile Organic Compounds by EPA Method 8260D in Water

Matrix Spike Sample Identification: L23A042-07								
Date Analyzed: 1/15/2023								
	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Recovery Limits (%)	Data Flag
Vinyl chloride	5.0	4.1	4.2	82	84	2.4	10-234	
1,1-Dichloroethene	5.0	4.9	5.4	97	108	10.5	15-233	
<i>trans</i> -1,2-Dichloroethene	5.0	5.0	5.3	100	105	4.8	54-165	
<i>cis</i> -1,2-Dichloroethene	5.0	5.1	5.1	102	103	1.0	35-167	
Trichloroethene (TCE)	5.0	5.7	5.6	114	112	2.4	64-141	
Tetrachloroethene (PCE)	5.0	6.2	6.1	124	122	1.8	42-173	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	108	109	27-188
1,2-Dichloroethane-d4	100	98	17-212
Toluene-d8	96	98	41-142
4-Bromofluorobenzene	97	96	47-167

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

Date Analyzed: 1/15/2023					
	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	Recovery Limits (%)	Data Flag
Vinyl chloride	5.0	4.0	80	15-226	
1,1-Dichloroethene	5.0	5.1	102	38-193	
<i>trans</i> -1,2-Dichloroethene	5.0	5.5	109	53-156	
<i>cis</i> -1,2-Dichloroethene	5.0	5.2	104	10-219	
Trichloroethene (TCE)	5.0	6.0	120	37-121	
Tetrachloroethene (PCE)	5.0	6.6	133	46-159	
Surrogate Recovery					
Dibromofluoromethane			109	27-188	
1,2-Dichloroethane-d4			96	17-212	
Toluene-d8			98	41-142	
4-Bromofluorobenzene			97	47-167	

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG an Atlas Geosciences NW Company
Libby Project # L23A043
Date Received 1/12/23 11:40

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

Received By AR

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☒ Yes | ☐ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>0.2 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>0.6 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 8, 2022

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on May 20, 2022 from the 4-Corners Cleaners 17-126, F&BI 205354 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: AEG A/P
AEG0608R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 20, 2022 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaners 17-126, F&BI 205354 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
205354 -01	SVE-IN
205354 -02	VP-1
205354 -03	VP-2
205354 -04	VP-3
205354 -05	VP-4

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVE-IN	Client:	AEG
Date Received:	05/20/22	Project:	4-Corners Cleaners 17-126
Date Collected:	05/09/22	Lab ID:	205354-01 1/4.7
Date Analyzed:	05/26/22	Data File:	052612.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.2	<0.47
trans-1,2-Dichloroethene	<1.9	<0.47
cis-1,2-Dichloroethene	<1.9	<0.47
Trichloroethene	<0.51	<0.094
Tetrachloroethene	<32	<4.7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1	Client:	AEG
Date Received:	05/20/22	Project:	4-Corners Cleaners 17-126
Date Collected:	05/09/22	Lab ID:	205354-02 1/4.1
Date Analyzed:	05/26/22	Data File:	052613.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1	<0.41
trans-1,2-Dichloroethene	<1.6	<0.41
cis-1,2-Dichloroethene	<1.6	<0.41
Trichloroethene	<0.44	<0.082
Tetrachloroethene	<28	<4.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2	Client:	AEG
Date Received:	05/20/22	Project:	4-Corners Cleaners 17-126
Date Collected:	05/09/22	Lab ID:	205354-03 1/5.1
Date Analyzed:	05/26/22	Data File:	052614.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.3	<0.51
trans-1,2-Dichloroethene	<2	<0.51
cis-1,2-Dichloroethene	<2	<0.51
Trichloroethene	0.90	0.17
Tetrachloroethene	<35	<5.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3	Client:	AEG
Date Received:	05/20/22	Project:	4-Corners Cleaners 17-126
Date Collected:	05/09/22	Lab ID:	205354-04 1/4.8
Date Analyzed:	05/26/22	Data File:	052615.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.2	<0.48
trans-1,2-Dichloroethene	<1.9	<0.48
cis-1,2-Dichloroethene	<1.9	<0.48
Trichloroethene	1.1	0.20
Tetrachloroethene	65	9.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4	Client:	AEG
Date Received:	05/20/22	Project:	4-Corners Cleaners 17-126
Date Collected:	05/09/22	Lab ID:	205354-05 1/4.6
Date Analyzed:	05/26/22	Data File:	052616.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.2	<0.46
trans-1,2-Dichloroethene	<1.8	<0.46
cis-1,2-Dichloroethene	<1.8	<0.46
Trichloroethene	<0.49	<0.092
Tetrachloroethene	<31	<4.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners 17-126
Date Collected:	Not Applicable	Lab ID:	02-1228 MB
Date Analyzed:	05/26/22	Data File:	052611.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	89	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
Trichloroethene	<0.11	<0.02
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/08/22

Date Received: 05/20/22

Project: 4-Corners Cleaners 17-126, F&BI 205354

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 205435-01 1/4.7 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.2	<1.2	nm
trans-1,2-Dichloroethene	ug/m3	<1.9	<1.9	nm
cis-1,2-Dichloroethene	ug/m3	<1.9	<1.9	nm
Trichloroethene	ug/m3	0.78	0.61	24
Tetrachloroethene	ug/m3	1,100	1,000	10

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	96	70-130
trans-1,2-Dichloroethene	ug/m3	54	104	70-130
cis-1,2-Dichloroethene	ug/m3	54	98	70-130
Trichloroethene	ug/m3	73	104	70-130
Tetrachloroethene	ug/m3	92	116	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

205 354

SAMPLE CHAIN OF CUSTODY

5/20/22

Report To Scott Rose
 Company AEG
 Address 2633 Parkmont Lane SW Suite A
 City, State, ZIP Olympia, WA 98522
 Phone 360-352-9835 Email SRose@AEGINC.COM

SAMPLERS (signature) <u>[Signature]</u>	
PROJECT NAME & ADDRESS <u>4-Corner Cleanup</u>	PO # <u>17-126</u>
NOTES: <u>ACE/ICE & DANGEROUS PRODUCTS</u>	INVOICE TO <u>AEG</u>

Page # 1 of 1

TURNAROUND TIME

☒ Standard
☐ RUSH
 Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Default: Clean after 3 days
☐ Archive (Fee may apply)

SAMPLE INFORMATION

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
SVE-IN	01	3254	304	IA / (SG)	5/19/22	28"	1230	6"	1238			X		X	SVE system shut off for SG testing
UP-1	02	3256	259	IA / (SG)	5/19/22	26"	1301	3"	1309			X		X	collected from manifold valve single port.
VP-2	03	2433	64	IA / (SG)	5/19/22	28"	1241	6"	1249			X		X	valve stick not closed at 6" close
VP-3	04	3251	255	IA / SG	5/19/22	28"	1312	6"	1319			X		X	
VP-4	05	3250	55	IA / (SG)	5/19/22	28"	1251	6"	1259			X		X	
				IA / SG											
				IA / SG											
				IA / SG											

Friedman & Bruya, Inc.
 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Tony Behrnick</u>	<u>AEG</u>	<u>5/20/22</u>	
Received by: <u>Windy Madden</u>	<u>Windy Madden</u>	<u>F+BI</u>	<u>5/20/22</u>	<u>11:09</u>
Relinquished by:				
Received by:				
Samples received at <u>17</u> °C				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 31, 2023

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on March 24, 2023 from the 4-Corners Cleaners Maple Valley, WA 17-126, F&BI 303407 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: AEG A/P
AEG0331R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 24, 2023 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaners Maple Valley, WA 17-126, F&BI 303407 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
303407 -01	VP-1
303407 -02	VP-2
303407 -03	VP-4
303407 -04	SVE-IN
303407 -05	VP-3

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1	Client:	AEG
Date Received:	03/24/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	03/23/23	Lab ID:	303407-01 1/5.7
Date Analyzed:	03/29/23	Data File:	032827.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.5	<0.57
trans-1,2-Dichloroethene	<2.3	<0.57
cis-1,2-Dichloroethene	<2.3	<0.57
Trichloroethene	1.1	0.21
Tetrachloroethene	69	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2	Client:	AEG
Date Received:	03/24/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	03/23/23	Lab ID:	303407-02 1/5.8
Date Analyzed:	03/29/23	Data File:	032826.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	87	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.5	<0.58
trans-1,2-Dichloroethene	<2.3	<0.58
cis-1,2-Dichloroethene	<2.3	<0.58
Trichloroethene	2.4	0.45
Tetrachloroethene	<39	<5.8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4	Client:	AEG
Date Received:	03/24/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	03/23/23	Lab ID:	303407-03 1/8.3
Date Analyzed:	03/29/23	Data File:	032829.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	82	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<2.1	<0.83
trans-1,2-Dichloroethene	<3.3	<0.83
cis-1,2-Dichloroethene	<3.3	<0.83
Trichloroethene	<0.89	<0.17
Tetrachloroethene	<56	<8.3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVE-IN	Client:	AEG
Date Received:	03/24/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	03/23/23	Lab ID:	303407-04 1/8.2
Date Analyzed:	03/29/23	Data File:	032828.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	85	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<2.1	<0.82
trans-1,2-Dichloroethene	<3.3	<0.82
cis-1,2-Dichloroethene	<3.3	<0.82
Trichloroethene	<0.88	<0.16
Tetrachloroethene	<56	<8.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3	Client:	AEG
Date Received:	03/24/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	03/23/23	Lab ID:	303407-05 1/8.6
Date Analyzed:	03/29/23	Data File:	032830.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	86	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<2.2	<0.86
trans-1,2-Dichloroethene	<3.4	<0.86
cis-1,2-Dichloroethene	<3.4	<0.86
Trichloroethene	<0.92	<0.17
Tetrachloroethene	260	38

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners Maple Valley
Date Collected:	Not Applicable	Lab ID:	03-0682 MB
Date Analyzed:	03/28/23	Data File:	032811.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	81	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
Trichloroethene	<0.11	<0.02
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/31/23

Date Received: 03/24/23

Project: 4-Corners Cleaners Maple Valley, WA 17-126, F&BI 303407

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 303447-01 1/5.2 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.3	<1.3	nm
trans-1,2-Dichloroethene	ug/m3	<2.1	<2.1	nm
cis-1,2-Dichloroethene	ug/m3	<2.1	<2.1	nm
Trichloroethene	ug/m3	<0.56	<0.56	nm
Tetrachloroethene	ug/m3	<35	<35	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	88	70-130
trans-1,2-Dichloroethene	ug/m3	54	94	70-130
cis-1,2-Dichloroethene	ug/m3	54	88	70-130
Trichloroethene	ug/m3	73	110	70-130
Tetrachloroethene	ug/m3	92	128	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased high; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

303407
~~303407~~ SCOTT ROSE
Company AEG-ATLAS

Address 2633 Parkview Ave SW Suite A
City, State, ZIP Olympia WA 98512
Phone 360-352-7835 Email SROSE@AEGINX.COM

SAMPLE CHAIN OF CUSTODY

03/24/23

SAMPLERS (signature) <i>[Signature]</i>	
PROJECT NAME & ADDRESS 4-Corner cleaners Maple Valley WA	PO # 17-126
NOTES: PCE/TCE samples removed	INVOICE TO AEG

Page # _____ of _____
TURNAROUND TIME
Standard RUSH Rush charges authorized by: _____
SAMPLE DISPOSAL Default: Clean following final report delivery Hold (Fee may apply): _____

SAMPLE INFORMATION										ANALYSIS REQUESTED					
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
VP-1	01	3254	206	IA / (SG)	3/23/23	27"	1236	5"	1246			X		X	
VP-2	02	3389	220	IA / (SG)	3/23/23	29"	1212	5"	1222			X		X	
VP-3		2295	228	IA / (SG)	3/23/23	29"	1212		1222			X		X	3/23/23
VP-4	03	2307	231	IA / (SG)	3/23/23	30"	1100	5"	1210			X		X	
SVG-IN	04	2294	204	IA / (SG)	3/23/23	28"	1252	5"	1302			X		X	
VP-3	05	2295	228	IA / (SG)	3/23/23	26"	1124	5"	1234			X		X	Had Office Testing after recovery
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											

SIGNATURE		PRINT NAME		COMPANY		DATE		TIME	
Relinquished by: <i>[Signature]</i>		Tony Becknick		PHG		3/24/23			
Received by: <i>[Signature]</i>		ANTHONY PHAN		FGB		03/24/23		11:56	
Relinquished by:									
Received by:									

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 17, 2022

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on October 6, 2022 from the 4-Corners Cleaner 17-126, F&BI 210077 project. There are 8 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: AEG A/P
AEG1017R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 6, 2022 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaner 17-126, F&BI 210077 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
210077 -01	VP-4
210077 -02	VP-2
210077 -03	VP-3
210077 -04	VP-1

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4	Client:	AEG
Date Received:	10/06/22	Project:	4-Corners Cleaner 17-126, F&BI 210077
Date Collected:	10/06/22	Lab ID:	210077-01 1/5.4
Date Analyzed:	10/11/22	Data File:	101115.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.4	<0.54
trans-1,2-Dichloroethene	<2.1	<0.54
cis-1,2-Dichloroethene	<2.1	<0.54
Trichloroethene	<0.58	<0.11
Tetrachloroethene	<37	<5.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2	Client:	AEG
Date Received:	10/06/22	Project:	4-Corners Cleaner 17-126, F&BI 210077
Date Collected:	10/06/22	Lab ID:	210077-02 1/5.6
Date Analyzed:	10/11/22	Data File:	101116.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.4	<0.56
trans-1,2-Dichloroethene	<2.2	<0.56
cis-1,2-Dichloroethene	<2.2	<0.56
Trichloroethene	<0.6	<0.11
Tetrachloroethene	<38	<5.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3	Client:	AEG
Date Received:	10/06/22	Project:	4-Corners Cleaner 17-126, F&BI 210077
Date Collected:	10/06/22	Lab ID:	210077-03 1/5.9
Date Analyzed:	10/11/22	Data File:	101117.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.5	<0.59
trans-1,2-Dichloroethene	<2.3	<0.59
cis-1,2-Dichloroethene	<2.3	<0.59
Trichloroethene	1.3	0.24
Tetrachloroethene	78	11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1	Client:	AEG
Date Received:	10/06/22	Project:	4-Corners Cleaner 17-126, F&BI 210077
Date Collected:	10/06/22	Lab ID:	210077-04 1/5.8
Date Analyzed:	10/11/22	Data File:	101118.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.5	<0.58
trans-1,2-Dichloroethene	<2.3	<0.58
cis-1,2-Dichloroethene	<2.3	<0.58
Trichloroethene	<0.62	<0.12
Tetrachloroethene	<39	<5.8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaner 17-126, F&BI 210077
Date Collected:	Not Applicable	Lab ID:	02-2308 mb
Date Analyzed:	10/11/22	Data File:	101111.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
Trichloroethene	<0.11	<0.02
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/17/22

Date Received: 10/06/22

Project: 4-Corners Cleaner 17-126, F&BI 210077

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 210122-01 1/4.7 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.2	<1.2	nm
trans-1,2-Dichloroethene	ug/m3	<1.9	<1.9	nm
cis-1,2-Dichloroethene	ug/m3	<1.9	<1.9	nm
Trichloroethene	ug/m3	0.96	0.91	5
Tetrachloroethene	ug/m3	<32	<32	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	107	70-130
trans-1,2-Dichloroethene	ug/m3	54	104	70-130
cis-1,2-Dichloroethene	ug/m3	54	101	70-130
Trichloroethene	ug/m3	73	106	70-130
Tetrachloroethene	ug/m3	92	105	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

10/06/12

210077
 Report To Scott Rade
 Company ACG
 Address 2633 Piedmont Lane SW USA
 City, State, ZIP Atlanta, GA 30312
 Phone 404-352-9835 Email scott@acginc.com

SAMPLERS (signature) <u>Adrian</u>	
PROJECT NAME & ADDRESS	PO #
4-Corner Clean	17-126
NOTES:	INVOICE TO
PC/116, 116, 116, 116	ACG

Page # <u>1</u> of <u>1</u> TURNOAROUND TIME ☒ Standard ☐ RUSH Rush charges authorized by:	SAMPLE DISPOSAL Default: Clean following final report delivery ☐ Hold (Fee may apply):
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SAMPLE INFORMATION										ANALYSIS REQUESTED					
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
VP-4	01	3483	65	IA / SG	10/6/12	28"	1303	5"	1313			X		X	
VP-2	02	2298	51	IA / SG	10/6/12	29"	1315	5"	1325			X		X	
VP-3	03	3672	303	IA / SG	10/6/12	28"	1347	5"	1357			X		X	
VP-1		3673	304	IA / SG	10/6/12	30"	1328	5"	1348			X			
SW-1A VP-1	04	3202	69	IA / SG	10/6/12	28"	1333	5"	1343			X		X	
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SIGNATURE		PRINT NAME		COMPANY		DATE		TIME	
Relinquished by:	<u>Adrian</u>	Tony Brown	ACG	10/6/12					
Received by:	<u>Adrian</u>	ANH PHAM	EPB	10/06/12	15:42				
Relinquished by:									
Received by:				Samples received at	21 °C				

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA-98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044
 FORMS\COG\COCTO-15.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

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January 21, 2022

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose

Included are the results from the testing of material submitted on January 13, 2022 from the 4-Corners Cleaners 17-126, F&BI 201161 project. There are 10 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: AEG A/P
AEG0121R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 13, 2022 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaners 17-126, F&BI 201161 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
201161 -01	4C-CARBON-011222-01
201161 -02	4C-KOW-011222-02

The 8260D calibration standard failed the acceptance criteria for methylene chloride. The data were flagged accordingly.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID: 4C-CARBON-011222-01	Client: AEG
Date Received: 01/13/22	Project: 4-Corners Cleaners 17-126, F&BI 201161
Date Extracted: 01/18/22	Lab ID: 201161-01
Date Analyzed: 01/18/22	Data File: 011810.D
Matrix: Soil	Instrument: GCMS4
Units: mg/kg (ppm) Dry Weight	Operator: RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	94	89	112
4-Bromofluorobenzene	114	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5 ca	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners 17-126, F&BI 201161
Date Extracted:	01/18/22	Lab ID:	02-119 mb
Date Analyzed:	01/18/22	Data File:	011805.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	90	109
Toluene-d8	96	89	112
4-Bromofluorobenzene	100	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5 ca	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	4C-KOW-011222-02	Client:	AEG
Date Received:	01/13/22	Project:	4-Corners Cleaners 17-126, F&BI 201161
Date Extracted:	01/14/22	Lab ID:	201161-02
Date Analyzed:	01/18/22	Data File:	018010.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	85	117
Toluene-d8	97	88	112
4-Bromofluorobenzene	105	90	111

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners 17-126, F&BI 201161
Date Extracted:	01/14/22	Lab ID:	02-113 mb
Date Analyzed:	01/14/22	Data File:	011407.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	RF

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	78	126
Toluene-d8	98	87	115
4-Bromofluorobenzene	94	92	112

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/21/22

Date Received: 01/13/22

Project: 4-Corners Cleaners 17-126, F&BI 201161

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 201161-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	1	<0.5	5 ip	5 ip	10-142	0
Chloromethane	mg/kg (ppm)	1	<0.5	19	21	10-126	10
Vinyl chloride	mg/kg (ppm)	1	<0.05	13	12	10-138	8
Bromomethane	mg/kg (ppm)	1	<0.5	33	28	10-163	16
Chloroethane	mg/kg (ppm)	1	<0.5	24	25	10-176	4
Trichlorofluoromethane	mg/kg (ppm)	1	<0.5	14	14	10-176	0
Acetone	mg/kg (ppm)	5	<5	54	53	10-163	2
1,1-Dichloroethene	mg/kg (ppm)	1	<0.05	13	12	10-160	8
Hexane	mg/kg (ppm)	1	<0.25	4 ip	4 ip	10-137	0
Methylene chloride	mg/kg (ppm)	1	<0.5	0 ip	0 ip	10-156	
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	<0.05	43	43	21-145	0
trans-1,2-Dichloroethene	mg/kg (ppm)	1	<0.05	8 ip	8 ip	14-137	0
1,1-Dichloroethane	mg/kg (ppm)	1	<0.05	23	22	19-140	4
2,2-Dichloropropane	mg/kg (ppm)	1	<0.05	27	28	10-158	4
cis-1,2-Dichloroethene	mg/kg (ppm)	1	<0.05	12 ip	11 ip	25-135	9
Chloroform	mg/kg (ppm)	1	<0.05	19 ip	18 ip	21-145	5
2-Butanone (MEK)	mg/kg (ppm)	5	<1	40	38	19-147	5
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	<0.05	18	18	12-160	0
1,1,1-Trichloroethane	mg/kg (ppm)	1	<0.05	18	19	10-156	5
1,1-Dichloropropene	mg/kg (ppm)	1	<0.05	6 ip	6 ip	17-140	0
Carbon tetrachloride	mg/kg (ppm)	1	<0.05	12	13	9-164	8
Benzene	mg/kg (ppm)	1	<0.03	3 ip	3 ip	29-129	0
Trichloroethene	mg/kg (ppm)	1	<0.02	4 ip	4 ip	21-139	0
1,2-Dichloropropane	mg/kg (ppm)	1	<0.05	15 ip	15 ip	30-135	0
Bromodichloromethane	mg/kg (ppm)	1	<0.05	13 ip	12 ip	23-155	8
Dibromomethane	mg/kg (ppm)	1	<0.05	18 ip	17 ip	23-145	6
4-Methyl-2-pentanone	mg/kg (ppm)	5	<1	28	27	24-155	4
cis-1,3-Dichloropropene	mg/kg (ppm)	1	<0.05	9 ip	8 ip	28-144	12
Toluene	mg/kg (ppm)	1	<0.05	2 ip	2 ip	35-130	0
trans-1,3-Dichloropropene	mg/kg (ppm)	1	<0.05	8 ip	7 ip	26-149	13
1,1,2-Trichloroethane	mg/kg (ppm)	1	<0.05	14	14	10-205	0
2-Hexanone	mg/kg (ppm)	5	<0.5	15	14 ip	15-166	7
1,3-Dichloropropene	mg/kg (ppm)	1	<0.05	15 ip	13 ip	31-137	14
Tetrachloroethene	mg/kg (ppm)	1	<0.025	2 ip	2 ip	20-133	0
Dibromochloromethane	mg/kg (ppm)	1	<0.05	11 ip	10 ip	28-150	10
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	<0.05	10 ip	10 ip	28-142	0
Chlorobenzene	mg/kg (ppm)	1	<0.05	1 ip	1 ip	32-129	0
Ethylbenzene	mg/kg (ppm)	1	<0.05	2 ip	2 ip	32-137	0
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	1	<0.05	10 ip	10 ip	31-143	0
m,p-Xylene	mg/kg (ppm)	2	<0.1	1 ip	1 ip	34-136	0
o-Xylene	mg/kg (ppm)	1	<0.05	1 ip	2 ip	33-134	67 ip
Styrene	mg/kg (ppm)	1	<0.05	1 ip	1 ip	35-137	0
Isopropylbenzene	mg/kg (ppm)	1	<0.05	2 ip	2 ip	31-142	0
Bromoform	mg/kg (ppm)	1	<0.05	7 ip	8 ip	21-156	13
n-Propylbenzene	mg/kg (ppm)	1	<0.05	1 ip	1 ip	23-146	0
Bromobenzene	mg/kg (ppm)	1	<0.05	1 ip	2 ip	34-130	67 ip
1,3,5-Trimethylbenzene	mg/kg (ppm)	1	<0.05	1 ip	2 ip	18-149	67 ip
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	1	<0.05	13 ip	14 ip	28-140	7
1,2,3-Trichloropropane	mg/kg (ppm)	1	<0.05	13 ip	13 ip	25-144	0
2-Chlorotoluene	mg/kg (ppm)	1	<0.05	1 ip	2 ip	31-134	67 ip
4-Chlorotoluene	mg/kg (ppm)	1	<0.05	1 ip	2 ip	31-136	67 ip
tert-Butylbenzene	mg/kg (ppm)	1	<0.05	3 ip	3 ip	30-137	0
1,2,4-Trimethylbenzene	mg/kg (ppm)	1	<0.05	1 ip	2 ip	10-182	67 ip
sec-Butylbenzene	mg/kg (ppm)	1	<0.05	2 ip	2 ip	23-145	0
p-Isopropyltoluene	mg/kg (ppm)	1	<0.05	1 ip	1 ip	21-149	0
1,3-Dichlorobenzene	mg/kg (ppm)	1	<0.05	1 ip	2 ip	30-131	67 ip
1,4-Dichlorobenzene	mg/kg (ppm)	1	<0.05	1 ip	2 ip	29-129	67 ip
1,2-Dichlorobenzene	mg/kg (ppm)	1	<0.05	1 ip	2 ip	31-132	67 ip
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	1	<0.5	5 ip	6 ip	11-161	18
1,2,4-Trichlorobenzene	mg/kg (ppm)	1	<0.25	1 ip	1 ip	22-142	0
Hexachlorobutadiene	mg/kg (ppm)	1	<0.25	4 ip	4 ip	10-142	0
Naphthalene	mg/kg (ppm)	1	<0.05	1 ip	1 ip	14-157	0
1,2,3-Trichlorobenzene	mg/kg (ppm)	1	<0.25	1 ip	1 ip	20-144	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/21/22

Date Received: 01/13/22

Project: 4-Corners Cleaners 17-126, F&BI 201161

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	1	47	10-146
Chloromethane	mg/kg (ppm)	1	68	27-133
Vinyl chloride	mg/kg (ppm)	1	77	22-139
Bromomethane	mg/kg (ppm)	1	85	38-114
Chloroethane	mg/kg (ppm)	1	88	9-163
Trichlorofluoromethane	mg/kg (ppm)	1	85	10-196
Acetone	mg/kg (ppm)	5	89	52-141
1,1-Dichloroethene	mg/kg (ppm)	1	100	47-128
Hexane	mg/kg (ppm)	1	95	43-142
Methylene chloride	mg/kg (ppm)	1	68	10-184
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	91	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	1	93	67-129
1,1-Dichloroethane	mg/kg (ppm)	1	93	68-115
2,2-Dichloropropane	mg/kg (ppm)	1	118	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	1	98	72-127
Chloroform	mg/kg (ppm)	1	94	66-120
2-Butanone (MEK)	mg/kg (ppm)	5	91	30-197
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	96	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	1	92	62-131
1,1-Dichloropropene	mg/kg (ppm)	1	95	69-128
Carbon tetrachloride	mg/kg (ppm)	1	81	60-139
Benzene	mg/kg (ppm)	1	97	71-118
Trichloroethene	mg/kg (ppm)	1	91	63-121
1,2-Dichloropropane	mg/kg (ppm)	1	92	72-127
Bromodichloromethane	mg/kg (ppm)	1	82	57-126
Dibromomethane	mg/kg (ppm)	1	99	62-123
4-Methyl-2-pentanone	mg/kg (ppm)	5	96	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	1	91	67-122
Toluene	mg/kg (ppm)	1	106	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	1	99	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	1	98	64-115
2-Hexanone	mg/kg (ppm)	5	100	33-152
1,3-Dichloropropene	mg/kg (ppm)	1	105	72-130
Tetrachloroethene	mg/kg (ppm)	1	110	72-114
Dibromochloromethane	mg/kg (ppm)	1	89	55-121
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	109	74-132
Chlorobenzene	mg/kg (ppm)	1	104	76-111
Ethylbenzene	mg/kg (ppm)	1	108	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	1	94	64-121
m,p-Xylene	mg/kg (ppm)	2	112	78-122
o-Xylene	mg/kg (ppm)	1	107	77-124
Styrene	mg/kg (ppm)	1	105	74-126
Isopropylbenzene	mg/kg (ppm)	1	108	76-127
Bromoform	mg/kg (ppm)	1	84	56-132
n-Propylbenzene	mg/kg (ppm)	1	113	74-124
Bromobenzene	mg/kg (ppm)	1	111	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	1	109	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	1	111	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	1	107	61-137
2-Chlorotoluene	mg/kg (ppm)	1	109	74-121
4-Chlorotoluene	mg/kg (ppm)	1	112	75-122
tert-Butylbenzene	mg/kg (ppm)	1	112	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	1	110	76-125
sec-Butylbenzene	mg/kg (ppm)	1	114	71-130
p-Isopropyltoluene	mg/kg (ppm)	1	115	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	1	113	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	1	111	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	1	107	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	1	88	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	1	112	64-135
Hexachlorobutadiene	mg/kg (ppm)	1	121	50-153
Naphthalene	mg/kg (ppm)	1	108	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	1	112	63-138

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/21/22

Date Received: 01/13/22

Project: 4-Corners Cleaners 17-126, F&BI 201161

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 201163-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Dichlorodifluoromethane	ug/L (ppb)	10	<1	102	50-150
Chloromethane	ug/L (ppb)	10	<10	84	50-150
Vinyl chloride	ug/L (ppb)	10	<0.02	103	50-150
Bromomethane	ug/L (ppb)	10	<5	115	50-150
Chloroethane	ug/L (ppb)	10	<1	107	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	112	50-150
Acetone	ug/L (ppb)	50	<50	72	50-150
1,1-Dichloroethene	ug/L (ppb)	10	<1	96	50-150
Hexane	ug/L (ppb)	10	<5	79	50-150
Methylene chloride	ug/L (ppb)	10	<5	58	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	95	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	102	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	95	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	147	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	103	50-150
Chloroform	ug/L (ppb)	10	<1	100	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	78	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	98	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	104	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	92	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	102	50-150
Benzene	ug/L (ppb)	10	<0.35	96	50-150
Trichloroethene	ug/L (ppb)	10	2.0	92	50-150
1,2-Dichloropropane	ug/L (ppb)	10	<1	83	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	102	50-150
Dibromomethane	ug/L (ppb)	10	<1	99	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	89	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	84	50-150
Toluene	ug/L (ppb)	10	<1	96	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	82	50-150
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	94	50-150
2-Hexanone	ug/L (ppb)	50	<10	77	50-150
1,3-Dichloropropane	ug/L (ppb)	10	<1	90	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	109	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	96	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	97	50-150
Chlorobenzene	ug/L (ppb)	10	<1	96	50-150
Ethylbenzene	ug/L (ppb)	10	<1	96	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	102	50-150
m,p-Xylene	ug/L (ppb)	20	<2	98	50-150
o-Xylene	ug/L (ppb)	10	<1	97	50-150
Styrene	ug/L (ppb)	10	<1	95	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	97	50-150
Bromoform	ug/L (ppb)	10	<5	92	50-150
n-Propylbenzene	ug/L (ppb)	10	<1	89	50-150
Bromobenzene	ug/L (ppb)	10	<1	86	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	92	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	89	50-150
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	85	50-150
2-Chlorotoluene	ug/L (ppb)	10	<1	89	50-150
4-Chlorotoluene	ug/L (ppb)	10	<1	82	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	89	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	89	50-150
sec-Butylbenzene	ug/L (ppb)	10	<1	88	50-150
p-Isopropyltoluene	ug/L (ppb)	10	<1	93	50-150
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	90	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	91	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	89	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	86	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	87	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	82	50-150
Naphthalene	ug/L (ppb)	10	<1	85	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	90	50-150

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/21/22

Date Received: 01/13/22

Project: 4-Corners Cleaners 17-126, F&BI 201161

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	10	92	89	46-206	3
Chloromethane	ug/L (ppb)	10	82	84	70-142	2
Vinyl chloride	ug/L (ppb)	10	97	97	70-130	0
Bromomethane	ug/L (ppb)	10	108	107	56-197	1
Chloroethane	ug/L (ppb)	10	102	102	70-130	0
Trichlorofluoromethane	ug/L (ppb)	10	106	104	70-130	2
Acetone	ug/L (ppb)	50	72	71	10-140	1
1,1-Dichloroethene	ug/L (ppb)	10	90	91	70-130	1
Hexane	ug/L (ppb)	10	80	80	54-136	0
Methylene chloride	ug/L (ppb)	10	68	69	43-134	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	91	91	70-130	0
trans-1,2-Dichloroethene	ug/L (ppb)	10	95	96	70-130	1
1,1-Dichloroethane	ug/L (ppb)	10	91	91	70-130	0
2,2-Dichloropropane	ug/L (ppb)	10	142 vo	135 vo	70-130	5
cis-1,2-Dichloroethene	ug/L (ppb)	10	98	98	70-130	0
Chloroform	ug/L (ppb)	10	96	99	70-130	3
2-Butanone (MEK)	ug/L (ppb)	50	88	77	17-154	13
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	95	95	70-130	0
1,1,1-Trichloroethane	ug/L (ppb)	10	99	99	70-130	0
1,1-Dichloropropene	ug/L (ppb)	10	89	90	70-130	1
Carbon tetrachloride	ug/L (ppb)	10	100	98	70-130	2
Benzene	ug/L (ppb)	10	93	92	70-130	1
Trichloroethene	ug/L (ppb)	10	91	91	70-130	0
1,2-Dichloropropane	ug/L (ppb)	10	83	78	70-130	6
Bromodichloromethane	ug/L (ppb)	10	83	88	70-130	6
Dibromomethane	ug/L (ppb)	10	94	100	70-130	6
4-Methyl-2-pentanone	ug/L (ppb)	50	92	94	68-130	2
cis-1,3-Dichloropropene	ug/L (ppb)	10	88	86	69-131	2
Toluene	ug/L (ppb)	10	98	97	70-130	1
trans-1,3-Dichloropropene	ug/L (ppb)	10	90	87	70-130	3
1,1,2-Trichloroethane	ug/L (ppb)	10	95	95	70-130	0
2-Hexanone	ug/L (ppb)	50	85	84	45-138	1
1,3-Dichloropropene	ug/L (ppb)	10	91	105	70-130	14
Tetrachloroethene	ug/L (ppb)	10	109	108	70-130	1
Dibromochloromethane	ug/L (ppb)	10	102	103	60-148	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	98	97	70-130	1
Chlorobenzene	ug/L (ppb)	10	101	100	70-130	1
Ethylbenzene	ug/L (ppb)	10	100	100	70-130	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	101	100	70-130	1
m,p-Xylene	ug/L (ppb)	20	101	101	70-130	0
o-Xylene	ug/L (ppb)	10	100	100	70-130	0
Styrene	ug/L (ppb)	10	100	100	70-130	0
Isopropylbenzene	ug/L (ppb)	10	101	101	70-130	0
Bromoform	ug/L (ppb)	10	101	100	69-138	1
n-Propylbenzene	ug/L (ppb)	10	94	94	70-130	0
Bromobenzene	ug/L (ppb)	10	92	90	70-130	2
1,3,5-Trimethylbenzene	ug/L (ppb)	10	96	97	70-130	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	93	93	70-130	0
1,2,3-Trichloropropane	ug/L (ppb)	10	91	89	70-130	2
2-Chlorotoluene	ug/L (ppb)	10	97	95	70-130	2
4-Chlorotoluene	ug/L (ppb)	10	91	89	70-130	2
tert-Butylbenzene	ug/L (ppb)	10	96	93	70-130	3
1,2,4-Trimethylbenzene	ug/L (ppb)	10	96	94	70-130	2
sec-Butylbenzene	ug/L (ppb)	10	97	95	70-130	2
p-Isopropyltoluene	ug/L (ppb)	10	100	99	70-130	1
1,3-Dichlorobenzene	ug/L (ppb)	10	95	94	70-130	1
1,4-Dichlorobenzene	ug/L (ppb)	10	96	95	70-130	1
1,2-Dichlorobenzene	ug/L (ppb)	10	96	94	70-130	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	90	89	70-130	1
1,2,4-Trichlorobenzene	ug/L (ppb)	10	95	95	70-130	0
Hexachlorobutadiene	ug/L (ppb)	10	99	96	70-130	3
Naphthalene	ug/L (ppb)	10	93	92	70-130	1
1,2,3-Trichlorobenzene	ug/L (ppb)	10	97	95	70-130	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

$A_{01}/v_{01}/v_{s1}$

SAMPLE DISPOSAL
 Dispose after 30 days
 Archive Samples
 Other _____

[illegible]

Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>[Signature]</i>	Tony Rehmick	AGG/DA6	1/17/22	
Received by: <i>[Signature]</i>	Ann Weber	FRB	1/13/22	1:37
Relinquished by:				
Received by:		Samples received at		6:00



Libby Environmental, Inc.

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

Phone (360) 352-2110 • libbyenv@gmail.com

July 13, 2023

Scott Rose

AEG an Atlas Geosciences NW Company

2633 Parkmont Lane SW, Suite A

Olympia, WA 98502

RE: 4 Corners Cleaners

Work Order Number: L23G015

Enclosed are the results of analyses for samples received by our laboratory on 7/7/2023.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry Chilcutt", is written over a light gray rectangular background.

Sherry Chilcutt
Senior Chemist

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506

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

Client: AEG

Address: 2633 Parkmount Lane SW, Suite A

City: Olympia State: WA Zip: 98502

Phone: (360) 352-9835 Fax: (360) 352-8164

Client Project # 17-126

Date: 7/7/23

Page: 1 of 1

Project Manager: Scott Rose

Project Name: 4 Corners Cleaners

Location: 23886 Se Kent-Kangley Rd City, State: Maple Valley, WA

Collector: Aimee Rixe Date of Collection: 7/7/23

Email: Srose@AEGWA.com

Page 2 of 10



Sample Number	Depth	Time	Sample Type	Container Type	PCETCE w/ Daughter P												Field Notes
1 MW-1	—	1045	GW	VOA	X												
2 MW-2	—	1018	↓	↓	X												
3 MW-3	—	0856	↓	↓	X												
4 MW-5	—	0935	↓	↓	X												
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

Relinquished by: <u>[Signature]</u> Date / Time: <u>7/7/23 @ 1300</u>	Received by: <u>[Signature]</u> Date / Time: <u>7-7-23 1300</u>	Sample Receipt Good Condition? Y N Temp. °C Seals Intact? Y N N/A Total Number of Containers: <u> </u>	Remarks: TAT: 24HR 48HR 5-DAY
Relinquished by: <u> </u> Date / Time: <u> </u>	Received by: <u> </u> Date / Time: <u> </u>		
Relinquished by: <u> </u> Date / Time: <u> </u>	Received by: <u> </u> Date / Time: <u> </u>		
Relinquished by: <u> </u> Date / Time: <u> </u>	Received by: <u> </u> Date / Time: <u> </u>		



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23G015
Reported: 07/13/2023 16:07

Notes and Definitions

Item	Definition
RL	Reporting Limit
ND	Analyte NOT DETECTED at or above the reporting limit
DET	Analyte DETECTED at or above the reporting limit
Qual	Qualifier

All results reported on an "as received" basis unless indicated by "Dry"

Work Order Sample Summary

Lab ID	Sample	Matrix	Date Sampled	Date Received
L23G015-01	MW-1	Water	07/07/2023	07/07/2023
L23G015-02	MW-2	Water	07/07/2023	07/07/2023
L23G015-03	MW-3	Water	07/07/2023	07/07/2023
L23G015-04	MW-5	Water	07/07/2023	07/07/2023



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23G015
Reported: 07/13/2023 16:07

Sample Results

Client Sample ID: MW-1

Lab ID: L23G015-01 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	07/11/2023	AR
1,1-Dichloroethene	ND		0.50	ug/L	07/11/2023	AR
trans-1,2-Dichloroethene	ND		1.0	ug/L	07/11/2023	AR
cis-1,2-Dichloroethene	ND		1.0	ug/L	07/11/2023	AR
Trichloroethene (SIM)	ND		0.40	ug/L	07/11/2023	AR
Tetrachloroethene (SIM)	ND		1.0	ug/L	07/11/2023	AR
Surrogate: Dibromofluoromethane	105%		22.9-220		07/11/2023	AR
Surrogate: 1,2-Dichloroethane-d4	94.4%		32.2-196		07/11/2023	AR
Surrogate: Toluene-d8	97.8%		47.3-146		07/11/2023	AR
Surrogate: 4-Bromofluorobenzene	94.4%		38.4-136		07/11/2023	AR



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23G015
Reported: 07/13/2023 16:07

Sample Results (Continued)

Client Sample ID: MW-2

Lab ID: L23G015-02 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	07/11/2023	AR
1,1-Dichloroethene	ND		0.50	ug/L	07/11/2023	AR
trans-1,2-Dichloroethene	ND		1.0	ug/L	07/11/2023	AR
cis-1,2-Dichloroethene	ND		1.0	ug/L	07/11/2023	AR
Trichloroethene (SIM)	ND		0.40	ug/L	07/11/2023	AR
Tetrachloroethene (SIM)	ND		1.0	ug/L	07/11/2023	AR
Surrogate: Dibromofluoromethane	108%		22.9-220		07/11/2023	AR
Surrogate: 1,2-Dichloroethane-d4	95.8%		32.2-196		07/11/2023	AR
Surrogate: Toluene-d8	99.8%		47.3-146		07/11/2023	AR
Surrogate: 4-Bromofluorobenzene	89.0%		38.4-136		07/11/2023	AR



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23G015
Reported: 07/13/2023 16:07

Sample Results (Continued)

Client Sample ID: MW-3

Lab ID: L23G015-03 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	07/11/2023	AR
1,1-Dichloroethene	ND		0.50	ug/L	07/11/2023	AR
trans-1,2-Dichloroethene	ND		1.0	ug/L	07/11/2023	AR
cis-1,2-Dichloroethene	ND		1.0	ug/L	07/11/2023	AR
Trichloroethene (SIM)	ND		0.40	ug/L	07/11/2023	AR
Tetrachloroethene (SIM)	ND		1.0	ug/L	07/11/2023	AR
Surrogate: Dibromofluoromethane	111%		22.9-220		07/11/2023	AR
Surrogate: 1,2-Dichloroethane-d4	96.0%		32.2-196		07/11/2023	AR
Surrogate: Toluene-d8	102%		47.3-146		07/11/2023	AR
Surrogate: 4-Bromofluorobenzene	87.0%		38.4-136		07/11/2023	AR



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23G015
Reported: 07/13/2023 16:07

Sample Results (Continued)

Client Sample ID: MW-5

Lab ID: L23G015-04 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	07/11/2023	AR
1,1-Dichloroethene	ND		0.50	ug/L	07/11/2023	AR
trans-1,2-Dichloroethene	ND		1.0	ug/L	07/11/2023	AR
cis-1,2-Dichloroethene	ND		1.0	ug/L	07/11/2023	AR
Trichloroethene (SIM)	ND		0.40	ug/L	07/11/2023	AR
Tetrachloroethene (SIM)	ND		1.0	ug/L	07/11/2023	AR
Surrogate: Dibromofluoromethane	109%		22.9-220		07/11/2023	AR
Surrogate: 1,2-Dichloroethane-d4	99.3%		32.2-196		07/11/2023	AR
Surrogate: Toluene-d8	101%		47.3-146		07/11/2023	AR
Surrogate: 4-Bromofluorobenzene	92.8%		38.4-136		07/11/2023	AR



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23G015
Reported: 07/13/2023 16:07

Quality Control

Volatile Organic Compounds by EPA Method 8260D

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	------	----	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BXG0032 - VOA

Blank (BXG0032-BLK1)

Prepared & Analyzed: 7/11/2023

Vinyl Chloride (SIM)	ND		0.20	ug/L						
1,1-Dichloroethene	ND		0.50	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
Trichloroethene (SIM)	ND		0.40	ug/L						
Tetrachloroethene (SIM)	ND		1.0	ug/L						
Surrogate: Dibromofluoromethane			22.2	ug/L	20.0		111	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			20.2	ug/L	20.0		101	32.2-196		
Surrogate: Toluene-d8			20.4	ug/L	20.0		102	47.3-146		
Surrogate: 4-Bromofluorobenzene			18.2	ug/L	20.0		91.0	38.4-136		

LCS (BXG0032-BS1)

Prepared & Analyzed: 7/11/2023

Vinyl Chloride (SIM)	5.01		0.20	ug/L	5.00		100	44.2-183		
1,1-Dichloroethene	5.17		0.50	ug/L	5.00		103	39.6-181		
trans-1,2-Dichloroethene	4.82		1.0	ug/L	5.00		96.5	39.6-177		
cis-1,2-Dichloroethene	5.18		1.0	ug/L	5.00		104	29.5-182		
Trichloroethene (SIM)	4.57		0.40	ug/L	5.00		91.4	28.8-130		
Tetrachloroethene (SIM)	4.72		1.0	ug/L	5.00		94.5	30.4-159		
Surrogate: Dibromofluoromethane			21.5	ug/L	20.0		107	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			19.7	ug/L	20.0		98.6	32.2-196		
Surrogate: Toluene-d8			21.7	ug/L	20.0		108	47.3-146		
Surrogate: 4-Bromofluorobenzene			22.6	ug/L	20.0		113	38.4-136		

Duplicate (BXG0032-DUP1)

Parent: L23G023-02RE2

Prepared & Analyzed: 7/11/2023

Vinyl Chloride (SIM)	ND		0.20	ug/L		ND				35
1,1-Dichloroethene	ND		0.50	ug/L		ND				35
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
Trichloroethene (SIM)	ND		0.40	ug/L		ND				35
Tetrachloroethene (SIM)	ND		1.0	ug/L		ND				35
Surrogate: Dibromofluoromethane			22.4	ug/L	20.0		112	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			20.0	ug/L	20.0		100	32.2-196		
Surrogate: Toluene-d8			20.4	ug/L	20.0		102	47.3-146		
Surrogate: 4-Bromofluorobenzene			20.8	ug/L	20.0		104	38.4-136		



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23G015
Reported: 07/13/2023 16:07

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Duplicate (BXG0032-DUP2)		Parent: L23G015-01RE1			Prepared & Analyzed: 7/11/2023					
Vinyl Chloride (SIM)	ND		0.20	ug/L		ND				35
1,1-Dichloroethene	ND		0.50	ug/L		ND				35
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
Trichloroethene (SIM)	ND		0.40	ug/L		ND				35
Tetrachloroethene (SIM)	ND		1.0	ug/L		ND				35
Surrogate: Dibromofluoromethane			22.6	ug/L	20.0		113	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			20.0	ug/L	20.0		100	32.2-196		
Surrogate: Toluene-d8			20.3	ug/L	20.0		102	47.3-146		
Surrogate: 4-Bromofluorobenzene			17.2	ug/L	20.0		86.2	38.4-136		
Matrix Spike (BXG0032-MS1)		Parent: L23G023-02RE2			Prepared & Analyzed: 7/11/2023					
Vinyl Chloride (SIM)	5.10		0.20	ug/L	5.00	ND	102	10.7-223		
1,1-Dichloroethene	5.27		0.50	ug/L	5.00	ND	105	21.7-199		
trans-1,2-Dichloroethene	4.46		1.0	ug/L	5.00	ND	89.3	10-216		
cis-1,2-Dichloroethene	4.52		1.0	ug/L	5.00	ND	90.3	10-246		
Trichloroethene (SIM)	4.50		0.40	ug/L	5.00	ND	89.9	25.2-172		
Tetrachloroethene (SIM)	4.56		1.0	ug/L	5.00	ND	91.1	43.2-139		
Surrogate: Dibromofluoromethane			20.2	ug/L	20.0		101	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			18.8	ug/L	20.0		93.8	32.2-196		
Surrogate: Toluene-d8			19.9	ug/L	20.0		99.6	47.3-146		
Surrogate: 4-Bromofluorobenzene			22.7	ug/L	20.0		113	38.4-136		
Matrix Spike Dup (BXG0032-MSD1)		Parent: L23G023-02RE2			Prepared & Analyzed: 7/11/2023					
Vinyl Chloride (SIM)	5.23		0.20	ug/L	5.00	ND	105	10.7-223	2.46	35
1,1-Dichloroethene	5.45		0.50	ug/L	5.00	ND	109	21.7-199	3.28	35
trans-1,2-Dichloroethene	4.63		1.0	ug/L	5.00	ND	92.6	10-216	3.61	35
cis-1,2-Dichloroethene	4.87		1.0	ug/L	5.00	ND	97.3	10-246	7.46	35
Trichloroethene (SIM)	4.40		0.40	ug/L	5.00	ND	88.1	25.2-172	2.07	35
Tetrachloroethene (SIM)	4.34		1.0	ug/L	5.00	ND	86.7	43.2-139	4.95	35
Surrogate: Dibromofluoromethane			21.1	ug/L	20.0		105	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			19.5	ug/L	20.0		97.5	32.2-196		
Surrogate: Toluene-d8			20.2	ug/L	20.0		101	47.3-146		
Surrogate: 4-Bromofluorobenzene			22.0	ug/L	20.0		110	38.4-136		

Libby Environmental, Inc.

4 CORNERS CLEANERS PROJECT
AEG an Atlas Geosciences NW Company
Libby Project # L23G015

Date Received 7/7/2023

Time Received 1:00 PM

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Received By SC

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☒ Yes | ☐ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>0.3 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>6.4 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 27, 2023

Scott Rose, Project Manager
AEG
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr Rose:

Included are the results from the testing of material submitted on October 18, 2023 from the 4-Corners Cleaners Maple Valley, WA 17-126, F&BI 310343 project. There are 11 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: AEG A/P
AEG1027R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 18, 2023 by Friedman & Bruya, Inc. from the AEG 4-Corners Cleaners Maple Valley, WA 17-126, F&BI 310343 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AEG</u>
310343 -01	VP-1
310343 -02	VP-2
310343 -03	VP-3
310343 -04	VP-4
310343 -05	SVE-IN

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-1	Client:	AEG
Date Received:	10/18/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	10/18/23	Lab ID:	310343-01 1/8.2
Date Analyzed:	10/19/23	Data File:	101915.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	97	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Vinyl chloride	<2.1	<0.82
trans-1,2-Dichloroethene	<3.3	<0.82
cis-1,2-Dichloroethene	<3.3	<0.82
Trichloroethene	2.1	0.39
Tetrachloroethene	130	19

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-2	Client:	AEG
Date Received:	10/18/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	10/18/23	Lab ID:	310343-02 1/5.4
Date Analyzed:	10/19/23	Data File:	101913.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.4	<0.54
trans-1,2-Dichloroethene	<2.1	<0.54
cis-1,2-Dichloroethene	<2.1	<0.54
Trichloroethene	<0.58	<0.11
Tetrachloroethene	<37	<5.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-3	Client:	AEG
Date Received:	10/18/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	10/18/23	Lab ID:	310343-03 1/8.1
Date Analyzed:	10/20/23	Data File:	101916.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<2.1	<0.81
trans-1,2-Dichloroethene	<3.2	<0.81
cis-1,2-Dichloroethene	<3.2	<0.81
Trichloroethene	<0.87	<0.16
Tetrachloroethene	190	28

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VP-4	Client:	AEG
Date Received:	10/18/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	10/18/23	Lab ID:	310343-04 1/4.8
Date Analyzed:	10/19/23	Data File:	101914.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<1.2	<0.48
trans-1,2-Dichloroethene	<1.9	<0.48
cis-1,2-Dichloroethene	<1.9	<0.48
Trichloroethene	<0.52	<0.096
Tetrachloroethene	60	8.9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SVE-IN	Client:	AEG
Date Received:	10/18/23	Project:	4-Corners Cleaners Maple Valley
Date Collected:	10/18/23	Lab ID:	310343-05 1/7.6
Date Analyzed:	10/20/23	Data File:	101918.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	98	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Vinyl chloride	<1.9	<0.76
trans-1,2-Dichloroethene	<3	<0.76
cis-1,2-Dichloroethene	<3	<0.76
Trichloroethene	<0.82	<0.15
Tetrachloroethene	<52	<7.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	AEG
Date Received:	Not Applicable	Project:	4-Corners Cleaners Maple Valley
Date Collected:	Not Applicable	Lab ID:	03-2424 mb
Date Analyzed:	10/19/23	Data File:	101912.D
Matrix:	Air	Instrument:	GCMS8
Units:	ug/m3	Operator:	bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration	
	ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
Trichloroethene	<0.11	<0.02
Tetrachloroethene	<6.8	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/27/23

Date Received: 10/18/23

Project: 4-Corners Cleaners Maple Valley, WA 17-126, F&BI 310343

Date Extracted: 10/27/23

Date Analyzed: 10/27/23

**RESULTS FROM THE ANALYSIS OF AIR SAMPLES
FOR HELIUM USING METHOD ASTM D1946**

Results Reported as % Helium

<u>Sample ID</u> Laboratory ID	<u>Helium</u>
VP-1 310343-01	<0.6
VP-2 310343-02	<0.6
VP-3 310343-03	<0.6
VP-4 310343-04	0.9
Method Blank 03-2560 MB	<0.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/27/23

Date Received: 10/18/23

Project: 4-Corners Cleaners Maple Valley, WA 17-126, F&BI 310343

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR VOLATILES BY METHOD TO-15**

Laboratory Code: 310343-05 1/7.6 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<1.9	<1.9	nm
trans-1,2-Dichloroethene	ug/m3	<3	<3	nm
cis-1,2-Dichloroethene	ug/m3	<3	<3	nm
Trichloroethene	ug/m3	<0.82	<0.82	nm
Tetrachloroethene	ug/m3	<52	<52	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	86	70-130
trans-1,2-Dichloroethene	ug/m3	54	102	70-130
cis-1,2-Dichloroethene	ug/m3	54	97	70-130
Trichloroethene	ug/m3	73	96	70-130
Tetrachloroethene	ug/m3	92	107	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/27/23

Date Received: 10/18/23

Project: 4-Corners Cleaners Maple Valley, WA 17-126, F&BI 310343

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES
FOR HELIUM
USING METHOD ASTM D1946**

Laboratory Code: 310275-01 (Duplicate)

Analyte	Sample Result (%)	Duplicate Result (%)	Relative Percent Difference	Acceptance Criteria
Helium	<0.6	<0.6	nm	0-20

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

310343

SAMPLE CHAIN OF CUSTODY

10/18/23

Page # of

Report To SCOTT ROSECompany ACG-ATLASAddress 2633 PARKMONI LANE SW SUITE ACity, State, ZIP OLYMPIA, WA 98522Phone 360-352-9835 Email scott@acginc.com

SAMPLERS (Signature)

PROJECT NAME & ADDRESS

Y-CORNER'S CLEANERS
maple valley, wa

PO #

17-126

NOTES:

PCE/TCE & DNAPLs MONITORED

INVOICE TO

ACG

TURNAROUND TIME

Standard RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Default: Clean following

final report delivery

Hold (Fee may apply):

SAMPLE INFORMATION

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
VP-1	01	9560	204	IA / (SG)	10/18/23	30"	11:17	5"	11:19	X	X	X	X	X	
VP Pte-2	02	8529	204	IA / (SG)	10/18/23	29"	10:04	5"	10:12	X	X	X	X	X	
VP Pte-3	03	4180	203	IA / (SG)	10/18/23	30"	10:54	5"	11:02	X	X	X	X	X	
VP-4	04	8528	225	IA / (SG)	10/18/23	30"	10:32	5"	10:42	X	X	X	X	X	
SG SUE-TN	05	8232	201	IA / (SG)	10/18/23	20"	11:36	4"	11:44	X	X	X	X	X	
				IA / SG											
				IA / SG											
				IA / SG											

Samples received at 21 °C

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Friedman & Bruya, Inc.
5500 4th Avenue South

Seattle, WA 98108

Ph. (206) 285-8282

Fax (206) 283-5044

Relinquished by:

[Signature]

TONY BARNICK

OHG/AGS

10/18/23

Received by:

Relinquished by:

ANH PHAN

F83

10/18/23

14:05

Received by:



Libby Environmental, Inc.

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

Phone (360) 352-2110 • libbyenv@gmail.com

December 08, 2023

Scott Rose

AEG an Atlas Geosciences NW Company

2633 Parkmont Lane SW, Suite A

Olympia, WA 98502

RE: 4 Corners Cleaners

Work Order Number: L23K097

Enclosed are the results of analyses for samples received by our laboratory on 11/21/2023.

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

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

Sincerely,

Sherry Chilcutt
Senior Chemist

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE

Ph: 360-352-2110

Olympia, WA 98506

Fax: 360-352-4154

Date: 11/21/23

Page: 1 of 1

Client: AEG Atlas, LLC

Project Manager: Scott Rose

Address: 2633 Parkmont Ln SW, Ste A

Project Name: 4 Corners Cleaners

City: Olympia

State: WA

Zip: 98507

Location: 23886 SE Kent-Kangley Rd City, State: Maple Valley, WA

Phone: 360-352-9835

Fax: _____

Collector: Paul Ditch

Date of Collection: 11/19/23 - 11/20/23

Client Project # 17-126

Email: SROSE@AEGWA.COM

Sample Number	Depth	Time	Sample Type	Container Type													Field Notes	Collection Date
					VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270		
1 B-14-3	3	0915	Soil	15, 2V	X													11/19/23
2 B-15-3	3	0925			X													
3 B-16-3	3	0940			X													
4 B-17-5	5	0935															Hold	11/20/23
5 B-17-10	10	0950			X												Hold	
6 B-17-15	15	0955			X													
7 B-17-20	20	1020			X													
8 B-17-25	25	1040			X													
9 B-17-30	30	1045															Hold	
10 B-18-5	5	1220			X												Hold	
11 B-18-10	10	1230			X												Hold	
12 B-18-15	15	1240			X													
13 B-19-5	5	1330															Hold	
14 B-19-10	10	1335															Hold	
15 B-19-15	15	1350															Hold	
16 B-19-18	18	1420			X												Hold	
17																		

Relinquished by: Paul Ditch	Date / Time: 11/21/23 (A13)	Received by: Jodie Chapman	Date / Time: 11/21/23 1413	Sample Receipt Good Condition? Y N Cooler Temp. °C Sample Temp. °C		Remarks: 12-1-23 Added per Paul via email. 2 Day TAT TAT: 1-Day 2-Day 5-DAY
Relinquished by:	Date / Time:	Received by:	Date / Time:	Total Number of Containers		
Relinquished by:	Date / Time:	Received by:	Date / Time:			



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Project: 4 Corners Cleaners
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City/State: Maple Valley, WA
Work Order: L23K097
Reported: 12/08/2023 16:53

Notes and Definitions

Item	Definition
R	High Relative Percent Difference observed.
S1	Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
S3	Outlying spike recovery observed (high bias). Analyte will be qualified with a ** if detected.
RL	Reporting Limit
ND	Analyte NOT DETECTED at or above the reporting limit
DET	Analyte DETECTED at or above the reporting limit
Qual	Qualifier
All results reported on an "as received" basis unless indicated by "Dry"	
RPD	Relative Percent Difference
%REC	Percent Recovery
Parent	Sample that was matrix spiked or duplicated

Work Order Sample Summary

Lab ID	Sample	Matrix	Date Sampled	Date Received
L23K097-01	B-14-3	Soil	11/19/2023	11/21/2023
L23K097-02	B-15-3	Soil	11/19/2023	11/21/2023
L23K097-03	B-16-3	Soil	11/19/2023	11/21/2023
L23K097-04	B-17-5	Soil	11/20/2023	11/21/2023
L23K097-05	B-17-10	Soil	11/20/2023	11/21/2023
L23K097-06	B-17-15	Soil	11/20/2023	11/21/2023
L23K097-07	B-17-20	Soil	11/20/2023	11/21/2023
L23K097-08	B-17-25	Soil	11/20/2023	11/21/2023
L23K097-09	B-17-30	Soil	11/20/2023	11/21/2023
L23K097-10	B-18-5	Soil	11/20/2023	11/21/2023
L23K097-11	B-18-10	Soil	11/20/2023	11/21/2023
L23K097-12	B-18-15	Soil	11/20/2023	11/21/2023
L23K097-13	B-19-5	Soil	11/20/2023	11/21/2023
L23K097-14	B-19-10	Soil	11/20/2023	11/21/2023
L23K097-15	B-19-15	Soil	11/20/2023	11/21/2023
L23K097-16	B-19-18	Soil	11/20/2023	11/21/2023



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City/State: Maple Valley, WA
Work Order: L23K097
Reported: 12/08/2023 16:53

Libby Environmental Sample Detection Summary

Analyte	Result	Qual	Units	RL	Method
Sample: B-14-3			Lab#: L23K097-01		
Tetrachloroethene (PCE)	0.024		mg/kg dry	0.012	8260D
Sample: B-15-3			Lab#: L23K097-02		
Tetrachloroethene (PCE)	0.014		mg/kg dry	0.011	8260D
Sample: B-16-3			Lab#: L23K097-03		
Tetrachloroethene (PCE)	0.012		mg/kg dry	0.012	8260D
Sample: B-17-10			Lab#: L23K097-05		
Tetrachloroethene (PCE)	0.025		mg/kg dry	0.016	8260D
Sample: B-17-15			Lab#: L23K097-06		
Tetrachloroethene (PCE)	0.020		mg/kg dry	0.019	8260D
Sample: B-17-20			Lab#: L23K097-07		
Tetrachloroethene (PCE)	0.073		mg/kg dry	0.013	8260D
Tetrachloroethene (PCE)	0.089		mg/kg dry	0.013	8260D
Sample: B-18-10			Lab#: L23K097-11		
Tetrachloroethene (PCE)	0.013		mg/kg dry	0.013	8260D
Sample: B-18-15			Lab#: L23K097-12		
Tetrachloroethene (PCE)	0.022		mg/kg dry	0.013	8260D
Sample: B-19-18			Lab#: L23K097-16		
Tetrachloroethene (PCE)	0.042		mg/kg dry	0.011	8260D

Note: If no entry is made, then no target compounds were detected.



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City/State: Maple Valley, WA
Work Order: L23K097
Reported: 12/08/2023 16:53

Sample Results

Client Sample ID: B-14-3

Lab ID: L23K097-01 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.012	mg/kg dry	11/29/2023	PB
1,1-Dichloroethene	ND		0.029	mg/kg dry	11/29/2023	PB
trans-1,2-Dichloroethene	ND		0.017	mg/kg dry	11/29/2023	PB
cis-1,2-Dichloroethene	ND		0.017	mg/kg dry	11/29/2023	PB
Trichloroethene (SIM)	ND		0.012	mg/kg dry	11/29/2023	PB
Tetrachloroethene (PCE)	0.024		0.012	mg/kg dry	11/29/2023	PB
Surrogate: Dibromofluoromethane	128%		22.9-220		11/29/2023	PB
Surrogate: 1,2-Dichloroethane-d4	159%		32.2-196		11/29/2023	PB
Surrogate: Toluene-d8	114%		47.3-146		11/29/2023	PB
Surrogate: 4-Bromofluorobenzene	91.4%		38.4-136		11/29/2023	PB
<u>Moisture by ASTM D2216-19</u>						
Moisture	4.5		0.50	%	11/22/2023	JC



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Work Order: L23K097
Reported: 12/08/2023 16:53

Sample Results (Continued)

Client Sample ID: B-15-3

Lab ID: L23K097-02 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.011	mg/kg dry	11/29/2023	PB
1,1-Dichloroethene	ND		0.028	mg/kg dry	11/29/2023	PB
trans-1,2-Dichloroethene	ND		0.017	mg/kg dry	11/29/2023	PB
cis-1,2-Dichloroethene	ND		0.017	mg/kg dry	11/29/2023	PB
Trichloroethene (SIM)	ND		0.011	mg/kg dry	11/29/2023	PB
Tetrachloroethene (PCE)	0.014		0.011	mg/kg dry	11/29/2023	PB
Surrogate: Dibromofluoromethane	122%		22.9-220		11/29/2023	PB
Surrogate: 1,2-Dichloroethane-d4	158%		32.2-196		11/29/2023	PB
Surrogate: Toluene-d8	109%		47.3-146		11/29/2023	PB
Surrogate: 4-Bromofluorobenzene	86.4%		38.4-136		11/29/2023	PB
<u>Moisture by ASTM D2216-19</u>						
Moisture	3.6		0.50	%	11/22/2023	JC



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Work Order: L23K097
Reported: 12/08/2023 16:53

Sample Results (Continued)

Client Sample ID: B-16-3

Lab ID: L23K097-03 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.012	mg/kg dry	11/29/2023	PB
1,1-Dichloroethene	ND		0.029	mg/kg dry	11/29/2023	PB
trans-1,2-Dichloroethene	ND		0.018	mg/kg dry	11/29/2023	PB
cis-1,2-Dichloroethene	ND		0.018	mg/kg dry	11/29/2023	PB
Trichloroethene (SIM)	ND		0.012	mg/kg dry	11/29/2023	PB
Tetrachloroethene (PCE)	0.012		0.012	mg/kg dry	11/29/2023	PB
Surrogate: Dibromofluoromethane	173%		22.9-220		11/29/2023	PB
Surrogate: 1,2-Dichloroethane-d4	154%		32.2-196		11/29/2023	PB
Surrogate: Toluene-d8	103%		47.3-146		11/29/2023	PB
Surrogate: 4-Bromofluorobenzene	81.4%		38.4-136		11/29/2023	PB
<u>Moisture by ASTM D2216-19</u>						
Moisture	5.0		0.50	%	11/22/2023	JC



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Work Order: L23K097
Reported: 12/08/2023 16:53

Sample Results (Continued)

Client Sample ID: B-17-10

Lab ID: L23K097-05 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (VC)	ND		0.016	mg/kg dry	12/04/2023	AA
1,1-Dichloroethene	ND		0.040	mg/kg dry	12/04/2023	AA
trans-1,2-Dichloroethene	ND		0.024	mg/kg dry	12/04/2023	AA
cis-1,2-Dichloroethene	ND		0.024	mg/kg dry	12/04/2023	AA
Trichloroethene (TCE)	ND		0.016	mg/kg dry	12/04/2023	AA
Tetrachloroethene (PCE)	0.025		0.016	mg/kg dry	12/04/2023	AA
Surrogate: Dibromofluoromethane	104%		22.9-220		12/04/2023	AA
Surrogate: 1,2-Dichloroethane-d4	118%		32.2-196		12/04/2023	AA
Surrogate: Toluene-d8	110%		47.3-146		12/04/2023	AA
Surrogate: 4-Bromofluorobenzene	98.6%		38.4-136		12/04/2023	AA
<u>Moisture by ASTM D2216-19</u>						
Moisture	16		0.50	%	12/05/2023	AA



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City/State: Maple Valley, WA
Work Order: L23K097
Reported: 12/08/2023 16:53

Sample Results (Continued)

Client Sample ID: B-17-15

Lab ID: L23K097-06 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.019	mg/kg dry	11/29/2023	PB
1,1-Dichloroethene	ND		0.048	mg/kg dry	11/29/2023	PB
trans-1,2-Dichloroethene	ND		0.029	mg/kg dry	11/29/2023	PB
cis-1,2-Dichloroethene	ND		0.029	mg/kg dry	11/29/2023	PB
Trichloroethene (SIM)	ND		0.019	mg/kg dry	11/29/2023	PB
Tetrachloroethene (PCE)	0.020		0.019	mg/kg dry	11/29/2023	PB
Surrogate: Dibromofluoromethane	109%		22.9-220		11/29/2023	PB
Surrogate: 1,2-Dichloroethane-d4	135%		32.2-196		11/29/2023	PB
Surrogate: Toluene-d8	104%		47.3-146		11/29/2023	PB
Surrogate: 4-Bromofluorobenzene	85.1%		38.4-136		11/29/2023	PB
<u>Moisture by ASTM D2216-19</u>						
Moisture	23		0.50	%	11/22/2023	JC



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City/State: Maple Valley, WA
Work Order: L23K097
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Sample Results (Continued)

Client Sample ID: B-17-20

Lab ID: L23K097-07 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.013	mg/kg dry	11/29/2023	PB
Vinyl Chloride (VC)	ND		0.013	mg/kg dry	12/04/2023	AA
1,1-Dichloroethene	ND		0.033	mg/kg dry	11/29/2023	PB
1,1-Dichloroethene	ND		0.033	mg/kg dry	12/04/2023	AA
trans-1,2-Dichloroethene	ND		0.020	mg/kg dry	11/29/2023	PB
trans-1,2-Dichloroethene	ND		0.020	mg/kg dry	12/04/2023	AA
cis-1,2-Dichloroethene	ND		0.020	mg/kg dry	11/29/2023	PB
cis-1,2-Dichloroethene	ND		0.020	mg/kg dry	12/04/2023	AA
Trichloroethene (SIM)	ND		0.013	mg/kg dry	11/29/2023	PB
Trichloroethene (TCE)	ND		0.013	mg/kg dry	12/04/2023	AA
Tetrachloroethene (PCE)	0.073		0.013	mg/kg dry	11/29/2023	PB
Tetrachloroethene (PCE)	0.089		0.013	mg/kg dry	12/04/2023	AA
Surrogate: Dibromofluoromethane	117%		22.9-220		11/29/2023	PB
Surrogate: Dibromofluoromethane	103%		22.9-220		12/04/2023	AA
Surrogate: 1,2-Dichloroethane-d4	136%		32.2-196		11/29/2023	PB
Surrogate: 1,2-Dichloroethane-d4	117%		32.2-196		12/04/2023	AA
Surrogate: Toluene-d8	109%		47.3-146		11/29/2023	PB
Surrogate: Toluene-d8	107%		47.3-146		12/04/2023	AA
Surrogate: 4-Bromofluorobenzene	79.4%		38.4-136		11/29/2023	PB
Surrogate: 4-Bromofluorobenzene	92.6%		38.4-136		12/04/2023	AA
<u>Moisture by ASTM D2216-19</u>						
Moisture	9.3		0.50	%	11/22/2023	JC



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Work Order: L23K097
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Sample Results (Continued)

Client Sample ID: B-17-25

Lab ID: L23K097-08 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.017	mg/kg dry	11/29/2023	PB
1,1-Dichloroethene	ND		0.043	mg/kg dry	11/29/2023	PB
trans-1,2-Dichloroethene	ND		0.026	mg/kg dry	11/29/2023	PB
cis-1,2-Dichloroethene	ND		0.026	mg/kg dry	11/29/2023	PB
Trichloroethene (SIM)	ND		0.017	mg/kg dry	11/29/2023	PB
Tetrachloroethene (PCE)	ND		0.017	mg/kg dry	11/29/2023	PB
Surrogate: Dibromofluoromethane	110%		22.9-220		11/29/2023	PB
Surrogate: 1,2-Dichloroethane-d4	136%		32.2-196		11/29/2023	PB
Surrogate: Toluene-d8	109%		47.3-146		11/29/2023	PB
Surrogate: 4-Bromofluorobenzene	90.0%		38.4-136		11/29/2023	PB
<u>Moisture by ASTM D2216-19</u>						
Moisture	19		0.50	%	11/22/2023	JC



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Sample Results (Continued)

Client Sample ID: B-18-10

Lab ID: L23K097-11 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (VC)	ND		0.013	mg/kg dry	12/04/2023	AA
1,1-Dichloroethene	ND		0.032	mg/kg dry	12/04/2023	AA
trans-1,2-Dichloroethene	ND		0.019	mg/kg dry	12/04/2023	AA
cis-1,2-Dichloroethene	ND		0.019	mg/kg dry	12/04/2023	AA
Trichloroethene (TCE)	ND		0.013	mg/kg dry	12/04/2023	AA
Tetrachloroethene (PCE)	0.013		0.013	mg/kg dry	12/04/2023	AA
Surrogate: Dibromofluoromethane	106%		22.9-220		12/04/2023	AA
Surrogate: 1,2-Dichloroethane-d4	117%		32.2-196		12/04/2023	AA
Surrogate: Toluene-d8	110%		47.3-146		12/04/2023	AA
Surrogate: 4-Bromofluorobenzene	98.6%		38.4-136		12/04/2023	AA
<u>Moisture by ASTM D2216-19</u>						
Moisture	8.5		0.50	%	12/05/2023	AA



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Work Order: L23K097
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Sample Results (Continued)

Client Sample ID: B-18-15

Lab ID: L23K097-12 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.013	mg/kg dry	11/29/2023	PB
1,1-Dichloroethene	ND		0.033	mg/kg dry	11/29/2023	PB
trans-1,2-Dichloroethene	ND		0.020	mg/kg dry	11/29/2023	PB
cis-1,2-Dichloroethene	ND		0.020	mg/kg dry	11/29/2023	PB
Trichloroethene (SIM)	ND		0.013	mg/kg dry	11/29/2023	PB
Tetrachloroethene (PCE)	0.022		0.013	mg/kg dry	11/29/2023	PB
Surrogate: Dibromofluoromethane	130%		22.9-220		11/29/2023	PB
Surrogate: 1,2-Dichloroethane-d4	154%		32.2-196		11/29/2023	PB
Surrogate: Toluene-d8	108%		47.3-146		11/29/2023	PB
Surrogate: 4-Bromofluorobenzene	89.2%		38.4-136		11/29/2023	PB
<u>Moisture by ASTM D2216-19</u>						
Moisture	9.6		0.50	%	11/22/2023	JC



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Sample Results (Continued)

Client Sample ID: B-19-18

Lab ID: L23K097-16 (Soil)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (VC)	ND		0.011	mg/kg dry	12/04/2023	AA
1,1-Dichloroethene	ND		0.029	mg/kg dry	12/04/2023	AA
trans-1,2-Dichloroethene	ND		0.017	mg/kg dry	12/04/2023	AA
cis-1,2-Dichloroethene	ND		0.017	mg/kg dry	12/04/2023	AA
Trichloroethene (TCE)	ND		0.011	mg/kg dry	12/04/2023	AA
Tetrachloroethene (PCE)	0.042		0.011	mg/kg dry	12/04/2023	AA
Surrogate: Dibromofluoromethane	98.2%		22.9-220		12/04/2023	AA
Surrogate: 1,2-Dichloroethane-d4	113%		32.2-196		12/04/2023	AA
Surrogate: Toluene-d8	106%		47.3-146		12/04/2023	AA
Surrogate: 4-Bromofluorobenzene	96.9%		38.4-136		12/04/2023	AA
<u>Moisture by ASTM D2216-19</u>						
Moisture	4.7		0.50	%	12/05/2023	AA



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23K097
Reported: 12/08/2023 16:53

Quality Control

Volatile Organic Compounds by EPA Method 8260D

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BXK0121 - VOA

Blank (BXK0121-BLK1)

Prepared & Analyzed: 11/29/2023

Vinyl Chloride (SIM)	ND		0.020	mg/kg wet						
1,1-Dichloroethene	ND		0.050	mg/kg wet						
trans-1,2-Dichloroethene	ND		0.030	mg/kg wet						
cis-1,2-Dichloroethene	ND		0.030	mg/kg wet						
Trichloroethene (SIM)	ND		0.020	mg/kg wet						
Tetrachloroethene (PCE)	ND		0.020	mg/kg wet						
Surrogate: Dibromofluoromethane			23.4	ug/L	20.0		117	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			29.8	ug/L	20.0		149	32.2-196		
Surrogate: Toluene-d8			21.1	ug/L	20.0		105	47.3-146		
Surrogate: 4-Bromofluorobenzene			17.8	ug/L	20.0		89.0	38.4-136		

LCS (BXK0121-BS1)

Prepared & Analyzed: 11/29/2023

Vinyl Chloride (VC)	0.436		0.10	mg/kg wet	0.250		174	29.9-188		
1,1-Dichloroethene	0.483	S3	0.050	mg/kg wet	0.250		193	39.6-181		
trans-1,2-Dichloroethene	0.429		0.030	mg/kg wet	0.250		172	39.6-177		
cis-1,2-Dichloroethene	0.289		0.030	mg/kg wet	0.250		116	29.5-182		
Trichloroethene (SIM)	0.283		0.020	mg/kg wet	0.250		113	28.8-130		
Tetrachloroethene (PCE)	0.161		0.020	mg/kg wet	0.250		64.3	53.1-167		
Surrogate: Dibromofluoromethane			21.7	ug/L	20.0		109	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			25.0	ug/L	20.0		125	32.2-196		
Surrogate: Toluene-d8			22.9	ug/L	20.0		114	47.3-146		
Surrogate: 4-Bromofluorobenzene			20.5	ug/L	20.0		103	38.4-136		

Matrix Spike (BXK0121-MS1)

Parent: L23K097-07

Prepared & Analyzed: 11/29/2023

Vinyl Chloride (SIM)	0.332		0.013	mg/kg dry	0.164	ND	203	30.4-218		
1,1-Dichloroethene	0.336	S1	0.033	mg/kg dry	0.164	ND	205	44.2-190		
trans-1,2-Dichloroethene	0.235		0.020	mg/kg dry	0.164	ND	144	35.2-199		
cis-1,2-Dichloroethene	0.205		0.020	mg/kg dry	0.164	ND	125	36.9-180		
Trichloroethene (SIM)	0.202		0.013	mg/kg dry	0.164	ND	124	43-151		
Tetrachloroethene (PCE)	0.160		0.013	mg/kg dry	0.164	0.0735	53.1	10-217		
Surrogate: Dibromofluoromethane			21.2	ug/L	20.0		106	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			25.9	ug/L	20.0		129	32.2-196		
Surrogate: Toluene-d8			22.8	ug/L	20.0		114	47.3-146		
Surrogate: 4-Bromofluorobenzene			20.7	ug/L	20.0		103	38.4-136		



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23K097
Reported: 12/08/2023 16:53

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike Dup (BXK0121-MSD1)		Parent: L23K097-07		Prepared & Analyzed: 11/29/2023						
Vinyl Chloride (SIM)	0.352	S1	0.013	mg/kg dry	0.164	ND	215	30.4-218	5.98	35
1,1-Dichloroethene	0.350		0.033	mg/kg dry	0.164	ND	214	44.2-190	3.99	35
trans-1,2-Dichloroethene	0.287		0.020	mg/kg dry	0.164	ND	176	35.2-199	20.1	35
cis-1,2-Dichloroethene	0.202		0.020	mg/kg dry	0.164	ND	123	36.9-180	1.79	35
Trichloroethene (SIM)	0.195		0.013	mg/kg dry	0.164	ND	119	43-151	3.69	35
Tetrachloroethene (PCE)	0.185		0.013	mg/kg dry	0.164	0.0735	68.3	10-217	14.4	35
Surrogate: Dibromofluoromethane			21.7	ug/L	20.0		109	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			28.8	ug/L	20.0		144	32.2-196		
Surrogate: Toluene-d8			22.2	ug/L	20.0		111	47.3-146		
Surrogate: 4-Bromofluorobenzene			20.7	ug/L	20.0		104	38.4-136		
Blank (BXL0012-BLK1)		Prepared & Analyzed: 12/4/2023								
Vinyl Chloride (VC)	ND		0.10	mg/kg wet						
1,1-Dichloroethene	ND		0.050	mg/kg wet						
trans-1,2-Dichloroethene	ND		0.030	mg/kg wet						
cis-1,2-Dichloroethene	ND		0.030	mg/kg wet						
Trichloroethene (TCE)	ND		0.020	mg/kg wet						
Tetrachloroethene (PCE)	ND		0.10	mg/kg wet						
Surrogate: Dibromofluoromethane			22.9	ug/L	20.0		115	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			23.0	ug/L	20.0		115	32.2-196		
Surrogate: Toluene-d8			20.7	ug/L	20.0		104	47.3-146		
Surrogate: 4-Bromofluorobenzene			17.1	ug/L	20.0		85.3	38.4-136		
LCS (BXL0012-BS1)		Prepared & Analyzed: 12/4/2023								
Vinyl Chloride (VC)	0.192		0.10	mg/kg wet	0.250		76.7	29.9-188		
1,1-Dichloroethene	0.282		0.050	mg/kg wet	0.250		113	39.6-181		
trans-1,2-Dichloroethene	0.254		0.030	mg/kg wet	0.250		102	39.6-177		
cis-1,2-Dichloroethene	0.276		0.030	mg/kg wet	0.250		110	29.5-182		
Trichloroethene (TCE)	0.222		0.020	mg/kg wet	0.250		88.6	59.1-140		
Tetrachloroethene (PCE)	0.238		0.10	mg/kg wet	0.250		95.1	53.1-167		
Surrogate: Dibromofluoromethane			22.6	ug/L	20.0		113	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			23.9	ug/L	20.0		119	32.2-196		
Surrogate: Toluene-d8			21.6	ug/L	20.0		108	47.3-146		
Surrogate: 4-Bromofluorobenzene			21.1	ug/L	20.0		106	38.4-136		



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23K097
Reported: 12/08/2023 16:53

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Duplicate (BXL0012-DUP1)		Parent: L23K097-07RE1			Prepared & Analyzed: 12/4/2023					
Vinyl Chloride (VC)	ND		0.065	mg/kg dry		ND				35
1,1-Dichloroethene	ND		0.033	mg/kg dry		ND				35
trans-1,2-Dichloroethene	ND		0.020	mg/kg dry		ND				35
cis-1,2-Dichloroethene	ND		0.020	mg/kg dry		ND				35
Trichloroethene (TCE)	ND		0.013	mg/kg dry		ND				35
Tetrachloroethene (PCE)	0.0163	R	0.013	mg/kg dry		0.0892			138	35
Surrogate: Dibromofluoromethane			20.8	ug/L	20.0		104	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			23.3	ug/L	20.0		117	32.2-196		
Surrogate: Toluene-d8			21.8	ug/L	20.0		109	47.3-146		
Surrogate: 4-Bromofluorobenzene			19.5	ug/L	20.0		97.4	38.4-136		
Matrix Spike (BXL0012-MS1)		Parent: L23K097-05			Prepared & Analyzed: 12/4/2023					
Vinyl Chloride (VC)	0.234		0.080	mg/kg dry	0.200	ND	117	10-220		
1,1-Dichloroethene	0.226		0.040	mg/kg dry	0.200	ND	113	44.2-190		
trans-1,2-Dichloroethene	0.265		0.024	mg/kg dry	0.200	ND	132	35.2-199		
cis-1,2-Dichloroethene	0.284		0.024	mg/kg dry	0.200	ND	142	36.9-180		
Trichloroethene (TCE)	0.238		0.016	mg/kg dry	0.200	ND	119	14.3-183		
Tetrachloroethene (PCE)	0.288		0.080	mg/kg dry	0.200	0.0250	132	10-217		
Surrogate: Dibromofluoromethane			18.9	ug/L	20.0		94.5	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			21.6	ug/L	20.0		108	32.2-196		
Surrogate: Toluene-d8			20.4	ug/L	20.0		102	47.3-146		
Surrogate: 4-Bromofluorobenzene			21.9	ug/L	20.0		110	38.4-136		



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L23K097
Reported: 12/08/2023 16:53

Quality Control (Continued)

Moisture by ASTM D2216-19

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BXX0119 - Gen Chem

LCS (BXX0119-BS1)

Moisture	18			%	17.0		105	90-115		
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Prepared & Analyzed: 11/22/2023

LCS (BXL0017-BS1)

Moisture	18			%	17.0		105	90-115		
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Prepared & Analyzed: 12/5/2023

Libby Environmental, Inc.

4 Corners Cleaners Project
AEG an Atlas Geosciences NW Company
Libby Work Order # L23K097

Date Received 11/21/2023

Time Received 2:13 PM

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Received By JC

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☒ Yes | ☐ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>3.7 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>5.0 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.



Libby Environmental, Inc.

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

Phone (360) 352-2110 • libbyenv@gmail.com

January 09, 2024

Scott Rose

AEG an Atlas Geosciences NW Company

2633 Parkmont Lane SW, Suite A

Olympia, WA 98502

RE: 4 Corners Cleaners

Work Order Number: L24A010

Enclosed are the results of analyses for samples received by our laboratory on 1/3/2024.

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

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

Sincerely,

Sherry Chilcutt
Senior Chemist

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506

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

Client: AEG

Address: 2633 Parkmount Lane SW, Suite A

City: Olympia State: WA Zip: 98502

Phone: (360) 352-9835 Fax: (360) 352-8164

Client Project # 17-126

Date: 12³⁰ 01/03/24

Page: 1 of 1

Project Manager: Scott Rose

Project Name: 4 Corners Cleaners

Location: 23886 Se Kent-Kangley Rd City, State: Maple Valley, WA

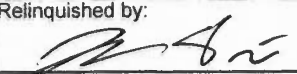
Collector: Jonah Davis

Date of Collection: 01/03/24

Email: Srose@AEGWA.com

Page 2 of 10

		Depth	Time	Sample Type	Container Type	PCE/TCE w/ Daughter P...										Field Notes				
Sample Number																				
1	MU-1	—	0852	G	Vials	X														
2	MU-2	—	0918	↓	↓	X														
3	MU-3	—	1016	↓	↓	X														
4	MU-5	—	0915	↓	↓	X														
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time	Sample Receipt		Remarks:
	01/03/24 B		1.3.24 1/45	Good Condition?	Y N	
Relinquished by:	Date / Time	Received by:	Date / Time	Temp.	°C	
Relinquished by:	Date / Time	Received by:	Date / Time	Seals Intact?	Y N N/A	
Relinquished by:	Date / Time	Received by:	Date / Time	Total Number of Containers		

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

TAT: 24HR 48HR 5(DAY)
Distribution: White - Lab, Yellow - File, Pink - Originator



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24A010
Reported: 01/09/2024 10:09

Notes and Definitions

Item	Definition
RL	Reporting Limit
ND	Analyte NOT DETECTED at or above the reporting limit
DET	Analyte DETECTED at or above the reporting limit
Qual	Qualifier

All results reported on an "as received" basis unless indicated by "Dry"

Work Order Sample Summary

Lab ID	Sample	Matrix	Date Sampled	Date Received
L24A010-01	MW-1	Water	01/03/2024	01/03/2024
L24A010-02	MW-2	Water	01/03/2024	01/03/2024
L24A010-03	MW-3	Water	01/03/2024	01/03/2024
L24A010-04	MW-5	Water	01/03/2024	01/03/2024



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24A010
Reported: 01/09/2024 10:09

Sample Results

Client Sample ID: MW-1

Lab ID: L24A010-01 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	01/04/2024	PB
1,1-Dichloroethene	ND		0.50	ug/L	01/04/2024	PB
trans-1,2-Dichloroethene	ND		1.0	ug/L	01/04/2024	PB
cis-1,2-Dichloroethene	ND		1.0	ug/L	01/04/2024	PB
Trichloroethene (SIM)	ND		0.40	ug/L	01/04/2024	PB
Tetrachloroethene (SIM)	ND		1.0	ug/L	01/04/2024	PB
Surrogate: Dibromofluoromethane	123%		22.9-220		01/04/2024	PB
Surrogate: 1,2-Dichloroethane-d4	123%		32.2-196		01/04/2024	PB
Surrogate: Toluene-d8	90.6%		47.3-146		01/04/2024	PB
Surrogate: 4-Bromofluorobenzene	89.4%		38.4-136		01/04/2024	PB



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24A010
Reported: 01/09/2024 10:09

Sample Results (Continued)

Client Sample ID: MW-2

Lab ID: L24A010-02 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	01/04/2024	PB
1,1-Dichloroethene	ND		0.50	ug/L	01/04/2024	PB
trans-1,2-Dichloroethene	ND		1.0	ug/L	01/04/2024	PB
cis-1,2-Dichloroethene	ND		1.0	ug/L	01/04/2024	PB
Trichloroethene (SIM)	ND		0.40	ug/L	01/04/2024	PB
Tetrachloroethene (SIM)	ND		1.0	ug/L	01/04/2024	PB
Surrogate: Dibromofluoromethane	127%		22.9-220		01/04/2024	PB
Surrogate: 1,2-Dichloroethane-d4	127%		32.2-196		01/04/2024	PB
Surrogate: Toluene-d8	91.0%		47.3-146		01/04/2024	PB
Surrogate: 4-Bromofluorobenzene	87.6%		38.4-136		01/04/2024	PB



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24A010
Reported: 01/09/2024 10:09

Sample Results (Continued)

Client Sample ID: MW-3

Lab ID: L24A010-03 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	01/04/2024	PB
1,1-Dichloroethene	ND		0.50	ug/L	01/04/2024	PB
trans-1,2-Dichloroethene	ND		1.0	ug/L	01/04/2024	PB
cis-1,2-Dichloroethene	ND		1.0	ug/L	01/04/2024	PB
Trichloroethene (SIM)	ND		0.40	ug/L	01/04/2024	PB
Tetrachloroethene (SIM)	ND		1.0	ug/L	01/04/2024	PB
Surrogate: Dibromofluoromethane	111%		22.9-220		01/04/2024	PB
Surrogate: 1,2-Dichloroethane-d4	117%		32.2-196		01/04/2024	PB
Surrogate: Toluene-d8	78.4%		47.3-146		01/04/2024	PB
Surrogate: 4-Bromofluorobenzene	86.5%		38.4-136		01/04/2024	PB



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24A010
Reported: 01/09/2024 10:09

Sample Results (Continued)

Client Sample ID: MW-5

Lab ID: L24A010-04 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	01/04/2024	PB
1,1-Dichloroethene	ND		0.50	ug/L	01/04/2024	PB
trans-1,2-Dichloroethene	ND		1.0	ug/L	01/04/2024	PB
cis-1,2-Dichloroethene	ND		1.0	ug/L	01/04/2024	PB
Trichloroethene (SIM)	ND		0.40	ug/L	01/04/2024	PB
Tetrachloroethene (SIM)	ND		1.0	ug/L	01/04/2024	PB
Surrogate: Dibromofluoromethane	118%		22.9-220		01/04/2024	PB
Surrogate: 1,2-Dichloroethane-d4	123%		32.2-196		01/04/2024	PB
Surrogate: Toluene-d8	80.2%		47.3-146		01/04/2024	PB
Surrogate: 4-Bromofluorobenzene	85.1%		38.4-136		01/04/2024	PB



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24A010
Reported: 01/09/2024 10:09

Quality Control

Volatile Organic Compounds by EPA Method 8260D

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BYA0025 - VOA

Blank (BYA0025-BLK1)

Prepared & Analyzed: 1/4/2024

Vinyl Chloride (SIM)	ND		0.20	ug/L						
1,1-Dichloroethene	ND		0.50	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
Trichloroethene (SIM)	ND		0.40	ug/L						
Tetrachloroethene (SIM)	ND		1.0	ug/L						
Surrogate: Dibromofluoromethane			25.1	ug/L	20.0		126	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			26.4	ug/L	20.0		132	32.2-196		
Surrogate: Toluene-d8			17.9	ug/L	20.0		89.7	47.3-146		
Surrogate: 4-Bromofluorobenzene			17.3	ug/L	20.0		86.7	38.4-136		

LCS (BYA0025-BS1)

Prepared & Analyzed: 1/4/2024

Vinyl Chloride (SIM)	5.78		0.20	ug/L	5.00		116	44.2-183		
1,1-Dichloroethene	7.42		0.50	ug/L	5.00		148	39.6-181		
trans-1,2-Dichloroethene	6.84		1.0	ug/L	5.00		137	39.6-177		
cis-1,2-Dichloroethene	6.96		1.0	ug/L	5.00		139	29.5-182		
Trichloroethene (SIM)	4.91		0.40	ug/L	5.00		98.2	28.8-130		
Tetrachloroethene (SIM)	4.72		1.0	ug/L	5.00		94.5	30.4-159		
Surrogate: Dibromofluoromethane			23.6	ug/L	20.0		118	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			23.0	ug/L	20.0		115	32.2-196		
Surrogate: Toluene-d8			18.8	ug/L	20.0		94.1	47.3-146		
Surrogate: 4-Bromofluorobenzene			19.6	ug/L	20.0		98.0	38.4-136		

Duplicate (BYA0025-DUP1)

Parent: L24A012-05

Prepared & Analyzed: 1/4/2024

Vinyl Chloride (SIM)	ND		0.20	ug/L		ND				35
1,1-Dichloroethene	ND		0.50	ug/L		ND				35
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
Trichloroethene (SIM)	ND		0.40	ug/L		ND				35
Tetrachloroethene (SIM)	ND		1.0	ug/L		ND				35
Surrogate: Dibromofluoromethane			23.6	ug/L	20.0		118	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			25.6	ug/L	20.0		128	32.2-196		
Surrogate: Toluene-d8			18.6	ug/L	20.0		92.8	47.3-146		
Surrogate: 4-Bromofluorobenzene			18.2	ug/L	20.0		90.8	38.4-136		



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24A010
Reported: 01/09/2024 10:09

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike (BYA0025-MS1)		Parent: L24A012-05			Prepared & Analyzed: 1/4/2024					
Vinyl Chloride (SIM)	5.60		0.20	ug/L	5.00	ND	112	10.7-223		
1,1-Dichloroethene	6.99		0.50	ug/L	5.00	ND	140	21.7-199		
trans-1,2-Dichloroethene	6.54		1.0	ug/L	5.00	ND	131	10-216		
cis-1,2-Dichloroethene	6.62		1.0	ug/L	5.00	ND	132	10-246		
Trichloroethene (SIM)	4.85		0.40	ug/L	5.00	ND	97.0	25.2-172		
Tetrachloroethene (SIM)	4.57		1.0	ug/L	5.00	ND	91.4	43.2-139		
Surrogate: Dibromofluoromethane			23.2	ug/L	20.0		116	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			23.8	ug/L	20.0		119	32.2-196		
Surrogate: Toluene-d8			18.5	ug/L	20.0		92.6	47.3-146		
Surrogate: 4-Bromofluorobenzene			19.5	ug/L	20.0		97.4	38.4-136		
Matrix Spike Dup (BYA0025-MSD1)		Parent: L24A012-05			Prepared & Analyzed: 1/4/2024					
Vinyl Chloride (SIM)	5.46		0.20	ug/L	5.00	ND	109	10.7-223	2.46	35
1,1-Dichloroethene	6.87		0.50	ug/L	5.00	ND	137	21.7-199	1.72	35
trans-1,2-Dichloroethene	6.45		1.0	ug/L	5.00	ND	129	10-216	1.35	35
cis-1,2-Dichloroethene	6.55		1.0	ug/L	5.00	ND	131	10-246	1.14	35
Trichloroethene (SIM)	4.61		0.40	ug/L	5.00	ND	92.2	25.2-172	5.01	35
Tetrachloroethene (SIM)	4.45		1.0	ug/L	5.00	ND	88.9	43.2-139	2.68	35
Surrogate: Dibromofluoromethane			23.6	ug/L	20.0		118	22.9-220		
Surrogate: 1,2-Dichloroethane-d4			24.8	ug/L	20.0		124	32.2-196		
Surrogate: Toluene-d8			18.4	ug/L	20.0		92.1	47.3-146		
Surrogate: 4-Bromofluorobenzene			19.8	ug/L	20.0		99.0	38.4-136		

Libby Environmental, Inc.

4 Corners Cleaners Project
AEG an Atlas Geosciences NW Company
Libby Work Order # L24A010

Date Received 1/3/2024

Time Received 11:45 AM

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Received By AA

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☒ Yes | ☐ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>-0.4 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>10.0 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.



Libby Environmental, Inc.

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

Phone (360) 352-2110 • libbyenv@gmail.com

April 23, 2024

Scott Rose

AEG an Atlas Geosciences NW Company

2633 Parkmont Lane SW, Suite A

Olympia, WA 98502

RE: 4 Corners Cleaners

Work Order Number: L24D083

Enclosed are the results of analyses for samples received by our laboratory on 4/19/2024.

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

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

Sincerely,

Sherry Chilcutt
Senior Chemist

www.LibbyEnvironmental.com

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

Page: 1 of 1

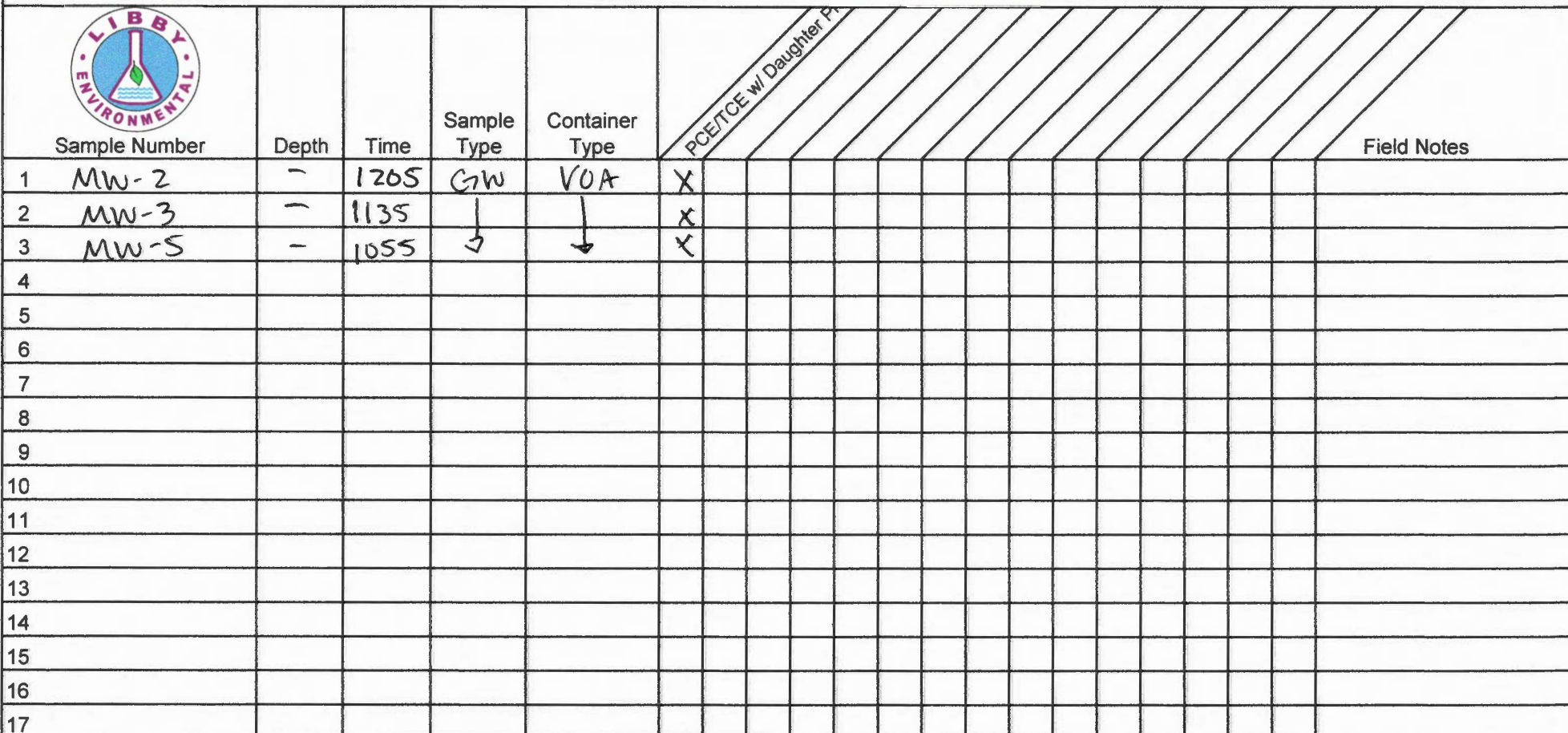
Project Manager: Scott Rose

Project Name: 4 Corners Cleaners

Location: 23886 Se Kent-Kangley Rd City, State: Maple Valley, WA

Collector: Aimee Rike Date of Collection: 4/19/24

Email: Srose@AEGWA.com



Remarks:

Total Number of Containers	
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TAT: 24HR 48HR 5-DAY

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

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



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24D083
Reported: 04/23/2024 12:18

Notes and Definitions

Item	Definition
RL	Reporting Limit
ND	Analyte NOT DETECTED at or above the reporting limit
DET	Analyte DETECTED at or above the reporting limit
Qual	Qualifier
All results reported on an "as received" basis unless indicated by "Dry"	

Work Order Sample Summary

Lab ID	Sample	Matrix	Date Sampled	Date Received
L24D083-01	MW-2	Water	04/19/2024	04/19/2024
L24D083-02	MW-3	Water	04/19/2024	04/19/2024
L24D083-03	MW-5	Water	04/19/2024	04/19/2024



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24D083
Reported: 04/23/2024 12:18

Sample Results

Client Sample ID: MW-2

Lab ID: L24D083-01 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	04/22/2024	AA
1,1-Dichloroethene	ND		0.50	ug/L	04/22/2024	AA
trans-1,2-Dichloroethene	ND		1.0	ug/L	04/22/2024	AA
cis-1,2-Dichloroethene	ND		1.0	ug/L	04/22/2024	AA
Trichloroethene (SIM)	ND		0.40	ug/L	04/22/2024	AA
Tetrachloroethene (SIM)	ND		1.0	ug/L	04/22/2024	AA
Surrogate: Dibromofluoromethane	104%		49.6-175		04/22/2024	AA
Surrogate: 1,2-Dichloroethane-d4	107%		31.7-194		04/22/2024	AA
Surrogate: Toluene-d8	103%		52.9-135		04/22/2024	AA
Surrogate: 4-Bromofluorobenzene	97.1%		50.8-121		04/22/2024	AA



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24D083
Reported: 04/23/2024 12:18

Sample Results (Continued)

Client Sample ID: MW-3

Lab ID: L24D083-02 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	04/22/2024	AA
1,1-Dichloroethene	ND		0.50	ug/L	04/22/2024	AA
trans-1,2-Dichloroethene	ND		1.0	ug/L	04/22/2024	AA
cis-1,2-Dichloroethene	ND		1.0	ug/L	04/22/2024	AA
Trichloroethene (SIM)	ND		0.40	ug/L	04/22/2024	AA
Tetrachloroethene (SIM)	ND		1.0	ug/L	04/22/2024	AA
Surrogate: Dibromofluoromethane	106%		49.6-175		04/22/2024	AA
Surrogate: 1,2-Dichloroethane-d4	107%		31.7-194		04/22/2024	AA
Surrogate: Toluene-d8	104%		52.9-135		04/22/2024	AA
Surrogate: 4-Bromofluorobenzene	94.8%		50.8-121		04/22/2024	AA



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24D083
Reported: 04/23/2024 12:18

Sample Results (Continued)

Client Sample ID: MW-5

Lab ID: L24D083-03 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	04/22/2024	AA
1,1-Dichloroethene	ND		0.50	ug/L	04/22/2024	AA
trans-1,2-Dichloroethene	ND		1.0	ug/L	04/22/2024	AA
cis-1,2-Dichloroethene	ND		1.0	ug/L	04/22/2024	AA
Trichloroethene (SIM)	ND		0.40	ug/L	04/22/2024	AA
Tetrachloroethene (SIM)	ND		1.0	ug/L	04/22/2024	AA
Surrogate: Dibromofluoromethane	120%		49.6-175		04/22/2024	AA
Surrogate: 1,2-Dichloroethane-d4	124%		31.7-194		04/22/2024	AA
Surrogate: Toluene-d8	119%		52.9-135		04/22/2024	AA
Surrogate: 4-Bromofluorobenzene	95.7%		50.8-121		04/22/2024	AA



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24D083
Reported: 04/23/2024 12:18

Quality Control

Volatile Organic Compounds by EPA Method 8260D

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BYD0131 - VOA

Blank (BYD0131-BLK1)

Prepared & Analyzed: 4/22/2024

Vinyl Chloride (SIM)	ND		0.20	ug/L						
1,1-Dichloroethene	ND		0.50	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
Trichloroethene (SIM)	ND		0.40	ug/L						
Tetrachloroethene (SIM)	ND		1.0	ug/L						
Surrogate: Dibromofluoromethane			20.6	ug/L	20.0		103	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			21.2	ug/L	20.0		106	31.7-194		
Surrogate: Toluene-d8			21.1	ug/L	20.0		106	52.9-135		
Surrogate: 4-Bromofluorobenzene			19.4	ug/L	20.0		96.9	50.8-121		

LCS (BYD0131-BS1)

Prepared & Analyzed: 4/22/2024

Vinyl Chloride (VC)	3.84		2.0	ug/L	5.00		76.8	27.5-188		
1,1-Dichloroethene	4.74		0.50	ug/L	5.00		94.9	42.4-208		
trans-1,2-Dichloroethene	5.04		1.0	ug/L	5.00		101	37.7-200		
cis-1,2-Dichloroethene	4.89		1.0	ug/L	5.00		97.8	53.2-160		
Trichloroethene (TCE)	4.35		2.0	ug/L	5.00		86.9	63.3-132		
Tetrachloroethene (PCE)	4.49		2.0	ug/L	5.00		89.9	46.9-140		
Surrogate: Dibromofluoromethane			20.4	ug/L	20.0		102	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			21.5	ug/L	20.0		107	31.7-194		
Surrogate: Toluene-d8			21.2	ug/L	20.0		106	52.9-135		
Surrogate: 4-Bromofluorobenzene			22.7	ug/L	20.0		113	50.8-121		

Duplicate (BYD0131-DUP1)

Parent: L24D083-01

Prepared & Analyzed: 4/22/2024

Vinyl Chloride (SIM)	ND		0.20	ug/L		ND				35
1,1-Dichloroethene	ND		0.50	ug/L		ND				35
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
Trichloroethene (SIM)	ND		0.40	ug/L		ND				35
Tetrachloroethene (SIM)	ND		1.0	ug/L		ND				35
Surrogate: Dibromofluoromethane			21.5	ug/L	20.0		108	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			22.2	ug/L	20.0		111	31.7-194		
Surrogate: Toluene-d8			21.2	ug/L	20.0		106	52.9-135		
Surrogate: 4-Bromofluorobenzene			19.3	ug/L	20.0		96.6	50.8-121		



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24D083
Reported: 04/23/2024 12:18

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike (BYD0131-MS1)		Parent: L24D083-01			Prepared & Analyzed: 4/22/2024					
Vinyl Chloride (VC)	4.03		2.0	ug/L	5.00	ND	80.5	12.9-180		
1,1-Dichloroethene	4.63		0.50	ug/L	5.00	ND	92.6	39.1-203		
trans-1,2-Dichloroethene	4.72		1.0	ug/L	5.00	ND	94.3	40.5-190		
cis-1,2-Dichloroethene	5.26		1.0	ug/L	5.00	ND	105	28.9-177		
Trichloroethene (TCE)	4.20		2.0	ug/L	5.00	ND	83.9	58.3-130		
Tetrachloroethene (PCE)	4.96		2.0	ug/L	5.00	ND	99.3	32-159		
Surrogate: Dibromofluoromethane			20.8	ug/L	20.0		104	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			21.7	ug/L	20.0		109	31.7-194		
Surrogate: Toluene-d8			21.8	ug/L	20.0		109	52.9-135		
Surrogate: 4-Bromofluorobenzene			21.6	ug/L	20.0		108	50.8-121		
Matrix Spike Dup (BYD0131-MSD1)		Parent: L24D083-01			Prepared & Analyzed: 4/22/2024					
Vinyl Chloride (VC)	4.59		2.0	ug/L	5.00	ND	91.9	12.9-180	13.2	35
1,1-Dichloroethene	5.49		0.50	ug/L	5.00	ND	110	39.1-203	17.0	35
trans-1,2-Dichloroethene	5.93		1.0	ug/L	5.00	ND	119	40.5-190	22.9	35
cis-1,2-Dichloroethene	5.72		1.0	ug/L	5.00	ND	114	28.9-177	8.32	35
Trichloroethene (TCE)	4.79		2.0	ug/L	5.00	ND	95.8	58.3-130	13.2	35
Tetrachloroethene (PCE)	5.40		2.0	ug/L	5.00	ND	108	32-159	8.49	35
Surrogate: Dibromofluoromethane			21.1	ug/L	20.0		105	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			21.6	ug/L	20.0		108	31.7-194		
Surrogate: Toluene-d8			21.5	ug/L	20.0		108	52.9-135		
Surrogate: 4-Bromofluorobenzene			22.0	ug/L	20.0		110	50.8-121		

Libby Environmental, Inc.

4 Corners Cleaners Project
AEG an Atlas Geosciences NW Company
Libby Work Order # L24D083

Date Received 4/19/2024

Time Received 2:16 PM

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Received By KLI

Sample Receipt Checklist

Chain of Custody

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

Log In

3. Cooler or Shipping Container is present. ☒ Yes ☐ No ☐ N/A
4. Cooler or Shipping Container is in good condition. ☒ Yes ☐ No ☐ N/A
5. Cooler or Shipping Container has Custody Seals present. ☐ Yes ☒ No ☐ N/A
6. Was an attempt made to cool the samples? ☒ Yes ☐ No ☐ N/A
7. Temperature of cooler (0°C to 8°C recommended) 0.0 °C
8. Temperature of sample(s) (0°C to 8°C recommended) 3.5 °C
9. Did all containers arrive in good condition (unbroken)? ☒ Yes ☐ No
10. Is it clear what analyses were requested? ☒ Yes ☐ No
11. Did container labels match Chain of Custody? ☒ Yes ☐ No
12. Are matrices correctly identified on Chain of Custody? ☒ Yes ☐ No
13. Are correct containers used for the analysis indicated? ☒ Yes ☐ No
14. Is there sufficient sample volume for indicated analysis? ☒ Yes ☐ No
15. Were all containers properly preserved per each analysis? ☒ Yes ☐ No
16. Were VOA vials collected correctly (no headspace)? ☒ Yes ☐ No ☐ N/A
17. Were all holding times able to be met? ☒ Yes ☐ No

Discrepancies/ Notes

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

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.



Libby Environmental, Inc.

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

Phone (360) 352-2110 • libbyenv@gmail.com

July 09, 2024

Scott Rose

AEG an Atlas Geosciences NW Company

2633 Parkmont Lane SW, Suite A

Olympia, WA 98502

RE: 4 Corners Cleaners

Work Order Number: L24G004

Enclosed are the results of analyses for samples received by our laboratory on 7/2/2024.

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

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

Sincerely,

Sherry Chilcutt
Senior Chemist

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506

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

Client: **AEG**

Address: **2633 Parkmount Lane SW, Suite A**

City: **Olympia** State: **WA** Zip: **98502**

Phone: **(360) 352-9835** Fax: **(360) 352-8164**

Client Project # **17-126**

Date: **7/2/24**

Page: **1** of **1**

Project Manager: **Scott Rose**

Project Name: **4 Corners Cleaners**

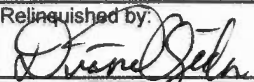
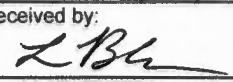
Location: **23886 Se Kent-Kangley Rd** City, State: **Maple Valley, WA**

Collector: **Diana Ojeda** Date of Collection: **7/2/24**

Email: Srose@AEGWA.com

Page 2 of 10

Sample Number	Depth	Time	Sample Type	Container Type	PCET/CE w/ Daughter P.												Field Notes
1 MW-1	-	0806	GW	VOA	X												
2 MW-2	-	0828	↓	↓	X												
3 MW-3	-	0926	↓	↓	X												
4 MW-5	-	0850	↓	↓	X												
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

Relinquished by: 	Date / Time: 7/2/24 1112	Received by: 	Date / Time: 7/2/24 11:15	Sample Receipt		Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:	Good Condition?	Y N	
				Temp.	°C	
				Seals Intact?	Y N N/A	
Relinquished by:	Date / Time:	Received by:	Date / Time:	Total Number of Containers		TAT: 24HR 48HR 5-DAY

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

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



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24G004
Reported: 07/09/2024 12:13

Notes and Definitions

Item	Definition
RL	Reporting Limit
ND	Analyte NOT DETECTED at or above the reporting limit
DET	Analyte DETECTED at or above the reporting limit
Qual	Qualifier

All results reported on an "as received" basis unless indicated by "Dry"

Work Order Sample Summary

Lab ID	Sample	Matrix	Date Sampled	Date Received
L24G004-01	MW-1	Water	07/02/2024	07/02/2024
L24G004-02	MW-2	Water	07/02/2024	07/02/2024
L24G004-03	MW-3	Water	07/02/2024	07/02/2024
L24G004-04	MW-5	Water	07/02/2024	07/02/2024



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24G004
Reported: 07/09/2024 12:13

Sample Results

Client Sample ID: MW-1

Lab ID: L24G004-01 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	07/02/2024	AA
1,1-Dichloroethene	ND		0.50	ug/L	07/02/2024	AA
trans-1,2-Dichloroethene	ND		1.0	ug/L	07/02/2024	AA
cis-1,2-Dichloroethene	ND		1.0	ug/L	07/02/2024	AA
Trichloroethene (SIM)	ND		0.40	ug/L	07/02/2024	AA
Tetrachloroethene (SIM)	ND		1.0	ug/L	07/02/2024	AA
Surrogate: Dibromofluoromethane	101%		49.6-175		07/02/2024	AA
Surrogate: 1,2-Dichloroethane-d4	104%		31.7-194		07/02/2024	AA
Surrogate: Toluene-d8	95.6%		52.9-135		07/02/2024	AA
Surrogate: 4-Bromofluorobenzene	91.0%		50.8-121		07/02/2024	AA



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24G004
Reported: 07/09/2024 12:13

Sample Results (Continued)

Client Sample ID: MW-2

Lab ID: L24G004-02 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	07/02/2024	AA
1,1-Dichloroethene	ND		0.50	ug/L	07/02/2024	AA
trans-1,2-Dichloroethene	ND		1.0	ug/L	07/02/2024	AA
cis-1,2-Dichloroethene	ND		1.0	ug/L	07/02/2024	AA
Trichloroethene (SIM)	ND		0.40	ug/L	07/02/2024	AA
Tetrachloroethene (SIM)	ND		1.0	ug/L	07/02/2024	AA
Surrogate: Dibromofluoromethane	104%		49.6-175		07/02/2024	AA
Surrogate: 1,2-Dichloroethane-d4	102%		31.7-194		07/02/2024	AA
Surrogate: Toluene-d8	93.6%		52.9-135		07/02/2024	AA
Surrogate: 4-Bromofluorobenzene	93.4%		50.8-121		07/02/2024	AA



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24G004
Reported: 07/09/2024 12:13

Sample Results (Continued)

Client Sample ID: MW-3

Lab ID: L24G004-03 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	07/02/2024	AA
1,1-Dichloroethene	ND		0.50	ug/L	07/02/2024	AA
trans-1,2-Dichloroethene	ND		1.0	ug/L	07/02/2024	AA
cis-1,2-Dichloroethene	ND		1.0	ug/L	07/02/2024	AA
Trichloroethene (SIM)	ND		0.40	ug/L	07/02/2024	AA
Tetrachloroethene (SIM)	ND		1.0	ug/L	07/02/2024	AA
Surrogate: Dibromofluoromethane	111%		49.6-175		07/02/2024	AA
Surrogate: 1,2-Dichloroethane-d4	109%		31.7-194		07/02/2024	AA
Surrogate: Toluene-d8	100%		52.9-135		07/02/2024	AA
Surrogate: 4-Bromofluorobenzene	91.3%		50.8-121		07/02/2024	AA



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24G004
Reported: 07/09/2024 12:13

Sample Results (Continued)

Client Sample ID: MW-5

Lab ID: L24G004-04 (Water)

Analyte	Result	Qual	RL	Units	Date Analyzed	Analyst Initials
<u>Volatile Organic Compounds by EPA Method 8260D</u>						
Vinyl Chloride (SIM)	ND		0.20	ug/L	07/02/2024	AA
1,1-Dichloroethene	ND		0.50	ug/L	07/02/2024	AA
trans-1,2-Dichloroethene	ND		1.0	ug/L	07/02/2024	AA
cis-1,2-Dichloroethene	ND		1.0	ug/L	07/02/2024	AA
Trichloroethene (SIM)	ND		0.40	ug/L	07/02/2024	AA
Tetrachloroethene (SIM)	ND		1.0	ug/L	07/02/2024	AA
Surrogate: Dibromofluoromethane	98.4%		49.6-175		07/02/2024	AA
Surrogate: 1,2-Dichloroethane-d4	98.6%		31.7-194		07/02/2024	AA
Surrogate: Toluene-d8	88.8%		52.9-135		07/02/2024	AA
Surrogate: 4-Bromofluorobenzene	87.5%		50.8-121		07/02/2024	AA



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24G004
Reported: 07/09/2024 12:13

Quality Control

Volatile Organic Compounds by EPA Method 8260D

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	------	----	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BYG0011 - VOA

Blank (BYG0011-BLK1)

Prepared & Analyzed: 7/2/2024

Vinyl Chloride (SIM)	ND		0.20	ug/L						
1,1-Dichloroethene	ND		0.50	ug/L						
trans-1,2-Dichloroethene	ND		1.0	ug/L						
cis-1,2-Dichloroethene	ND		1.0	ug/L						
Trichloroethene (SIM)	ND		0.40	ug/L						
Tetrachloroethene (SIM)	ND		1.0	ug/L						
Surrogate: Dibromofluoromethane			19.7	ug/L	20.0		98.4	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			19.3	ug/L	20.0		96.3	31.7-194		
Surrogate: Toluene-d8			17.6	ug/L	20.0		88.0	52.9-135		
Surrogate: 4-Bromofluorobenzene			18.2	ug/L	20.0		91.0	50.8-121		

LCS (BYG0011-BS1)

Prepared & Analyzed: 7/2/2024

Vinyl Chloride (VC)	5.39		2.0	ug/L	5.00		108	27.5-188		
1,1-Dichloroethene	5.15		0.50	ug/L	5.00		103	42.4-208		
trans-1,2-Dichloroethene	5.01		1.0	ug/L	5.00		100	37.7-200		
cis-1,2-Dichloroethene	4.70		1.0	ug/L	5.00		94.0	53.2-160		
Trichloroethene (TCE)	4.55		2.0	ug/L	5.00		91.0	63.3-132		
Tetrachloroethene (PCE)	4.77		2.0	ug/L	5.00		95.5	46.9-140		
Surrogate: Dibromofluoromethane			19.4	ug/L	20.0		96.8	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			20.0	ug/L	20.0		100	31.7-194		
Surrogate: Toluene-d8			18.2	ug/L	20.0		90.9	52.9-135		
Surrogate: 4-Bromofluorobenzene			21.4	ug/L	20.0		107	50.8-121		

Duplicate (BYG0011-DUP1)

Parent: L24G004-01

Prepared & Analyzed: 7/2/2024

Vinyl Chloride (SIM)	ND		0.20	ug/L		ND				35
1,1-Dichloroethene	ND		0.50	ug/L		ND				35
trans-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
cis-1,2-Dichloroethene	ND		1.0	ug/L		ND				35
Trichloroethene (SIM)	ND		0.40	ug/L		ND				35
Tetrachloroethene (SIM)	ND		1.0	ug/L		ND				35
Surrogate: Dibromofluoromethane			20.0	ug/L	20.0		100	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			19.8	ug/L	20.0		98.9	31.7-194		
Surrogate: Toluene-d8			18.2	ug/L	20.0		90.9	52.9-135		
Surrogate: 4-Bromofluorobenzene			17.3	ug/L	20.0		86.7	50.8-121		



Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Project: 4 Corners Cleaners
Project Number: 17-126
Project Manager: Scott Rose

City/State: Maple Valley, WA
Work Order: L24G004
Reported: 07/09/2024 12:13

Quality Control (Continued)

Volatile Organic Compounds by EPA Method 8260D (Continued)

Analyte	Result	Qual	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike (BYG0011-MS1)		Parent: L24G004-01			Prepared & Analyzed: 7/2/2024					
Vinyl Chloride (SIM)	5.14		0.20	ug/L	5.00	ND	103	12.9-183		
1,1-Dichloroethene	4.96		0.50	ug/L	5.00	ND	99.2	39.1-203		
trans-1,2-Dichloroethene	4.71		1.0	ug/L	5.00	ND	94.3	40.5-190		
cis-1,2-Dichloroethene	4.57		1.0	ug/L	5.00	ND	91.5	28.9-177		
Trichloroethene (TCE)	4.90		2.0	ug/L	5.00	ND	98.0	58.3-130		
Tetrachloroethene (PCE)	5.13		2.0	ug/L	5.00	ND	103	32-159		
Surrogate: Dibromofluoromethane			19.4	ug/L	20.0		96.8	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			19.6	ug/L	20.0		97.9	31.7-194		
Surrogate: Toluene-d8			18.3	ug/L	20.0		91.6	52.9-135		
Surrogate: 4-Bromofluorobenzene			21.6	ug/L	20.0		108	50.8-121		
Matrix Spike Dup (BYG0011-MSD1)		Parent: L24G004-01			Prepared & Analyzed: 7/2/2024					
Vinyl Chloride (VC)	4.48		2.0	ug/L	5.00	ND	89.7	12.9-180	0.998	35
1,1-Dichloroethene	4.84		0.50	ug/L	5.00	ND	96.8	39.1-203	2.49	35
trans-1,2-Dichloroethene	4.82		1.0	ug/L	5.00	ND	96.5	40.5-190	2.31	35
cis-1,2-Dichloroethene	4.59		1.0	ug/L	5.00	ND	91.8	28.9-177	0.371	35
Trichloroethene (TCE)	5.46		2.0	ug/L	5.00	ND	109	58.3-130	10.7	35
Tetrachloroethene (PCE)	5.28		2.0	ug/L	5.00	ND	106	32-159	2.75	35
Surrogate: Dibromofluoromethane			19.7	ug/L	20.0		98.3	49.6-175		
Surrogate: 1,2-Dichloroethane-d4			19.7	ug/L	20.0		98.4	31.7-194		
Surrogate: Toluene-d8			18.2	ug/L	20.0		91.2	52.9-135		
Surrogate: 4-Bromofluorobenzene			23.1	ug/L	20.0		116	50.8-121		

Libby Environmental, Inc.

4 Corners Cleaners Project
AEG an Atlas Geosciences NW Company
Libby Work Order # L24G004

Date Received 7/2/2024

Time Received 11:15 AM

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Received By LB

Sample Receipt Checklist

Chain of Custody

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

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | ☒ Yes | ☐ No | ☐ N/A |
| 4. Cooler or Shipping Container is in good condition. | ☒ Yes | ☐ No | ☐ N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | ☐ Yes | ☒ No | ☐ N/A |
| 6. Was an attempt made to cool the samples? | ☒ Yes | ☐ No | ☐ N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>0.3 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>5.1 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | ☒ Yes | ☐ No | |
| 10. Is it clear what analyses were requested? | ☒ Yes | ☐ No | |
| 11. Did container labels match Chain of Custody? | ☒ Yes | ☐ No | |
| 12. Are matrices correctly identified on Chain of Custody? | ☒ Yes | ☐ No | |
| 13. Are correct containers used for the analysis indicated? | ☒ Yes | ☐ No | |
| 14. Is there sufficient sample volume for indicated analysis? | ☒ Yes | ☐ No | |
| 15. Were all containers properly preserved per each analysis? | ☒ Yes | ☐ No | |
| 16. Were VOA vials collected correctly (no headspace)? | ☒ Yes | ☐ No | ☐ N/A |
| 17. Were all holding times able to be met? | ☒ Yes | ☐ No | |

Discrepancies/ Notes

- | | | | |
|---|------------------------------|-----------------------------|---|
| 18. Was client notified of all discrepancies? | ☐ Yes | ☐ No | ☒ N/A |
|---|------------------------------|-----------------------------|---|

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.

APPENDIX B

No Further Action Letter – NW2931
No Further Action Letter – NW2932



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

March 2, 2015

Mr. Mark Jenkins
Kite Realty Group
30 South Meridian Street, Suite 1100
Indianapolis, IN 46204

Re: No Further Action at the Following Site:

- **Name:** Four Corners Cleaners Original Location
- **Address:** 23900 Kent-Kangley Road, Maple Valley, WA
- **Facility/Site No.:** 98451692
- **Cleanup Site ID No.:** 12512
- **VCP No.:** NW2931

Dear Mr. Jenkins:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Four Corners Cleaners Original Location facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is based on information and data provided in the Remedial Action Report dated August 22, 2014. The report documents the remedial activities that have addressed contamination in soil at the Site due to operations of the former dry cleaning facility.

This opinion is also based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.



Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following releases:

- Perchloroethylene (PCE), Trichloroethene (TCE), cis-1,2-Dichloroethene (cis-1,2-DCE), and trans-1,2-Dichloroethene (trans-1, 2-DCE) into Soil.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. The Riley Group, Inc., August 22, 2014, Remedial Action Report.
2. The Riley Group, Inc., February 26, 2014, Addendum to 2012 Additional Subsurface Investigation Report.
3. The Riley Group, Inc., September 28, 2012, Additional Subsurface Investigation Report.
4. The Riley Group, Inc., May 9, 2012, Phase I Environmental Site Assessment Update.
5. The Riley Group, Inc., December 7, 2004, Supplemental Phase II Subsurface Investigation.
6. The Riley Group, Inc., September 30, 2003, Phase I Environmental Site Assessment.

Those documents listed above are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by calling the NWRO resource contact at (425) 649-7235 or by sending an email to nwro_public_request@ecy.wa.gov.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to further clean up the contaminated soil at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined characterization of the Site is sufficient to establish cleanup standards and select cleanup actions for removal of the contaminated soil exceeding MTCA Method A cleanup levels and confirmation of the groundwater quality.

- a. Site assessments conducted at this Site from 1989 to 2014 confirmed the presence of chemicals of concern (COCs) as aforementioned in soil. The studies also concluded that the contamination resulted from operations of the former dry cleaning facility.
- b. Following completion of Site characterization, cleanup actions were conducted in August 2014. The remedial activities included excavation of approximately 134 tons of impacted soil at two locations (Figure 3), collection of confirmation soil samples in both of the excavations and transport of the soil to Columbia Ridge Subtitle D Landfill for disposal.
- c. Laboratory analysis results of the soil samples collected from the bottoms and sidewalls of the two excavations (Figure 3) confirmed that the contaminated soil exceeding MTCA Method A cleanup levels has been cleaned up at this Site.
- d. Soil vapor measurement was conducted in two soil borings with PCE during the site characterization in 2004. The study concluded that there was no soil vapor pathway existing at this Site.
- e. Ground water encountered in the monitoring wells at approximately 21 feet bgs was analyzed during Site assessment activities. None of the samples contained COCs at concentrations exceeding MTCA Method A cleanup levels. Ground water was not present in either of the two excavations at the maximum depth of approximately seven feet bgs, which is about 14 feet above the ground water table. Ground water at this Site was unlikely impacted by releases due to operations of the facility.

2. Establishment of cleanup standards.

a. Substance-specific standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

Cleanup levels for soil contamination at this Site are defined as the MTCA Method A cleanup levels, which are classified for unrestricted land use.

Cleanup levels for ground water contamination at this Site are defined as the MTCA Method A cleanup levels.

b. Action and location-specific requirements.

The requirements to clean up this Site included removal and disposal of the contaminated soil exceeding the MTCA Method A cleanup levels.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

- a. Investigations were conducted to characterize the Site, and remediation was performed later to remove contaminated soil which was disposed of at an appropriate facility.
- b. Confirmation soil samples were collected for laboratory analysis at the bottoms and sidewalls of the two excavations. The results indicated the concentrations of COCs were either undetectable, or below the MTCA Method A cleanup levels.
- c. Ground water was detected for the COCs at concentrations below the MTCA Method A cleanup levels for unrestricted land use.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site at MTCA Method A cleanup levels for all the COCs aforementioned. This determination is based on the performances specified below.

- a. PCE, TCE, cis-1,2-DCE, and trans-1,2-DCE-contaminated soils exceeding MTCA Method A cleanup levels were excavated; a total of approximately 134 tons of the soil was disposed of at a subtitle D landfill. The follow up soil confirmation sample analysis concluded that completion of soil removal to undetectable, or below MTCA Method A cleanup levels was achieved.
- b. Laboratory results demonstrated the ground water had not been impacted due to operation of the former dry cleaning facility.

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from our lists of hazardous waste sites, including:

- Confirmed and Suspected Contaminated Sites List.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

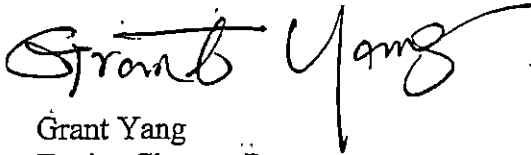
Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project #NW2931.

Mr. Mark Jenkins
March 2, 2015
Page 6

For more information about the VCP and the cleanup process, please visit our web site:
www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion
or the termination of the Agreement, please contact me by phone at (425) 649-7126 or e-mail at
gyan461@ecy.wa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Grant Yang". The signature is fluid and cursive, with the first name "Grant" and the last name "Yang" clearly distinguishable.

Grant Yang
Toxics Cleanup Program

Enclosures: A - Site Description
B - Site Diagrams

cc: Jerry Sawetz, The Riley Group, Inc.
Sonia Fernandez, VCP Coordinator, Ecology
Dolores Mitchell, VCP Financial Manager, Ecology

Site Description

This enclosure provides Ecology's understanding and interpretation of Site conditions and forms part of the basis for the opinion expressed in the letter.

Site: The Site is located at 23886 Kent-Kangley Road in Maple Valley, WA (Property) (see Figure 1) and consists of PCE, TCE, and DCE contamination in soil. The Property covers King County tax parcel number 2722069086.

Area and Property Description: The Property is located in a mixed commercial and residential area with a size of less than 5,000 square feet (< 1 acre; Figure 2).

Property History and Current Use: The Site was historically occupied by a dry cleaning facility, 4 Corners Cleaners, which operated from 1984 to 2000. The Site was redeveloped as a parking lot for a newly constructed Walgreens at the same time when the remedial action was performed in 2014.

Source of Contamination: Based on the Site assessment results, the presence of PCE and related degradation products (TCE, cis-1,2-DCE, and trans-1,2-DCE) were confirmed in soil at this Site. Impacts of these contaminants to the surface and subsurface soils occurred over time through releases from operations of the former dry cleaning facility.

Physiographic Setting: The Site is located on the Des Moines drift upland at an elevation of approximately 500 feet above mean sea level. The Site is relatively level, with a slight gradient toward the north.

Surface/Storm Water System: The closest surface water body to the Site is Wilderness Lake, which is approximately 4,000 feet to the northwest. Surface water and storm water runoff on and in the vicinity of the Site disperse via sheet flow to the city of Maple Valley's storm water drainage system.

Ecological Setting: There is no terrestrial habitat within 1000 feet of any part of the Site, which is surrounded by the developed land occupied by residential and commercial buildings, roads, paved areas and other barriers. Therefore, the environment prevents wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

Geology: The Site and vicinity are primarily underlain by the Vashon till, a dense unconsolidated glacial deposit characterized by poorly-sorted materials. A thin veneer of Vashon recessional outwash deposits is also present, as recorded in well logs to depths of at least 20 feet below the ground surface (bgs) overlying the till at this Site.

Ground Water: A perched shallow ground water-bearing zone was encountered at depths of approximately 21 feet bgs at the Site. The ground water flow direction is generally north.

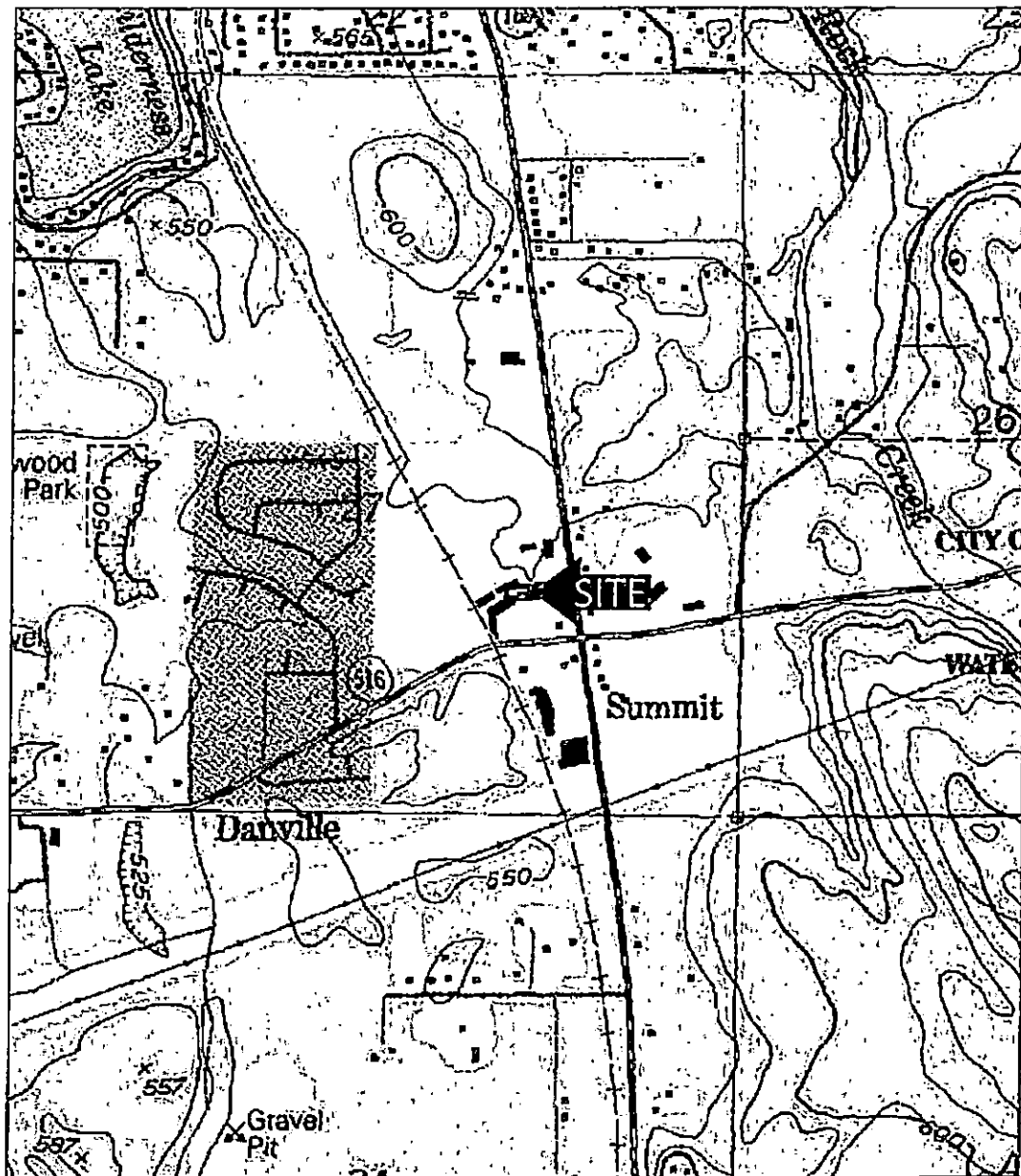
Water Supply: A public water supply is currently provided to the Site by the Covington Water District which obtains water from the Lake Sawyer wellfield in Black Diamond. According to Ecology's well log data base, there are no private drinking water wells located within approximately 1,000 feet of the Property.

Releases and Extent of Soil Contamination: Soil was contaminated due to releases from operations of the former dry cleaning facility from 1984 to 2000. From 1989 to 2014, various investigative and cleanup efforts were conducted at the Site, which included characterization of the Site contamination and over-excavation of the contaminated soil. As a result, approximately 134 tons of the soil contaminated by PCE, TCE and DCEs were excavated at two locations (Figure 3) and the materials were disposed off-site at a regulated disposal landfill afterwards.

Confirmation soil sampling conducted in 2014 indicated that concentrations of the COCs in the soil were at the non-detectable or below MTCA Method A cleanup levels. The vapor intrusion study concluded that there was no a vapor intrusion pathway in the Site. Therefore, Ecology determines the cleanup at this Site is complete.

Releases and Extent of Ground Water Contamination: Ground water samples collected at 21 feet bgs from two monitoring wells were analyzed for the COCs at the Site. The laboratory results indicated that the concentrations in the water did not exceed MTCA Method A cleanup levels.

Figure 1 Location of the Site



USGS, 1994, Black Diamond, Washington
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'

0 500 1000 2000



 RILEYGROUP	Corporate Office	Former 4 Corners Cleaners		Figure 1		
	17522 Bothell Way Northeast	RGt Project Number:	Site Vicinity Map		Date Drawn:	
	Bothell, Washington 98011	2003-16SL			08/2014	
	Phone: 425.415.0551	Address: 23886 Southeast Kent-Kangley Road, Maple Valley, Washington 98038				
	Fax: 425.415.0311					

Figure 2 General Vicinity Map of the Site

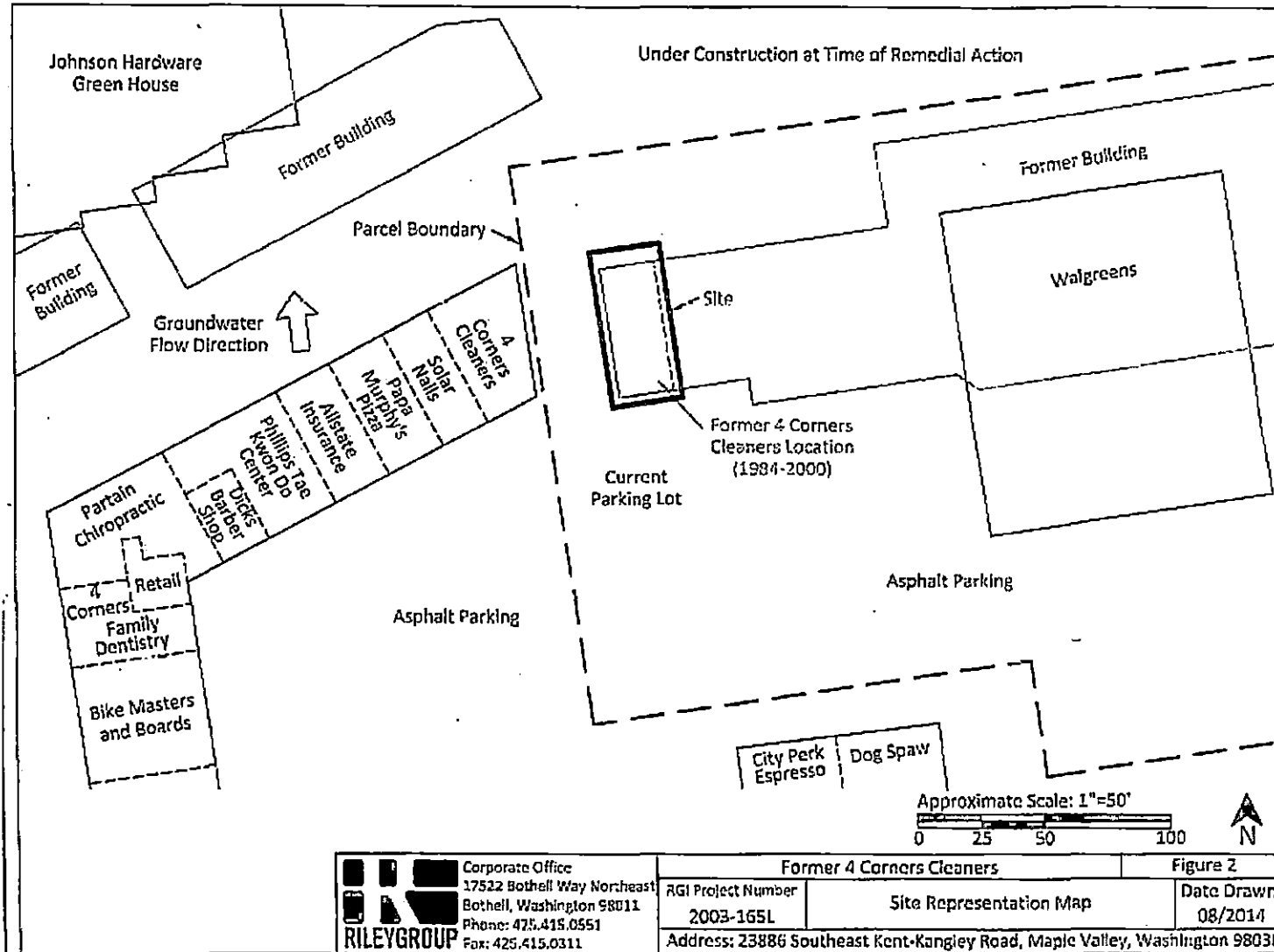


Figure 3 Confirmation Soil Locations with Analytical Results (mg/kg) at the Excavations

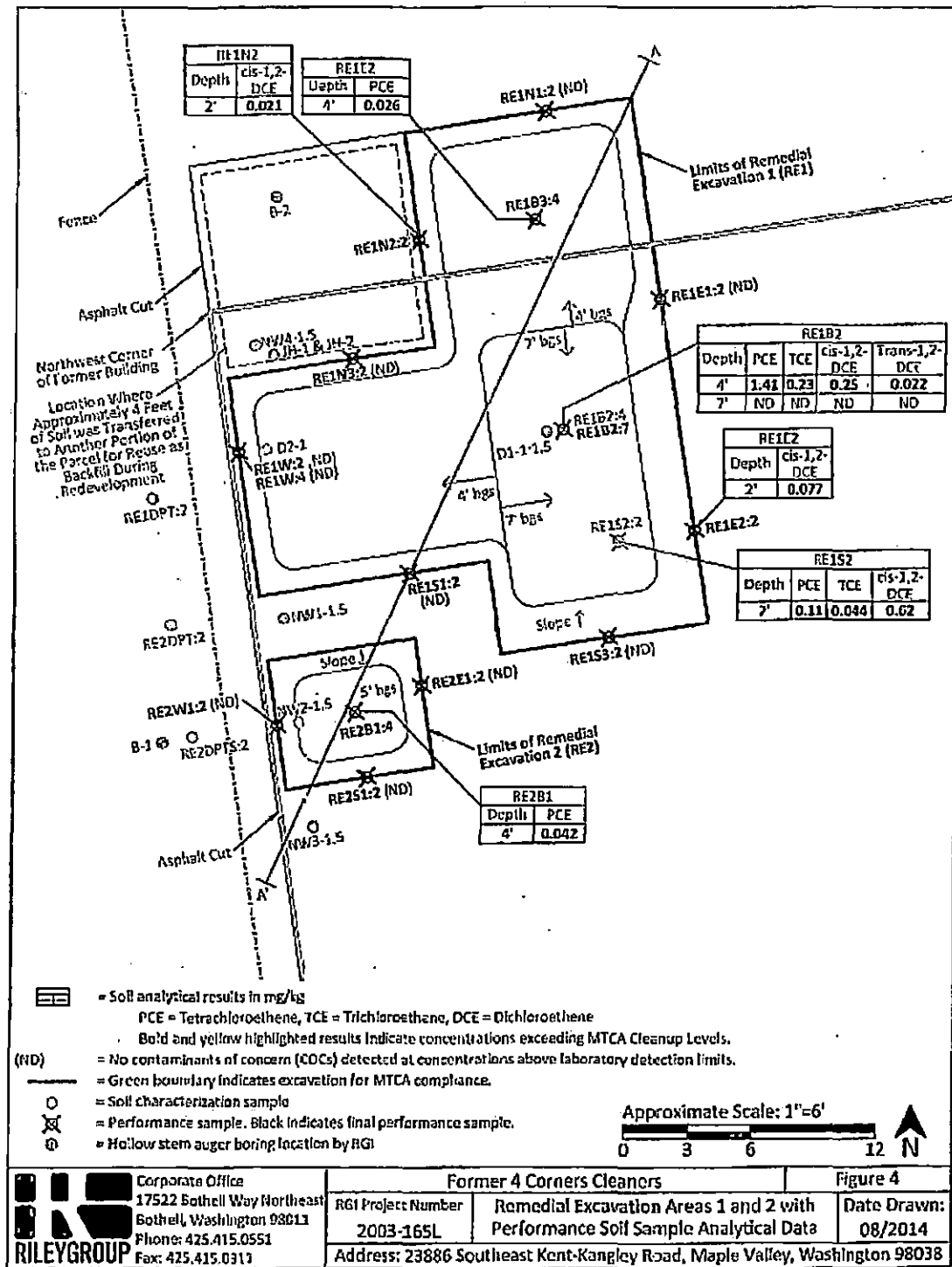
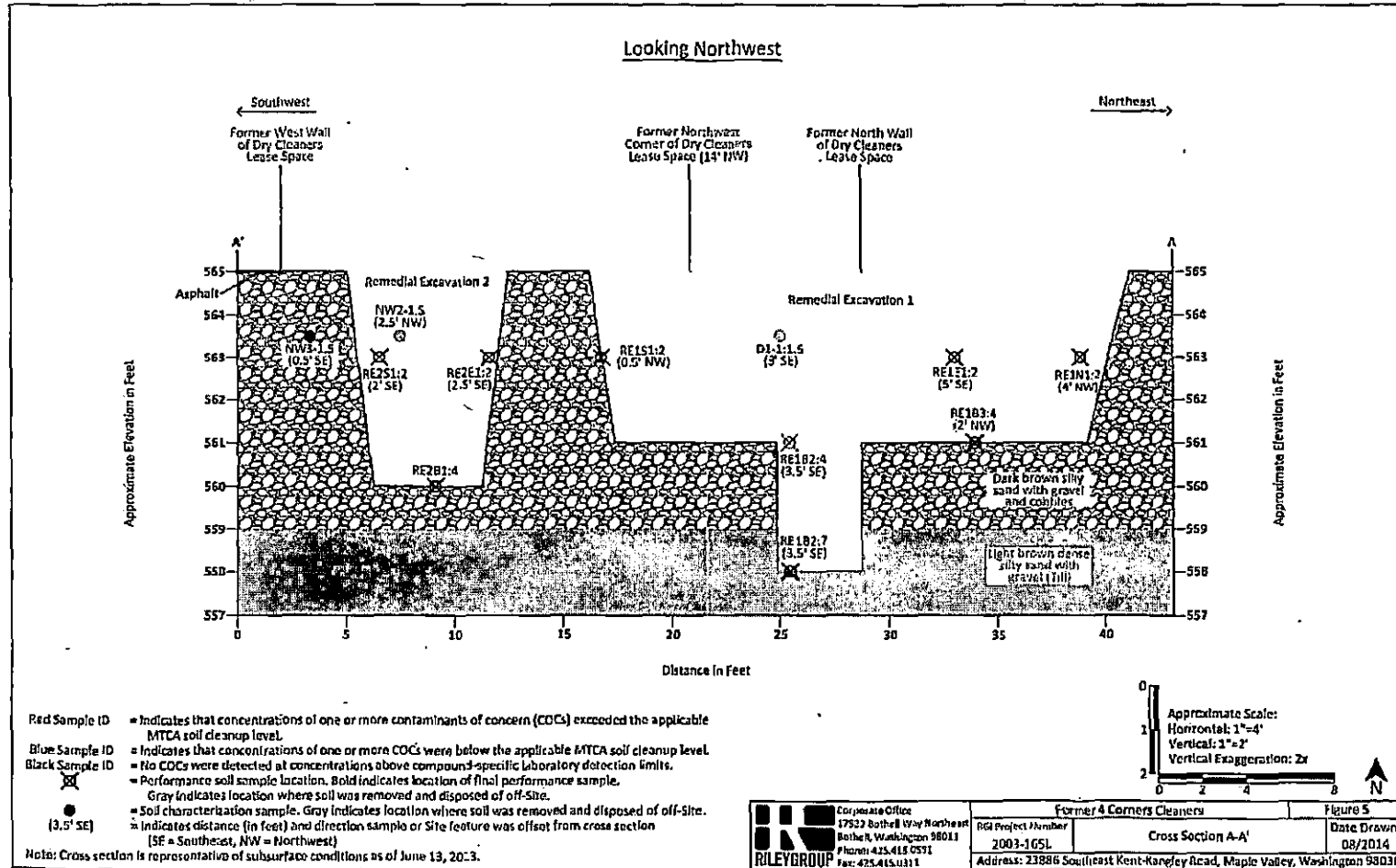


Figure 4 Soil Sampling Locations Showing at the Cross Section





STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

February 28, 2017

Mr. Mark Jenkins
Kite Realty Group
30 South Meridian St Ste 1100
Indianapolis IN 46204

Re: No Further Action at the following Site:

- **Name:** Four Corners Cleaners New Location
- **Address:** 23886 Kent-Kangley Road, Maple Valley, WA
- **Facility/Site No.:** 5867
- **Cleanup Site ID No.:** 12513
- **VCP No.:** NW2932

Dear Mr. Jenkins:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Four Corners Cleaners New Location facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is based on information and data provided in the Addendum to 2012 Additional Subsurface Investigation Report dated February 26, 2014 and Response to Ecology Comments Dated June 22, 2015. The reports document the remedial activities that have addressed contamination in soil at the Site due to operations of the former dry cleaning facility.

This opinion is also based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following releases:

- Perchloroethylene (PCE) and Trichloroethene (TCE) into Soil.

Enclosure A includes a detailed description of the Site, as currently known to Ecology.

Enclosure B includes diagrams of the Four Corners Cleaners New Location Site.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel associated with this Site is affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. The Riley Group, Inc., June 22, 2015, Response to Ecology Comments dated April 2, 2015.
2. The Riley Group, Inc., February 26, 2014, Addendum to 2012 Additional Subsurface Investigation Report.
3. The Riley Group, Inc., September 28, 2012, Additional Subsurface Investigation Report.
4. The Riley Group, Inc., May 9, 2012, Phase I Environmental Site Assessment Update Report.
5. The Riley Group, Inc., January 18, 2011, Phase I Environmental Site Assessment Update Report.
6. The Riley Group, Inc., January 3, 2011, Drycleaners Compliance Review Report.
7. The Riley Group, Inc., December 7, 2004, Supplemental Phase II Subsurface Investigation.
8. The Riley Group, Inc., September 30, 2003, Phase I Environmental Site Assessment.

Those documents listed above are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by calling the NWRO resource contact at (425) 649-7235; or sending an email to nwro_public_request@ecy.wa.gov.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to further clean up the contaminated soil at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined that your characterization of the Site is sufficient to establish cleanup standards, and select cleanup actions for removal of the contaminated soil exceeding MTCA Method A cleanup levels and confirmation of the groundwater quality.

- a. Site assessments conducted at this Site from 2003 to 2014 confirmed the presence of chemicals of concern (COCs) as aforementioned in soil vapor. The studies also concluded that the contamination resulted from operations of the former dry cleaning facility on the Property, Four Corners Cleaners.
- b. While a total of 16 soil samples were collected from the soil borings at a range of 0.1 to 30 feet below the ground surface (bgs), three ground water samples were obtained from the soil borings where ground water was encountered between 21 to 23 feet bgs. The laboratory results indicated none of the analytes (gasoline, diesel, heavy oil, PCE, TCE, 1,2-dichloroethylene and vinyl chloride) were found in Site soil or ground water.
- c. Soil vapor measurements were conducted during the Site characterization in 2004. PCE and TCE were the only chlorinated compounds detected and occurred at concentrations in the soil vapor at 1,000 and 11 $\mu\text{g}/\text{m}^3$ respectively. RGI utilized the Environmental Protection Agency (EPA) online Johnson and Ettinger Model (JEM) to calculate property-specific soil vapor screening levels for PCE and TCE. The calculated Site-specific soil vapor screening levels were 2,755 $\mu\text{g}/\text{m}^3$ for PCE and 103 $\mu\text{g}/\text{m}^3$ for TCE. Therefore, there is no soil vapor intrusion risk at this Site since the field measurements were detected at 1,000 and 11 $\mu\text{g}/\text{m}^3$ for PCE and TCE, respectively.

2. Establishment of cleanup standards.

a. Substance-specific standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

Cleanup levels for soil contamination at this Site are defined as the MTCA Method A cleanup levels, which are classified for unrestricted land use.

Cleanup levels for ground water contamination at this Site are defined as the MTCA Method A cleanup levels.

Cleanup level for soil vapor at this Site is defined as the MTCA Method B calculated site-specific concentration screening levels.

b. Action and location-specific requirements.

The requirement to clean up this Site includes reducing concentrations of soil vapor to the MTCA Method B calculated site-specific concentration screening level.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

- a. Investigations conducted to characterize the Site indicated the exceedance was not found in soil and ground water.
- b. The soil vapor study concluded that vapor intrusion is not of concern at this Site because measured soil vapor concentrations of PCE and TCE are below MTCA Method B calculated Site-specific concentration screening levels (JEM Model) of 2,755 and 103 $\mu\text{g}/\text{m}^3$, respectively.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site at MTCA Method A cleanup levels for the COCs aforementioned. This determination is based on the performances specified below.

- a. PCE and TCE detected in soil vapor were below MTCA Method B calculated site-specific concentration screening levels.
- b. Laboratory results demonstrated the COCs in soil and ground water were at concentrations below the detectable levels.

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from our lists of hazardous waste sites, including:

- Confirmed and Suspected Contaminated Sites List.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

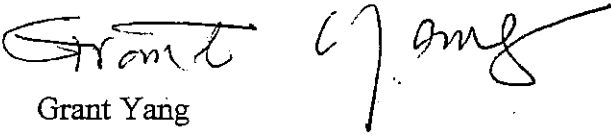
Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project #NW2931.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at (425) 649-7126 or e-mail at gyan461@ecy.wa.gov.

Mr. Mark Jenkins
February 28, 2017
Page 6

Sincerely,


Grant Yang

Toxics Cleanup Program

Enclosures (2) A - Site Description
B - Site Diagrams

cc: Jerry Sawetz, The Riley Group, Inc.
Sonia Fernandez, VCP Coordinator, Ecology
Matt Alexander, VCP Financial Manager, Ecology

Enclosure A:

Site Description

This enclosure provides Ecology's understanding and interpretation of Site conditions and forms part of the basis for the opinion expressed in the letter.

Site: The Site is located at 23886 Kent-Kangley Road in Maple Valley, Washington (Property) (see Figure 1) and consists of PCE and TCE in soil vapor.

Area and Property Description: The Property is located in a mixed commercial and residential area with a size of less than 5,000 square feet (Figure 2).

Property History and Current Use: The Site was historically occupied by a dry cleaning facility, Four Corners Cleaners, which operated from 1984 to 2000. The Site was redeveloped as a parking lot for a newly constructed Walgreens at the same time as the Site assessment was performed in 2014.

Source of Contamination: Based on the Site assessment results, the presence of PCE and a related degradation product, TCE, were confirmed in soil vapor at this Site. Impacts of these contaminants to the surface and subsurface soils occurred over time through releases from operations of the former dry cleaning facility. Once in the soil, PCE and TCE volatilized and migrated into the soil vapor.

Physiographic Setting: The Site is located on the Des Moines drift upland at an elevation of approximately 500 feet above mean sea level. The Site is relatively level, with a slight gradient toward the north.

Surface/Storm Water System: The closest surface water body to the Site is Rock Creek, which is approximately 2,000 feet to the east. Surface water and storm water runoff on and in the vicinity of the Site disperses via sheet flow to the city of Maple Valley's storm water drainage system.

Ecological Setting: There is no terrestrial habitat within 1,000 feet of any part of the Site, which is surrounded by the developed land occupied by residential and commercial buildings, roads, paved areas and other barriers. Therefore, the environment prevents wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

Geology: The Site and vicinity are primarily underlain by the Vashon till, a dense unconsolidated glacial deposit characterized by poorly-sorted materials including gravel, sand, silt and clay. A thin veneer of Vashon recessional outwash deposits is also present, as recorded in well logs to depths of at least 20 feet below the ground surface (bgs) overlying the till at this Site.

Ground Water: A perched shallow ground water-bearing zone was encountered at depths of approximately 21 to 23 feet bgs at the Site. Based on the formation of ground water encountered in soil borings and monitoring wells, the ground water flow direction is generally north.

Water Supply: A public water supply system is currently provided to the Site by the Covington Water District which obtains water from the Lake Sawyer wellfield in Black Diamond. According to Ecology's well log data base, there are no private drinking water wells located within approximately 1,000 feet of the Property.

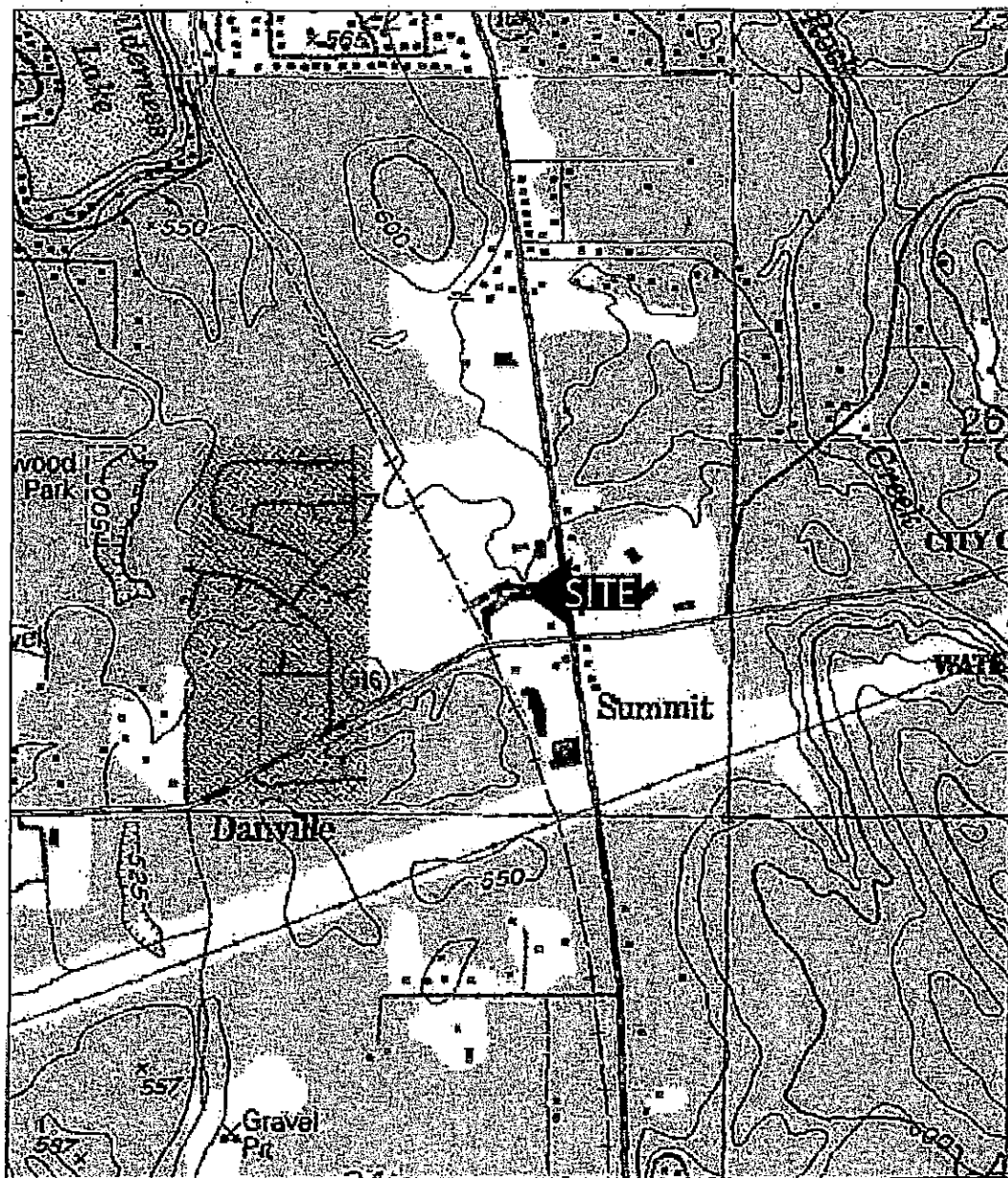
Releases and Extent of Soil Contamination: Soil was contaminated due to releases from operations of the former dry cleaning facility from 1984 to 2000. From 1989 to 2014, various investigative were conducted at the Site, which included characterization of the Site contamination in soil and performance of a soil vapor study. Based on the conclusions obtained from these remedial investigations, soil was not found to be exceeded with PCE and TCE above MTCA Cleanup levels.

PCE and TCE were detected in soil during the site assessment at levels of 1,000 and 11 $\mu\text{g}/\text{m}^3$. In accordance with the calculations used Ecology's MTCA Method B and EPA's JEM, the Site-specific screening levels for PCE and TCE are 1,680 and 65 $\mu\text{g}/\text{m}^3$; and 2,755 and 103 $\mu\text{g}/\text{m}^3$, respectively. The soil vapor study indicated that there is no a vapor intrusion pathway on the Site since the detected levels were below the Site-specific screening levels. Therefore, Ecology determines the cleanup at this Site is complete.

Releases and Extent of Ground Water Contamination: Ground water samples collected at 21 to 23 feet bgs from three monitoring wells were analyzed for the COCs at the Site. The laboratory results indicated that the concentrations of COCs in the ground water were at undetectable levels.

Enclosure B:

Figure 1 Location of the Site



USGS, 1994, Black Diamond, Washington
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'



Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Former 4 Corners Cleaners

RGT Project Number:
2003-165L

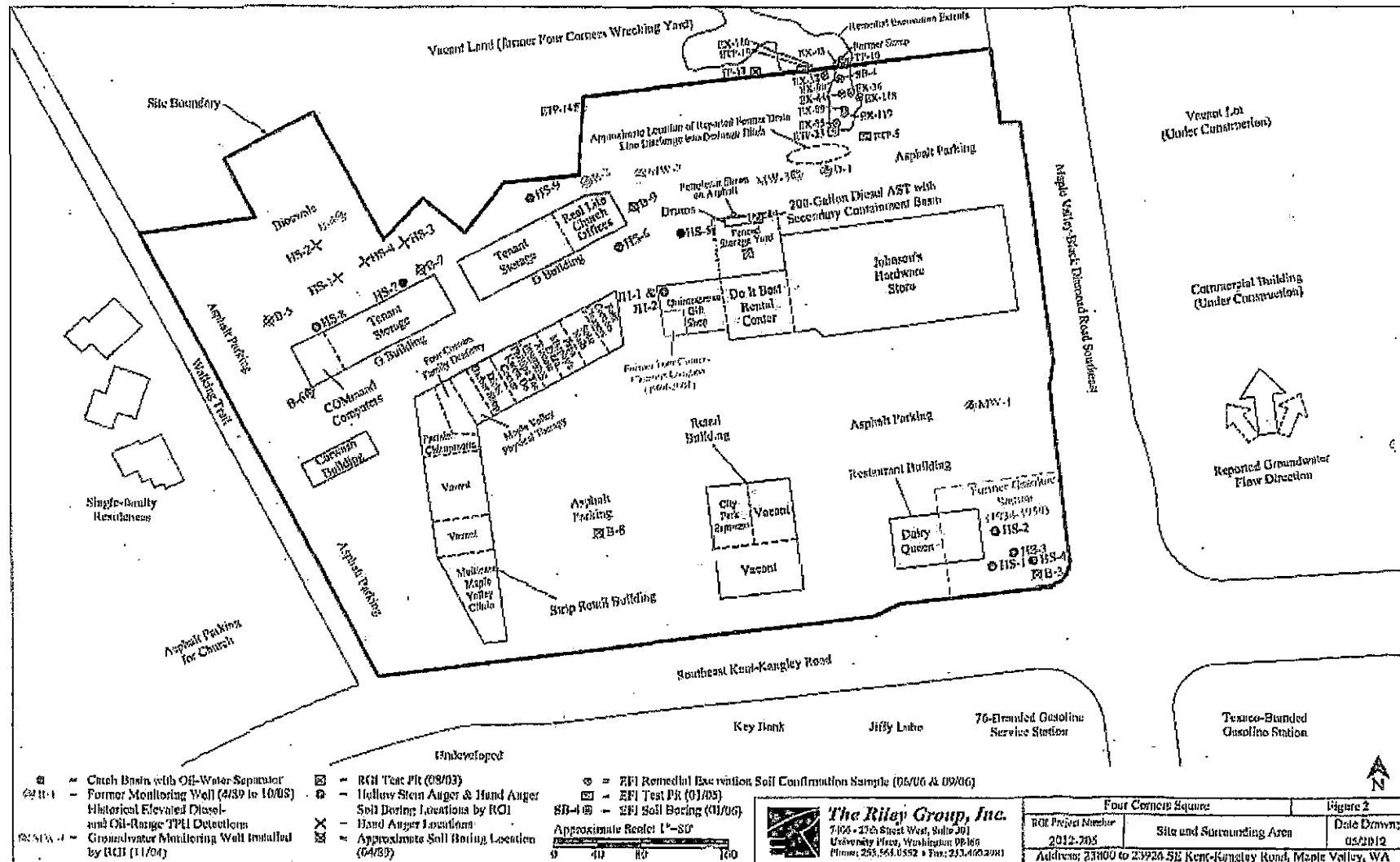
Site Vicinity Map

Figure 1

Date Drawn:
08/2014

Address: 23886 Southeast Kent-Kangley Road, Maple Valley, Washington 98038

Figure 2 General Vicinity Map of the Site



From: Yang, Grant (ECY)
To: "Jerry Sawetz"
Subject: Four Corners New Location (NW 2932) at Maple Valley, WA
Date: Thursday, September 10, 2015 11:29:00 AM
Attachments: Site Map.pdf

Jerry,

The correspondence made to respond Ecology's comments (June 22, 2015) have been reviewed.

While most of the Ecology's concerns to satisfy issuing a NFA determination have been addressed, there is still a data-gap remained to be filled, present of PCE and TCE in soil within the Property.

Based on the site assessment reports conducted at Site NW 2932 and 2931, you concluded in the document, 1. There were no indications of a release from the on-going-operation dry cleaner; 2.

The soil vapor detected inside the facility was most likely from the adjacent site (NW2931).

It is noted that the conclusions were derived from the sampling results in two soil boings (P1 and P2) and one ground water well (B-3) at this Property. After reviewing all the data to date, Ecology believes more information needed to collect for determining the contamination source for the soil vapor found beneath the facility. Ecology recommends to install additional two soil and one ground water boings to characterize the contamination at this Site (see the attachment).

Please contact me to discuss this matter if you have any questions regarding the comments above.

Grant Yang, VCP Site Manager
TCP/NWRO, Ecology

Former Building

B-3							
Sample	Matrix	VC	Trans-1,2-DCE	cis-1,2-DCE	TCE	PCE	Other HVOCs
B-3:2	Soil	ND	ND	ND	ND	ND	ND
B-3:5	Soil	ND	ND	ND	ND	ND	ND
B-3:10	Soil	ND	ND	ND	ND	ND	ND
B-3:15	Soil	ND	ND	ND	ND	ND	ND
B-3:20	Soil	ND	ND	ND	ND	ND	ND
B-3W	GW	ND	ND	ND	ND	ND	ND

Potential Sewer Line Unmarked

Unknown Utility and Fence

P-1							
Sample	Matrix	VC	Trans-1,2-DCE	cis-1,2-DCE	TCE	PCE	Other HVOCs
P-1:2	Soil	ND	ND	ND	ND	ND	ND

P-2							
Sample	Matrix	VC	Trans-1,2-DCE	cis-1,2-DCE	TCE	PCE	Other HVOCs
P-2:0.5	Soil	ND	ND	ND	ND	ND	ND

SG-1							
Sample	Matrix	VC	Trans-1,2-DCE	cis-1,2-DCE	TCE	PCE	Other HVOCs
SG-1	Soil Vapor	ND	ND	ND	11	1,000	ND

Dry Cleaning Machine

4 Corners Cleaners (2000 to Present)

Solar Nails

Papa Murphy's Pizza

Drive Thru

Concentrations of Target Analytes for Soil in milligrams/kilogram, GW (Groundwater) in micrograms/liter and Soil Vapor

VC = Vinyl Chloride, DCE = Dichloroethene

TCE = Trichloroethene, PCE = Tetrachloroethene

HVOCs = Other Halogenated Volatile Organic Compounds

ND = Not Detected Above the Laboratory Detection Limit

- ⊗ = (in black) Boring Soil and Groundwater Grab Sample Location (2012)
- = (in pink) Test Probe Soil Sample Location (2012)
- = (in cyan) Soil Vapor Sample Location (2012)
- = (in gray) Test Probe Hand Auger Sample Location by RGI (2004)

- c - c - = (in orange) Communication Line
- p - p - = (in yellow) Gas Line
- s - s - = (in red) Power Line
- w - w - = (in green) Sewer Line
- w - w - = (in blue) Water Line

New to
FS + ESIS

VCP FILE ROUTER SHEET

(Please include router in file)

VCP Project (FILE) Name: Four Corners Cleaners New Location 90-Day Action Date: _____

VCP# 1W2932 Address: 23864 East Langley Rd CITY: Maple Valley

ERTS # _____ UST# _____ HIST LUST# NA COUNTY: King

FS # 5847 FS Name (X-ref): Four Corners Cleaners New Location

CSID# 12513 LUST Site Name (X-ref): NA

Notes: _____

VCP APP COMPLETE? Reviewed by: Musa Fernandez Escobedo (initial) EF (date) 12/19/14

Louise Bardy sign agreement & assign Site Manager (write below) (initial) BT (date) 12/19/14

ISIS ENTRY Done by S. Fernandez (initial) EF (date) 12/19/14

BARTS ENTRY Done by S. Fernandez (initial) EF (date) 12/19/14

10-Day Letter Sent (Orig Agreement & App Pgs 1&2 to Dolores) (initial) EF (date) 12/19/14

LUST ENTRY Done by NA (initial) _____ (date) _____

Review Start Date: 12/19/14 Review Completion Date: 2/28/17

Review Results (circle): NFA Further Cleanup Action Needed Incomplete Report Received

Interim Status Letter Sent

Long-term Monitoring

Restrictive Covenant

Copy of Letter to M. Alexander ~~DOLORES MITCHELL~~ sent by S. Fernandez Date: 3/7/17

SITE MANAGER NAME: G. Yang INITIALS: _____ DATE: _____

Final Letter Sent by _____ (date) _____ Site Reg Notice? (initial) _____ (date) _____

ISIS/VCP Update (initial) _____ (date) _____ LUST Update (initial) _____ (date) _____

Site Delisted from HSL by _____ (initial) _____ (date) _____

Routed to Central Files by _____ (initial) _____ (date) _____

Instructions for FILE? _____



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

*Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341*

December 19, 2014

MR. MARK JENKINS
KITE REALTY GROUP
30 SOUTH MERIDIAN STREET, SUITE 1100
INDIANAPOLIS, IN 46204

Re: Acceptance of VCP Application for the following Site:

- **Site Name:** Four Corners Cleaners New Location
- **Site Address:** 23886 Kent – Kangley Road, Maple Valley, WA 98038
- **Facility/Site No.:** 5867
- **CS ID:** 12513
- **VCP Project No.:** NW2932

Dear Mr. Jenkins:

The Department of Ecology (Ecology) has accepted your Voluntary Cleanup Program (VCP) application for the Four Corners Cleaners New Location facility (Site). We applaud your initiative and welcome your interest in the VCP. This letter confirms your entry into the VCP and provides important information on how we will manage the Project.

Agreement

Ecology has completed and signed the VCP Agreement governing the Project. The effective date of the Agreement is **December 19, 2014**. A copy of the Agreement is enclosed. Please review it carefully.

Identification

Ecology has assigned a unique name and number to the **Site**. We have also assigned a unique number to your **Project** at the Site. You can find this information in the box at the bottom of the first page of the Agreement. When contacting us, please use this information to identify your Project.

Designated Managers

Communications between Ecology and Four Corners Cleaners New Location should be directed through their designated managers to the maximum extent possible.

Mr. Mark Jenkins
December 19, 2014
Page 2

- **Ecology**

We have designated the following site manager to respond to your requests:

Mr. Grant Yang
Department of Ecology
Toxic Cleanup Program, NWRO
3190 160th Ave SE
Bellevue, WA 98008
Phone: (425) 649-7126
E-mail: gyan461@ecy.wa.gov

- **Four Corners Cleaners New Location**

The application designated you as the project manager for the site. We will therefore respond only to your requests. If someone replaces you as the project manager or your contact information changes, please submit a Change of Contact Form. You may download the Form from our VCP web site:

<http://www.ecy.wa.gov/programs/tcp/vcp/vcp2008/vcpForms.html>

Requests for Written Opinions

In your application, you requested a written opinion on the sufficiency of your cleanup. Ecology will review the documents you submitted and provide you a written opinion within about 90 days.

Reporting Requirements

When requesting written opinions on planned or completed remedial actions, please comply with the following reporting requirements:

1. **Licensing.** Documents submitted containing geologic, hydrologic, or engineering work must be under the seal of an appropriately licensed professional, as required by Chapters 18.43 and 18.220 RCW.
2. **Data Submittal.** Environmental sampling data must be submitted in both a printed form and an electronic form capable of being transferred into our data management systems. For instructions on how to submit data, please refer to the following web site:
www.ecy.wa.gov/programs/tcp/data_submittal/data_requirements.htm.

Failure to comply with these requirements may result in unnecessary delays.

Mr. Mark Jenkins
December 19, 2014
Page 3

Payment

Ecology will send monthly invoices to you, the billing contact designated in the Application Form. If someone replaces you as the billing contact or your contact information changes, please submit a Change of Contact Form. The Form is available on the VCP web site.

The invoice will include a summary of the costs incurred, payments received, identity of staff involved, and the amount of time spent on the Project during the previous month. Payment is due within thirty days of the invoice date. For more information on the billing system, please refer to the VCP web site.

Contact Information

We are committed to working with you to accomplish the prompt and effective cleanup of the Site. Again, if you have any questions about the VCP or your Project, please contact Mr. Grant Yang at (425) 649-7126.

Sincerely,

Sonia Fernández
Toxics Cleanup Program, NWRO

SF:sf

Enclosure: Copy of VCP Agreement

cc: Jerry Sawetz, The Riley Group, Inc. (e-mail)
Dolores Mitchell, VCP Financial Manager

VCP AGREEMENT



INSTRUCTIONS: Submit this Agreement (original) to Ecology as part of your Application. Before submitting, enter the Customer's name and the Site's address on the first page and sign the Agreement on the second page. If your Application is accepted, then Ecology will do the following: 1) identify the Site and VCP project in the box below; 2) sign the Agreement; and 3) send you a copy of the completed Agreement.

This document constitutes an Agreement between the State of Washington Department of Ecology (Ecology) and Kite Realty Group- KRG Four Corner Square, LLC **RECEIVED** (Customer) to provide informal site-specific technical consultations under the Voluntary Cleanup Program (VCP) for the Site identified below and associated with the following address: **OCT 24 2014**
4 Corners Cleaners - 23886 Kent-Kangley Road, Maple Valley, Washington

The purpose of this Agreement is to facilitate independent remedial action at the Site. Ecology is entering into this Agreement under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC. If a term in this Agreement is defined in MTCA or Chapter 173-340 WAC, then that definition shall govern.

Services Provided by Ecology

Upon request, Ecology agrees to provide the Customer informal site-specific technical consultations on the independent remedial actions proposed for or performed at the Site consistent with WAC 173-340-515(5). Those consultations may include assistance in identifying applicable regulatory requirements and opinions on whether the remedial actions proposed for or conducted at the Site meet those requirements.

Ecology may use any appropriate resource to provide the Customer with the requested consultative services. Those resources may include, but shall not be limited to, those of Ecology and the Office of the Attorney General. However, Ecology shall not use independent contractors unless the Customer provides Ecology with prior written authorization.

In accordance with RCW 70.105D.030(1)(i), any opinions provided by Ecology under this Agreement are advisory only and not binding on Ecology. Ecology, the state, and officers and employees of the state are immune from all liability. Furthermore, no cause of action of any nature may arise from any act or omission in providing, or failing to provide, informal advice and assistance under the VCP.

Payment for Services by Customer

The Customer agrees to pay all costs incurred by Ecology in providing the informal site-specific technical consultations requested by the Customer consistent with WAC 173-340-515(6) and 173-340-550(6). Those costs may include the costs incurred by attorneys or independent contractors used by Ecology to provide the requested consultative services. Ecology's hourly costs shall be determined based on the method in WAC 173-340-550(2).

Ecology shall mail the Customer a monthly itemized statement of costs (invoice) by the tenth day of each month (invoice date) that there is a balance on the account. The invoice shall include a summary of the costs incurred, payments received, identity of staff involved, and amount of time staff spent on the project.

The Customer shall pay the required amount by the due date, which shall be thirty (30) calendar days after the invoice date. If payment has not been received by the due date, then Ecology shall withhold

FOR COMPLETION BY ECOLOGY ONLY	Facility / Site Name: <u>Four Corners Cleaners New Location</u>
	Facility / Site No.: <u>5867</u>
	VCP Project No.: <u>NW 2932</u>

any requested opinions and notify the Customer by certified mail that the debt is past due. If payment has not been received within sixty (60) calendar days of the invoice date, then Ecology shall stop all work under the Agreement and may, as appropriate, assign the debt to a collection agency under Chapter 19.16 RCW. The Customer agrees to pay the collection agency fee incurred by Ecology in the course of debt collection.

Reservation of Rights / No Settlement

This Agreement does not constitute a settlement of liability to the state under MTCA. This Agreement also does not protect a liable person from contribution claims by third parties for matters addressed by the Agreement. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). Ecology's signature on this Agreement in no way constitutes a covenant not to sue or a compromise of any Ecology rights or authority.

Ecology reserves all rights under MTCA, including the right to require additional or different remedial actions at the Site should it deem such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions. Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

Effective Date, Modifications, and Severability

The effective date of this Agreement shall be the date on which this Agreement is signed by the Toxics Cleanup Program's Section Manager or delegated representative. This Agreement may be amended by mutual agreement of Ecology and the Customer. Amendments shall be in writing and shall be effective when signed by the Toxics Cleanup Program's Section Manager or delegated representative. If any provision of this Agreement proves to be void, it shall in no way invalidate any other provision of this Agreement.

Termination of Agreement

Either party may terminate this Agreement without cause by sending written notice by U.S. mail to the other party. The effective date of termination shall be the date Ecology sends notice to the Customer or the date Ecology receives notice from the Customer, whichever occurs first. Unless otherwise directed, issuance of a No Further Action opinion, either for the Site as a whole or for a portion of the real property located within the Site, shall constitute notice of termination by Ecology.

Under this Agreement, the Customer is only responsible for costs incurred by Ecology before the effective date of termination. However, termination of this Agreement shall not affect any right Ecology may have to recover its costs under MTCA or any other provision of law.

Representations and Signatures

The undersigned representative of the Customer hereby certifies that he or she is fully authorized to enter into this Agreement and to execute and legally bind the Customer to comply with the Agreement.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Ronald W. Timm acting
VEP Supervisor
Signature

Ronald W. Timm
Printed Name

Section Manager, FOR Bob WARREN MURDO
Toxics Cleanup Program Section

Date: 12/19/14

Kite Realty Group

Name of Customer

Mark S. Jenkins
Signature

Mark S. Jenkins
Printed Name of Signatory

Sr. VP of Development
Title of Signatory

Date: 9/10/14

If you need this document in an alternative format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

APPLICATION FORM

Under the Voluntary Cleanup Program (VCP), the Department of Ecology (Ecology) may provide informal site-specific technical consultations to persons conducting independent remedial actions at a hazardous waste site. Ecology may provide such consultations under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC.

To enter the VCP, complete and submit to the Department of Ecology (Ecology) a VCP Application. The Application consists of the following two documents:

1. Application Form (including required attachments). ← **THIS DOCUMENT**
2. Agreement.

For guidance on how to complete your Application, please refer to the Application Instructions, which are available separately on the VCP web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm.

Part 1 - ADMINISTRATION

A. Customer Information. The Customer is the person or organization requesting services from Ecology under the VCP, and is responsible for paying the costs incurred by Ecology. The authority and duty of the Customer are explained in the Agreement.

Name of Customer: KRG Four Corners Square, LLC

What type of entity is the Customer?

☐ Person

If the Customer is a "person," then the Customer shall serve as both the Manager and Billing Contact for the Project. When identifying the Project Manager below, please enter the name of the Customer and his or her contact information.

☒ Organization

If the Customer is an "organization," then please identify below both a Manager and Billing Contact for the Project. Those persons must be employed by the organization.

What is the Customer's involvement at the Site? Please check all that apply.

☒ Property owner

☐ Business owner (operator)

☐ Past property owner

☐ Mortgage holder

☐ Future property owner

☐ Consultant

☐ Property lessee

☐ Attorney

☐ Other – please specify: _____

If not the current property owner, is the Customer acting as the agent for the property owner?

☐ Yes ☐ No

If not the current property owner, is the Customer authorized to grant access to the property?

☐ Yes ☐ No

Part 1 – ADMINISTRATION continued

B. Project Manager Information. Ecology will send this person all official correspondence. Please enter the required information below.

Name: Mr. Mark Jenkins Title: Senior Vice President

Mailing address: 30 South Meridian Street, Suite 1100

City: Indianapolis, State: Indiana Zip: 46204

Phone: 317-578-5152 Fax: 317-577-7879 E-mail: mjenkins@kiterealty.com

C. Project Billing Contact Information. Ecology will send this person monthly invoices.

Is the Project Billing Contact the same as the Project Manager?

- ☒ Yes *If you answered "YES," then skip to the next question.*
☐ No *If you answered "NO," then please enter the required information below.*

Name: Title:

Mailing address:

City: State: Zip:

Phone: Fax: E-mail:

D. Project Consultant Information.

Is the Customer a consultant?

- ☐ Yes *If you answered "YES," then skip to the next question.*
☒ No *If you answered "NO" and the Customer hired a consultant to conduct the independent remedial action, then enter the required information below.*

Name: Jerry Sawetz Title: Senior Environmental Scientist

Organization: The Riley Group, Inc.

Mailing address: 17522 Bothell Way Northeast

City: Bothell State: WA Zip: 98011

Phone: 425-415-0551 Fax: 425-415-0311 E-mail: jsawetz@riley-group.com

Do you want Ecology to contact the Project Consultant?

- ☒ Yes ☐ No

E. Property Owner Information.

Is the Customer the owner of the property where independent remedial action is being conducted?

- ☒ Yes *If you answered "YES," then enter the type of entity and skip to the next question.*
☐ No *If you answered "NO," then please enter all of the required information below.*

Name: Title:

Organization:

Mailing address:

City: State: Zip:

Phone: Fax: E-mail:

Part 1 – ADMINISTRATION continued

What type of entity is the property owner? Please check only one.

- | | |
|--|--|
| ☒ Private | ☐ County |
| ☐ Tribal | ☐ Municipal |
| ☐ Federal | ☐ Mixed |
| ☐ State | ☐ Public School |
| ☐ Other – please specify: _____ | |

F. Request for Written Opinion.

Are you requesting a written opinion at this time?

- ☒ Yes ☐ No

If you answered **"YES,"** on what planned or completed remedial action do you want a written opinion?

The Riley Group and KRG Four Corners Square, LLC are of the opinion that no further action is necessary at the Property based on our 2012 investigation documented in the attached Additional Subsurface Investigation Letter Report dated September 28, 2012 by RGI and the Addendum to the 2012 ASI Report dated February 26, 2014).

Please note that this report also documents investigation of the Former 4 Corners Cleaners Site, which is a separate Site and information pertaining to the Former 4 Corners Cleaners is being submitted under a different VCP application. We are submitting reports to Ecology for review to determine if Ecology concurs with our opinion that no further action is necessary at the Property.

Please attach to this Application any additional remedial action plans or reports you want Ecology to review. Ecology will base its opinion on the information contained in the Site file, including any information attached to this Application.

If you answered **"NO,"** please explain why you are enrolling in the VCP at this time and when you expect to request a written opinion from Ecology.

Attach additional pages if necessary.

G. Reporting Requirements.

Please comply with the following reporting requirements when requesting written opinions on planned or completed remedial actions:

- ☐ **Licensing.** Documents submitted containing geologic, hydrologic, or engineering work must be under the seal of an appropriately licensed professional, as required by Chapters 18.43 and 18.220 RCW.

- ☐ **Data Submittal.** Environmental sampling data must be submitted in both a printed form and an electronic form capable of being transferred into Ecology's data management systems. For instructions on how to submit the data, please refer to the following Ecology web site:
www.ecy.wa.gov/programs/tcp/data_submittal/Data_Requirements.htm.

Failure to comply with these requirements may result in unnecessary delays. **Ecology will not issue a No Further Action (NFA) opinion unless these requirements are satisfied.**

Part 2 - DESCRIPTION OF THE SITE

A. Name of the Site. If Ecology has already identified the Site, enter the name provided by Ecology. Otherwise, enter a suggested name for the Site. You may also include an alternate name.

Name: 4 Corners Cleaners

Alternate Name:

B. Location of Property where the Releases Occurred (Source Property).

The "source property" is the property where hazardous substances were released into the environment. For example, if petroleum was released from a leaking UST, the source property is the property where the UST was located.

Do you know on which property the releases occurred?

☒ Yes

If you answered "YES," then please refer to the source property when answering the following questions.

☐ No

If you answered "NO," then please refer to the property addressed by your remedial action (cleanup) when answering the following questions.

Physical Address. Please enter the physical address of the property below.

Street Address: 23886 Kent-Kangley Road

City: Maple Valley

State: WA

Zip: 98038

Geographic Position. Please enter the geographical position of the property below. For additional guidance on how to complete this part, please refer to instructions on the VCP web site.

COORDINATES	LATITUDE:	Degrees: 47	Minutes: 21	Seconds: 44.0424
	LONGITUDE :	Degrees: -122	Minutes: 1	Seconds: 21.5394
LOCATION ON PROPERTY: [e.g., point of release or center of parcel]		Location of dry cleaning machine on the Property		
COLLECTION METHOD: [e.g., GPS or address matching]		Google Maps		
COLLECTION SOURCE: [i.e., map scale]		1" = 20 meters		
HORIZONTAL DATUM: [i.e., base reference for coordinate system]		WGS84		
ACCURACY LEVEL: [i.e., +/- feet or meters]		+/- 250 feet		

Legal Descriptions.

TRS DATA:	Township: 22	Range: 6	Section: 27	Quarter-Quarter: SE
TAX PARCEL #(s):	The Property consists of the current 4 Corners Cleaners and is situated on the southern portion of Parcel # 2722069029 (See attached Figure 2)			

Part 2 - DESCRIPTION OF THE SITE continued

C. Identification of Properties affected by the Releases (Affected Properties).

An "affected property" is a property affected by the release of hazardous substances on the source property. For example, petroleum released from a leaking UST on one property (source property) may migrate through the soil or ground water onto an adjacent property (affected property).

Do any of the releases affect any properties adjacent to the source property?

☐ Yes

If you answered "YES," then please identify below each property that you know has been affected by the releases on the source property. If you need to identify additional properties, please attach additional pages.

☒ No

If you answered "NO," then skip to the next question.

☐ Unknown

If you answered "UNKNOWN," then skip to the next question.

1.	Address:
	Tax Parcel(s):
2.	Address:
	Tax Parcel(s):
3.	Address:
	Tax Parcel(s):
4.	Address:
	Tax Parcel(s):

D. Identification of Public Right-of-Ways affected by the Releases.

Do any of the releases affect any public right-of-ways (e.g., streets)?

☐ Yes

☒ No

☐ Unknown

If you answered "YES" above, please specify below. Otherwise, skip to the next question.

Attach additional pages if necessary.

E. Extent of the Site.

What is the approximate areal extent of the Site? Please check only one.

☒

< 5,000 square feet

☐

> 5,000 square feet, but < 1 acre

☐

> 1 acre, but < 10 acres

☐

> 10 acres

☐

Unknown

Part 2 - DESCRIPTION OF THE SITE continued

F. Description of Release(s) at the Site.

Source of Release(s).

What are the source(s) of the release(s) at the Site? Please check all that apply.

- ☐ Point source (e.g., leaking tank)
- ☐ Non-point source (e.g., contaminated soil used as fill)
- ☐ Area-wide lead and arsenic soil contamination (see questions below)
- ☐ Other – please specify: _____
- ☒ Unknown

To the extent known, please describe the source(s) of the release(s):

Tetrachloroethene (PCE) and trichloroethene (TCE) were detected in soil vapor at a concentrations below the calculated site-specific soil vapor screening levels. The screening level calculations are documented in the attached Additional Subsurface Investigation Report. No PCE or TCE were detected in soil or groundwater on the Property. Therefore, no source of a release was identified and soil vapor concentrations may be the result of a vapor release from the dry cleaning machine.

Attach additional pages if necessary.

Circumstances of Release(s). To the extent known, please describe below the circumstances of the release(s).

Unknown

Attach additional pages if necessary.

Circumstances of Release Discovery. To the extent known, please describe below the circumstances of the discovery of the release(s).

Soil vapor concentrations of PCE and TCE were detected during a 2012 subsurface investigation near the current dry cleaning machine. The detected soil vapor concentrations were below the calculated Site-specific soil vapor screening levels.

Attach additional pages if necessary.

Part 2 - DESCRIPTION OF THE SITE continued

Area-Wide Soil Contamination. For information about the area-wide soil contamination project, please refer to the following web site: [www.ecy.wa.gov/programs/tcp/area wide/area wide hp.html](http://www.ecy.wa.gov/programs/tcp/area%20wide/area%20wide%20hp.html). For information about the Tacoma Smelter Plume (TSP) and the associated Management Plan, please refer to the following web site: [www.ecy.wa.gov/programs/tcp/sites/tacoma smelter/ts hp.htm](http://www.ecy.wa.gov/programs/tcp/sites/tacoma%20smelter/ts%20hp.htm).

Is the Site located within an area affected by smelter emissions, such as the TSP area?

☐ Yes ☒ No ☐ Unknown

To determine whether your Site is located within the TSP area, please refer to the map on the TSP web site identified above.

Is the Site located on a former apple or pear orchard in operation prior to 1947?

☐ Yes ☐ No ☒ Unknown

Is the Site impacted by area-wide arsenic and/or lead soil contamination?

☐ Yes ☒ No ☐ Unknown

G. Nature and Extent of Hazardous Substances Released at the Site. The following questions refer to conditions after the release, but prior to any cleanup, of the hazardous substances at the Site.

Hazardous Substances and Affected Media. To the extent known, please identify in the following table the hazardous substances released at the Site and the media (e.g., soil) impacted by those substances. Use the codes at the bottom of the table.

HAZARDOUS SUBSTANCE	AFFECTED MEDIA				
	SOIL	GROUND WATER	SURFACE WATER	SEDIMENT	AIR
EXAMPLE: Benzene	C	S	N/A	N/A	B
Tetrachloroethene (PCE)	O	O			B
Trichloroethene (TCE)	O	O			B

When identifying the affected media in the table above, please use one of the following codes:

- C = confirmed, above cleanup level
- B = confirmed, below cleanup level
- O = confirmed, not present
- S = suspected
- N/A = not suspected
- U = unknown

Part 2 - DESCRIPTION OF THE SITE continued

Drinking Water.

Does any of the contamination at the Site pose a threat or potential threat to an existing drinking water source (ground water or surface water)?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, what type of drinking water system is threatened by the contamination? Please check all that apply.

☐ Single Family
☐ Public Drinking Water Supply

If you checked "Public Drinking Water Supply" above, is the contamination located within or upstream of a 10-year wellhead protection area?

☐ Yes ☐ No ☐ Unknown

To help answer the above question or if you answered "Yes" to that question, then go to <https://fortress.wa.gov/doh/eh/dw/swap/maps/> or call (800) 521-0323.

Indoor Air.

Are contaminant odors present in any buildings, manholes, or other confined spaces?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify:

Attach additional pages if necessary.

H. Maps of the Site.

Please attach to this application map(s) that identify, to the extent known, the following:

- ☐ The location of the site.
- ☐ The properties, and any public right-of ways, affected by the site.
- ☐ The source(s) of the release(s) at the site.
- ☐ The nature and extent of contamination at the site.
- ☐ Any human or ecological receptors impacted by the site (e.g., drinking water wells).
- ☐ The physical characteristics of the site (e.g., property lines, building and road outlines, surface water bodies, water supply wells, ground water flow direction, and utility right-of-ways).
- ☐ The properties adjacent to the site and the uses of those properties (e.g., gas station, dry cleaner, residential).

Part 3 – OPERATIONAL HISTORY OF THE SITE

A. Current Use of Source Property. *Note that the following questions refer only to the Source Property, not other properties affected by the Site. Answer these questions to the best of your ability.*

Current Property Owners. To the extent known, please identify below the current owner of the source property.

Name: Mr. Mark Jenkins	Title: Senior Project Manager
Organization: KRG Four Corners Square, LLC	
Mailing address: 30 South Meridian Street, Suite 1100	
City: Indianapolis,	State: Indiana Zip code: 46204
Phone: 317-578-5152	

Current Business Owner (Operator). To the extent known, please identify below the current owner of the business located on the source property.

Name: Mr. Chang Kim	Title:
Organization: 4 Corners Cleaners	
Mailing address: 23886 Kent-Kangley Road	
City: Maple Valley	State: WA Zip code: 98038
Phone: 425-432-3296	

Current Business Operations. To the extent known, please identify below the current operations of the business located on the source property.

What is the current land use of the source property? Please check all that apply.

- | | |
|--|---|
| ☐ Residential | ☐ School |
| ☒ Commercial | ☐ Childcare facility |
| ☐ Industrial | ☐ Park |
| ☐ Agricultural | |
| ☐ Other – please specify: _____ | |

Is there a currently operational commercial or industrial business located on the source property?

- ☒ Yes ☐ No ☐ Unknown

If you answered "YES" above, please identify in the following table the current business operations using the North American Industry Classification System (NAICS) codes and specifying the operations.

NAICS CODE	DESCRIPTION OF OPERATIONS
EX: 447110	Gasoline Stations with Convenience Stores
812320	Cleaners, drycleaning and laundry service (except coin-operated)

Part 3 – OPERATIONAL HISTORY OF THE SITE continued

Is there a solid waste handling facility located on the Source Property?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please identify:

Attach additional pages if necessary.

Is there a dangerous waste treatment, storage, or disposal facility located on the Source Property?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please identify:

Attach additional pages if necessary.

Regulation of Current Business Operations.

Does the business operate under any federal, state, or local permits related to the release of hazardous substances into the environment (e.g., NPDES permit)?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify the regulated operation, the name of the permit, and the date it was issued in the table below.

REGULATED OPERATION	PERMIT	DATE ISSUED
EX: Wastewater discharge	NPDES permit	02/02/02

Has a state or federal notice of enforcement action (e.g., notice of violation) ever been issued related to the release of hazardous substances at the business?

☐ Yes ☒ No ☐ Unknown

If you answered "yes" above, please specify (notice and year issued): _____

Have business operations resulted in any other spills or other unpermitted releases on the source property?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify in the table below.

RELEASE	DATE OF RELEASE	STATUS OF RELEASE

Part 3 – OPERATIONAL HISTORY OF THE SITE continued

Storage Tank Information. In table below, please identify all above ground storage tanks (AST) and underground storage tanks (UST) that have been used for storing hazardous substances on the source property, irrespective of whether the tanks are still in use or in place. *If you are unable to provide answers to specific questions regarding a tank, please enter "U" for unknown.*

IDENTIFICATION				STATUS AND CLOSURE				RELEASES	
Hazardous Substance	Type (AST/UST)	Size (Gallons)	TANK ID	DATE INSTALL	IN USE (Y/N)	DATE CLOSED	CLOSURE METHOD (*)	PAST (Y/N)	CURRENT (Y/N)
EX: Diesel	UST	10,000	4	02/87	N	05/98	Removed	Y	N

(*) Options = Removed or Closed in Place

B. Past Use of Source Property. *Note that the following questions refer only to the Source Property, not other properties affected by the Site. Please answer these questions to the best of your ability.*

Past Property Owners. To the extent known, please identify below the owner of the source property at the time the release occurred.

Name: _____ Title: _____

Organization: _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Phone: _____ Fax: _____ E-mail: _____

Past Business Owners (Operators). To the extent known, please identify below the owner of the business (operator) at the time the release occurred.

Name: Mr. Chang Kim Title: _____

Organization: 4 Corners Cleaners

Mailing address: 23886 Kent Kangley Road

City: Maple Valley State: WA Zip code: 98038

Phone: 425-432-3296 Fax: _____ E-mail: _____

Identification of Past Business Operations. Please identify in the following table the past operations of businesses located on the source property using the North American Industry Classification System (NAICS) codes and/or specifying the operations.

NAICS CODE	DESCRIPTION OF OPERATIONS
EX: 447110	Gasoline Stations with Convenience Stores
812320	Cleaners, drycleaning and laundry service (except coin-operated)

Part 3 – OPERATIONAL HISTORY OF THE SITE continued

C. Future Use of Source and Affected Properties. The following questions refer to both source and affected properties. Please answer these questions to the best of your ability.

Will any ownership interest in the source or affected properties be conveyed prior to, or upon completion of, the cleanup?

☐ Yes ☐ No ☒ Unknown

If you answered "YES" above, please specify:

Attach additional pages if necessary.

Will any of the source or affected properties, or portions of those properties, be redeveloped as part of the cleanup?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify the proposed land use below. Please check all that apply.

- | | |
|--|---|
| ☐ Residential | ☐ School |
| ☐ Commercial | ☐ Childcare facility |
| ☐ Industrial | ☐ Park |
| ☐ Agricultural | |
| ☐ Other – please specify: | |

Please also specify the activities proposed for that land use:

Attach additional pages if necessary.

Part 4 – ADMINISTRATIVE HISTORY OF THE SITE

Have you previously reported the release(s) of hazardous substances at the Site to Ecology?

☐ Yes – If so, when? _____ ☒ No ☐ Unknown

Has the cleanup of the Site, or any portion of the Site, ever been managed under the VCP?

☐ Yes – If so, please specify the VCP Project Number: _____
☒ No
☐ Unknown

Has the cleanup of the Site, or any portion of the Site, ever been managed under a federal or state order or decree?

☐ Yes – If so, please specify the type and docket number: _____
☒ No
☐ Unknown

Part 5 – DESCRIPTION OF INDEPENDENT REMEDIAL ACTIONS AT THE SITE

A. Scope of Remedial Actions.

Do you plan to characterize and address all of the contamination at the Site, including any contamination located on affected adjacent properties, as part of the VCP project?

☒ Yes ☐ No ☐ Unknown

If you answered "NO" above, please describe below the scope of the VCP project, including the contamination (properties, portions of a property, media and/or hazardous substances) that you DO NOT plan on characterizing and/or addressing as part of the VCP project. Please include additional pages if necessary.

Attach additional pages if necessary.

Part 5 – DESCRIPTION OF INDEPENDENT REMEDIAL ACTIONS AT THE SITE continued

B. Status of Remedial Actions.

What is the current status of remedial actions at the site? Please check all that apply in the table below.

REMEDIAL ACTION	PLANNED	ONGOING	COMPLETED	NOT APPLICABLE
INITIAL RESPONSE (UST ONLY)				X
INTERIM ACTION				X
REMEDIAL INVESTIGATION			X	
FEASIBILITY STUDY				X
CLEANUP ACTION				X

C. Documentation of Remedial Actions.

Please list in the table below all known remedial action plans or reports produced for the site, including:

- The title of the plan or report,
- The author (e.g. consulting firm) of the plan or report,
- The date the plan or report was produced,
- Whether the plan or report has been submitted to Ecology,
- The date the plan or report was submitted to Ecology.

	TITLE	AUTHOR	DATE	SUBMITTED TO ECOLOGY	
				Y/N?	DATE
EX:	John Doe's Site: Remedial Investigation Work Plan	Mom's Consulting Firm	02/20/05	NO	N/A
1.	Phase I Environmental Site Assessment Report (also includes areas outside the Property boundary)	The Riley Group, Inc.	9/30/03	Y	With this application
2.	Drycleaners Compliance Review Report	The Riley Group, Inc.	1/03/11	Y	With this application
3.	Phase I Environmental Site Assessment Update Report (also includes areas outside of the Property boundary)	The Riley Group, Inc.	1/18/11	Y	With this application
4.	Phase I Environmental Site Assessment Update Report (also includes areas outside of the Property boundary)	The Riley Group, Inc.	5/9/2012	Y	With this application
5.	Additional Subsurface Investigation Letter Report (also includes areas outside of the Property boundary)	The Riley Group, Inc.	9/28/12	Y	With this application
6.	Addendum to 2012 Additional Subsurface Investigation Report	The Riley Group, Inc.	2/26/14	Y	With this application
7.					
8.					
9.					
10.					

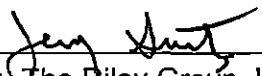
Part 6 – STATEMENT AND SIGNATURE

A. Statement and Signature. The undersigned affirms that the information contained in this application is true and accurate to the best of his or her knowledge. Please note that someone other than the Customer may sign this Application Form.

Name: Jerry Sawetz

Title: Senior Environmental Scientist

Signature:



Date: 10/22/14

Organization: The Riley Group, Inc.

Mailing address: 17522 Bothell Way Northeast

City: Bothell

State: WA

Zip code: 98011

Phone: 425-415-0551

Fax: 425-315-0331

E-mail: jsawetz@riley-group.com

B. Affiliation.

What is the signatory's involvement at the Site? Please check all that apply.

- ☐ Customer
- ☐ Property Owner
- ☒ Consultant
- ☐ Attorney
- ☐ Other – please specify: _____

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

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

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

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

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

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

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: 4 Corners Cleaners

Facility/Site Address: 23886 Kent Kangley Road, Maple Valley, Washington 98038

Facility/Site No: N/A

VCP Project No.: N/A

Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Jerry Sawetz

Title: Senior Environmental
Scientist

Organization: The Riley Group

Mailing address: 17522 Bothell Way Northeast

City: Bothell

State:
Washington

Zip code: 98011

Phone: 425-415-0551

Fax: 425-415-0311

E-mail: jsawetz@riley-group.com

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

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

- ☐ Yes *If you answered "YES," then answer **Question 2**.*
- ☒ No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

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

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

- ☐ All soil contamination is, or will be,* at least 15 feet below the surface.
- ☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

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

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

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

- ☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- ☐ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

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

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

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

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

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

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

- ☒ Yes *If you answered "YES," then answer **Question 2** below.*
- ☐ No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

- ☒ Yes *If you answered "YES," then answer **Question 3** below.*
- ☐ No *If you answered "NO," then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

- ☐ Yes *If you answered "YES," then answer **Question 4** below.*
- ☒ No *If you answered "NO," then answer **Question 5** below.*

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

- ☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- ☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

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

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

- ☐ Area of soil contamination at the Site is not more than 350 square feet.
- ☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

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

- ☒ No potential exposure pathways from soil contamination to ecological receptors.

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

- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

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

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

- ☐ Yes *If you answered "YES," then answer **Question 2** below.*
- ☐ No *If you answered "NO," then identify the reason here and then skip to **Question 5** below:*
- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

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

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

3. If you conducted further site-specific evaluations, what methods did you use?

Check all that apply. See WAC 173-340-7493(3).

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

4. What was the result of those evaluations?

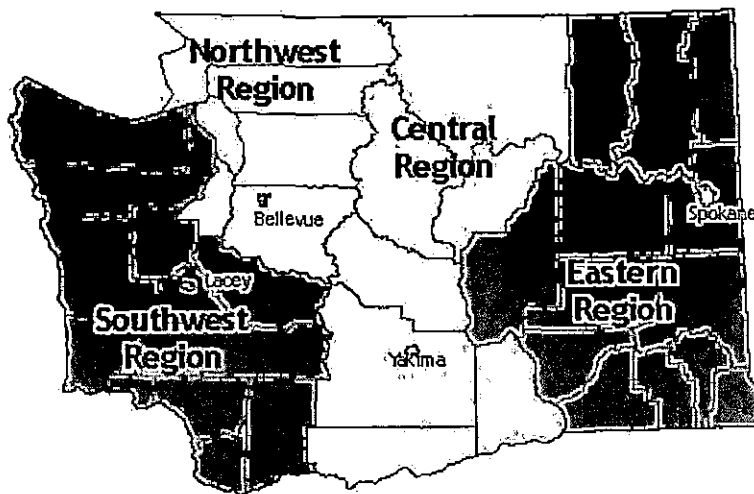
- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

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

- ☐ Yes *If so, please identify the Ecology staff who approved those steps:*
- ☐ No

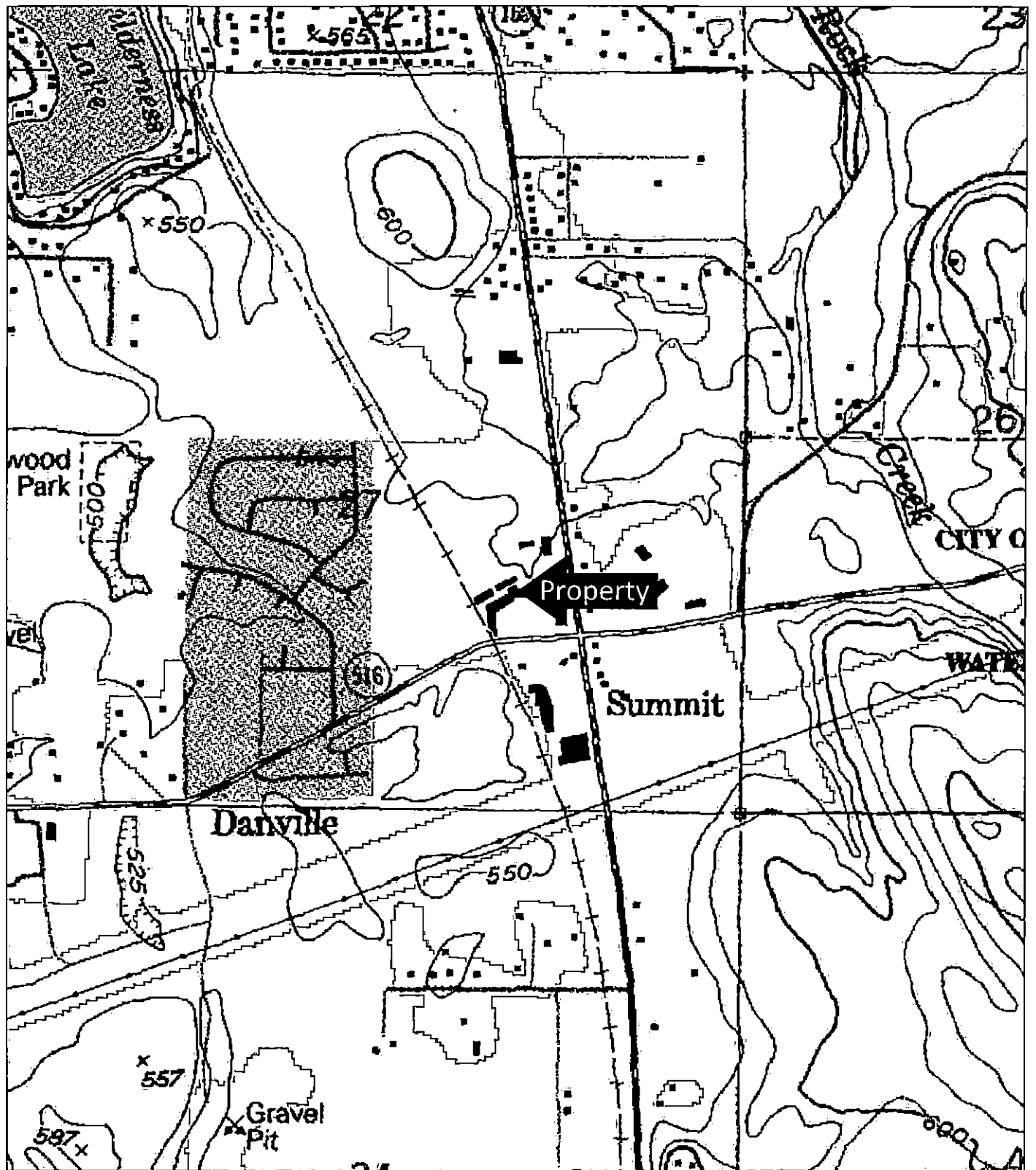
Step 4: SUBMITTAL

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



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

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USGS, 1994, Black Diamond, Washington
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'

0 500 1000 2000



Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

4 Corners Cleaners

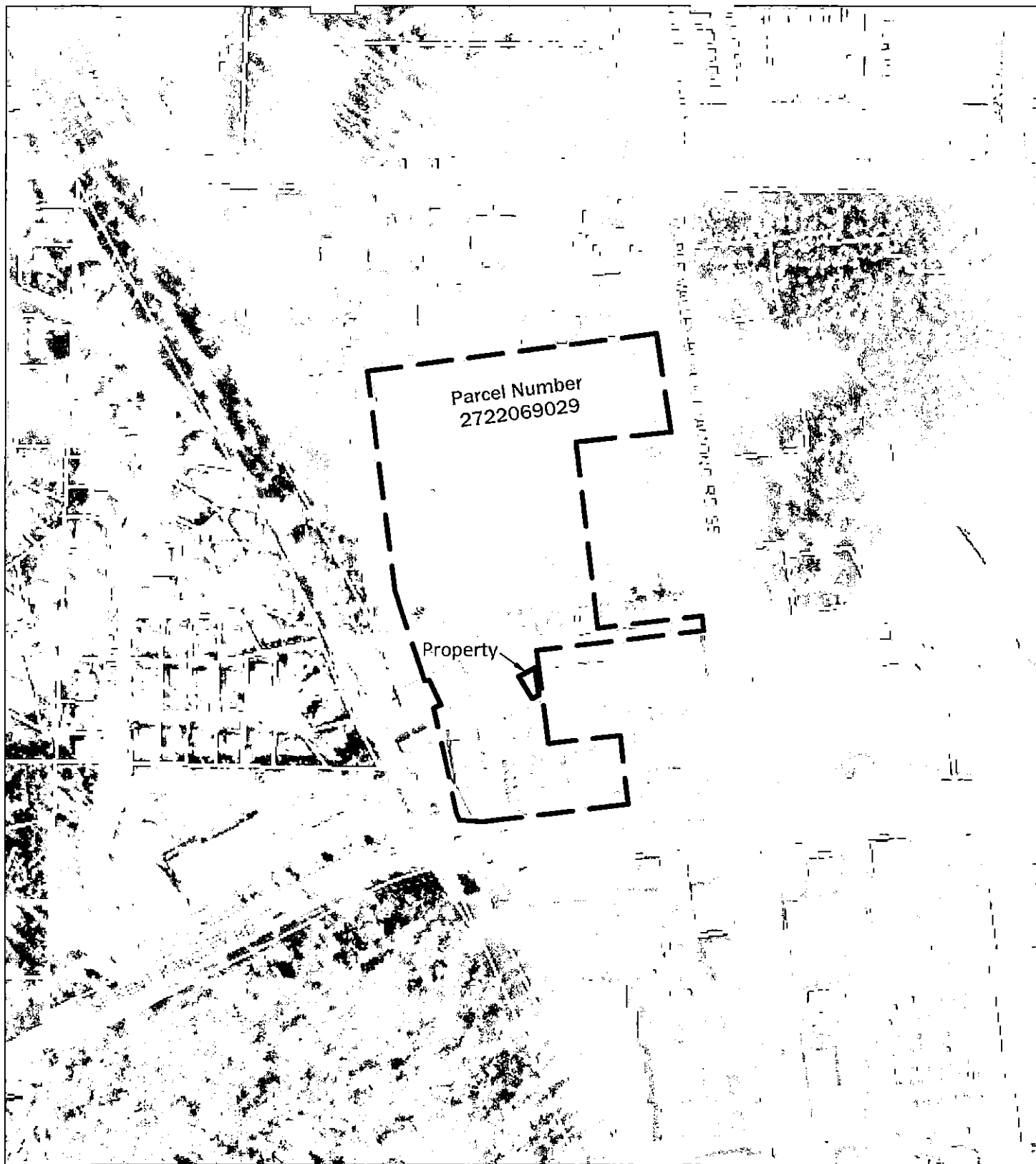
RGI Project Number
2003-165M

Property Vicinity Map

Figure 1

Date Drawn:
08/2014

Address: 23886 Southeast Kent-Kangley Road, Maple Valley, Washington 98038



Approximate Scale: 1"=300'

0 150 300 600



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4 Corners Cleaners

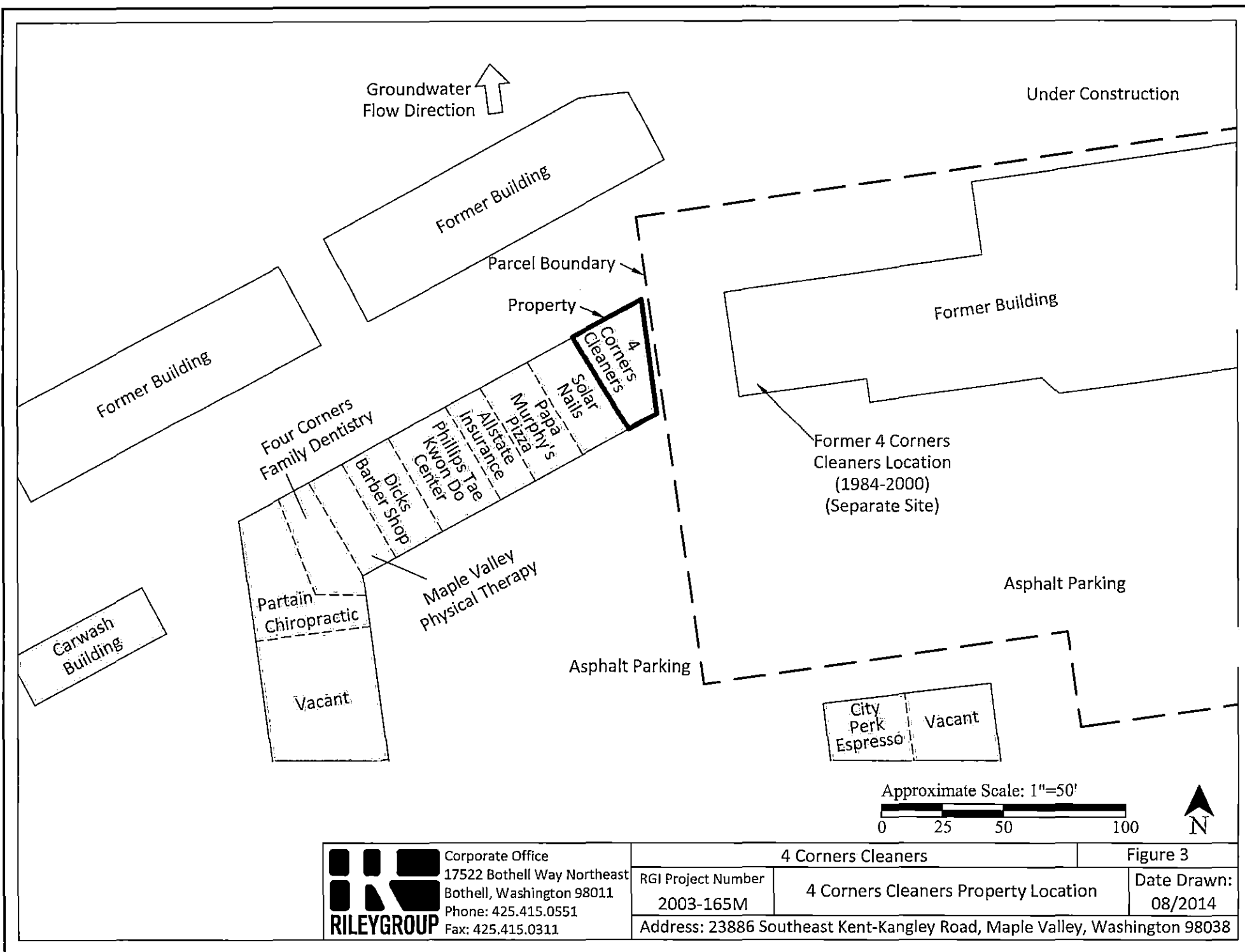
RGI Project Number
2003-165M

Property Parcel Location

Figure 2

Date Drawn:
08/2014

Address: 23886 Southeast Kent-Kangley Road, Maple Valley, Washington 98038



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Phone: 425.415.0551
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4 Corners Cleaners

Figure 3

RGI Project Number
2003-165M

4 Corners Cleaners Property Location

Date Drawn:
08/2014

Address: 23886 Southeast Kent-Kangley Road, Maple Valley, Washington 98038