

ECSI Listing #6285
“Class-N-Kustom” Lot
Tax Lot 1N1E28CB0700
Portland, OR 97210

Point Source Solutions LLC (Point Source) is preparing this memorandum to provide a comprehensive summary of project activities related to the removal of Polychlorinated Biphenyl (PCB) impacted soils from the “Class-N-Kustom” (CNK) property formerly owned by ESCO Corporation. The CNK lot is located at 2404 NW Nicolai Street (Site) and is described by Multnomah County as tax lot 1N1E28CB0700. The CNK lot is adjoined by the ESCO “Main Plant” Site to the west and south, and is an out-parcel included in the ECSI #6285 listing.

BACKGROUND

Hahn & Associates, Inc. (HAI) conducted a PH I Environmental Site Assessment (ESA) of the CNK property on behalf of Bridgewater Group Inc. serving as a consultant to ESCO Corporation (*Hahn Project #9169, dated June 15, 2017*).

At the time the assessment was conducted, the Site (Tax Lot 1N1E28CB0700) was improved with an automotive body shop. Through a review of standard historical sources, Hahn determined that the Site was improved with multiple dwellings and small commercial buildings from at least 1908 through the late 1950s. The existing building was constructed in 1960, and the Site was utilized as a metal salvage scrapyards until 1971. The Site was operated as an automotive body shop from 1971 to at least 2017, and is currently vacant.

The following concerns related to the Site were identified by Hahn:

- An oil storage shed was historically located on the southwestern portion of the Site from approximately the 1980s through 2005. The oil storage shed had a dirt floor, and oily staining was noted at this location.
- The Site was historically used as a metal salvage operation (1960 – 1971) and as an automotive body shop (1971 – 2017). The parking lot has never been paved. Releases of contaminants to the shallow soil may have occurred at the Site as a result of historical site operations.
- Three residences and three commercial structures were historically present at the Site during the time period from approximately 1908 through the late 1950s. It is possible that the structures historically used oil heat which could have been stored in underground storage tanks.
- The Site is located in an area which has a long history of industrial usage. Contaminants originating at adjacent and nearby properties may have migrated onto the subject property.

As a result of these findings, Tuppan Consultants completed a Phase II ESA of the Site (*Tuppan Project #ESC-003-001/041, dated February 14, 2018*).

Phase II activities included a surface geophysical survey to assess the potential presence of underground storage tanks (USTs) associated with former buildings on the Site; advancement of three soil borings on the Site to a depth of 25 feet, and three to a depth of 5.0 feet to assess the soil quality of the property; and collection of soil samples from the borings with analysis by comprehensive suite of organic chemicals and trace metals.

The A geophysical survey was performed by GeoPotential in October 2017. No magnetic anomalies believed to represent the presence of abandoned underground storage tanks were detected on the property.

Push probe borings were drilled by Cascade Drilling using a track-mounted Geoprobe rig. For all borings, soil samples were collected at: 1 feet, 5 feet, 10 feet, 15 feet, 20 feet and 25 feet. The top (shallow) 3 samples were analyzed unless visual or olfactory evidence of contamination was apparent during sampling, or analytical contamination was suspected to extend deeper based on initial analysis of the top 3 samples.

Locations of the deeper borings targeted areas where historical activities were reported in the Phase I ESA. As follows these included: former chemical storage shed (soil boring EB-24), potential historical sink hole (EB-23), and near the air compressor and oil tank (EB-25). Shallow borings targeted lower use areas.

Testing for soil was conducted at Apex Labs in Tigard, Oregon. The suite of analytes included total petroleum hydrocarbons (TPH) as diesel and gasoline, PCBs, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs) and a suite of 14 metals.

Soil - The soil concentrations were either non-detect or at trace concentrations for organics and were significantly below any potential RBCs with the exception of PCBs as described below. In the case of metals in soil, the results were comparable to or below background concentrations with none exceeding RBCs. As a note, the RBC for arsenic in soil is not applicable since the natural background concentration in the Portland area is above the RBC.

Total PCBs (primarily Aroclor 1242) were detected in borings EB-23 and EB-27. Two shallower soil samples (EB-25 and EB-26) exceeded the 4.9 mg/Kg direct contact RBC for construction workers. The shallow soil samples collected at EB-23, EB-24, and EB-27 exceeded ODEQ's direct contact RBC for residential receptors. All deeper samples (3.5 – 4.0 feet) collected on the Site met ODEQ's clean fill criteria.

Groundwater - In May 2018 Bridgewater Group in cooperation with Tuppan Consultants completed a Baseline Environmental Site Assessment (BESA) of the CNK Site and adjoining ESCO properties. During completion of the BESA 8 monitoring wells located on the ESCO Main Plant lots and vicinity were sampled monthly for a suite of environmental contaminants that included PCBs. PCBs were not detected in any of the sampling events.

Copies of the HAI PH I ESA, and the Tuppan Consultants PH II ESA are included as Appendix A to this report.

All previous environmental consultants involvement with the project was terminated following transfer of ownership of the Site, and Point Source was contracted to complete outstanding activities. In addition to the previous reports described above, Point Source was provided with raw data that included field notes, laboratory analytical reports, and photographs produced by Hahn. The proceeding sections are based upon file review and interpretation of these raw documents.

EXCAVATION OF PCB IMPACTED SOILS AND CONFIRMATION SOIL SAMPLING

The CNK Site was subdivided into four quadrants designated NE (Site building), SE, SW, and NW by HAI.

On May 4, 2018 HAI advanced 4 additional soil borings underneath the concrete slab of the building occupying the NE quadrant of the Site to evaluate the condition of shallows soils. Analytical results indicated total PCB concentrations below all applicable RBCs for the Site. No further investigation or soil removal was performed as the building was expected to remain in place indefinitely at the time of project activities.

From June 4 through 20, 2020 Hahn oversaw excavation of PCB impacted soils from the SE, SW, and NW quadrants of the CNK property. The effectiveness of the soil cleanup was evaluated through collection of five

point composite samples collected from each quadrant following soil removal. If total PCB concentrations from the composite sample exceeded applicable RBCs, discrete samples from each composite sampling point were analyzed, and additional excavation was performed. The SE, SW, and NW quadrants were excavated twice to a depth of 4.0 feet below ground surface. Analytical results from the final round of composite samples indicated that concentrations of total PCBs were below applicable RBCs for each quadrant.

It is estimated that approximately 780 cubic-yards of impacted soils was excavated from the Site based upon the approximate dimensions of the three excavated quadrants reported by Hahn, and an excavation depth of 4.0 feet. Approximately 1,047 tons of PCB impacted soils were transported for disposal at Wasco Landfill under profile #2042-18-092. Copies of the Wasco Landfill disposal profile, and weigh ticket transaction summary are included as Appendix B.

Excerpts from HAI's field notes that pertain to the CNK excavation and confirmation sampling are included as Appendix C.

A figure depicting the quadrants and the locations of all discrete and composite sampling locations is included as an attachment to this memorandum.

LABORATORY ANALYTICAL RESULTS

The sample analytical results are summarized in Table 1 below. Laboratory analytical reports for the initial PH II ESA are attached to the Tuppen PH II Memorandum included in Appendix A. Laboratory analytical reports from the Hahn excavation and confirmation sampling are included as Appendix D.

TABLE 1 - SOIL SAMPLES LABORATORY ANALYTICAL RESULTS – PCBs (UG/KG)								
SAMPLE ID/DESCRIPTION	AROCLOR 1016	AROCLOR 1221	AROCLOR 1232	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	TOTAL PCBs
Tuppen PH II ESA Borings (05/17/2017)								
EB-22-051517-0.5-1.0	ND	---						
EB-22-051517-4.0-5.0	ND	---						
EB-23-051517-1.0-2.0*	ND	ND	ND	3080	ND	ND	99.6	3179.6
EB-23-051517-4.0-5.0	ND	---						
EB-23-051517-8.4-9.4	ND	---						
EB-24-051517-2.5-3.5*	ND	ND	ND	425	ND	ND	9.63	434.6
EB-24-051517-7.2-8.2	ND	---						
EB-24-051517-12.0-13.0	ND	---						
EB-25-051517-0.5-1.5*	ND	ND	ND	4880	ND	ND	190	5070
EB-25-051517-4.0-5.0	ND	ND	ND	15.6	ND	ND	ND	15.6
EB-25-051517-7.5-8.5	ND	---						
EB-26-051517-0.5-1.5*	ND	ND	ND	9690	ND	ND	1370	11060
EB-26-051517-3.5-4.5	ND	---						
EB-27-051517-0.0-1.0*	ND	ND	ND	1820	ND	ND	126	1946
EB-27-051517-4.0-5.0	ND	ND	ND	8.50	ND	8.59	ND	17.09

TABLE 1 - SOIL SAMPLES LABORATORY ANALYTICAL RESULTS – PCBs (UG/KG)								
SAMPLE ID/DESCRIPTION	AROCLOR 1016	AROCLOR 1221	AROCLOR 1232	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	TOTAL PCBs
Hahn Discrete Sampling (05/04/2018) – NE Quadrant								
Class-N-Kustom-SE-0.3-1.0	ND	ND	ND	6.08	ND	ND	6.55	12.6
Class-N-Kustom-NW-0.3-1.0	ND	ND	ND	14.6	ND	ND	24.2	38.8
Class-N-Kustom-S-0.3-1.0	ND	ND	ND	77.7	ND	ND	43.1	121
Class-N-Kustom-NE-0.3-1.0	ND	ND	ND	10.8	ND	ND	50.0	60.8
Hahn Confirmation Sampling (06/06/2018) – SE Quadrant Composite								
Class-N-SE Quad-Comp*	ND	ND	ND	46000	ND	ND	ND	46000
Hahn Confirmation Sampling (06/06/2018) – SE Quadrant Discrete								
Class-N-SE Quad-NW*	ND	ND	ND	141	ND	52.2	16.0	209.2
Class-N-SE Quad-NE*	ND	ND	ND	893	ND	ND	ND	893
Class-N-SE Quad-SW*	ND	ND	ND	138	ND	33.0	19.3	190.3
Class-N-SE Quad-SE*	ND	---						
Class-N-SE Quad-Center*	ND	ND	ND	1210	ND	ND	ND	1210
Hahn Confirmation Sampling (06/12/2018) – SE Quadrant Composite								
Class-N-SE Quad-Comp-4.0	ND	---						
Hahn Confirmation Sampling (06/06/2018) – SW Quadrant Composite								
Class-N-SW Quad-Comp*	ND	ND	ND	317	ND	87.8	34.0	439
Hahn Confirmation Sampling (06/06/2018) – SW Quadrant Discrete								
Class-N-SW Quad-NW*	ND	ND	ND	21.3	ND	11.1	ND	32.4
Class-N-SW Quad-NE*	ND	ND	ND	432	ND	141	83.3	656
Class-N-SW Quad-SW*	ND	---						
Class-N-SW Quad-SE*	ND	ND	ND	741	ND	411	78.6	1231
Class-N-SW Quad-Center*	ND	ND	ND	610	ND	219	78.9	908
Hahn Confirmation Sampling (06/12/2018) – SW Quadrant Composite								
Class-N-SW Quad-Comp-4.0	ND	---						
Hahn Confirmation Sampling (06/06/2018) – NW Quadrant Composite								
Class-N-NW Quad-Comp*	ND	ND	ND	1240	ND	1750	254.0	3244
Hahn Confirmation Sampling (06/06/2018) – NW Quadrant Discrete								
Class-N-NW Quad-NW*	ND	ND	ND	1000	ND	4170	ND	5170
Class-N-NW Quad-NE*	ND	ND	ND	54.2	ND	98.7	166	319
Class-N-NW Quad-SW*	ND	ND	ND	1060	ND	1940	321	3321
Class-N-NW Quad-SE*	ND	---						

TABLE 1 - SOIL SAMPLES LABORATORY ANALYTICAL RESULTS – PCBs (UG/KG)								
SAMPLE ID/DESCRIPTION	AROCLOR 1016	AROCLOR 1221	AROCLOR 1232	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	TOTAL PCBs
Class-N-NW Quad-Center*	ND	ND	ND	793	ND	1470	230	2493
Hahn Confirmation Sampling (06/12/2018) – NW Quadrant Composite								
Class-N-NW Quad-Comp-4.0	ND	---						
ODEQ RBC: Soil ingestion, dermal contact, inhalation (Residential)								233
ODEQ RBC: Soil ingestion, dermal contact, inhalation (Urban Residential)								330
ODEQ RBC: Soil ingestion, dermal contact, inhalation (Occupational)								590
ODEQ RBC: Soil ingestion, dermal contact, inhalation (Construction Workers)								4900
ODEQ RBC: Soil ingestion, dermal contact, inhalation (Excavation Workers)								14000

Table 1 Notes:

* represents soils that have been removed

ND = Not detected above the laboratory reporting limit

Results in **BOLD** exceed one or more applicable RBCs.

CONCLUSIONS

Point Source believes that environmental assessment and soil excavation work completed to date on the “CNK” Parcel (Tax Lot 1N1E28CB00700) supports closure of this portion of ECSI listing #6285. Following soil removal, no PCB impacted soils appear to remain in excess of the most stringent ODEQ RBCs for residential receptors, or the ODEQ Clean Fill Determination

If you have any questions regarding this report, please do not hesitate to contact the undersigned.



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Reviewed by:

Gil Cobb, Registered Geologist (Oregon #G1440)



Expires 12/31/2020

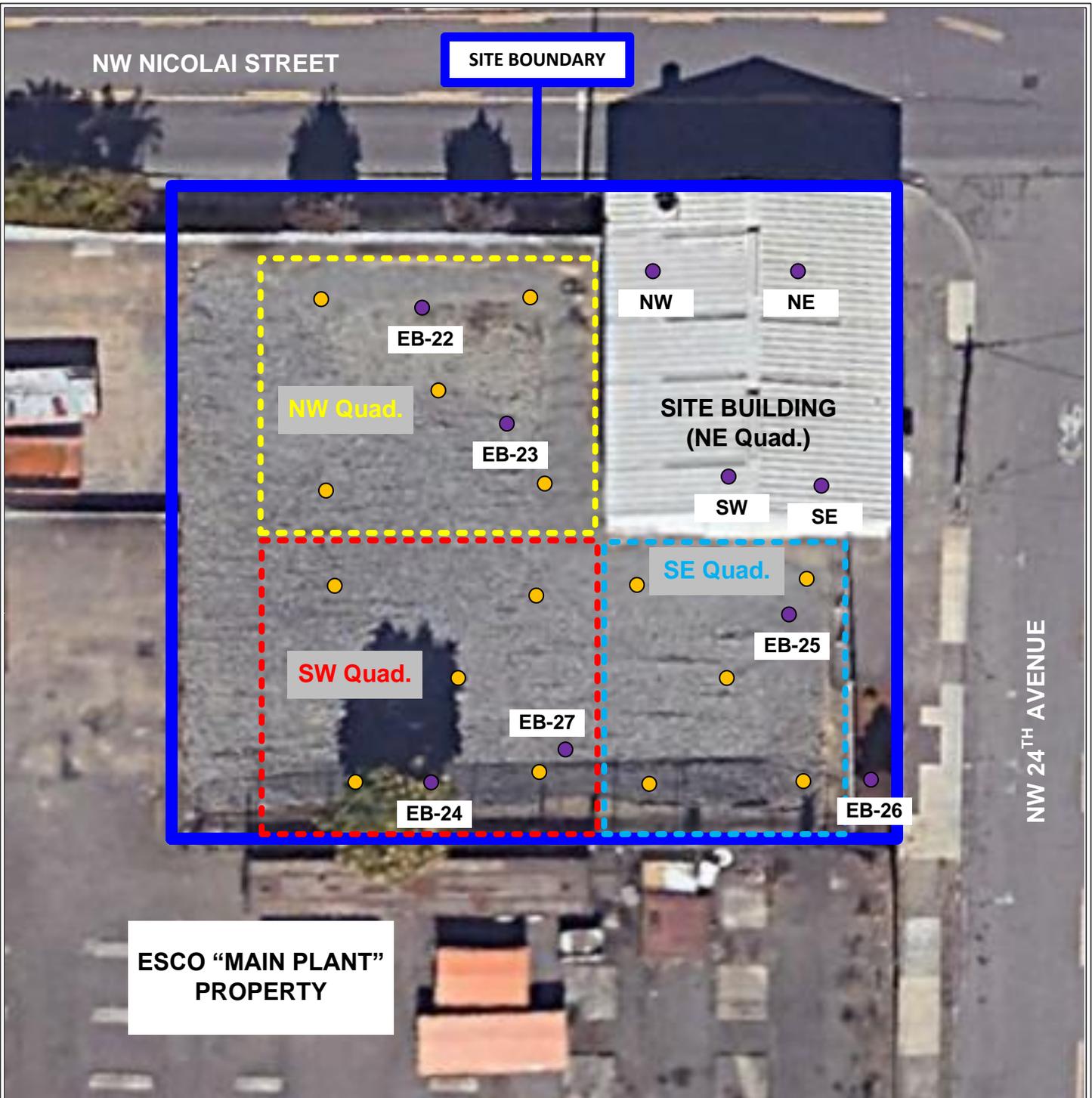
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Figure 1 Site Location Map
Figure 2 Topographic Map
Figure 3 Sample Location Diagram

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Appendix A Previous Environmental Reports
Appendix B Soil Disposal Profile
Appendix C Wasco Transaction Summary
Appendix D Hahn Field Note Excerpts
Laboratory Analytical Reports

FIGURES



**ESCO "MAIN PLANT"
PROPERTY**

SAMPLE LOCATION DIAGRAM

Img Src: Google Earth
(July 2018)



Notes:

- EB-22 through EB-27 advanced by Tuppan (05/2017)
- NW, NE, SW, SE advanced by Hahn (05/2018)
- Quadrant composite confirmation samples collected by Hahn (06/2018)
- Sampling locations approximated based upon prior reports and field data provided to Point Source Solutions.

- Composite Sampling Points
- Discrete Soil Boring Location

Scale in Feet (Approximate)



Site Name: ESCO "CNK" Property
2404 NW Nicolai St
Tax Lot 1N1E28CB00700
Portland, Oregon 97210

APPENDICES

APPENDIX A

PREVIOUS ENVIRONMENTAL REPORTS

- ***Phase I Environmental Site Assessment, Auto Body Shop Property, Portland, Multnomah County, Oregon*** dated June 8, 2017 prepared by Hahn & Associates, Inc. Project #9163
- ***Phase II Memorandum, Class-N-Kustom Property at 2404 NW Nicolai Street, Portland, Oregon*** dated February 14, 2018 prepared by Tuppan Consultants LLC. Project #ESC-003-001/041

A PHASE I ENVIRONMENTAL SITE ASSESSMENT

Auto Body Shop Property
2404 NW Nicolai Street
Portland, Multnomah County, Oregon

June 8, 2017

HAI Project No. 9163



HAI HAHN AND ASSOCIATES, INC.
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ENVIRONMENTAL CONSULTANTS
ASSESSMENT
INVESTIGATION
REMEDIATION

A PHASE I ENVIRONMENTAL SITE ASSESSMENT

Project Location:

Auto Body Shop Property
2404 NW Nicolai Street
Portland, Multnomah County, Oregon

Prepared For:

Bridgewater Group, Inc.
c/o Mr. Jeff Dresser
7100 SW Hampton Street, Suite 235
Tigard, Oregon 97223

Users:

Bridgewater Group, Inc.
Consultant

ESCO Corporation
Property Owner

Prepared By:

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Date: June 8, 2017

Project No.: 9163

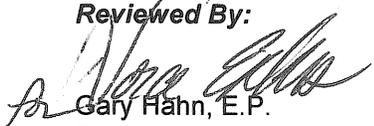
Certification:

We, Eleanore Ramsey and Gary Hahn, declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in Title 40 of the Code of Federal Regulations (CFR) Part 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in Title 40 CFR Part 312.

Prepared By:


Eleanore Ramsey, G.I.T., E.P.
Sr. Project Manager

Reviewed By:


Gary Hahn, E.P.
President

Date: 6/8/2017

Date: 6/8/2017

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- B Oregon Water Resources Department Water Well Log Report
- C User/Owner Information: User Questionnaire and Owner Interview Forms
- D First American Title Company of Oregon, *Preliminary Title Report*, March 6, 2017
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- F Subject Property, Hazardous Waste Generator Information
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1.0 EXECUTIVE SUMMARY

Hahn and Associates, Inc. has performed this Phase I Environmental Site Assessment in conformance with the scope and limitations of the American Society for Testing and Materials Practice E1527-13 at the request of Bridgewater Group, Inc.. The Phase I Environmental Site Assessment consisted of a site reconnaissance, an historical and physical features evaluation of the subject property, an examination of the surrounding land uses, and an environmental database review of the property and of the surrounding land uses. Any exceptions to, or deletions from, this practice are described in Section 11.0 of this report.

Viability of Report

For the purposes of Landowner Liability Protections under the federal Comprehensive Environmental Response, Compensation, and Liability Act, a Phase I Environmental Site Assessment conducted in conformance with the American Society for Testing and Materials Practice E1527 is valid for a period of 180 days. For extended viability beyond 180 days, the report may be updated within one year of the initial assessment and will be valid for an additional 180 days. If more than one year passes from the date of the initial assessment, a new Phase I Environmental Site Assessment would need to be conducted in order to qualify for the federal protections.

Subject Property

- Property Name – Auto Body Shop Property
- 2404 NW Nicolai Street, Portland, Multnomah County, Oregon

Site Description

- Size: 0.23 acre
- Current Use: Automotive body shop
- Significant Features: None
- Vicinity Characteristics: Mixed commercial-light industrial usage, NW District, Portland, Oregon.

Site History

- At least 1901 – 1905: Undeveloped
- 1908 – late 1950s: Residences and small commercial buildings
- 1960: Existing building constructed
- 1960 – 1971: Metal salvage scrapyards
- 1971 – present: Auto body shop

- Approximately 1980s – 2005: Oil storage shed on southwestern portion of subject property

Site Reconnaissance

The site reconnaissance identified:

- Four Recognized Environmental Conditions
- One *de minimis* condition

The site reconnaissance did not identify evidence of:

- Significant quantities of hazardous substances, petroleum products or hazardous waste
- Controlled Recognized Environmental Conditions
- Historical Recognized Environmental Conditions

Recognized Environmental Conditions

Former Oil Storage Shed

- Located on southwestern portion of property, 1980s – 2005
- Featured dirt floor, oil staining

Historical Site Operations

- Metal Salvage Operation, 1960 – 1971
- Auto Body Shop, 1971 – present
- Parking lot area has never been paved

Possible Underground Storage Tanks

- Six structures (residences and commercial buildings) historically located on subject property (prior to 1960)
- Heat sources unknown, heating oil use was common in vicinity

Historical Industrial Usage of Surrounding Sites

- ESCO: adjacent, upgradient, long history of foundry operations
- Possibility of contaminant migration (soil, groundwater, and/or vapor intrusion) onto subject property

De Minimis Conditions

Aboveground Storage Tank

- 250-gallon heating oil tank on unpaved area, no secondary containment

Other Site Features

Equipment Located on or near Unpaved Areas:

- Vehicle hoist
- Air compressor

Suspect Asbestos-Containing Materials:

- Existing building constructed 1960: May contain asbestos

Records Review

The review of state and federal environmental records disclosed a number of sites located within a 1.0-mile radius of the subject property that are currently or have previously been under review for environmental issues. However, these sites do not appear to represent a Recognized Environmental Condition for the property at this time.

Conclusions and Recommendations

This Phase I Environmental Site Assessment revealed evidence of Recognized Environmental Conditions in connection with the property. From the data that was assembled during the course of this investigation, it is the professional opinion of Hahn and Associates, Inc. that further investigatory work in the form of a Phase II Environmental Site Assessment appears to be necessary for the subject property.

The Recognized Environmental Conditions identified at the property, along with Phase II recommendations, are:

1. An oil storage shed was historically located on the southwestern portion of the subject property from approximately the 1980s through 2005. The oil storage shed had a dirt floor, and oily staining was noted at this location.
Recommendation: Soil sampling should be performed at the subject property in the vicinity of the former oil storage shed to document the presence or absence of contamination.
2. The subject property was historically used as a metal salvage operation (1960 – 1971) and as an automotive body shop (1971 – present). The parking lot has never been paved. Releases of contaminants to the shallow soil may have occurred at the property as a result of historical site operations.
Recommendation: Soil sampling should be performed at the subject property to document the presence or absence of contamination.
3. Three residences and three commercial structures were historically present at the subject property during the time period from approximately 1908 through the late 1950s. It is possible that the structures historically used oil heat which could have been stored in underground storage

tanks.

Recommendation: A geophysical survey should be performed on the property in order to identify the potential for historical underground storage tanks in connection with the former structures.

4. The subject property is located in an area which has a long history of industrial usage. Contaminants originating at adjacent and nearby properties may have migrated onto the subject property.

Recommendation: An investigation to assess environmental impacts at the subject property should be designed in such a way as to evaluate impacts from potential offsite sources as well as onsite sources of contamination.

In addition, while not Recognized Environmental Conditions under E1527-13, the following recommendations are presented:

1. An aboveground storage tank, used to store heating oil, was located on an unpaved area, without secondary containment. Evidence of spills or leaks, such as staining or odors, was not observed in the vicinity of the tank.

Recommendation: It is recommended that the tank be placed within appropriate secondary containment. In addition, if soil sampling activities are planned at the property, it may be prudent to collect a sample from the vicinity of this tank.

2. A hydraulic hoist was noted on an unpaved area under a carport. An air compressor was noted in a lean-to shed on the southern side of the building. Minor oil staining has been noted on surface gravel in these locations.

Recommendation: If soil sampling activities are planned at the property, it may be prudent to collect samples near this equipment.

3. Based upon the age of the building (1960), materials used in its construction may contain asbestos.

Recommendation: It is recommended that an asbestos survey be performed for the building. Areas found to contain asbestos which are in a deteriorated condition should undergo abatement or be repaired by a licensed asbestos contractor.

Further, the Oregon Department of Environmental Quality requires that an asbestos survey be conducted prior to the renovation or demolition of non-residential buildings, regardless of date of construction, and also of residential buildings constructed prior to January 1, 2004. A copy of the

asbestos report must be kept onsite and provided to the agency upon request.

Note that a waiver of the survey requirement can be granted if requested in writing and documentation proves to agency satisfaction that no asbestos-containing material is present. An asbestos survey is not required if all of the material will be handled and disposed of as asbestos-containing material.

2.0 INTRODUCTION

2.1 Purpose

On behalf of ESCO Corporation (ESCO) (a User of this Phase I ESA), Bridgewater Group, Inc. (the Client/User) retained the environmental consulting firm of Hahn and Associates, Inc. (HAI) to perform a Phase I Environmental Site Assessment (ESA) of the Auto Body Shop Property located at 2404 NW Nicolai Street, Portland, Multnomah County, Oregon.

In addition to Bridgewater Group, Inc., intended Users of this Phase I ESA report also include the following:

- ESCO Corporation (ESCO)

This Phase I ESA was undertaken by the Client/User for the purpose of identifying Recognized Environmental Conditions (RECs) at the property, that is, *the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.* This report is intended to constitute *All Appropriate Inquiries* (AAI) for purposes of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

2.2 Detailed Scope-of-Services

The scope of work for this project followed the American Society for Testing and Materials (ASTM) guideline (E1527-13) entitled *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. This scope of work is strictly limited to the scope set forth in ASTM E1527-13 unless specifically noted herein and detailed in the services agreement for this project. The U.S. Environmental Protection Agency (EPA) has stated that the ASTM E1527-13 standard may be used to comply with meeting the objectives and performance factors of 40 Code of Federal Regulations (CFR) Part 312 Standards for *All Appropriate Inquiries, Final Rule* (40 CFR 312.11). All appropriate inquiries must be conducted in compliance with E1527-13 to obtain protection from potential liability under CERCLA as an innocent landowner, a contiguous property owner, or a bona fide prospective purchaser. Any deviations to or from ASTM E1527-13 are described in Section 9.0 *Deviations*.

In accordance with E1527-13, information on the property under consideration was gathered through the following activities:

- Physical inspection (site visit)
- Observation of the physical features of the property
- Survey of the surrounding land uses
- Interviews of knowledgeable persons, when available and as pertinent, including
 - Current and past owners
 - Current and past operators
 - Current and past occupants
 - Others
- Review of the available historical documents
- Review of recorded environmental cleanup liens and Activity and Use Limitations (AULs), as provided to HAI by the Client/User, for the purpose of CERCLA Landowner Liability Protections
- Reviews of federal, tribal, state, and local government records
- Examination of other pertinent documents, such as, but not limited to, photographs and maps

In accordance with the services agreement for this project (Appendix A) and unless specifically noted herein, the Phase I ESA review and inspection activities did not include items that were outside the scope of ASTM E1527-13 (also known as non-scope considerations) that may exist on a property that are beyond the scope of E1527-13, but may warrant consideration by parties to a commercial real estate transaction. Non-scope considerations include certain environmental conditions such as, but not limited to, the following:

- Asbestos
- Lead-Based Paint (LBP)
- Lead in Drinking Water (LIW)
- Electromagnetic Radiation
- Cultural and/or Historical Resources
- Indoor Air Quality (e.g. Vapor Intrusion, Radon, Etc.)
- Fungi (e.g. Mold)
- Wetlands And Other Ecological Resources
- Endangered Species
- Health and Safety
- Regulatory Compliance
- Determination of the Suitability of a Property or its Structures for any Purpose

NOTE: this list is not intended to be an all-inclusive list of all possible environmental conditions that may exist on a property that are outside the scope of ASTM E1527-13 and this report. Further, no implication is intended as to the relative importance of inquiry into such non-scope considerations.

While issues pertaining to asbestos are not within the scope of ASTM E1527-13, this report does comment on the possible presence of suspect asbestos-containing materials (ACMs), based upon 1) the age(s) of the property structure(s) and 2) physical observations during the site visit of visually accessible materials. However, a formal asbestos survey was not performed for the subject property,

Additionally, while indoor air quality is not within the scope of ASTM E1527-13, the Phase I ESA review and inspection activities have included an assessment of the likelihood of an impact to the subject property and its structures from migrating hazardous substances and petroleum products in any form, including solid and liquid at the surface or subsurface, and vapor in the subsurface, in accordance with ASTM E1527-13 and *All Appropriate Inquiries*. However, a formal Vapor Intrusion Assessment was not within the scope of this Phase I ESA and was not performed for the subject property.

2.3 Significant Assumptions

User's Responsibilities

Unless specifically noted herein, it is the obligation of the Client/User of this Phase I ESA to provide HAI with certain information as specified in ASTM E1527-13 as the *User's Responsibilities*, including:

- A Title Report that includes the required search for recorded environmental liens and activity and use limitations (AULs), as well as any actual knowledge thereof
- Information regarding any specialized knowledge or experience, or commonly known information that may be material to identifying RECs at the subject property
- Information regarding the reason for a significantly reduced property purchase price (lower than fair market value)

Inferred Groundwater Flow Direction

For the purpose of evaluating the potential for groundwater contamination from offsite sources to impact the subject property, or from onsite sources to impact surrounding areas, the uppermost groundwater flow has been inferred to generally follow surface topography, and to flow toward surface water bodies, unless specific information is available regarding groundwater

flow direction. HAI has not field-checked any of the site hydrogeological information for accuracy, nor did HAI conduct an independent evaluation of the local geology.

Accuracy/Completeness

The accuracy and completeness of “readily available” recorded information and historical documentation varies among and within information sources, including governmental sources. Historical records and documentation are often inaccurate or incomplete, or may provide conflicting information. Similarly, the accessibility to or the ease of retrieval of such records may vary or be inconsistent.

Under ASTM E1527-13, the Client/User or Environmental Professional (EP) is not obligated to identify mistakes or insufficiencies in the information provided or obtained. HAI has made a reasonable effort to take into consideration the possible significance of any such mistakes or insufficiencies that are obvious in light of the available information of which HAI has actual knowledge.

Limitations and Exceptions

This report is not intended to be an exhaustive investigation of environmental conditions or a characterization of any contamination discovered. In performing an environmental site assessment, a balance must be struck between the desire to conduct a complete inquiry into environmental matters and the limits of time, cost and technology.

This report sets forth HAI’s evaluation of the possibility of RECs based on the scope of work agreed to by the Client and within the Client’s schedule and budget. HAI’s limitations and exceptions are described in Section 11.0 *Limitations*.

Special Terms and Conditions

None.

2.4 User Reliance

Unless otherwise specified in writing, this report has been prepared solely for use by the Client and User(s), as identified in Section 2.1 *Purpose*, for use only in connection with the described property, subject to the limitations and conditions in the services agreement for this project and those presented in Section 11.0 *Limitations*. Any other use by the Client/User(s) or any use by any other person shall be at the user’s sole risk, and HAI shall have neither liability nor responsibility with respect to such use.

3.0 SITE BACKGROUND

3.1 Location and Legal Description

The subject property consisted of Tax Lot 700, located in the NW 1/4 of the SW 1/4 of Section 28, Township 1 North, Range 1 East, Willamette Meridian (W.M.).

Street Address	Acreage	Improvement Type	Year Built	Owner
2404 NW Nicolai Street	0.23	Garage	1961	ESCO Corp. Corporate Tax Department

Source: Multnomah County Department of Assessment and Taxation records

The following historical addresses associated with the subject property were identified during the course of this assessment: 2441 NW 24th Avenue, 2447 NW 24th Avenue, and 2455 NW 24th Avenue (Figure 2b). The historical addresses were included in the historical and records research conducted for this assessment.

3.2 Site and Vicinity General Characteristics

The subject property was located approximately 1.5 miles to the northwest of the downtown core of the City of Portland, in an area of commercial and industrial usage. NW Nicolai Street bounded the property to the north, and NW 24th Avenue bounded it to the east (Figure 1).

3.3 Current Use of the Property

The subject property was utilized as an auto body shop by Class-n-Kustom Autobody & Boat Repair. The building included a small office, a restroom, a paint booth, and a repair shop area. In addition to the building, two open-sided carport structures and one shipping container were present at the subject property. The shipping container was used as a storage shed. The exterior areas of the property were surfaced with gravel and were used for vehicle and parts storage (Figure 2a).

3.4 Current Uses of the Adjoining Properties

The surrounding properties consisted of commercial and industrial development, as tabulated below and shown in Figure 2a.

Surrounding Properties	
Direction	Description
North	Color Technology Inc.
East	Catfish Lou's (Pub)
Southeast	Restaurant Supply Warehouse
South, West	ESCO Corporation Storage Yard*

* See Section 7.0 *Site History* and 8.0 *Records Review*

3.5 Physical Setting Sources

3.5.1 Topography

The subject property was located on the U.S. Geological Survey 7.5-Minute Quadrangle, Portland, Oregon, 1995 (Figure 1). It was situated on relatively flat terrain at an elevation of approximately 60 feet above mean sea level (msl). The vicinity of the property slopes to the northeast and towards the Willamette River.

3.5.2 Geology

According to the Oregon Department of Geology and Mineral Industries *Earthquake-Hazard Geology Map of the Portland, Oregon Quadrangle*, 1990, the soils in the vicinity of the subject property are underlain by Pleistocene fluvial sediments deposited during catastrophic flood events and described as coarse sand to silt complexly interlayered with variable silts, sands, and gravels. These materials may be overlain by artificial fill nearing the heavily industrial zone to the northeast.

3.5.3 Hydrogeology

Water wells or monitoring wells were not observed on the subject property or indicated by Oregon Water Resources Department (OWRD) records to be located on the property. An OWRD well log report for nearby registered wells in Sections 28 and 29 of Township 1 North, Range 1 East, W.M. indicated the depth to first groundwater in the vicinity of the property ranged from approximately 20 to 65 feet below ground surface (bgs) (Appendix B). HAI did not field-check any of the site geological or hydrogeological information for accuracy as a part of this environmental site assessment.

4.0 SITE RECONNAISSANCE

A site reconnaissance of the subject property was conducted on April 18, 2017 by Ms. Eleanore Ramsey, G.I.T., E.P., a representative of HAI. Access to the property was granted by Mr. Travis Quarles of ESCO, the property Owner, who accompanied Ms. Ramsey on the site visit. Ms. Ramsey was also accompanied by Mr. Jeff Dresser, P.E., of Bridgewater Group, Inc., the Client, and Mr. Clint Birch of Class-n-Kustom Autobody & Boat Repair, the property Occupant.

4.1 Methodologies and Limiting Conditions

The methodologies for conducting the site reconnaissance included:

- Visual inspection of the interior areas of the structure at the property
- Visual inspection of the exterior areas of the structure at the property
- Visual inspection of the property perimeter
- Visual inspection of the remainder of the property
- Visual inspection of the adjoining properties from the subject property boundary, public rights-of-way, or other vantage points (e.g., aerial photography).

The visual inspection of the subject and adjoining properties endeavored to identify areas where hazardous substances and petroleum products may be or may have been stored, treated, handled or disposed.

4.2 General Site Observations

The subject property was developed with one building and was utilized as an auto body shop by Class-n-Kustom Autobody & Boat Repair (Photograph 1).

Interior Areas

The subject property was developed with one commercial building. The building was 2,000 square feet in size, and was constructed in 1961. It was constructed with a metal frame and sides, and had a concrete slab-on-grade foundation. The building included a small office, a restroom, a paint booth, and a repair shop area.

In addition to the building, two open-sided carport structures and one shipping container were present at the subject property. The shipping container was used as a storage shed.

Exterior Areas

The exterior areas of the subject property were surfaced with gravel and were used for vehicle and parts storage. A hoist was located under one of the carport canopies (Photograph 1).

Oily staining was observed on the gravel ground surface in the southwestern portion of the subject property (Photograph 2). According to Mr. Clint Birch of Class-n-Kustom Autobody & Boat Repair, the property Occupant, this portion of the property was historically used by ESCO, the property Owner, for oil storage (see Section 7.3 *Summary of Historical Use*).

With the exception of the oily staining noted above and minor (*de minimis*) oil staining at various locations on the property, evidence of releases of hazardous substances or petroleum products, such as stains, soil discoloration, odors, distressed vegetation, or other visible indications of impairment, was not noted within the property structures or elsewhere on the subject property.

Utilities

The subject property was served by the following utilities:

Utility	Provider / Comments
Electricity	Portland General Electric
Water	City of Portland
Sewer	City of Portland
Heating / Cooling	Oil-burning furnace

Surrounding Properties

Evidence of the usage, storage, or disposal of hazardous substances, petroleum products or RECs on the adjoining parcels and right-of-way areas was not observed from the property boundary or from the public right-of-way.

4.3 Storage Tanks

4.3.1 *Underground Storage Tanks*

During the assessment activities, the subject property was inspected for visual evidence of underground storage tanks (USTs). Visual evidence of USTs would include fill caps, vent pipes, and pump islands.

In addition, the following resources were queried / reviewed regarding UST records pertaining to the subject property:

- Portland Fire and Rescue
- City of Portland on-line UST records
- The City of Portland Auditor's *List of Fuel Oil and Gasoline Storage Tanks, Filling Stations, and Curb Pumps*, included in the *1927 Mayor's Message and Annual Reports*, which covers the period from 1890 to 1927
- The Oregon Department of Environmental Quality's (DEQ) Registered UST Facility and Leaking Underground Storage Tank (LUST) lists
- Mr. Travis Quarles, the Environmental Engineering Manager for ESCO, the property Owner and also a User of this Phase I ESA

Visual evidence of USTs was not observed at the property.

Three residences and three commercial structures were historically present at the subject property during the time period from approximately 1908 through the late 1950s, prior to the construction of the existing building in 1961 (see Figure 2b).

HAI could not determine the sources of heat for the former structures historically located on the subject property from the resources reviewed for this assessment. There is a possibility that the former structures used heating oil that could have been stored in USTs. Further, DEQ and City of Portland records indicate that heating oil USTs were historically common in the vicinity of the subject property. The possible current or historical presence of USTs at the property represents a REC for the property.

4.3.2 *Aboveground Storage Tanks*

The subject property was visually inspected for evidence of aboveground storage tanks (ASTs). Visual evidence of ASTs would include tanks, concrete foundations or saddles, pedestals or steel support structures.

One 250-gallon AST was observed adjacent to the southern exterior wall of the building (Photographs 1 and 3). According to Mr. Clint Birch, the property Occupant, the AST stores stove (heating) oil, which is used to heat the building. The AST is located on an unpaved area and was not situated within secondary containment. Evidence of spills or leaks, such as odors or staining, was not observed in the vicinity of the AST.

4.4 Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs), EPA-regulated hazardous substances, are commonly found in electrical equipment manufactured prior to 1980, the year PCBs above 50 parts per million (ppm) were banned from commerce for most applications. Pole and pad-mounted fluid-filled electrical transformers, ballasts associated with fluorescent light fixtures and some hydraulic fluids are typical of electrical equipment that would be suspected to contain PCBs.

Electrical Transformers

Electrical transformers were not observed on or adjacent to the subject property.

Hydraulic Equipment

An aboveground hydraulic hoist was observed under a carport canopy at the subject property, on an unpaved area. Some staining was present in the vicinity of the hoist. The staining may have been the result of drips from vehicles rather than leaks of hydraulic fluid. The hoist appeared to have been manufactured after 1980 and therefore is unlikely to contain PCBs.

Fluorescent Light Ballasts

Fluorescent light ballasts (used in light fixtures) manufactured prior to 1979 typically contained PCBs. Fluorescent lights were noted throughout the subject property building. Based on the age of the building (1961), the ballasts may contain PCBs. However, these types of units do not typically pose an environmental concern unless they leak. The fixtures that were noted during the site visit did not appear to have leaked. Ballasts that are removed for replacement and/or disposal should be evaluated for PCB content. Those not labeled with the words "No PCBs" must be assumed to contain PCBs and must be managed in accordance with the applicable regulations.

Water Well Pumps

PCBs may also be associated with submersible water well pumps manufactured prior to 1979. Water supply wells were not observed on the subject property, or indicated by OWRD records or through interviews to be located on the property.

4.5 Hazardous Substances, Petroleum Products, and Hazardous Wastes

The subject property was visually inspected for signs of the storage, use or disposal of hazardous substances, petroleum products, and hazardous wastes (e.g. containers, drums, staining, leakage, etc.).

Numerous containers of paint, paint thinner, paint additives, and other typical auto body shop fluids were observed at the subject property (Photograph 4). They were stored within the shop area of the building and in a shipping container located adjacent to the western exterior wall of the building. Approximately 30 paint thinner containers were stacked on an unpaved area under a carport canopy. According to Mr. Clint Birch, the property Operator, all of these containers were empty.

An enclosed automatic paint gun cleaner was observed in the building (Photograph 4). According to Mr. Birch, the gun cleaner uses a lacquer thinner (non-chlorinated) solvent. Waste solvent is emptied from the gun cleaner approximately once per year and is collected in a 15-gallon container provided by Safety Kleen. Safety Kleen collects the used solvent as needed.

A paint booth was located in the northwestern portion of the building. An air filtration and venting system was associated with the paint booth.

De minimis paint staining was observed on the concrete slab floor of the property building.

A bead blaster was present in the shop area of the building. Mr. Birch stated that the bead material has never been replaced.

Several vehicle batteries were stored on an unpaved area under a carport canopy.

Oily staining was noted at various locations on the subject property, in particular on the graveled surface of the exterior areas of the subject property, in the southwestern corner (former oil storage shed location) and near the hoist.

Fifty-five gallon drums were not noted on the subject property.

4.6 Water, Wastewater and Stormwater

4.6.1 Wastewater Discharge Sources

Evidence of industrial, process or other discharge sources was not observed at the subject property.

4.6.2 Subsurface Discharge Features

The subject property was inspected for evidence of subsurface discharge features (e.g. floor drains, oil/water separators, sumps and trenches).

Evidence of subsurface discharge features was not observed at the subject property.

4.6.3 Sanitary Systems and Water Supply

The subject property was visually inspected for evidence of current or former onsite sanitary systems (e.g. septic tanks, cesspools).

The subject property was served by the municipal water and sanitary sewer system at the time of the site visit. According to information posted on the City of Portland website, the sanitary sewer system was installed in the subject property areas in the early 1900s.

4.6.4 Stormwater Discharge

Stormwater

Stormwater features, such as catch basins or bioswales, were not observed at the subject property. The exterior areas of the subject property were unpaved and covered with gravel. Accordingly, stormwater at the property would infiltrate into the ground surface and/or flow as sheet runoff downslope to the northeast.

Drywells

Drywells were not observed or indicated by permits or plans to be present at the subject property.

Surface Water

Evidence of surface water (e.g. ponds, lagoons or standing surface water indicative of industrial or wastewater disposal) was not observed at the subject property. Surface water in this context does not include naturally occurring bodies of water such as rivers, lakes, streams, or wetlands (annual or perennial).

4.7 Solid Waste Disposal / Fill Materials

Solid waste generated at the subject property was disposed of by the municipal solid waste service. Uncontrolled or improper solid waste disposal practices were not observed at the property.

Mr. Clint Birch of Class-n-Kustom Auto Body, the property Occupant, stated that pieces of metal debris have been found in the gravel-paved parking lot areas of the subject property. The subject property was historically used as a metal salvage operation. It is possible that materials from the historical metal salvage operation use are present in the shallow soils of the subject property.

The presence of undocumented fill at a property could present environmental concerns. Although the possibility exists that undocumented fill could be located on the subject property, evidence of imported fill was not observed on the property (e.g. stockpiles, mounds, hummocks, depressions, etc.) or identified by interviews or the historical records review performed for the property.

4.8 Wells

The subject property was inspected for evidence of wells (e.g. potable supply, irrigation, monitoring, extraction, dry injection).

Evidence of wells was not observed at the subject property during the site reconnaissance. Further, wells were not indicated by OWRD records, interviews or the historical records review to be located on the property.

4.9 Table 1 – Summary of Site Features

The results of the site reconnaissance, interview(s), and/or the records review with respect to specific site features are summarized in Table 1. Where indicated, a reference where additional information can be found in this report with regard to a specific item has been included.

Table 1

Feature/Condition	Observed/Present (Yes/No/Unknown)	Reference Section for Additional Information
Potable Water Supply	Yes	4.2
Water Supply Well	No	
Monitoring Well	No	
Municipal Sanitary Sewer	Yes	4.2, 4.6.3
Septic Tank	No	
Stormwater Catch Basins	No	
Connected to Municipal Stormwater Collection System	No	
Stormwater Swale or Retention Pond	No	
Drywells	No	
Hazardous Substances/Petroleum Products	Yes	4.5
Drums/Totes (55-gallon or larger)	No	
Petroleum or Potentially Hazardous Substance Containers (less than 55- gallons)	Yes	4.5
Unidentified Substance Containers	No	
USTs/ASTs	AST	4.3.2
Odors	No	
Ponds, Lagoons, Standing Surface Water	No	
Pits/Sumps	No	
Floor Drains	No	
Spillage (other than water)	No	
Staining (other than water staining)	Yes	4.2, 4.5
Fluid-filled Electrical Transformers	No	
Hydraulic Equipment	Yes	4.4
Stressed Vegetation	No	
Obvious Areas of Fill (stockpiles, mounds, hummocks, depressions, etc.)	No	
Evidence of On-Site Solid Waste Disposal (other than litter)	Yes	4.7

4.10 Additional Services

Unless specifically noted herein, the Phase I ESA review and inspection activities did not include items that are outside the scope of ASTM E1527-13 such as issues related to lead-based paint, lead in drinking water, electromagnetic radiation, cultural and/or historical resources, indoor air quality (e.g. vapor intrusion, radon, etc.), fungi (e.g. mold), wetlands and other ecological resources, and endangered species. Similarly, the review and inspection activities did not include surveys for asbestos, health and safety, regulatory compliance, or a determination of the suitability of a property or its structures for any purpose.

An asbestos survey was not within the scope of this Phase I ESA and was not performed for the subject property. However, HAI conducted a limited visual assessment for suspect asbestos-containing materials (ACMs) at the time of the site visit. This visual assessment did not constitute an asbestos survey and was not intended to identify every suspect ACM at the property.

4.10.1 Asbestos

Asbestos is a U. S. Environmental Protection Agency (EPA)-regulated toxic substance and a human carcinogen. By EPA standards, asbestos-containing material (ACM) is any material that contain more than one percent asbestos. ACMs were typically used in insulation materials, ceiling tiles, and linoleum manufactured prior to the mid-1970s. However, certain types of ACMs, including roofing felt and coatings, among others, may continue to legally be imported or produced, sold, and installed in structures today.

EPA requires that all Regulated ACM (RACM) be removed from a site prior to demolition, dismantling or renovation of structures to prevent the release of asbestos fibers to the air. RACM would include friable ACM or nonfriable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or has crumbled, or has been pulverized or reduced to powder in the course of demolition or renovation operations. Friable ACM is defined as any material with more than one percent asbestos by weight that hand pressure can crumble, pulverize or reduce to powder when dry.

State regulations further require that all ACMs be removed from a site prior to demolition, dismantling or renovation of structures, regardless if the material is friable. Additionally, DEQ also requires that an asbestos survey be conducted prior to the renovation or demolition of all non-residential buildings, regardless of date of construction, and also of residential buildings

constructed prior to January 1, 2004. A copy of the asbestos report must be kept onsite and provided to the agency upon request.

Note that a waiver of DEQ's requirement for an asbestos survey can be granted if requested in writing and documentation proves to agency satisfaction that no asbestos-containing material is present. Alternatively, an asbestos survey is not required if all of the material will be handled and disposed of as ACM.

In addition, federal and state Occupational Safety and Health Administrations (OSHA) require that commercial and industrial building and facility owners communicate asbestos hazards and provide asbestos awareness training to tenants, employees, and maintenance personnel.

Suspect ACMs were noted at the subject property, including drywall joint compound, located in the office portion building. The shop portion of the building did not include interior finishes. Based upon the age of the building (1961), additional materials may be present that contain asbestos. The condition of the observed materials was noted to be good.

5.0 INTERVIEWS

5.1 Interviews with Owner, Site Manager, Occupant

Attempts were made to interview current Owner(s), the key site manager, occupants and/or major occupants, and occupants likely to use, store, treat, handle or dispose of hazardous substances or petroleum products at the subject property. In addition, to the extent that they have been identified, past owners, operators, and occupants likely to have information regarding the potential for contamination at the property were also interviewed. Further, a reasonable attempt has been made to interview a state and/or local government agency. Additional personnel may also be interviewed as deemed necessary. Data Gaps with regard to the referenced interviews are discussed below and in Section 9.1 *Data Gaps*.

Current Property Owner, Key Site Manager

Information obtained from Multnomah County Tax records and the City of Portland identified the following current Owner of the subject property:

- ESCO Corporation (ESCO), Owner since 1992

Mr. Travis Quarles, the Environmental Engineering Manager for ESCO, the property Owner and also a User of this Phase I ESA, completed a property owner interview questionnaire on April 28, 2017. Mr. Quarles indicated the following:

- Mr. Quarles was not aware of the date of acquisition by ESCO. He has been familiar with the property in his professional capacity for ESCO since approximately 2011.
- The subject property is developed with one main building, occupied by an office, auto body shop, and paint booth. Also present at the property are one pole building covering a hydraulic lift, one storage structure, and one steel container used for chemical storage.
- The subject property has been used as an auto body shop since at least the 1990s (Mr. Quarles was not aware of its usage between the 1950s and 1990s). Activities conducted at the property have included painting, body work, and disassembly. Chemical usage included paints and solvents. An air compressor, some heavy equipment, and vehicle storage have been present.
- An aboveground storage tank, used to store fuel oil for heating the building, was located on the property.
- Historical structures included an office and residence in the 1940s and/or 1950s.
- Hydrocarbon staining was observed under the vehicles parked on the southwestern corner of the subject property.
- Mr. Quarles indicated that subject property was involved in ESCO's response to the Portland Harbor Superfund site.

Mr. Quarles indicated that he was not aware of:

- Other historical uses of the property or of any former property structures
- Any existing or former USTs, ASTs, water supply wells, septic tanks, drywells, pits, sumps, fill material, or hazardous substances and/or petroleum product usage on the property, beyond those discussed above
- Environmental permits, notices, significantly lower property purchase price (lower than comparable), environmental liens or activity and use limitations, or RECs in association with the property
- Any pending, threatened or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property except for Portland Harbor issues
- Any notices from any government entity regarding possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products except for Portland Harbor issues
- Environmental conditions that have affected or may affect the purchase or lease price of the property, with the possible exception of minor staining on exterior portions of the property.

- Any specialized knowledge of the property or surrounding sites, and knew of no commonly known information about the property that would help in identifying conditions indicative of releases or threatened releases, including RECs at the property
- Any obvious indicators that point to the presence or likely presence of contamination at the property, with the possible exception of minor staining on exterior portions of the property.

Current Property Occupant

Mr. Clint Birch of Class-n-Kustom Autobody & Boat Repair, the property Occupant, was interviewed on April 18 and 25, 2017. Mr. Birch indicated the following:

- Mr. Birch has operated an automotive body shop, Class-n-Kustom Auto Body, at the subject property since 1994. He stated that the operations at the subject property consisted primarily of body work on automobiles and boats, including painting inside the paint booth.
- The paint gun cleaner used a lacquer thinner solvent. The waste sludge is emptied approximately once per year into a 15-gallon container provided by Safety Kleen, a waste fluids handler. Because of the low volume of waste generated by the gun cleaner, the 15-gallon container is collected by Safety Kleen every few years.
- Mr. Birch stated that the AST noted adjacent to the southern exterior wall of the building contained "stove oil" for use in an oil-burning furnace used to heat the building.
- He stated that an oil storage shed was located on the southwest corner of the unpaved parking lot area from at least 1994 through approximately 2007. He also stated that oily staining is present in the former location of the oil storage shed.
Note: Aerial photographs indicated that the oil storage shed was removed in approximately 2005.
- He stated that the prior use of the property was an auto body shop from approximately 1971 through the time he took over in 1994.
- Mr. Birch stated that the property had historically been used as a wrecking yard prior to 1971. He also stated that metal fragments have been discovered by himself or his employees in the gravel-surfaced parking lot areas.
- With the exception of the staining at the location of the former oil storage shed, Mr. Birch was not aware of any releases of hazardous substances or petroleum products at the subject property.

5.2 Interviews with Past Owners, Operators, Occupants

Past Property Owner(s), Operator(s) and Occupant(s)

Information obtained from Multnomah County Tax records and the City of Portland identified the following former Owners of the subject property:

- Mr. Aaron Sugarman, Ms. Berry Sugarman, Ms. Marcy Sugarman, Ms. Selma Perloff, Ms. Manya Gevurtz, and Ms. Bobbi Breslin, past property Owners, at least 1980 – 1992
- Mr. Amedee Tremblay, past property Operator, 1971 – 1994
- Mr. Louis Bender, past Owner/Operator, 1958 – 1970

Internet searches and information provided by local resources did not yield a valid telephone number for any of the above-listed former Owners and Occupant/Operators. Therefore HAI was not able to interview former Owners, Operators or their representatives with knowledge of the property prior to the 1990s (Data Gap). However, based on the duration of ownership by the current Owner and the tenure of the current Operator, combined with the information obtained from interviews, historical records, historical aerial photographs, and interviews conducted in 1991 for a previous Phase I ESA (see below), this Data Gap was not considered to be significant.

Past Property Owner(s), Operator(s) and Occupant(s) – Interviews Conducted in 1991

A Phase I ESA was conducted for the subject property in 1991 by Lambier Professional Group¹ (see Section 7.2 *Previous ESAs*). Relevant information from interviews conducted by LPG as part of the 1991 Phase I ESA are summarized below.

Mr. Aaron Sugarman, a past Owner of the subject property, indicated the following in 1991:

- He represented a family partnership which owned the property in 1991. At that time, they leased the property to ESCO, and ESCO subleased the property to Business Men's Auto Body.
- Mr. Sugarman had been familiar with the property since 1952. He was originally an employee of Superior Equipment and Salvage Company, which operated a metal salvage operation at the subject property from the early 1950s through 1971.

¹ Lambier Professional Group (LPG 1991). *Phase I Environmental Site Assessment of 2404 & 2414 NW Nicolai Property, Portland, Oregon*. December 30, 1991.

- The building was originally used to store metals. Operations at the site included receiving, sorting, weighing, and shipping of scrap metals. Scrapping operations such as dismantling of equipment or transformers reportedly was not performed at the site. The salvaged metals were sorted and resold for shipment offsite to reclaimers.
- He was not aware of any environmental concerns at the subject property.

Mr. Amedee Tremblay operated Business Men's Body Shop at the subject property from 1971 through 1994. He indicated the following in 1991:

- He had operated an automotive body shop, Business Men's Body Shop, at the subject property since 1971. He stated that the property was historically used as a scrapyard, and metal debris was occasionally found in the parking area.
- He was not aware of any environmental concerns at the subject property.

5.3 Interviews with Government Officials / Others

State and/or Local Government Agency

State and County government agency records and information were readily available through Internet database searches and queries. Local agency representatives for the building and fire departments did not have additional information beyond publicly available records and plans (Section 7.1 *Historical Use Resources*). Accordingly, interviews with state or local government agency representatives were not conducted during this assessment.

6.0 USER PROVIDED INFORMATION

Persons (e.g. the Client/User) seeking to qualify for the innocent landowner defense, prospective purchaser or contiguous property owner liability protection under CERCLA must provide any specialized knowledge of the subject property or surrounding sites, commonly known or reasonably ascertainable information within the community regarding the subject property, and any other experience relevant to this inquiry, for the purpose of identifying conditions indicative of releases or threatened releases at the subject property. The Client/User must also consider the degree of obviousness of the presence or likely presence of contamination on the property.

Mr. Jeff Dresser, P.E., of Bridgewater Group, Inc. (the Client/User) completed a *Phase I Environmental Site Assessment User Questionnaire* (Appendix C).

6.1 Title Records

On behalf of Bridgewater Group, Inc. (the Client/User) and ESCO (a User of this Phase I ESA, and also the property Owner), Mr. Dresser provided HAI with a Preliminary Title Report for the subject property, prepared by First American Title Company of Oregon and dated March 6, 2017 (Appendix D).

6.2 Environmental Liens or Activity and Use Limitations

Mr. Dresser indicated that he was not aware of federal, tribal, state, or local environmental liens or activity and use limitations (AULs, such as engineering or institutional controls) in association with the subject property, as borne out by the preliminary title report provided by Bridgewater Group, Inc.

6.3 Specialized Knowledge and Commonly Known or Reasonably Ascertainable Information

Mr. Dresser indicated that he had no specialized knowledge of the property or surrounding sites.

Mr. Dresser provided a 1991 Phase I ESA for the subject property (see Section 7.2 *Previous ESAs*). He also stated that the current tenant, Mr. Clint Birch of Class-n-Kustom Auto Body, has speculated that oil spills may have occurred at a former oil storage area at the subject property.

6.4 Valuation Reduction for Environmental Issues

Mr. Dresser indicated that he was not aware of:

- Environmental permits, notices, or significantly lower property purchase price (lower than fair market value)
- Any pending, threatened, or past litigation or administrative proceedings concerning hazardous substances or petroleum products in relation to the property
- Any notices from any government entity regarding possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products

- Environmental conditions that have affected or may affect the purchase or lease price of the property
- Knowledge of RECs at the property or of any obvious indicators that point to the presence or likely presence of contamination at the property, with the exception of the former oil storage area (discussed in this report in Section 7.3 *Summary of Historical Use*).

6.5 Reason for Performing Phase I ESA

Mr. Dresser indicated that Bridgewater Group, Inc. was conducting the Phase I ESA on behalf of ESCO, for due diligence purposes in support of Landowner Liability Protections under CERCLA, prior to the sale of the property.

7.0 SITE HISTORY

7.1 Historical Use Resources

A combination of practically reviewable information (available within reasonable cost and time constraints), obtained from publicly available records and resources, was used to determine the prior uses of the subject property and of the surrounding properties. A complete listing of all references, including sources and dates of review, is included in Section 12.0 *References*. The following resources were reviewed in an effort to establish the history of the subject property and surrounding land use:

- Multnomah County Department of Assessment and Taxation, tax assessment records and historical ownership information for 2404 NW Nicolai Street, the subject property
- City of Portland Records Center, available permits and plans (hard copies and microfilm for building, plumbing, and mechanical) for 2404 NW Nicolai Street and 2441-2459 NW 24th Avenue (odd addresses), were reviewed for addresses deemed to currently or historically correspond to the property
- First American Title Company of Oregon, *Preliminary Title Report*, March 6, 2017 (Appendix D)
- Reverse City Directories (Cole and Polk's) for Portland, Oregon, for the years 1924, 1930, 1935, 1940, 1946, 1950, 1955, 1960, 1965, 1967, 1970, 1975, 1977, 1980, 1985, 1981, 1990, 1995, 2000, 2005, 2010, and 2014 obtained from Environmental Data Resources (EDR)

- Reverse City Directories (Cole) for Greater Portland, Oregon, 1994, 1997, 2002, 2007, 2012, 2017
- Sanborn Fire Insurance Maps (SFIMs) for Portland, Oregon, 1901, 1905, 1908, 1950, and 1969, previously obtained from Environmental Data Resources (EDR)
- Aerial photographs for 1936, 1943, 1955, 1963, 1972, 1980, and 1995, obtained from U.S. Army Corps of Engineers Central Map Files, Portland, Oregon. Aerial photographs for 2001, 2005, 2006, 2008, 2009, 2011, and 2016 obtained from Google Earth Imagery. Aerial photographs for the years 1936, 1963, 1972 and 2016 are included in the Appendix of this report.

7.2 Previous Environmental Site Assessments

Mr. Jeff Dresser of Bridgewater Group, Inc. (the Client/User) provided one previous ESA for review.

Phase I Environmental Site Assessment of 2404 & 2414 NW Nicolai Property, Portland, Oregon. Lambier Professional Group (LPG), December 30, 1991.

The 1991 LPG Phase I ESA included the subject property (2404 NW Nicolai Street) and the west-adjacent property (2414 NW Nicolai Street). LPG identified the following environmental concerns for the subject property and made the following recommendations:

- The body shop utilized paints, thinners, and chemicals. LPG noted that the chemical storage, handling, and inventories inside the building were maintained in good order, and that the floor of the shop was a concrete slab.
- A number of empty chemical containers were observed in areas with uncontrolled weather protection and drainage control. LPG stated that waste storage practices needed improvement.
- Staining was observed on the dirt floor of the shed located on the property, in the vicinity of containers of lubricating oils, petroleum-based solvents, and a waste collection drum. LPG stated that the soil contamination appeared to be minor. They recommended that waste materials should be stored in secure containers or areas, and that corrective action be taken to mitigate existing contamination and prevent ongoing contamination of the site.
- Soil staining, possibly lubricating oil, was noted near the air compressor. LPG stated that the soil contamination appeared to be minor.

- The historical use of the subject property as a scrap metal receiving site presented some risk of environmental impairment.
- The property was located in a general area of industrial development. Surrounding sites may have impacted the subject property.
- LPG noted that the roof drains were connected to the municipal stormwater sewer in 1975, and stated that the stormwater may have been directed to onsite drywells prior to 1975.

Note: The plumbing permits reviewed by HAI for the current Phase I ESA included a permit which indicated that the roof drains were connected to the municipal combined sewer at the time of the construction of the existing building in 1960. A 1975 permit indicated that the roof drains were separated from the combined sewer and connected to the municipal stormwater sewer. Accordingly, although HAI cannot rule out the presence of drywells on the property, there is no reason to believe that drywells are or have been located on the property.

- LPG noted the possible presence of asbestos-containing materials and PCB-containing fluorescent light ballasts based on the age of the building.

7.3 Summary of Historical Use

Based upon the interviews and the resources that were reviewed, the history of the subject property and of the surrounding land use was determined.

Subject Property

1905 and Prior: Undeveloped

According to historical information, the subject property was undeveloped from at least 1901 through 1905.

1908 – 1950s: Single-Family Residences and Small-Scale Commercial

In 1908, the subject property was developed with three residences, a small commercial building (identified as a “store” on SFIMs), a building used for storage, and several small outbuildings (Figure 2b). The northwestern residence was demolished prior to 1936. The southeastern residences remained until the 1950s. Building department records and aerial photographs indicated that the storage building was demolished in 1929 and the commercial building was demolished in 1936.

An L-shaped commercial building, identified as an “office” on SFIMs, was present on the northeastern portion of the property from 1946 through the late 1950s.

1960 – 1971: Metal Salvage

The property was redeveloped in 1960. The existing steel-framed building was constructed, and was used for metal storage by Superior Machinery and Salvage Company (also identified in historical resources as Superior Junk Company and Superior Equipment and Salvage Company). The property was used as a metal salvage operation from 1960 through 1971. According to interviews conducted previously (LPG 1991 Phase I ESA), operations at the site included receiving, sorting, weighing, and shipping of scrap metals. Scrapping operations such as dismantling of equipment or transformers were not reportedly performed at the site. The salvaged metals were sorted and resold for shipment offsite to reclaimers. Metal debris has reportedly been encountered in the gravel parking lot area by the current and former Occupants of the subject property.

1971 – Present: Auto Body Shop

The property has been used as an automotive body repair shop from 1971 through the present: Business Men’s Body Shop (1971 – 1993), and Class-n-Kustom Autobody (1994 – present). The site visit for this assessment did not identify any RECs associated with the current operation of Class-n-Kustom Auto Body. However, awareness of environmentally sound practices was less prevalent in past decades. Therefore, the current and past Operators may have contributed to contamination at the property, if any is present.

Environmentally Significant Historical Site Operations

It is possible that releases of contaminants to the shallow soil have occurred at the property as a result of historical site operations. Based on the duration of use of the property for metal salvage and auto body repair (1960 – present), combined with the fact that the parking lot area has never been paved, the historical usage of the property represents a REC.

An oil storage shed was historically located on the southwestern portion of the subject property from approximately the 1980s through 2005 (Figure 2b). According to the LPG 1991 Phase I ESA, this shed was used at that time by ESCO (the property Owner) and Business Men’s Body Shop (the Occupant in 1991) to store oils, petroleum-based solvents, empty containers, and waste collection drums. This shed was also likely used for storage by Class-n-Kustom Autobody, which has operated at the subject property from 1994

through the present. The oil storage shed had a dirt floor, and oily staining was noted at this location during the LPG 1991 Phase I ESA and during the site visit for this current Phase I ESA. Mr. Travis Quarles of ESCO, the property Owner and also a User of this report, did not independently verify historical usage of the oil storage shed by ESCO. Based on the information provided by the 1991 LPG Phase I ESA and on recent observations, the possibility of soil contamination in the vicinity of the former oil storage shed represents a REC for the subject property.

Surrounding Properties

The surrounding properties were undeveloped or used for residential purposes from at least 1901 through 1905. By 1908, some nearby properties were developed for commercial purposes, including stores and restaurants.

Industrial development of the surrounding area began in approximately the 1930s. By the 1960s, all of the surrounding properties were developed for industrial or commercial purposes, and such uses have continued through the present.

South, Southwest, and West-Adjacent Property Usage

Years	South-Adjacent	Southwest-Adjacent	West-Adjacent
1901	Residential	Undeveloped	Undeveloped
1908		Residential	Residential, Store
1936		Barn or warehouse building	Undeveloped
1943		Undeveloped	
1950			Auto parts storage yard
mid-1950s		Parking lot	Warehouse built - Superior Junk Co.
1963			
1969	Shipping warehouse (ESCO)		
1970s	Storage yard (ESCO)		Warehouse used for storage of refractory materials (ESCO)
1980-2008			Warehouse used as machine shop (ESCO)
2009-present			No building. Storage yard (ESCO)

ESCO Corporation, a steel product manufacturing facility, was founded in 1913 and has expanded its footprint throughout its history. It comprised approximately 16 acres at the time of this Phase I ESA, including the south, southwest, and west-adjacent properties. A discussion of regulatory records for the ESCO property is included in Section 8.0 *Records Review*.

Foundries have been found to be potentially associated with soil and/or groundwater contamination, including lead and other metals, petroleum hydrocarbons, chlorinated solvents, polychlorinated biphenyls, and polynuclear aromatic hydrocarbons. Air-deposited dusts containing hazardous materials may also be associated with foundries.

Contaminants originating at adjacent and nearby properties may have migrated onto the subject property. The long history of industrial usage of adjacent and nearby properties represents a REC for the subject property.

8.0 RECORDS REVIEW

As a part of this Phase I ESA of the subject property and as deemed necessary, inquiries were made to governmental agencies with jurisdiction over current and prior activities conducted at the subject property that could have affected the environment. When available and as necessary, files on nearby properties were also reviewed and agency personnel knowledgeable about activities conducted in the area of the subject property were interviewed.

Environmental Data Resources (EDR) was contracted by HAI to provide a regulatory site radius search which has been analyzed and interpreted by HAI. The EDR *Radius Map™ Report*, dated April 14, 2017, is included in Appendix E.

The following lists satisfy the requirements of ASTM E1527-13 for the review of records. As indicated by EDR, the lists reviewed for the *Radius Map™ Report* are obtained on a quarterly basis from the source agencies, and represent the most recent data available at the time of the quarterly update. When available and as necessary, information furnished by EDR was cross-referenced by HAI to DEQ's Facility Profiler and other readily available online database lists. The lists cross-referenced by HAI were the most recent lists available online as of May 9, 2017.

STANDARD ENVIRONMENTAL RECORD SOURCES

U.S. Environmental Protection Agency (EPA) Lists	Search Distance	No. of Sites
National Priorities List (NPL) and Proposed NPL Sites	1.0 mile	1
De-listed NPL Sites	0.5 mile	0
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List	0.5 mile	0
CERCLIS No Further Remedial Action Planned (NFRAP) List	0.5 mile	5
Resource Conservation Recovery Act (RCRA) Corrective Action Report (CORRACTS) List	1.0 mile	0
RCRA Treatment, Storage, and Disposal (TSD) Facilities	0.5 mile	0
RCRA Handlers List	Subject and Adjoining Sites	3
Federal Engineering and Institutional Controls List	Subject Property	0
Emergency Response Notification System (ERNS) List	Subject Property	0

Oregon Department of Environmental Quality (DEQ) Lists	Search Distance	No. of Sites
Environmental Cleanup Site information (ECSI) System: Includes Confirmed Release (CRL), Voluntary Cleanup Program (VCP), State Brownfield, and State-registered Engineering and/or Institutional Controls Sites	1.0 mile	48
Solid Waste Facilities/Landfill (SWF/LF) List	0.5 mile	2
Leaking Underground Storage Tank (LUST) Sites	0.5 mile	94
Underground Storage Tank (UST) Facilities List	Subject and Adjoining Sites	0

Tribal Lists	Search Distance	No. of Sites
Indian LUST Sites	0.5 mile	0
Indian UST List	Subject and Adjoining Sites	0

<i>The following tribal lists are not known to exist and could not be reviewed</i>	
<i>Tribal-Equivalent NPL List</i>	<i>Tribal SWF/LF Sites</i>
<i>Tribal-Equivalent CERCLIS</i>	<i>Tribal Institutional /Engineering Control Registries</i>
<i>Tribal-Equivalent CERCLIS</i>	<i>Tribal Brownfield Sites / Voluntary Cleanup Sites</i>

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

Federal and State Records	Search Distance	No. of Sites
Federal Brownfields Program Sites List	0.5 mile	0
Oregon ERIS Spills List	Subject Property	0
Oregon State Fire Marshal's Office HSIS List	Subject Property	0
Oregon Building Codes Division Drug Lab Cleanup Program List	Subject Property	0
DEQ Underground Injection Control (UIC) Database	Subject Property	0
METRO Landfill Report	0.5 mile	0

Subject Property

The subject property appeared on the RCRA Hazardous Waste Generator (HWG) database list as follows:

Business Men's Body Shop 2404 NW Nicolai Street, Portland, Oregon	EPA ID No. ORD177076197
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According to the DEQ Hazardous Waste Site Summary (Appendix F), the Business Men's Body Shop was listed as a Conditionally Exempt Generator (CEG) in 1991 and 1992. CEGs are defined as generating 100 kilograms (kg) or less of hazardous waste per calendar month, and accumulating 1000 kg or less of hazardous waste at any time; or generating one kg or less of acutely hazardous waste per calendar month, and accumulating at any time 1 kg or less of acutely hazardous waste. As such, information about the types of hazardous wastes formerly generated at this facility were not reported and thus are not available for review. According to the EPA Enforcement and Compliance History Online (ECHO) database, no violations are on file for this site (Appendix F). Further, this facility was not listed on the DEQ Enforcement Action (EA) database. A release was not documented on any of the regulatory lists reviewed for this assessment.

Based on the fact that this facility has not been identified as generating hazardous waste since 1992, combined with the small quantities of hazardous waste previously generated and the absence of a reported release, the listing of the subject property on the RCRA HWG database did not appear to represent a REC.

Surrounding Sites

The review of environmental records sources disclosed a number of sites located within an approximately 1.0-mile radius of the subject property in addition to the subject property listing. The majority of the identified sites do not appear to represent a REC for the property based upon their distance from the property (greater than 150 feet), combined with their downgradient or cross-gradient position relative to the property, the fact that groundwater was not reported to have been impacted, and/or the fact that the sites have been conferred DEQ No Further Action (NFA) status.

Two of the identified sites are discussed due to their proximity or relevance to the property.

ESCO Corporation 2141 NW 25 th Avenue, Portland, Oregon Adjacent Site	LUST Log Nos. 26-90-0054 26-93-0026 26-97-0487 EPA ID No. ORD009028259
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Location / Topographic Position relative to subject property:

- Immediately adjacent to the south and west
- Upgradient

The ESCO Site has been used as a steel product manufacturing facility from 1913 through the present. ESCO has expanded its footprint throughout its history and comprised approximately 16 acres at the time of this Phase I ESA. Refer to Section 7.0 *Site History* in this report for a description of ESCO's use of the south- and west-adjacent properties.

LUST Files

According to the DEQ LUST Incident Reports and No Further Action (NFA) letters for this site (Appendix G), four USTs were removed from the ESCO Site between 1990 and 1997. In each case, petroleum-contaminated soil was removed from the excavation, and confirmation soil sampling did not find levels of remaining contamination in excess of applicable regulatory cleanup levels. Groundwater was not encountered in the excavations. Each of the LUST files was granted NFA status by DEQ. The locations of these former USTs was not provided in the available information reviewed for this Phase I ESA. Based on the available information, including the fact that groundwater was not reported to be affected and the fact that the releases were certified to be cleaned up according to DEQ standards, these nearby LUST sites do not appear to represent a REC for the property.

Hazardous Waste Generator

The adjacent ESCO facility appeared on the EPA RCRA database of hazardous waste generators as a Small Quantity Generator. A record of reported waste streams from 1991 through 2016, obtained from DEQ, was reviewed (Appendix G). In addition to other wastes, wastes containing chlorinated solvents were reported in 1991, 1992, 2013, and 2014. The EPA ECHO database indicated that violations have occurred as recently as 2015, but that no current violations are listed (Appendix G). The DEQ Enforcement Action (EA) database indicated that ESCO was the subject of several EAs between 1994 and 2013. The EA database lists enforcements by Source Name (e.g. ESCO Corporation @ Portland), but does not provide specific location information.

ECSI Site No. 112

According to the DEQ Site Summary Report for ECSI Site No. 112 (Appendix G), ESCO Plant #3 was listed as an ECSI suspect site requiring further investigation. Although the address information for the ECSI site corresponds to the subject property, Mr. Jeff Dresser of Bridgewater, Inc. (the Client/User of this report) confirmed that the ECSI Site is located at ESCO Plant #3, which is located approximately 800 feet to the north-northwest (downgradient) of the subject property. In 1980, a DEQ representative observed runoff from ESCO property located near railroad tracks. Soil was indicated to be contaminated with phenols at a concentration of 2.8 parts per million (ppm). The discharge problem was indicated to have been corrected, and soil contamination was indicated to be possible. No remedial action was noted. Based on its distance and downgradient position relative to the subject property, the listing of ESCO Plant #3 on the ECSI database does not appear to represent a REC for the subject property.

Conclusion

The information obtained from regulatory agency records for this site was not sufficient to exclude the possibility of contamination at the ESCO site. Based on its long history of heavy industrial usage (see Section 7 *Site History*) and the types of contamination typically associated with foundries, combined with its upgradient position relative to the subject property, the possibility of migration of contamination onto the subject property from the ESCO site represents a REC for the subject property.

Portland Harbor Superfund Site Willamette River Mile 1.9 through Mile 11.8	NPL Site ID No. ORSFN1002155 ECSI Site No. 2068
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Location / Topographic Position relative to subject property:

- Approximately 0.5-mile northeast
- Hydraulically downgradient

A Record of Decision (ROD) for the Portland Harbor Superfund Site was released on January 6, 2017. EPA, DEQ and other agencies, tribal governments, community groups and companies have been working to investigate and clean up contamination in Portland Harbor. EPA is the lead agency responsible for investigating and cleaning up contaminated sediments in the river itself. The subject property is not directly adjacent to the Willamette River.

EPA has sent requests for information (known as 104(e) requests) to hundreds of current and former property owners in the general vicinity of the Portland Harbor Superfund Site in order to gather information to assist in

identification of Potentially-Responsible Parties (PRPs) with regard to the investigation and cleanup of the Portland Harbor. According to a list of 104(e) recipients dated January 2013 and available from EPA, ESCO Corporation (the current Owner) received a request for information from EPA. Superfund "General Notice Letters" (GNLs) inform recipients that they are identified as a PRP and may be liable for cleanup costs at the site. A list of Portland Harbor PRPs, available from EPA and dated September 2014, indicated that ESCO received a GNL (Appendix H). However, the subject property for this assessment was not specified as one of ESCO's facilities on the GNL list.

DEQ is the lead agency for identifying and controlling upland sources of pollution adjacent to or near the river that may be contaminating river water or sediments. In 2016, DEQ released the Portland Harbor Upland Source Control Summary Report. The 2016 DEQ summary report does not identify the subject property either as a site having a pending source control decision or as a site that may potentially need investigation.

Based on the documents reviewed at the time of this assessment, the subject property was not specifically identified by the EPA as a potential contributor to the contamination of Willamette River sediments, nor has the subject property been identified by the DEQ as a potential ongoing source of contamination to river sediments. It is recommended that the status of the Portland Harbor site be monitored for any future developments that may affect the property.

9.0 DEVIATIONS

This Phase I ESA deviates from ASTM E1527-13 as follows:

- See Data Gaps below

9.1 Data Gaps

A Data Gap is defined in ASTM E1527-13 as a lack of or inability to obtain information required by the standards and practices listed in the regulation despite good faith efforts by the environmental professional or prospective landowner to gather such information. Such Data Gaps may affect the environmental professional's ability to identify RECs at the property.

A Data Failure is defined as the failure to achieve the historical research objectives contained in ASTM E1527-13, including identifying obvious uses of the property from the present, back to the property's first developed use, or back to 1940, whichever is earlier. A Data Failure is one type of Data Gap.

The following Data Gap was identified in association with this Phase I ESA, along with its significance and the attempts made to fill the Data Gap:

- Former Owners/Operators or representatives with knowledge of the subject property could not be located and therefore could not be interviewed during the course of this assessment (Data Gap). However, based on the duration of ownership by the current Owner, combined with the information obtained from interviews, historical records, historical aerial photographs, and interviews conducted in 1991 for a previous Phase I ESA, this Data Gap was not considered to be significant.

10.0 ADDITIONAL SERVICES

In addition to the basic elements of ASTM E1527-13, this report includes the following:

- A visual assessment for suspect asbestos-containing materials was conducted during the course of the site reconnaissance (Section 4.10.1). This visual assessment did not constitute an asbestos survey and was not intended to identify every suspect asbestos-containing material at the subject property.

11.0 LIMITATIONS

The purpose of this environmental assessment is to evaluate the possibility that the specified real property contains a *Recognized Environmental Condition* (REC), as defined by the American Society for Testing and Materials (ASTM) guideline (E1527-13). In performing an environmental assessment, a balance must be struck between the desire to conduct a complete inquiry into environmental matters and the limits of time, cost and technology. This report sets forth HAI's evaluation of the possibility of RECs based on the scope of work agreed to by the Client and within the Client's schedule and budget.

No investigation is thorough enough to ensure that hazardous substances are not present on a particular property. Even if RECs have not been identified in this report, there is no guarantee that contamination or other environmental conditions are not present. If samples have been collected in connection with this assessment, our assessment is based in part on our interpretation of data from discrete sample locations that may not represent actual conditions at unsampled locations. In evaluating the potential risks associated with the subject property, we have focused on possible sources on the property and on property in the immediate vicinity. We have not attempted to assess the risk that the property may be affected by regional contamination problems, such as the possibility of widespread contamination of the groundwater from sources not associated with this property.

All conclusions, opinions, and recommendations presented in this report are based on conditions existing at the time the services were performed and the laws, practices and technology in effect and commonly used as of that time. HAI is not able to predict future events that may affect the condition of the property or that may affect the risks attendant to such conditions.

Unless otherwise specified in this report, HAI has not investigated either the conditions inside any buildings on the property or the possible presence of hazardous substances incorporated into buildings, equipment, or other improvements on the property. HAI has not investigated conditions in any area of the property not readily accessible. Except as specifically described in this report, HAI also has not investigated the presence of hazardous substances that may be naturally occurring on the property. HAI has relied on information provided by the Client and other individuals and documents and has not verified the accuracy of such information.

Unless otherwise specified in writing, this report has been prepared solely for the use by the Client and Users, as identified in this report, and for use only in connection with the described property, subject to the limitations and conditions in HAI's services agreement with its Client. Any other use by the Client/Users or any use by any other person shall be at the user's sole risk, and HAI shall have neither liability nor responsibility with respect to such use.

(02/13)

12.0 REFERENCES

- City of Portland Building Department, building permits/plans, May 8, 2017
- City of Portland, *Mayor's Message and Annual Reports*, the City Auditor's *List of Fuel Oil and Gasoline Storage Tanks, Filling Stations, and Curb Pumps*, 1927
- Cole City Directories for Portland, Oregon, 1994, 1997, 2002, 2007, 2012, 2017, reviewed at the HAI office, May 8, 2017
- Environmental Data Resources, *Certified Sanborn Map® Report*, previously obtained May 5, 2010
- Environmental Data Resources, *The EDR City Directory Abstract*, April 14, 2017
- Environmental Data Resources, *The Radius Map™ Report*, April 14, 2017
- Google Map Imagery, aerial photographs for 2001, 2005, 2006, 2008, 2009, 2011, and 2016, obtained April 2017
- Google search engine (<http://www.google.com>), keyword searches, various dates, April and May 2017
- Multnomah County Department of Assessment and Taxation, property ownership and tax lot information, May 5, 2017
- MyTopo Map Pass Subscription Service, topographic base map for Figure 1, (map-pass.mytopo.com), April 25, 2017
- Oregon Department of Environmental Quality, state regulatory lists, reviewed May 9, 2017
- Oregon Department of Geology and Mineral Industries, *Earthquake-Hazard Geology Map of the Portland, Oregon Quadrangle*, 1990, area geology
- Oregon Water Resources Department, water well logs review, May 2, 2017 (www.wrd.state.or.us)
- Portland Fire and Rescue, underground storage tank records request (no records on file), May 8, 2017
- U.S. Army Corps of Engineers Central Map Files, Portland, Oregon, aerial photographs for 1936, 1943, 1955, 1963, 1972, 1980, and 1995, obtained April 13, 2017
- U.S. Environmental Protection Agency, federal regulatory lists, reviewed May 9, 2017
- U.S. Geological Survey 7.5-Minute Quadrangle, Portland, Oregon, 1995, area topography

13.0 GLOSSARY OF ABBREVIATIONS

ACM	Asbestos-Containing Materials
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
AUL	activity and use limitations
bgs	below ground surface
CCDs	Cole City Directories
CEG	Conditionally Exempt Generator
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CFR	Code of Federal Regulations
CORRACTS	RCRA Corrective Action Report
DEQ	Oregon Department of Environmental Quality
ECSI	Environmental Cleanup Site Information
EPA	U.S. Environmental Protection Agency
HAI	Hahn and Associates, Inc.
LQG	Large Quantity Generator
LUST	Leaking Underground Storage Tank
MSL	Mean Sea Level
NFA	No Further Action
NFRAP	No Further Remedial Action Planned
NPL	National Priority List
OAR	Oregon Administrative Rule
OSHA	Occupational Safety and Health Administration
OWRD	Oregon Water Resources Department
PCB	Polychlorinated Biphenyls
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
SEMS	Superfund Enterprise Management System
SFIM	Sanborn Fire Insurance Map
SQG	Small Quantity Generator of Hazardous Waste
SWDF	Solid Waste Disposal Facility
SWDS	Solid Waste Disposal Site
TSD	Treatment, Storage and Disposal
USGS	U.S. Geological Survey
UST	Underground Storage Tank
W.M.	Willamette Meridian

14.0 DESCRIPTION OF ENVIRONMENTAL DATABASES

Federal NPL Sites List: The EPA National Priority List (NPL) details the locations of hazardous substance sites that present a potential for imminent and substantial harm to the environment.

Federal De-listed NPL Sites List: The Federal De-listed NPL Site (NPL) List details the locations of hazardous substance sites where either environmentally significant quantities of hazardous waste were never confirmed at the site, or an environmentally insignificant amount of hazardous waste is all that remains at the site as a result of remediation.

Federal CERCLIS List: The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) lists hazardous substance sites that require preliminary investigation or are undergoing EPA investigations.

Federal CERCLIS NFRAP List: This report lists all CERCLIS No Further Remedial Action Planned (NFRAP) sites, which are CERCLIS sites that have been removed from the CERCLIS List. Archived status indicates that contamination was not found at the CERCLIS NFRAP sites, the contamination has been remediated, or the contamination has been deemed to not be significant enough to require consideration under CERCLIS or NPL. The listing of a site on the CERCLIS NFRAP does not necessarily imply that contamination has been deemed insignificant or remediated based upon applicable state or local standards.

Federal Superfund Enterprise Management System: The Federal Superfund Enterprise Management System (SEMS) was developed to replace the Federal CERCLIS Public Access Database, and was made operational in 2016. SEMS includes the same data fields and content as CERCLIS. The Federal CERCLIS Public Access Database, which contained a selected set of publicly releasable Superfund program data, was retired in 2013.

Federal CORRACTS List: The Corrective Action Report (CORRACTS) List identifies hazardous waste handlers with RCRA corrective action activity.

Federal RCRA TSD Facilities List: The EPA Resource Conservation and Recovery Act (RCRA) Treatment, Storage and Disposal (TSD) Facilities List identifies sites which manage hazardous waste for the purpose of on-site treatment, interim storage, or on-site disposal.

Federal RCRA Handlers List: The EPA RCRA Handlers List identifies facilities which have given notification as current hazardous waste generators, including Large Quantity Generators (LQG), Small Quantity Generators (SQG), or Conditionally Exempt Generators (CEGs), and facilities that do not presently generate hazardous waste (Non-Generators).

Federal Engineering and Institutional Controls Lists: The EPA Federal Engineering Controls List identifies sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or affect human health. The EPA Federal Institutional Controls

List identifies sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Federal ERNS List: The Emergency Response Notification System (ERNS) List records and stores information on reported releases of oil and hazardous substances.

DEQ ECSI List: The Oregon Department of Environmental Quality (DEQ) Environmental Cleanup Site Information (ECSI) List includes hazardous substance sites undergoing DEQ investigations, along with DEQ Voluntary Cleanup Program (VCP) sites, State Brownfield sites, and sites with State-registered engineering and/or institutional controls.

DEQ SWF/LF List: The DEQ SWF/LF list is an inventory of active permitted facilities (including landfills, waste tire storage sites and carriers) in Oregon. The types of permitted facilities include compost, municipal solid waste (disposal) landfills, material recovery, transfer stations, tire and household hazardous waste.

DEQ LUST List: The DEQ Leaking Underground Storage Tank (LUST) Database List contains an inventory of reported LUST incidents.

DEQ UST List: The UST Facilities by Zip List is compiled of all underground storage tank facilities in Oregon. The list contains the following information: Facility ID, Name, Location, City, Zip, Phone Number, Permittee, Total Number of Tanks, Number of Active Tanks, Number of Decommissioned Tanks, and Number of Permitted Tanks.

Indian LUST List: The Indian LUST List identified leaking USTs on Indian land in Alaska, Idaho, Oregon and Washington.

Indian UST List: The Indian UST List identified USTs on Indian land in Alaska, Idaho, Oregon and Washington.

Federal Brownfields Program Sites List: EPA's Brownfields Program empowers states, communities, and other stakeholders in economic development to work together to prevent, assess, safely clean up, and sustainably reuse brownfields. A Brownfield Site is real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Oregon State Fire Marshal's Office HSIS List: The Oregon State Fire Marshal's Office Hazardous Substance Information Survey (HSIS) identifies companies in Oregon submitting the HSIS and either reporting or not reporting hazardous substances.

Oregon ERIS Spills List: The Oregon Emergency Response Information System (ERIS) List identifies reported releases of petroleum and/or hazardous substances to land or water since 1995. DEQ discontinued usage and maintenance of this database in July 2013.

Oregon Building Codes Division Drug Lab Cleanup Program List: The Building Codes Division of the Oregon Department of Consumer & Business Services

maintains a list of properties declared by law enforcement agencies to be unfit for use due to methamphetamine manufacturing and/or storage activities. The properties are considered unfit for habitation until they are certified clean in accordance with the Oregon Department of Human Services' Clandestine Drug Lab Cleanup Program, at which time they are removed from the list.

15.0 DEFINITIONS OF TERMS

Abandoned Property — property that can be presumed to be deserted, or an intent to relinquish possession or control can be inferred from the general disrepair or lack of activity thereon such that a reasonable person could believe that there was an intent on the part of the current owner to surrender rights to the property.

Activity and Use Limitation (AUL) — legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil or groundwater on the property.

Actual Knowledge — the knowledge actually possessed by an individual who is a real person, rather than an entity. Actual knowledge is to be distinguished from constructive knowledge, that is knowledge imputed to an individual or entity.

Adjoining Properties — any real property or properties the border of which is contiguous or partially contiguous with that of the property, or that would be contiguous or partially contiguous with that of the property but for a street, road, or other public thoroughfare separating them.

Aerial Photographs — photographs taken from an aerial platform with sufficient resolution to allow identification of development and activities of areas encompassing the property.

All Appropriate Inquiries — that inquiry constituting “all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial or customary practice” as defined in CERCLA, 42 U.S.C §9601(35)(B), that will qualify a party to a commercial real estate transaction for one of threshold criteria for satisfying the landowner liability protections to CERCLA liability (42 U.S.C §9601(35)(A) & (B), §9607(b)(3), §9607(q); and §9607(r)), assuming compliance with other elements of the defense.

Approximate Minimum Search Distance — the area for which records must be obtained and reviewed under ASTM E1527-13, subject to limitations as provided in ASTM E1527-13. This distance is to be measured from the nearest subject property boundary. This term is used in lieu of radius to include irregularly shaped properties.

Business Environmental Risk — a risk which can have a material environmental or environmentally-driven impact on a business associated with the current or future use of a parcel of commercial real estate. Consideration of business environmental

risk is not necessarily limited to those environmental issues required to be investigated under ASTM E1527-13, and may involve addressing considerations outside the scope of this practice (non-scope considerations).

Continuing Obligations — Continuing Obligations that the Client/User must achieve and maintain in order to qualify for one of the Landowner Liability Protections (LLPs) to CERCLA liability under the 2002 Brownfields Amendments, assuming compliance with other elements of the defense. Continuing Obligations include: (1) complying with land use restrictions and institutional controls; (2) taking reasonable steps with respect to hazardous substance releases; (3) providing full cooperation, assistance, and access to persons that are authorized to conduct response actions or natural resource restoration; (4) complying with requests for information and with administrative subpoenas; and (5) providing legally required notices.

Controlled Recognized Environmental Condition (CREC) — a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a NFA letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, AULs, or institutional/engineering controls).

Data Failure — a failure to achieve the historical research objectives contained in ASTM E1527-13 (includes identifying obvious uses of the property from the present, back to the property's first developed use, or back to 1940, whichever is earlier), even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data Failure is one type of Data Gap.

Data Gap — a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.).

De Minimis Condition — a condition that generally does not present a material risk of harm to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions or controlled recognized environmental conditions.

Drywells — underground areas where soil has been removed and replaced with pea gravel, coarse sand, or large rocks. Dry wells are used for drainage, to control storm runoff, for the collection of spilled liquids (intentional and non-intentional) and wastewater disposal (often illegal).

Environment — The term "environment" includes (A) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Magnuson-Stevens Fishery Conservation and Management Act; and (B) any other surface water, groundwater, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States, as defined in CERCLA 42 U.S.C. § 9601(8)).

Environmental Compliance Audit — the investigative process to determine if the operations of an existing facility are in compliance with applicable environmental laws and regulations. This term should not be used to describe this practice, although an environmental compliance audit may include an environmental site assessment or, if prior audits are available, may be part of an environmental site assessment.

Environmental Lien — a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 U.S.C. §9607(1) & 9607(r) and similar state or local laws.

Environmental Professional — (1) a person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases on, at, in, or to a property, sufficient to meet the objectives and performance factors in §312.20(e) and (f).

(2) Such a person must: (i) hold a current Professional Engineer's or Professional Geologist's license or registration from a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) and have the equivalent of three (3) years of full-time relevant experience; or (ii) be licensed or certified by the federal government, a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) to perform environmental inquiries as defined in §312.21 and have the equivalent of three (3) years of full-time relevant experience; or (iii) have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of five (5) years of full-time relevant experience; or (iv) have the equivalent of ten (10) years of full-time relevant experience.

(3) An environmental professional should remain current in his or her field through participation in continuing education or other activities.

(4) The definition of environmental professional provided above does not preempt state professional licensing or registration requirements such as those for a professional geologist, engineer, or site remediation professional. Before commencing work, a person should determine the applicability of state professional licensing or registration laws to the activities to be undertaken as part of the inquiry identified in §312.21(b).

(5) A person who does not qualify as an environmental professional under the foregoing definition may assist in the conduct of all appropriate inquiries in accordance with this part if such person is under the supervision or responsible charge of a person meeting the definition of an environmental professional provided above when conducting such activities.

Environmental Site Assessment (ESA) — the process by which a person or entity seeks to determine if a particular parcel of real property (including improvements) is subject to recognized environmental conditions. At the option of the user, an environmental site assessment may include more inquiry than that constituting all appropriate inquiries or, if the user is not concerned about qualifying for the *landowner liability protections* (LLPs), less inquiry than that constituting all appropriate inquiries. An environmental site assessment is both different from and often less rigorous than an environmental compliance audit.

Fill Dirt — dirt, soil, sand, or other earth, that is obtained off-site, that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or

elevation of real property. It does not include material that is used in limited quantities for normal landscaping activities.

Good Faith — the absence of any intention to seek an unfair advantage or to defraud another party; an honest and sincere intention to fulfill one's obligations in the conduct or transaction concerned.

Hazardous Substance — Per ASTM 1527-13, a substance defined as a *hazardous substance* pursuant to CERCLA 42 U.S.C. §9601(14), as interpreted by EPA regulations and the courts:“ (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any *hazardous waste* having the characteristics identified under or listed pursuant to section 3001 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, (42 U.S.C. §6921) (but not including any waste the regulation of which under RCRA (42 U.S.C. §6901 et seq.) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 U.S.C. §7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a *hazardous substance* under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Hazardous Waste — any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of RCRA, as amended, (42 U.S.C. §6921) (but not including any waste the regulation of which under RCRA (42 U.S.C. §6901-6992k) has been suspended by Act of Congress). RCRA is sometimes also identified as the Solid Waste Disposal Act. RCRA defines a hazardous waste, at 42 U.S.C. §6903, as: “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may—(A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

Historical Recognized Environmental Condition (HREC) —a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls). Before calling the past release an HREC, the EP must determine whether the past release is a REC at the time the Phase I ESA is conducted (e.g., if there has been a change in the regulatory criteria). If the EP considers this past release to be a REC at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a REC

IC/EC registries — databases of institutional controls or engineering controls that may be maintained by a federal, state or local environmental agency for purposes of tracking sites that may contain residual contamination and AULs. The names for

these may vary from program to program and state to state, and include terms such as Declaration of Environmental Use Restriction database (Arizona), list of “deed restrictions” (California), environmental real covenants list (Colorado), brownfields site list (Indiana, Missouri) and the Pennsylvania Activity and Use Limitation (PA AUL) Registry.

Innocent Landowner Defense — (42 U.S.C. §9601(35) & 9607(b)(3)) — a person may qualify as one of three types of innocent landowners: (i) a person who “did not know and had no reason to know” that contamination existed on the property at the time the purchaser acquired the property; (ii) a government entity which acquired the property by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation; and (iii) a person who “acquired the facility by inheritance or bequest.” To qualify for the first type of innocent landowner LLP, such person must have made all appropriate inquiries on or before the date of purchase. Furthermore, the all appropriate inquiries must not have resulted in knowledge of the contamination. If it does, then such person did “know” or “had reason to know” of contamination and would not be eligible for the innocent landowner defense.

Institutional Controls — a legal or administrative restriction (for example, “deed restrictions,” restrictive covenants, easements, or zoning) on the use of, or access to, a site or facility to (1) reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or groundwater on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. An institutional control is a type of Activity and Use Limitation (AUL).

Key Site Manager — the person identified by the owner or operator of a property as having good knowledge of the uses and physical characteristics of the property.

Landowner Liability Protections — landowner liability protections (LLPs) include the bona fide prospective purchaser liability protection, contiguous property owner liability protection, and innocent landowner defense from CERCLA liability (42 U.S.C. §§9601(35)(A), 9601(40), 9607(b), 9607(q), 9607(r)).

Major Occupants — those tenants, subtenants, or other persons or entities each of which uses at least 40 % of the leasable area of the property or any anchor tenant when the property is a shopping center.

Material Threat — a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the environmental professional, is threatening and might result in impact to public health or the environment. An example might include an aboveground storage tank system that contains a hazardous substance and which shows evidence of damage. The damage would represent a material threat if it is deemed serious enough that it may cause or contribute to tank integrity failure with a release of contents to the environment.

Migrate/Migration — the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface.

Petroleum Products — those substances included within the meaning of the petroleum exclusion to CERCLA, 42 U.S.C. §9601(14), as interpreted by the courts

and EPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of 42 U.S.C. §9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Pits, Ponds, or Lagoons — man-made or natural depressions in a ground surface that are likely to hold liquids or sludge containing hazardous substances or petroleum products.

Practicably Reviewable — information that is practically reviewable means that the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data. The form of the information shall be such that the user can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the property or a geographic area in which the property is located are not generally practically reviewable. Further, when so much data is generated that it cannot be feasibly reviewed for its impact on the property, it is not practically reviewable.

Publicly Available — information that is publicly available means that the source of the information allows access to the information by anyone upon request.

Reasonably Ascertainable — for purposes of both the ASTM Phase I ESA (Practice E 1527) and the TSA (Practice E 1528) standards, information that is (1) publicly available, (2) obtainable from its source within reasonable time and cost constraints, and (3) practicably reviewable.

Recognized Environmental Condition (REC) — the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions.

Release — any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discharging of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant).

Relevant Experience — as used in the definition of environmental professional, means: participation in the performance of environmental site assessments that may include environmental analyses, investigations, and remediation which involve the understanding of surface and subsurface environmental conditions and the processes used to evaluate these conditions and for which professional judgment was used to develop opinions regarding conditions indicative of releases or threatened releases (per §312.1(c)) to the subject property.

Site Reconnaissance — that part that is contained in ASTM Practice E1527 and addresses what should be done in connection with the site visit. The site

reconnaissance includes, but is not limited to, the site visit done in connection with a Phase I Environmental Site Assessment.

Site Visit — the visit to the property during which observations are made as part of the site reconnaissance.

Subject Property — the real property that is the subject of this Phase I ESA. Real property includes buildings and other fixtures and improvements located on the property and affixed to the land.

Sump — a pit, cistern, cesspool, or similar receptacle where liquids drain, collect, or are stored.

Underground Storage Tank (UST) — any tank, including underground piping connected to the tank, that is or has been used to contain hazardous substances or petroleum products and the volume of which is 10% or more beneath the surface of the ground.

User — the party seeking to use ASTM E1527-13 to complete a Phase I ESA of the subject property. A User may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager.

User's Responsibilities — ASTM E1527-13 describes specific tasks to be performed by the Client/User that will help identify the possibility of RECs in connection with the subject property and which a) do not require the technical expertise of an environmental professional (EP) and b) are generally not performed by EPs performing a Phase I ESA. These tasks include communicating to the EP any specialized or actual knowledge or experience the Client/User may have with respect to the property, the relationship of the purchase price to the fair market value of the property, and the reason for conducting the Phase I ESA. Additionally, under ASTM E1527-13, it is the Client/User's responsibility to either: 1) engage a title company or title professional to undertake a review of reasonably ascertainable recorded land title records and lien records for environmental liens or AULs currently recorded against or relating to the property, or 2) negotiate such an engagement of a title company or title professional as an addition to the scope of the Phase I ESA activities.

Vapor Encroachment Condition (VEC) — the presence or likely presence of COC vapors in the subsurface of the subject property caused by the release of vapors from contaminated soil or groundwater or both either on or near the property.

Wastewater — water that (1) is or has been used in an industrial or manufacturing process, (2) conveys or has conveyed sewage, or (3) is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. Wastewater does not include water originating on or passing through or adjacent to a site, such as stormwater flows, that has not been used in industrial or manufacturing processes, has not been combined with sewage, or is not directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

(12/13)

16.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

ELEANORE J. RAMSEY, G.I.T.

Sr. Project Manager

Technical Expertise

Ms. Ramsey is a registered Geologist-In-Training (G.I.T.) with over 12 years of progressive experience conducting Phase I Environmental Site Assessments (ESAs). She excels in all aspects of Phase I ESA research activities and report preparation, including data mining from diverse sources, aerial photograph analysis, historical research, interviews, and regulatory agency file review, and is proficient in identifying potential environmental concerns. Her expertise also includes a thorough understanding of regulatory compliance issues associated with underground injection control (UIC) systems as well as with the usage, storage and disposal of hazardous materials.

Experience Summary

Since 2002, Ms. Ramsey has conducted Phase I ESAs, and also Phase II ESAs, for a wide variety of properties, including undeveloped land, watersheds, developed urban properties, residential properties, commercial developments and industrial properties in the western U.S. She is very knowledgeable of the federal All Appropriate Inquiries (AAI) rule and the latest American Society of Testing and Materials (ASTM) Standard E1527 for Phase I ESAs. Since joining HAI in 2007, she has completed over 150 Phase I ESAs in conformance with ASTM E1527, including numerous ESAs for complex sites with long-term histories of industrial use.

In addition, Ms. Ramsey has assisted numerous clients with regulatory compliance, including UIC (drywell) registration and stormwater regulations. Ms. Ramsey participated in field research in Antarctica with duties including multi-stream aerogeophysical (airplane-based) data collection and field research in remote and harsh conditions.

Credentials

B.S. Geology, Bowling Green State University, Bowling Green, Ohio
Graduate Work in Geophysics, University of California, Santa Barbara, California

Professional Titles and Registrations

- Oregon Geologist in Training (G.I.T.)

Selected Professional Training

- OSHA 40-Hour HAZMAT Training and Annual 8-Hour Updates
- Environmental Data Resources, Inc. Due Diligence at Dawn Seminars

Employment History

Hahn and Associates, Inc.	Project Manager	2007 to present
PIERS Environmental Services, Inc.	Project Manager	2002 to 2005
Cotton, Shires & Associates	Staff Geologist	2001 to 2002

(05/16)

GARY W. HAHN, E.P.

President, Principal

Technical Expertise

Mr. Hahn is a qualified Environmental Professional (E.P.), with technical expertise in managing the day-to-day operations of a regionally-based environmental consulting firm that specializes in site assessment, investigation, and remediation.

Experience Summary

Mr. Hahn has owned and managed Hahn and Associates, Inc. since its inception in 1987, and has provided environmental regulatory assistance and site assessment activities for industry and government, as well as overseeing the design and implementation of environmental compliance programs and the management of environmental cleanup projects for over 30 years.

Credentials

B.S. Chemistry, Case Western Reserve University

Professional Titles and Affiliations

- Member, Board of Directors, The Wetlands Conservancy
- Past Member, Board of Directors, Oregon Association of Environmental Professionals

Selected Professional Training

- OSHA 40-Hour Health and Safety Training for Hazardous Waste Workers
- OSHA 8-Hour Health and Safety Supervisor Training for Hazardous Waste Workers

Employment History

Hahn and Associates, Inc.	President	1987 to present
SRH Associates, Inc.	Environmental Scientist	1986 to 1987
McCall Oil and Chemical Corp.	Environmental Compliance Manager	1983 to 1986
Waste Management, Inc.	Remedial Action/Cleanup Manager	1981 to 1983
Oregon DEQ	Hazardous Waste Specialist	1980 to 1981
Ohio EPA	Hazardous Spill Response Manager	1976 to 1979

(01/12)

FIGURES



Color Technology Inc.

NW Nicolai Street

Shipping Container
(Paint/Chemical
Storage)

Sidewalk

Paint
Booth

Sidewalk

Carport
(Storage)

**Auto
Body
Shop**

NW 24th Avenue

Catfish Lou's
(Pub)

Carport
(Hoist)

ESCO
Storage
Yard

Air
Compressor

Heating
Oil AST

Oregon Restaurant
Supply

Gravel-Surfaced
Parking Lot

Staining
(Former Oil
Storage Shed)

Metal
Enterprises Inc.

ESCO Storage Yard

LEGEND



Subject Property Boundary



Existing Building

**FIGURE 2a – Site and Surrounding
Land Use Map**

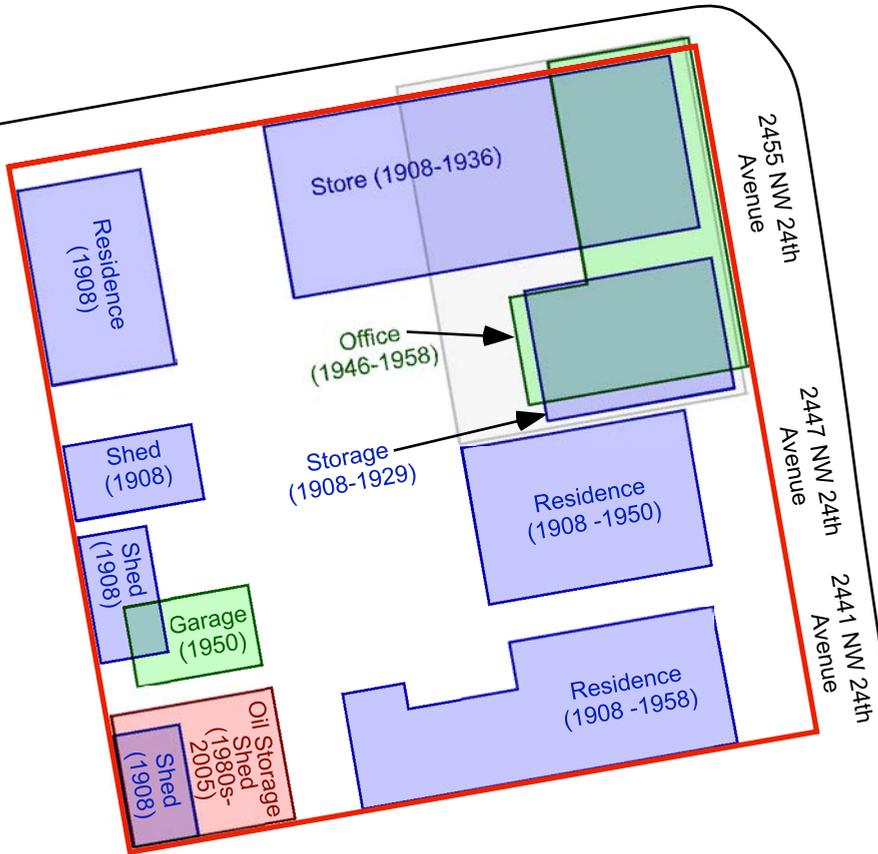
Phase I Environmental Site Assessment
ESCO Auto Body Shop Property
2404 NW Nicolai Street
Portland, Oregon

HAHN AND ASSOCIATES, INC.
Project No. 9163

May 2017



NW Nicolai Street



2455 NW 24th Avenue

NW 24th Avenue

2447 NW 24th Avenue

2441 NW 24th Avenue

LEGEND

 Subject Property Boundary

 Existing Building

FIGURE 2b – Historical Structures

Phase I Environmental Site Assessment
ESCO Auto Body Shop Property
2404 NW Nicolai Street
Portland, Oregon

HAHN AND ASSOCIATES, INC.
Project No. 9163

May 2017

SITE PHOTOGRAPHS

Photograph ID: 1

Direction:
North-Northeast

Comments: View of the subject property from its southern boundary, showing the shop building, carports, hoist, air compressor shed, and heating oil AST.



Photograph ID: 2

Location:
Southwestern portion of parking lot

Comments: Oily staining in the location of a former oil storage shed.



HAHN AND ASSOCIATES, INC.
434 NW 6th Avenue, Suite 203
Portland, Oregon 97209
503.796.0717

Site Photographs
Phase I Environmental Site Assessment
ESCO Auto Body Shop Property
2404 NW Nicolai Street
Portland, Oregon

Project No. 9163 May 2017

Photograph ID: 3

Direction:
West-Northwest

Comments: The heating oil AST and air compressor shed.



Photograph ID: 4

Location: Inside the building, near its southwestern corner

Comments: Typical storage of paint and paint thinner. The paint gun cleaner is visible on the right side of the photograph.



HAHN AND ASSOCIATES, INC.

434 NW 6th Avenue, Suite 203
Portland, Oregon 97209
503.796.0717

Site Photographs

Phase I Environmental Site Assessment
ESCO Auto Body Shop Property
2404 NW Nicolai Street
Portland, Oregon

Project No. 9163

May 2017

AERIAL PHOTOGRAPHS

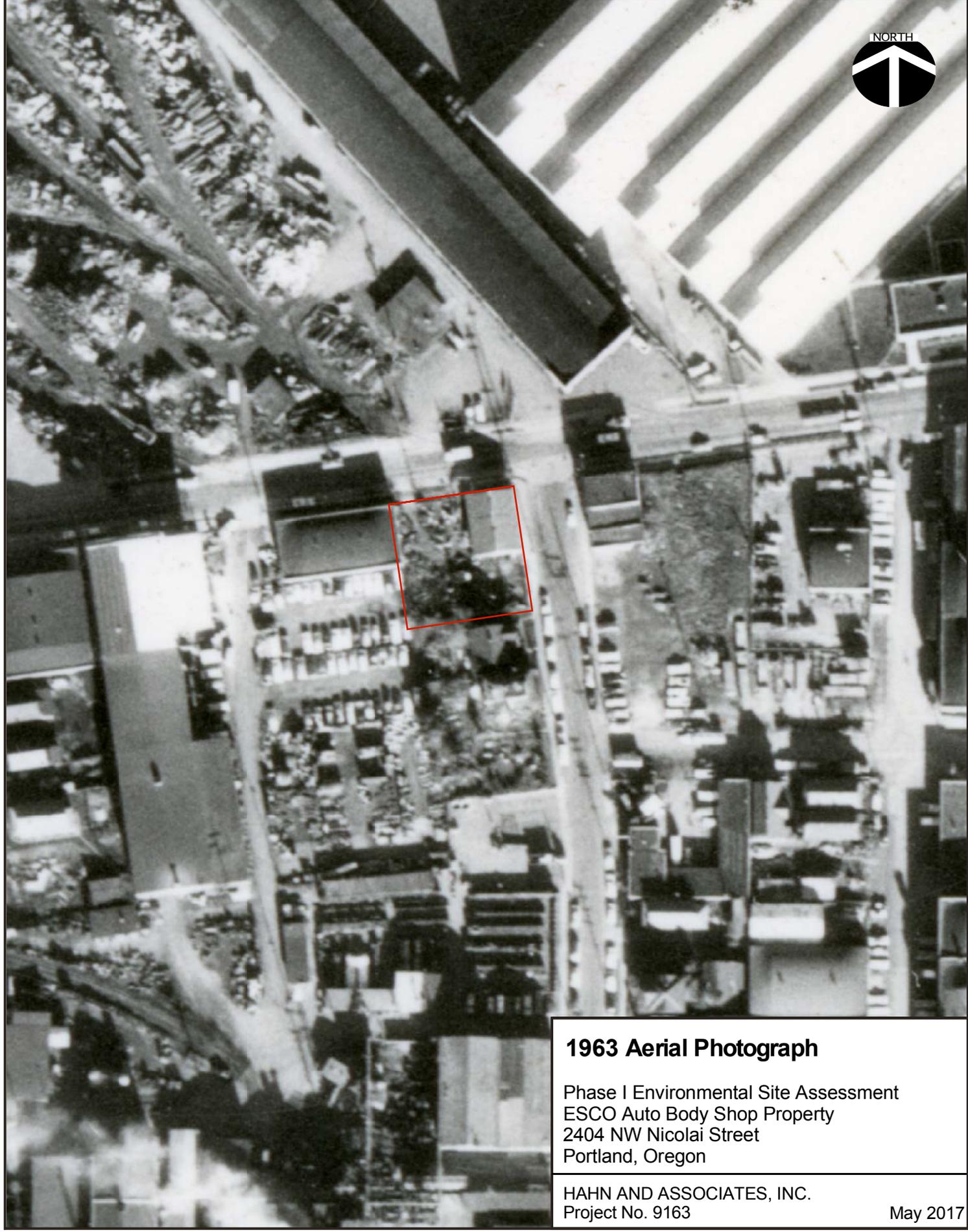


1936 Aerial Photograph

Phase I Environmental Site Assessment
ESCO Auto Body Shop Property
2404 NW Nicolai Street
Portland, Oregon

HAHN AND ASSOCIATES, INC.
Project No. 9163

May 2017

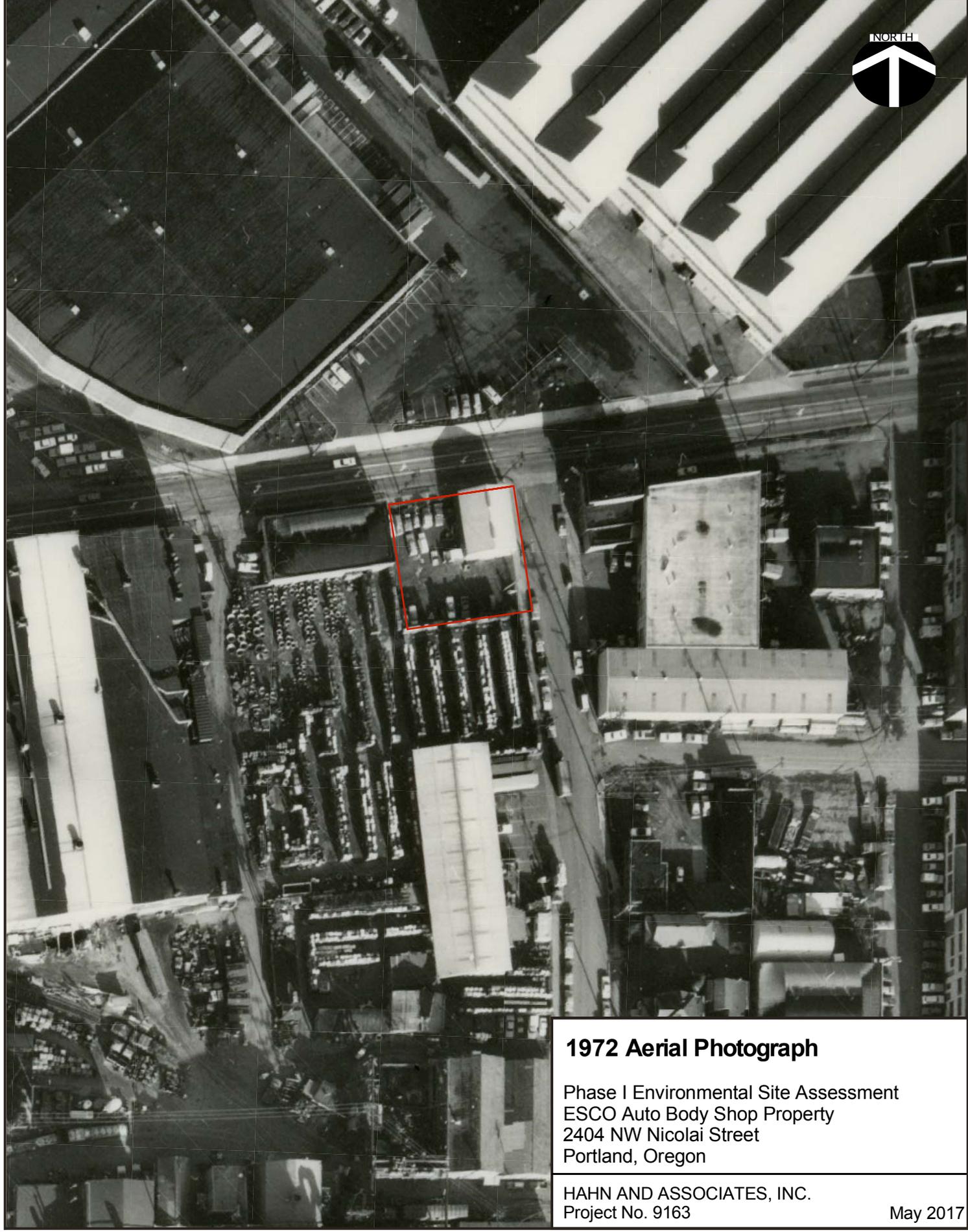


1963 Aerial Photograph

Phase I Environmental Site Assessment
ESCO Auto Body Shop Property
2404 NW Nicolai Street
Portland, Oregon

HAHN AND ASSOCIATES, INC.
Project No. 9163

May 2017



1972 Aerial Photograph

Phase I Environmental Site Assessment
ESCO Auto Body Shop Property
2404 NW Nicolai Street
Portland, Oregon

HAHN AND ASSOCIATES, INC.
Project No. 9163

May 2017



2016 Aerial Photograph

Phase I Environmental Site Assessment
ESCO Auto Body Shop Property
2404 NW Nicolai Street
Portland, Oregon

HAHN AND ASSOCIATES, INC.
Project No. 9163

May 2017

Appendix A

Contract

**WORK ORDER
No. 9176-1**

HAI Project No. 9176

April 5, 2017

CONTRACTOR:

BRIDGEWATER GROUP, INC.
5100 SW Hampton St. #235
Tigard, Oregon 97223

Phone: 503.675.5252

SUBCONTRACTOR:

HAHN AND ASSOCIATES, INC.
434 NW 6th Avenue, Suite 203
Portland OR 97209-3651

Phone: 503.796.0717

The above-named SUBCONTRACTOR agrees to provide Services and BRIDGEWATER GROUP, INC. agrees to purchase Services on the terms and conditions set out in this Work Order and the Master Services Agreement between BRIDGEWATER GROUP, INC. and the SUBCONTRACTOR, as executed April 3, 2017.

1. SERVICES

Services to be provided by SUBCONTRACTOR:

Phase I Environmental Site Assessment (ESA) according to ASTM E1527-13: Nine individual Phase I ESAs

2. LOCATION

The location of the Services shall be provided at or with respect to the following location or locations (Site) in Portland, Oregon:

1. Auto Body Shop, 2404 NW Nicolai Street
2. Reed Electric Shop, 2539 NW Vaughn Street
3. ESCO World Headquarters, 2141 NW 25th Avenue
4. ESCO Executive Offices (A2) ("H" Building), 2141 NW 25th Avenue
5. ESCO Innovation Center (A3) (Rectangular Building), 2141 NW 25th Avenue
6. Roosevelt Parking Lot, North Side, NW Roosevelt Street, between NW 23rd Avenue and NW 24th Avenue
7. Roosevelt Laydown Yard North, NW Corner, NW 23rd Avenue and NW Roosevelt Street
8. Roosevelt Laydown Yard South, SW Corner, NW 23rd Avenue and NW Roosevelt Street
9. Schiller Parking Lot, 1925 NW 24th Place

3. SITE CONDITIONS

BRIDGEWATER GROUP, INC. and SUBCONTRACTOR understand the conditions at the Site to be:

Automotive repair shop, office buildings, laydown yards, and parking areas

4. CLIENT

BRIDGEWATER GROUP, INC.'s client is:

ESCO Corporation

5. SCHEDULE

SUBCONTRACTOR shall commence performance of field services:

Upon execution of this Work Order

SUBCONTRACTOR shall complete performance of its services:

To be scheduled for each individual location in coordination with Bridgewater Group and ESCO

6. COMPENSATION

BRIDGEWATER GROUP, INC. shall compensate SUBCONTRACTOR for Services performed as follows according to the terms of the Master Services Agreement on a Time and Materials basis, not to exceed the individual estimated project budgets without prior authorization:

\$4,500	Auto Body Shop, 2404 NW Nicolai Street
\$4,250	Reed Electric Shop, 2539 NW Vaughn Street
\$4,250	ESCO World Headquarters, 2141 NW 25th Avenue
\$4,000	ESCO Executive Offices (A2), 2141 NW 25th Avenue
\$4,000	ESCO Innovation Center (A3), 2141 NW 25th Avenue
\$4,000	Roosevelt Parking Lot, North Side, NW Roosevelt Street, between NW 23 rd Avenue and NW 24 th Avenue
\$4,000	Roosevelt Laydown Yard North, NW Corner, NW 23 rd Avenue and NW Roosevelt Street
\$4,000	Roosevelt Laydown Yard South, SW Corner, NW 23 rd Avenue and NW Roosevelt Street
\$4,000	Schiller Parking Lot, 1925 NW 24 th Place

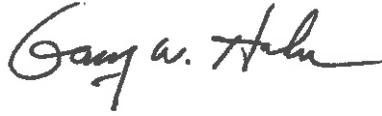
7. ADDITIONAL TERMS AND CONDITIONS

None.

BRIDGEWATER GROUP, INC.

By: 
Name: Jeff Dressev
Title: Vice President
Date: 4/5/17

HAHN AND ASSOCIATES, INC.


By:
Name: Gary W. Hahn
Title: President
Date: April 5, 2017

HAHN AND ASSOCIATES, INC.

ENVIRONMENTAL CONSULTANTS

Assessment Investigation Remediation

March 28, 2017

Mr. Jeff Dresser, P.E.
Bridgewater Group, Inc.
7100 SW Hampton Street, Suite 235
Tigard, Oregon 97223

SUBJECT: Proposal for Phase I Environmental Site Assessments,
Nine Properties, NW Industrial District, Portland, Oregon

- ESCO Auto Body Shop, 2404 NW Nicolai Street
- ESCO Reed Electric Shop, 2539 NW Vaughn Street
- ESCO World Headquarters, 2141 NW 25th Avenue
- ESCO Executive Offices (A2) ("H" Building), 2141 NW 25th Avenue
- ESCO Innovation Center (A3) (Rectangular Building), 2141 NW 25th Avenue
- ESCO Roosevelt Parking Lot, North Side, NW Roosevelt Street, between NW 23rd Avenue and NW 24th Avenue
- ESCO Roosevelt Laydown Yard North, NW Corner, NW 23rd Avenue and NW Roosevelt Street
- ESCO Roosevelt Laydown Yard South, SW Corner, NW 23rd Avenue and NW Roosevelt Street
- ESCO Schiller Parking Lot, 1925 NW 24th Place

Dear Mr. Dresser:

At your request, Hahn and Associates, Inc. (HAI) has prepared a proposal and cost estimate for Phase I Environmental Site Assessment (ESA) activities at the nine (9) above-referenced properties. The purpose of a Phase I ESA is to identify environmental concerns that may present a potential liability to the current owner or to a prospective purchaser of the property. Environmental concerns identified in association with the property will be presented in the report as *Recognized Environmental Conditions* (RECs), that is the presence or likely presence of contamination resulting from hazardous materials, including petroleum products at the property.

Scope of Work

It is proposed that the nine (9) subject properties be evaluated for environmental hazards and that nine (9) Phase I ESA reports be prepared for the properties in accordance with the ASTM standard (E1527-13) entitled *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The U.S. Environmental Protection Agency (EPA) has stated that ASTM E1527-13 may be used to comply with meeting the objectives and performance factors of 40 CFR Part 312 Standards for All Appropriate Inquiries, Final Rule (40 CFR 312.11) which became effective November 1, 2006. For more detail, refer to the attached *Scope of Work for Phase I Environmental Site Assessments* (SOW).

Additional Environmental Concerns / Non-Scope Considerations

Beyond the Phase I ESA work, there may be additional environmental concerns that are associated with a property which may contribute to environmental risk but which are outside of the scope of the Phase I ESA (“non-scope considerations”). Non-scope considerations may include, but are not limited to, surveys for asbestos, lead-based paint, drinking water quality, indoor air quality (e.g. vapor intrusion) (including radon and urea formaldehyde), fungi (e.g. mold), occupational health and safety, wetlands and other ecological resources, electromagnetic radiation, cultural and/or historic resources, and environmental regulatory compliance generally. The Phase I ESA work activities also do not include surface or subsurface investigations, including sampling and analyses, which would be necessary to determine the actual presence of contamination on or beneath a property. However, these environmental risk issues can be addressed separately and in addition to the Phase I ESA, at the request of the Client.

NOTE that no implication is intended as to the relative importance of inquiry into such non-scope considerations, and that the preceding list of non-scope considerations is not intended to be all-inclusive.

Fees

The estimated costs for the indicated Phase I ESA work, to be invoiced on a time and materials (T&M) basis, are as follows:

Property Name	Fee
• ESCO Auto Body Shop, 2404 NW Nicolai Street	\$4,500
• ESCO Reed Electric Shop, 2539 NW Vaughn Street	\$4,250
• ESCO World Headquarters, 2141 NW 25th Avenue	\$4,250
• ESCO Executive Offices (A2) (“H” Building), 2141 NW 25th Avenue	\$4,000
• ESCO Innovation Center (A3) (Rectangular Building), 2141 NW 25th Avenue	\$4,000
• ESCO Roosevelt Parking Lot, North Side, NW Roosevelt Street, between NW 23 rd Avenue and NW 24 th Avenue	\$4,000
• ESCO Roosevelt Laydown Yard North, NW Corner, NW 23 rd Avenue and NW Roosevelt Street	\$4,000
• ESCO Roosevelt Laydown Yard South, SW Corner, NW 23 rd Avenue and NW Roosevelt Street	\$4,000
• ESCO Schiller Parking Lot, 1925 NW 24 th Place	\$4,000
	\$37,000

NOTE: Due to the proximity of the properties, HAI is offering discounted fees to reflect cost savings for those elements that overlap between the reports (e.g. historical aerial photographs, nearby regulatory sites with suspected or confirmed contamination, underlying geology, etc.). However, it should also be noted that since the historical usages are unique for each property, substantial areas of research will not overlap from one property to another.

These fees include lender Reliance Letters, if requested, and assume the following:

- Title Reports (current within the past six months) will be provided to HAI that will include the required search for recorded environmental liens and activity and use limitations (AULs). Upon request, HAI can obtain this information at a cost in addition to the estimated fee(s)
- Report Revisions or Amendments after the reports are submitted, and as a result of information not available to HAI during the project, will be charged on a time and materials (T&M) basis in addition to the estimated fee(s)
- Surrounding Regulatory Sites, if any, may be noted in the reports as a Recognized Environmental Condition, which may require additional research beyond the scope of the Phase I ESA

Schedule

The Phase I ESA reports can be completed within approximately 4 to 5 weeks of the authorization to proceed, depending upon HAI's workload at the time of assignment. One (1) electronic copy (PDF) of each report will be provided. They can be prioritized, if needed, and earlier completion dates scheduled.

If one of the subject properties is authorized and subsequently cancelled before the submission of the final report, there will be a minimum charge of \$500, and up to the full fee amount, depending on the accrued fees and expenses.

This proposal is valid for thirty (30) days from the date of this letter. At your direction, HAI is ready to proceed with the indicated work activity. If there are any comments or questions, please contact either the undersigned or Mr. Rob Ede, R.G., Principal (robe@hahnenv.com), of our staff. Thank you for the opportunity to present this information.

Sincerely,



Nora Eskes
Sr. Associate

norae@hahnenv.com

Regulatory Database Review — Federal, state and tribal environmental databases will be reviewed for facilities listed within the ASTM-prescribed radius (1.0 mile or less) of the subject property:

- Federal National Priority List (NPL) and Delisted NPL sites lists
- Federal Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) lists
- Federal Resource Conservation Recovery Act (RCRA) list of Treatment, Storage, and Disposal (TSD) Facilities subject to corrective action under RCRA (CORRACTS)
- Federal RCRA non-CORRACTS TSD facilities and RCRA generators lists
- Federal Emergency Response Notification System (ERNS) list
- State/Tribal-equivalent NPL and CERCLIS lists; landfill/solid waste disposal sites list; Leaking Underground Storage Tank (LUST) list; registered UST list

TASK 2 SITE RECONNAISSANCE

A site reconnaissance will be conducted to identify visual indications of past or present activities which could pose a risk of contamination. The site reconnaissance will include the following:

- A physical site visit (walk-through) to identify potential on-site sources of contamination
- Visual observations of evidence of USTs, suspected PCB-contaminated equipment, waste disposal areas, surface water drainages, and potential Hazardous Substance contamination
- Review of appropriate land use maps to identify known contaminated areas and USTs in the surrounding area
- Identification of potential off-site sources of contamination from surrounding land uses
- Photography of environmental features of the property, for inclusion in the report
- Visual observations of potential Underground Injection Controls (UICs)
- Visual observations of suspect asbestos-containing materials (ACMs) at the property

TASK 3 INTERVIEWS

As available, individuals likely to have knowledge of the current and/or historical operational practices at the property will be interviewed. Such knowledgeable individuals may include some or all of the following:

- Client or “User” of the Phase I ESA
- Government Agency Personnel
- Current / Historical Owners, Tenant(s), Neighbors

TASK 4 REPORT PREPARATION

A comprehensive report will be prepared upon completion of the Site Reconnaissance, Records Review, and Interview task items. The report will serve as a consolidated gathering of the data that was obtained, and will detail the resultant findings and conclusions.

EXCLUSIONS

Unless otherwise specified or requested by the Client, the Phase I ESA activities will not include additional environmental concerns that are outside of the scope of the Phase I ESA (“non-scope considerations”). No implication is intended as to the relative importance of inquiry into such non-scope considerations, and the following list of non-scope considerations is not intended to be all-inclusive:

- Interpretation of geological or hydrogeological information
- Asbestos or lead-based paint surveys, lead in drinking water, indoor air quality, fungi (e.g. mold), industrial hygiene, health and safety issues, electromagnetic radiation, radon, geotechnical or wetland surveys
- Identification of non-native materials or imported fill on a property, unless identified via interviews, the records review, or site visit
- Regulatory compliance assessment with respect to subject property activities
- Cultural and/or Historical resources, endangered species, or National Environmental Policy Act (NEPA) issues
- Chain of Title or Title Report, nor a determination of the suitability of a property or its structures for any purpose

**SCOPE OF WORK FOR
PHASE I ENVIRONMENTAL SITE ASSESSMENTS**
(10/15)

Purpose

The purpose of a Phase I Environmental Site Assessment (ESA) is to identify potential *Recognized Environmental Conditions* (RECs) that could present a liability to a property owner or to a prospective purchaser of the property. The historical and current uses of a property are researched to evaluate the need for further work.

Potential RECs that may be identified during the Phase I ESA include:

- Known or suspect areas of Hazardous Substances usage
- Hazardous and non-Hazardous Waste disposal
- Evidence of Underground Storage Tanks (USTs) (current or historical)
- Evidence of Polychlorinated Biphenyls (PCBs)
- Historical practices that could result in Environmental Liability
- Areas of Potential Contamination

National Standard

The task items noted below have been designed to follow the American Society for Testing and Materials (ASTM) guideline (E1527-13) entitled *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, and to meet the requirements of the federal *All Appropriate Inquiries* (AAI) rule. **NOTE:** for the purposes of Landowner Liability Protections under federal law, the Phase I ESA report is valid for a period of 180 days. For extended viability beyond 180 days, the report may be updated within one year of the initial assessment.

Report

The product of the Phase I ESA will be a written report containing maps, diagrams, photographs and descriptions of environmental conditions encountered during the Phase I ESA, along with any RECs.

TASK 1 RECORDS REVIEW

Internal File Review – Pertinent Client and/or tenant records, if any and as made available, will be reviewed. In particular, the following types of records will be requested for review:

- Construction Plans
- Material Safety Data Sheets (MSDSs)
- Asbestos Surveys
- Hazardous Substance Usage, Release and Remediation Reports
- Environmental Regulatory Permits
- Waste Characterization / Disposal Records
- Geotechnical Studies

Physical Setting / Environmental Condition Sources — Documentation pertaining to the physical or environmental conditions on the property will be reviewed, as available from the U.S. Geological Survey (USGS), the Army Corps of Engineers, and/or city and county agencies.

Historical Review — A historical background search will be conducted, including a review of the readily available data on historical land use practices at the property and the surrounding area. Common sources that may be used, if readily available, include but are not limited to:

- Facility construction plans
- Land ownership maps/land use records/building permits and plans/tax record files
- Historical aerial photographs/historical topographic maps
- Records regarding UST installation or decommissioning, in particular Fire department records

Agency File Review — Readily available records at local municipal agencies and/or the local office of the state environmental agency will be reviewed, as needed, to identify inspections, permits, notifications, orders or penalties for the property.

Appendix B

Oregon Water Resources Department
Water Well Log Report

Well Log No.	Section	Q	QQ	Tax Lot	Address	Owner Name	Company	Type of Log	Depth to First Water	Depth Drilled	Completed Depth	Static Water Level	Completed Date	New Well	Abandonment	Domestic Use	Industrial Use	Dewatering Use	Piezometer
MULT	102868	28	NW	SW		2455 NW NICOLAI				95	0	50	7/9/10		X				
						WEST BOUND LANE NEAR CURB OF 2455 NW NICOLAI, PORTLAND, OR	CITY OF PORTLAND	M											
MULT	88671	29	NE	SE	R-O-W		CITY OF PORTLAND	G		80	80		4/6/07	X	X				
MULT	93384	28	NW	SW	2200	2455 NW NICOLAI ST	ROSA INC	G		85	85		3/14/08	X	X				
MULT	93386	28	NW	SW	2200	2455 NW NICOLAI ST	ROSA INC	G		85	85		3/18/08	X	X				
MULT	93387	28	NW	SW	2200	2455 NW NICOLAI ST	ROSA INC	G		85	85		3/19/08	X	X				
MULT	95751	28	SW	NE	3700	2439 NW NICOLAI ST	STEVEN	M		88	88		7/31/08	X					
MULT	102617	28	SW	NE		2439 NW NICOLAI		M		88	0		6/1/10		X				
MULT	125553	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR	ESCO CORPORATION ENV	M		58.5	58.5	42	3/21/17	X					
MULT	125539	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		60	60	48	3/16/17	X	X				
MULT	125538	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		60	60	50	3/15/17	X	X				
MULT	125554	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR	ESCO CORPORATION ENV	M		65	65	50	3/22/17	X					
MULT	125546	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		75	75	54	3/21/17	X	X				
MULT	125548	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		80	80	60	3/17/17	X	X				
MULT	125551	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR	ESCO CORPORATION ENV	M		85	85	62	3/23/17	X					
MULT	125552	29	SW	NE	1700	2141 NW 25TH AVE, PORTLAND OR	ESCO CORPORATION ENV	M		80	80	65	3/24/17	X					
MULT	125535	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/22/17	X	X				
MULT	125536	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/22/17	X	X				
MULT	125537	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/22/17	X	X				
MULT	125540	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/13/17	X	X				
MULT	125541	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/13/17	X	X				
MULT	125542	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/17/17	X	X				
MULT	125543	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/20/17	X	X				
MULT	125544	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/20/17	X	X				
MULT	125545	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/21/17	X	X				
MULT	125547	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/22/17	X	X				
MULT	125549	29	SE	NE	1700	2141 NW 25TH AVE, PORTLAND OR 97210	ESCO CORPORATION	G		25	25		3/23/17	X	X				
MULT	125550	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR	ESCO CORPORATION ENV	M		85	85		3/24/17	X					
MULT	125555	28	SW	NW	100	2141 NW 25TH AVE, PORTLAND OR	ESCO CORPORATION ENV	M		70	70		3/27/17	X					
MULT	4037	28	SW	NW	39	2345 NW NICOLAI	SID	M	36.7	45	45	36.7	3/1/94	X					
MULT	4037	28	NW	SW		2345 NW NICOLAI	SID	M	36.7	45	45	36.7	3/1/94	X					
MULT	4037	28	SW	NW		2345 NW NICOLAI	SID	M	36.7	45	45	36.7	3/1/94	X					
MULT	97729	29	NE	SE	100	2495 NICOLAI	JEFFREY	M	42	50	50	42	11/1/08	X					
MULT	97730	29	NE	SE	100	2495 NICOLAI	JEFFREY	M	44	50	50	44	10/31/08	X					
MULT	97731	29	NE	SE	100	2495 NW NICOLAI	JEFFREY	M	47	55	55	47	11/1/08	X					
MULT	97732	29	NE	SE	100	2495 NW NICOLAI	JEFFREY	G	8	0	0	0	10/30/08	X	X				
MULT	97733	29	NE	SE	100	2495 NW NICOLAI	JEFFREY	G	8	0	0	0	11/1/08	X	X				
MULT	97734	29	NE	SE	100	2495 NW NICOLAI	JEFFREY	G	8	0	0	0	11/1/08	X	X				
MULT	97735	29	NE	SE	100	2495 NW NICOLAI	JEFFREY	G	12	0	0	0	10/30/08	X	X				
MULT	97736	29	NE	SE	100	2495 NW NICOLAI	JEFFREY	G	12	0	0	0	10/30/08	X	X				
MULT	56600	28	NW	SW	2100	2345 NICOLAI NW; OLD STEEL MILL		G		50	0	20	10/2/98	X	X				
							WOODBURY FAMILY LTD PROP; WOODBURY, SYDNEY (C/O)												
MULT	56603	28	NW	SW	2100	2345 NICOLAI NW; OLD STEEL MILL		G		40	0	20	10/2/98	X	X				
							WOODBURY FAMILY LTD PROP; WOODBURY, SYDNEY (C/O)												
MULT	52909	29	SE	NE	300	2345 NW NICOLI ST	SID	M	38	38	38	28	1/15/97	X					
MULT	52910	28	SW	NW	39	2345 NW NICOLI ST	SID	M	38	38	38	28	1/15/97	X					
MULT	52912	28	SW	NW	39	2345 NW NICOLI ST	SID	M	42	42	42	32	1/16/97	X					
MULT	52911	28	SW	NW	39	2345 NW NICOLI ST	SID	M	45	45	45	35	1/16/97	X					
MULT	52889	29	SE	NE		2345 NW NICOLI ST.	SID	G	10	10	10		1/15/97	X					
MULT	52890	29	SE	NE	300	2345 NW NICOLI ST	SID	G	10	10	10		1/15/97	X					
MULT	52891	29	SE	NE	300	2345 NW NICOLI ST.	SID	G	10	10	10		1/15/97	X					
MULT	52892	29	SE	NE	300	2345 NW NICOLI ST	SID	G	10	10	10		1/15/97	X					
MULT	52894	29	SE	NE	300	2345 NW NICOLI ST	SID	G	10	10	10		1/15/97	X					
MULT	52895	29	SE	NE	300	2345 NW NICOLI ST	SID	G	10	10	10		1/15/97	X					
MULT	52896	29	SE	NE	300	2345 NW NICOLI ST	SID	G	10	10	10		1/15/97	X					
MULT	52897	29	SE	NE	300	2345 NW NICOLI ST	SID	G	10	10	10		1/15/97	X					
MULT	61979	28	SW	NW	300	2345 NW NICOLAI		M			0		8/7/00		X				
							THE OREGONIAN PUBLISHING CO.												
MULT	61980	28	SW	NW	300	2345 NW NICOLAI		M			0		8/7/00		X				
							THE OREGONIAN PUBLISHING CO.												
MULT	61981	28	SW	NW	300	2345 NW NICOLAI		M			0		8/7/00		X				
							THE OREGONIAN PUBLISHING CO.												
MULT	62400	28	SW	NW	300	2345 NW NICOLAI		M			0		9/25/00		X				
							THE OREGONIAN PUBLISHING CO.												
MULT	113602	28	SW	NW	4500	2110 NW 23RD AVE, PORTLAND, OR		G	27	30	30	27	7/26/13	X	X				
MULT	113603	28	SW	NW	4500	2110 NW 23RD AVE, PORTLAND, OR		G	27	30	30	27	7/26/13	X	X				
MULT	113604	28	SW	NW	4500	2110 NW 23RD AVE, PORTLAND, OR		G	27	30	30	27	7/26/13	X	X				
MULT	113605	28	SW	NW	4500	2110 NW 23RD AVE, PORTLAND, OR		G	27	35	35	27	7/26/13	X	X				
MULT	4038	28	SW	NW	39	2825 NW YEON	SID	M	40	45	45	37	2/24/94	X					
MULT	97728	28	SW	NW	1600	2500 NW NICOLAI	JEFFREY	M	47	55	55	47	11/1/08	X	X				
MULT	97737	28	SW	NW	1600	2500 NW NICOLAI	JEFFREY	G	8	0	0	0	11/1/08	X	X				
MULT	97738	28	SW	NW	1600	2500 NW NICOLAI	JEFFREY	G	16	0	0	0	10/30/08	X	X				
MULT	97739	28	SW	NW	1600	2500 NW NICOLAI	JEFFREY	G	8	0	0	0	11/1/08	X	X				

Well Log No.	Section	Q	QQ	Tax Lot	Address	Owner Name	Company	Type of Log	Depth to First Water	Depth Drilled	Completed Depth	Static Water Level	Completed Date	New Well	Abandonment	Domestic Use	Industrial Use	Dewatering Use	Piezometer Use	
MULT	57315	28	SW	NW		2439 NW 22ND	GRIFFITH RUBBER	G		24	24	12	12/23/98	X	X					
MULT	53756	28	SW	NW		2401 NW 22ND AVE	MACHINE WORKS HELSER	G		32	32	22	4/28/97	X						
MULT	53757	28	SW	NW		2401 NW 22ND AVE	MACHINE WORKS HELSER	G		32	32	22	4/28/97	X						
MULT	53759	28	SW	NW		2401 NW 22ND AVE	MACHINE WORKS HELSER	G		32	32	22	4/28/97	X						
MULT	53761	28	SW	NW		2401 NW 22ND AVE	MACHINE WORKS HELSER	G		32	32	22	4/28/97	X						
MULT	1013	28	SW	NW			GRIFFITH RUBBER MILLS	W		395	395	32	8/31/46	X			X			
MULT	52393	28	SW	NW		2211 NW NICOLAI ST, PORTLAND, OR	KEN HUMKE	G		15	15		10/28/96	X						
MULT	52394	28	SW	NW		2211 NW NICOLAI ST, PORTLAND, OR	KEN HUMKE	G		15	15		10/28/96	X						
MULT	53758	28	SW	NW		2401 NW 22ND AVE	MACHINE WORKS HELSER	G		12	12		4/28/97	X						
MULT	53760	28	SW	NW		2401 NW 22ND AVE	MACHINE WORKS HELSER	G		12	12		4/28/97	X						
MULT	56455	28	SW	NW		NW NICOLAI ST AND NW 26TH	CITY OF PORTLAND	G		10	10		9/12/98	X	X					
MULT	56456	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		26	24		9/12/98	X	X					
MULT	56457	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/12/98	X	X					
MULT	56458	28	SW	NW		NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/12/98	X	X					
MULT	56459	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		10	10		9/12/98	X	X					
MULT	56460	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/12/98	X	X					
MULT	56461	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/12/98	X	X					
MULT	56505	28	SW	NW		NEAR NW NICOLAI & NW 26TH AVE	CITY OF PORTLAND	G		19	19		9/9/98	X						
MULT	56506	28	SW	NW		NEAR NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		26	26		9/9/98	X						
MULT	56507	28	SW	NW		NEAR NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		13	13		9/10/98	X						
MULT	56508	28	SW	NW		NEAR NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		13	13		9/10/98	X						
MULT	56567	28	SW	NW		NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/20/98	X	X					
MULT	56568	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/21/98	X	X					
MULT	56569	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/20/98	X	X					
MULT	56570	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/20/98	X	X					
MULT	56571	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		16	16		9/20/98	X	X					
MULT	56572	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		16	16		9/20/98	X	X					
MULT	56573	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		40	40		9/20/98	X	X					
MULT	56574	28	SW	NW		NW NICOLAI & NW 26TH AVE	CITY OF PORTLAND	G		36	36		9/20/98	X	X					
MULT	56575	28	SW	NW		NW NICOLAI & NW 26TH AVE	CITY OF PORTLAND	G		22	22		9/20/98	X	X					
MULT	56576	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		16	16		9/20/98	X	X					
MULT	56579	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		20	20		9/20/98	X	X					
MULT	56580	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		16	16		9/20/98	X	X					
MULT	56581	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		40	40		9/20/98	X	X					
MULT	56582	28	SW	NW		NW NICOLAI ST & NW 28TH AVE	CITY OF PORTLAND	G		12	12		9/20/98	X	X					
MULT	56583	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		26	26		9/21/98	X	X					
MULT	56584	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		22	22		9/21/98	X	X					
MULT	56585	28	SW	NW		NW NICOLAI & NW 26TH AVE	CITY OF PORTLAND	G		12	12		9/21/98	X	X					
MULT	56586	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		16	16		9/21/98	X	X					
MULT	56587	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		20	20		9/21/98	X	X					
MULT	56588	28	SW	NW		NW NICOLAI & NW 26TH AVE	CITY OF PORTLAND	G		12	12		9/21/98	X	X					
MULT	56589	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		14	14		9/21/98	X	X					
MULT	56590	28	SW	NW		NW NICOLAI & NW 26TH	CITY OF PORTLAND	G		14	14		9/21/98	X	X					
MULT	56591	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/21/98	X	X					
MULT	56592	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		24	24		9/21/98	X	X					
MULT	56593	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		23	23		9/21/98	X	X					
MULT	56594	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		15	15		9/21/98	X	X					
MULT	56595	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		12	12		9/21/98	X	X					
MULT	56596	28	SW	NW		NW NICOLAI ST & NW 26TH AVE	CITY OF PORTLAND	G		14	14		9/21/98	X	X					
MULT	57316	28	SW	NW		2439 NW 22ND	GRIFFITH RUBBER	G		27	27		12/23/98	X	X					
MULT	57317	28	SW	NW		2439 NW 22ND	GRIFFITH RUBBER	G		32	32		12/23/98	X	X					
MULT	61978	28	SW	NW	300	2825 NW YEON AVE	THE OREGONIAN PUBLISHING CO.	M			0		8/4/00	X						
MULT	85842	28	SW	NW	4400	2107 NW 23RD AVE	JAN BOZICH	G		8.1	0		4/13/06	X	X					
MULT	85843	28	SW	NW	4400	2107 NW 23RD AVE	JAN BOZICH	G		11	0		5/8/06	X	X					
MULT	113221	28	SW	NW	ROW	2310 NW 24TH AVE, PORTLAND, OR	CITY OF PORTLAND	G		15	15		4/17/13	X	X					
MULT	113222	28	SW	NW	ROW	2366 NW NEW YORK AVE., PORTLAND, OR	CITY OF PORTLAND	G		15	15		4/17/13	X	X					
MULT	113223	28	SW	NW	ROW	2350 NW NEW YORK AVE, PORTLAND, OR	CITY OF PORTLAND	G		15	15		4/17/13	X	X					
MULT	113224	28	SW	NW	ROW	NW 23RD PL. & NW NEW YORK AVE., PORTLAND, OR	CITY OF PORTLAND	G		15	15		4/17/13	X	X					
MULT	113225	28	SW	NW	ROW	2303 NW 23RD PL., PORTLAND, OR	CITY OF PORTLAND	G		15	15		4/17/13	X	X					
MULT	113226	28	SW	NW	ROW	NW ROOSEVELT & NW 23RD, PORTLAND, OR	CITY OF PORTLAND	G		15	15		4/17/13	X	X					
MULT	113227	28	SW	NW	ROW	2336 NW ROOSEVELT, PORTLAND, OR	CITY OF PORTLAND	G		10	10		4/17/13	X	X					
MULT	113228	28	SW	NW	ROW	2389 NW WILSON, PORTLAND, OR	CITY OF PORTLAND	G		10	10		4/17/13	X	X					
MULT	113229	28	SW	NW	ROW	2323 NW WILSON, PORTLAND, OR	CITY OF PORTLAND	G		15	15		4/17/13	X	X					
MULT	113230	28	SW	NW	ROW	NW WILSON ST & NW 24TH AVE, PORTLAND, OR	CITY OF PORTLAND	G		15	15		4/17/13	X	X					
MULT	113252	28	SW	NW	ROW	NW WILSON & NW 24TH AVE, PORTLAND, OR	CITY OF PORTLAND	G		15	15		4/23/13	X	X					
MULT	122294	28	SW	NW	2300	2233 NW 23RD AVE	DAVENPORT LLC C/O WYSE INVESTMENT SVLS	G		14	0		2/29/16	X	X					

Well Log No.	Section	Q	QQ	Tax Lot	Address	Owner Name	Company	Type of Log	Depth to First Water	Depth Drilled	Completed Depth	Static Water Level	Completed Date	New Well	Abandonment	Domestic Use	Industrial Use	Dewatering Use	Piezometer Use	
MULT	122295	28	SW	NW	2300	2233 NW 23RD AVE					8	0	2/29/16	X	X					
MULT	122296	28	SW	NW	2300	2233 NW 23RD AVE					14	0	2/29/16	X	X					
MULT	122297	28	SW	NW	2300	2233 NW 23RD AVE					15	0	2/29/16	X	X					
MULT	122298	28	SW	NW	2300	2233 NW 23RD AVE					15	0	2/29/16	X	X					
MULT	91	29	NE	SE					11	15		11	2/20/91	X	X					
MULT	92	29	NE	SE					11	15		11	2/20/91	X	X					
MULT	93	29	NE	SE					11	15		11	2/20/91	X	X					
MULT	94	29	NE	SE					11	15		11	2/20/91	X	X					
MULT	83200	28	SW	NE	900	2400 FRONT AVE; NICOLI SHAFT NW ROOSEVELT NEAR NW 30TH, PORTLAND, OR					12	89	89	21	3/28/06	X				
MULT	98163	29	SE	SE	R-O-W		P09037 - 3000		14.7	20	20	14.7	2/2/09	X	X					
MULT	114758	28	SW	SE	100	2030 NW 17TH AVE PORTLAND, OR 97209	HARLEY	JOHNSON		15	20	20	15	1/25/13	X	X				
MULT	114759	28	SW	SE	100	2030 NW 17TH AVE PORTLAND, OR 97209	HARLEY	JOHNSON		15	20	20	15	1/25/13	X	X				
MULT	114760	28	SW	SE	100	2030 NW 17TH AVE PORTLAND, OR 97209	HARLEY	JOHNSON		15	20	20	15	1/25/13	X	X				
MULT	114761	28	SW	SE	100	2030 NW 17TH AVE PORTLAND, OR 97209	HARLEY	JOHNSON		15	20	20	15	1/25/13	X	X				
MULT	83201	28	SW	NE	900	2400 FRONT AVE; NICOLI SHAFT			15	89	89	22	3/24/06	X				X		
MULT	111604	28	SW	SE	1900	1900 NW 18TH AVENUE, PORTLAND, OREGON	JIM	MURRAY		15	22	22	11/27/12	X	X					
MULT	69535	28	NW	SE	100	2500 NW FRONT AVE			20	147	147	18.5	6/6/03	X						
MULT	114757	28	SW	SE	100	2030 NW 17TH AVE PORTLAND, OR 97209	HARLEY	JOHNSON		20	25	25	20	1/25/13	X	X				
MULT	58127	28	SW	SE	293	21ST TO 20TH; THURMAN TO SAVIER; BLOCK 293			21	50	50	21	5/4/99	X						X
MULT	83202	28	SW	NE	900	2400 FRONT AVE; NICOLI SHAFT			22	89	89	22	3/30/06	X				X		
MULT	63963	28	NW	SE		NW FRONT AVE AND NICOLI ST			23	191	136	23	4/19/01	X						
MULT	63598	28	NW	SE		NW FRONT AND 26TH AVE			25	137	0	23	2/26/01	X	X					
MULT	121567	28	SW	NE	4600	2211 NW YORK ST. PORTLAND,OR			25	40	40		12/23/15	X	X					
MULT	121568	28	SW	NE	4600	2211 NW YORK ST. PORTLAND,OR			25	25	25		12/23/15	X	X					
MULT	63602	28	NW	SE		NW FRONT AVE AND 26TH AVE			28	166	141	21	4/5/01	X						
MULT	88925	29	NE	SE	700	2615 NW INDUSTRIAL			29	68	68	29	4/17/07	X						
MULT	102551	29	NE	SE	100	3033 NW YEON AVE, PORTLAND	MONTGOMERY	R SCOTT		29	89	89	29	6/11/10	X					X
MULT	102552	29	NE	SE	100	3033 NW YEON AVE, PORTLAND	MONTGOMERY	R SCOTT		29	88.5	88.5	29	6/11/10	X					X
MULT	70259	28	NW	SW	900	2526 NW YEON AVE	DON	REARDEN		32	38	38	32	7/25/03	X					
MULT	70260	28	NW	SW	900	2526 NW YEON AVE	DON	REARDEN		33	37	37	33	7/25/03	X					
MULT	70261	28	NW	SW	900	2526 NW YEON AVE	DON	REARDEN		33	38	38	33	7/25/03	X					
MULT	70258	28	NW	SW	900	2526 NW YEON AVE	DON	REARDEN		34	40	40	34	7/25/03	X					
MULT	88926	29	NE	SE	100	3033 NW YEON AVE	R SCOTT	MONTGOMERY		35	79	79	35	4/18/07	X					
MULT	4036	28	NW	SW		2825 NW YEON	SID	WOODBURY		37.3	45	45	37.3	2/28/94	X					
MULT	103342	28	SW	NE	3900	2439 NW 22ND AVE			40	96	95.83	36	8/26/10	X					X	
MULT	103343	28	SW	NE	3900	2439 NW 22ND AVE			40	96	95.83	36	8/30/10	X					X	
MULT	4038	28	NW	SW		2825 NW YEON	SID	WOODBURY		40	45	45	37	2/24/94	X					
MULT	95999	29	NE	SE	700	2615 NW INDUSTRIAL ST			40	50	50	40	8/4/08	X	X					
MULT	94934	28	SW	SE	5500	1828 NW RALEIGH ST			44	50	50	44	6/4/08	X						
MULT	94935	28	SW	SE	5500	1828 NW RALEIGH ST			44	50	28	44	6/4/08	X						
MULT	94936	28	SW	SE	5500	1828 NW RALEIGH ST			44	49	49	44	6/5/08	X						
MULT	98532	29	NE	SE	1600	2500 NW NICOLAI ST			45	57	50	45	1/31/09	X						X
MULT	3537	29	SE	NE					48	56	56	48	6/3/93	X						
MULT	98533	29	NE	SE	1600	2500 NW NICOLAI ST			49	56	55	49	1/31/09	X						X
MULT	88927	29	SE	NE		NW 26TH AVE; JUST S OF NICOLAI AVE			59	105	105	59	4/23/07	X						
MULT	67547	28	NW	SE		2200 NW FRONT AVE			70	216	160	69	8/7/01	X						
MULT	3536	29	SE	NE					84	70	70	54	6/3/93	X						
MULT	1012	28	SW	NE					124	126	126	25	6/12/57	X				X		
MULT	50115	28	SW	NE								11	12/5/95	X	X					
MULT	109564	29	NE	SE	1200	2625 NW INDUSTRIAL ST	JAMES	FROMER		14.5	0	13.8	3/28/12	X	X					
MULT	70777	28	NW	SE	900	2500 NW FRONT AVE				98	98	14	6/18/03	X						
MULT	70778	28	NW	SE	900	2500 NW FRONT AVE				98	98	14	6/19/03	X						
MULT	70781	28	NW	SE	900	2500 NW FRONT AVE				98	98	14	6/19/03	X						
MULT	109557	29	NE	SE		2625 NW INDUSTRIAL ST	JAMES	FROMER		14.5	0	14	3/29/12	X	X					
MULT	109559	29	NE	SE	1200	2625 NW INDUSTRIAL ST	JAMES	FROMER		15.5	0	14	3/29/12	X	X					

Well Log No.	Section	Q	QQ	Tax Lot	Address	Owner Name	Company	Type of Log	Depth to First Water	Depth Drilled	Completed Depth	Static Water Level	Completed Date	New Well	Abandonment	Domestic Use	Industrial Use	Dewatering Use	Piezometer Use
MULT 109560	29	NE	SE	1200	2625 NW INDUSTRIAL ST	JAMES	FROMER	G		15.5	0	14	3/29/12	X	X				
MULT 109562	29	NE	SE	1200	2625 NW INDUSTRIAL ST	JAMES	FROMER	G		16.5	0	14	3/28/12	X	X				
MULT 109563	29	NE	SE	1200	2625 NW INDUSTRIAL ST	JAMES	FROMER	G		22	0	14	3/29/12	X	X				
MULT 109558	29	NE	SE	1200	2625 NW INDUSTRIAL ST	JAMES	FROMER	G		16	0	14.1	3/29/12	X	X				
MULT 109561	29	NE	SE	1200	2625 NW INDUSTRIAL ST	JAMES	FROMER	G		19.75	0	14.7	3/29/12	X	X				
MULT 109598	29	NE	SE	1200	2625 NW INDUSTRIAL ST	JAMES	FROMER	G		15.5	0	14.8	4/12/12	X	X				
MULT 50114	28	SW	NE				PORT OF PORTLAND	G				15	12/5/95	X	X				
MULT 50119	28	SW	NE		11700 NW THURMAN	ALAN	COLE	G				16	11/8/95	X	X				
					2500 NW FRONT AVE; NICOLAI SHAFT CSO PROJECT		CITY OF PORTLAND; BUREAU OF ENVIRONMENTAL SERVICES	G		100	0	17	9/23/03	X	X				
MULT 71805	28	NW	SE	900				G											
MULT 102361	28	SW	SW	8800	1723 NW 24TH AVE PORTLAND, OR 97210	KIM	SCHREINER	G		30	30	18	5/21/10	X	X				
MULT 69536	28	NW	SE	900	2500 NW FRONT AVE		CITY OF PORTLAND; BUREAU OF ENVIRONMENTAL SERVICES	G		158	158	18.5	6/4/03	X					
MULT 56541	28	NW	SW	1900	2825 NW YEON; OLD STEEL MILL		WOODBURY FAMILY LTD; WOODBURY, SYDNEY (C/O)	G		35	0	20	10/5/98	X	X				
MULT 56601	28	NW	SW	2100	2805 NW YEON; OLD STEEL MILL		WOODBURY FAMILY LTD PROP; WOODBURY, SYDNEY (C/O)	G		35	0	20	10/5/98	X	X				
MULT 56602	28	NW	SW	1900	2825 NW YEON; OLD STEEL MILL		WOODBURY FAMILY LTD PROP; WOODBURY, SYDNEY (C/O)	G		33	0	20	10/5/98	X	X				
MULT 56604	28	NW	SW	2100	2805 NW YEON; OLD STEEL MILL		WOODBURY FAMILY LTD PROP; WOODBURY, SYDNEY (C/O)	G		35	0	20	10/5/98	X	X				
MULT 70429	28	NW	SE	900	2500 NW FRONT AVE		CITY OF PORTLAND; BUREAU OF ENVIRONMENTAL SERVICES	G		163	163	20	5/16/03	X					
MULT 70430	28	NW	SE	900	2500 NW FRONT AVE		CITY OF PORTLAND; BUREAU OF ENVIRONMENTAL SERVICES	G		163	163	20	5/15/03	X					
MULT 72390	28	NW	SE	400	INTERSECTION OF FRONT AND 21ST; SUBSTATION		PORTLAND GENERAL ELECTRIC	G		25	0	20	1/27/04	X	X				
MULT 72391	28	NW	SE	400	INTERSECTION OF FRONT AND 21ST; SUBSTATION		PORTLAND GENERAL ELECTRIC	G		25	0	20	1/27/04	X	X				
MULT 72392	28	NW	SE	400	INTERSECTION OF FRONT AND 21ST; SUBSTATION		PORTLAND GENERAL ELECTRIC	G		25	0	20	1/27/04	X	X				
MULT 88842	28	NW	SW	R-O-W	NICHOLIE ST, PORTLAND, OR		P D O T	G		80	80	22.5	5/8/07	X	X				
MULT 50122	28	SW	NE		11700 NW THURMAN	ALAN	COLE	G				23	11/9/95	X	X				
MULT 102867	28	SW	NE	700	2700 NW FRONT AVE		CITY OF PORTLAND	M		57.5	57.5	23	7/6/10	X					
MULT 69388	28	NW	SE	900	2500 NW FRONT AVE		CITY OF PORTLAND; BUREAU OF ENVIRONMENTAL SERVICES	G		157	0	23.4	12/27/02	X	X				
MULT 64082	28	NW	SW		E OF NAITO PARKWAY AND N OF NICOLAI ST		PORT OF PORTLAND	G		171	0	26	5/20/01	X	X				
MULT 53693	28	SW	NE		2100 NW 22ND AVE, PORTLAND	DEVOE	ICI; DEVOE	M		50	50	30	5/12/97	X					
MULT 53694	28	SW	NE		2100 NW 22ND AVE, PORTLAND	DEVOE	ICI; DEVOE	M		50	50	30	5/12/97	X					
MULT 53695	28	SW	NE		2100 NW 22ND AVE, PORTLAND	DEVOE	ICI; DEVOE	M		50	50	30	5/12/97	X					
MULT 53696	28	SW	NE		2100 NW 22ND AVE, PORTLAND	DEVOE	ICI; DEVOE	M		50	50	30	5/12/97	X					
MULT 53697	28	SW	NE		2100 NW 22ND AVE, PORTLAND	DEVOE	ICI; DEVOE	M		50	50	30	5/12/97	X					
MULT 78358	28	SW	NE	2500	2130 NW YORK ST		B C G CONSULTING	G		45	0	30	7/14/05	X	X				
MULT 78359	28	SW	NE	2500	2130 NW YORK ST		B C G CONSULTING	G		45	0	30	7/14/05	X	X				
MULT 78360	28	SW	NE	2500	2130 NW YORK ST		B C G CONSULTING	G		45	0	30	7/14/05	X	X				
MULT 61245	28	SW	SW	2900	2121 NW YORK ST	STUART	SOREN	G		35	35	31	5/8/00	X					
MULT 61246	28	SW	SW	2900	2121 NW YORK STREET	STUART	SOREN	G		37	37	31	5/8/00	X					
MULT 61247	28	SW	SW	2900	2121 NW YORK ST	STUART	SOREN	G		34	34	31	5/8/00	X					
MULT 61248	28	SW	SW	2800	2121 NW YORK ST	STUART	SOREN	G		37	37	31	5/8/00	X					
MULT 107673	29	NE	SE	100	3033 NW YEON AVE, PORTLAND, OR 97210	SCOTT	MONTGOMERY	M		79	79	33	9/23/11		X				
MULT 84193	29	SE	SE	1300	2575 NW VAUGHN ST, PORTLAND		FREEMAN LAND AND CATTLE	G		50	0	50	6/7/06	X	X				
MULT 88839	28	NW	SW	2100	2829 NW YEON		OREGONIAN PUBLISHING	M		95	95	58	5/2/07	X					

Appendix C
User Questionnaire

PHASE I ENVIRONMENTAL SITE ASSESSMENT USER QUESTIONNAIRE

(Required by ASTM E1527-13)

Property: Class-N-Kustom Auto Body Shop, 2404 NW Nicolai Street, Portland OR

HAI Project No. 9163

The party who will be the *User* of the Phase I ESA should provide the following information, if available. Failure to do so could result in a determination that "All Appropriate Inquiry" is not complete, thereby putting your Landowner Liability Protections at risk. Accordingly, please fill in this form to the best of your ability. Explain any *Yes* answers to 6b, 7b, 8b, 9, 10a, b, c or d, and 11 on a separate sheet of paper. Then sign this form and return it to HAI along with copies of any of the available documents or information. This form will be made a part of the completed Phase I ESA Report to be prepared by Hahn and Associates, Inc.

Documents Provided to HAI?

Yes	No	Un-known		Yes	No
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	1. Existence / location of water wells, fill material, drywells, sumps, pits, or drainage systems	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	2. Building plans (architectural, mechanical, utility, plumbing)	<input type="radio"/>	<input checked="" type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	3. Description of current site operations, including site plans or sketches	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	4. Tax Assessor records (previous owner and occupants)	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	5. Title Report or Preliminary Title Report (which may include a search for recorded liens and <i>Activity and Land Use Limitations</i> (AULs)), and/or Chain Of Title	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	6. a) Environmental Cleanup Liens: Has a search for environmental cleanup liens filed under federal, tribal, state, or local law been conducted by a <i>title company</i> or <i>professional</i> ?	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	6. b) Are you aware of any such liens encumbering the property?*	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	7. a) Activity and Land Use Limitations (AULs): Has a search for recorded AULs been conducted by a <i>title company</i> or <i>professional</i> ? AULs may include engineering controls, land use restrictions or institutional controls in place at the property and/or filed or recorded in a registry under federal, tribal, state or local law.	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	7. b) Are you aware of any AULs in connection with the property?*	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	8. a) Fair Market Value: Does the purchase price for this property reasonably reflect the fair market value of the property?	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	8. b) If not, does the lower purchase price reflect known or suspected contamination to be present at the property?*	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	9. Specialized Knowledge: As the User of this ESA, do you have any specialized knowledge or experience related to the property or nearby property? For example, if you have been a tenant of the property or have been involved in the same line of business as the current or former occupant(s) you may have specialized knowledge of the chemicals and/or processes used at the property.*	<input type="radio"/>	<input checked="" type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	10. Common Knowledge: Are you aware of commonly known or reasonably ascertainable information about the property that would help to identify conditions indicative of releases or threatened releases? For example, do you know (a) The historical uses of the property? <u>Provided an old Phase I report on property</u> * (b) Of specific chemicals that are present or once were present at the property? <u>See old Phase I and auditor's site visit notes</u> * (c) Of spills or other chemical releases that have taken place at the property? <u>Speculation by current tenant that oil spills from former storage area may have occurred</u> * (d) Of any environmental cleanups that have taken place at the property? <u>None</u> *	<input checked="" type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	11. Obvious Indicators: Based on your knowledge of the property, are there any obvious indicators, such as spills, stains, releases, cleanups, etc., that point to the presence or likely presence of contamination at or near the property? *	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	12. Information concerning any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products	<input type="radio"/>	<input checked="" type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	13. Notices from any governmental entity regarding possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products	<input type="radio"/>	<input checked="" type="radio"/>

*Please explain any Yes answer on a separate sheet of paper

PHASE I ENVIRONMENTAL SITE ASSESSMENT USER QUESTIONNAIRE

(Required by ASTM E1527-13)

Property: Class-N-Kustom Auto Body Shop, 2404 NW Nicolai Street, Portland OR

HAI Project No. 9163

14. Are you aware of any documents that may be pertinent to this ESA? Yes No
 Please check the Yes column for all that apply, then check Copy column for any known documents for which copies are available. Please provide available copies to HAI:

	Yes			Copy	
	Yes	Copy		Yes	Copy
Prior Environmental Site Assessments (ESAs)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Hazardous Waste Generator Notices or Reports	<input type="checkbox"/>	<input type="checkbox"/>
Regulatory Agency Documents/Correspondence	<input type="checkbox"/>	<input type="checkbox"/>	Material Safety Data Sheets	<input type="checkbox"/>	<input type="checkbox"/>
Environmental Registrations/Permits for:	<input type="checkbox"/>	<input type="checkbox"/>	Community Right-To-Know Plans	<input type="checkbox"/>	<input type="checkbox"/>
Underground / Above-Ground Storage Tanks	<input type="checkbox"/>	<input type="checkbox"/>	Site Safety Plans	<input type="checkbox"/>	<input type="checkbox"/>
Solid Waste Disposal	<input type="checkbox"/>	<input type="checkbox"/>	Spill Prevention Plans	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous Waste Disposal	<input type="checkbox"/>	<input type="checkbox"/>	Spill Control / Countermeasure Plans	<input type="checkbox"/>	<input type="checkbox"/>
Wastewater	<input type="checkbox"/>	<input type="checkbox"/>	Geotechnical Reports	<input type="checkbox"/>	<input type="checkbox"/>
NPDES	<input type="checkbox"/>	<input type="checkbox"/>	Hydrogeologic Reports	<input type="checkbox"/>	<input type="checkbox"/>
Stormwater	<input type="checkbox"/>	<input type="checkbox"/>	Other (Specify)	<input type="checkbox"/>	<input type="checkbox"/>
Drywell/UIC	<input type="checkbox"/>	<input type="checkbox"/>			

15. What type of Property Transaction are you having this ESA performed for?
 A. Purchase of Property C. Exchange of Property E. Construction Loan
 B. Sale of property D. Refinance F. Other (Specify) _____

16. What is the Reason for performing this ESA? (Check all that apply)
 A. Due Diligence purposes in support of Landowner Liability Protections under CERCLA (i.e., Innocent Landowner, Bona Fide Prospective Purchaser, or Contiguous Owner Defenses)
 NOTE: to qualify for any one of the CERCLA defenses, a *title company* or *title professional* must be engaged to conduct the required search for environmental cleanup liens and AULs.
 B. Business Risk C. Other (Specify) _____

17. What is/are the complete and correct address(es) and/or Tax Identification Number(s) of this property, e.g., Map and Tax Lot(s)? If available, please provide a map showing the property boundaries.
Previously provided to HAI

18. Are there any additional required scopes of service that apply to this ESA, e.g., additional Lender requirements beyond ASTM Standard Practice E 1527-13, or additional services required by a Buyer, Seller, etc.?
No

19. Are there any Lenders who will rely on this ESA? If so, please provide Lender Name(s):
Unknown

20. Please provide the name and contact information (telephone, email, fax, etc.) for the Site Contact:
Travis Quarles. travis.quarles@escocorp.com. 503.778.6493

21. Are there any special Terms and Conditions which must be agreed upon by the Environmental Professional (E.P.)?
No

I have reviewed the above list and where noted have or will provide copies of existing documents and information.

Jeff Dresser
 Signature

5/5/17
 Date

Jeff Dresser
 Printed Name

Bridgewater Group, Inc. on behalf of ESCO
 Company Name/Firm (if applicable)

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Property Owner Interview Questions

Property: Auto Body Shop HAI Project No. 9163

Address: 2404 NW Nicolai St City: Portland
County: Multnomah Zip Code: 97210 Owner: ESCO

Owner / Owner Representative Information: Date May 1 2017

Name	Title/Relationship to Owner	Years Associated with Property
<u>Travis Quarles</u>	<u>Manager Environmental Engineering</u>	<u>6</u>

Telephone No: 503 778 6488 Email: travis.quarles@escocorp.com

Property size? < 1 acres Tax Lot(s) or Account #s _____

1. Date of acquisition of the property? Unknown
2. Name(s) of previous owner(s)? Unknown
3. Contact information for any previous owners? _____
4. Property usage since acquisition? Add pages as needed. Describe site operations in brief.
Auto body shop since at least 1990s. Painting, body work, disassembly.
5. Previous owner's usage of property?
Unknown
6. Any known prior usages of the property other than the current usage?
Former office and possibly residence circa 40s or 50s
7. Current or past usage of heavy equipment the property? (Details)
Some equipment, car storage for painting or similar work.
8. Chemical usage? (Details)
Paints, solvents, oil tank for heating, compressor
9. Pesticides/herbicides usage at the property? List products used, method/frequency of application
Unknown

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Property Owner Interview Questions

Property: Auto Body Shop

HAI Project No. 9163

10. Any known chemical spills or releases on or adjacent to the property?
Observed hydrocarbon staining under vehicles in SW corner
11. Has fill material been brought onsite?
Unknown
12. To your knowledge, are there any Activity and Use Limitations associated with the property?
No
13. Has waste ever been disposed of on the property? Illegal dumping?
Unknown
14. Do you know of any other environmental reports for the property (ESA, Asbestos, Lead Paint, Radon, Geotechnical, etc.)?
No
15. To your knowledge, has there ever been an illegal drug lab ever on the property?
No
16. Are there any pending or historical litigation or administrative proceedings regarding hazardous substances or petroleum products in, on, or from the property?
Not other than Portland Harbor Superfund
17. Have you ever received notices from government agencies regarding possible violations of environmental laws or possible liability relating to hazardous substances or petroleum products?
Not other than Portland Harbor Superfund
18. Do you know of any environmental issues or Recognized Environmental Conditions (i.e. specialized knowledge or experience, commonly known or reasonably ascertainable information) associated with the property or adjoining properties?
No
19. Do you know of any environmental conditions that have affected or may affect the purchase/lease price (fair market value) of the property?
Minor staining in lot outside
20. To your knowledge, do any of the following exist on the property (or have historically existed on the property)? For yes answers, provide detail
- a. Former buildings
Yes, office or residences before body shop
 - b. Wells
No
 - c. Catch basins
Yes, stormwater
 - d. Dry wells
No
 - e. bioswales, ditches, french drains, sumps
No

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Property Owner Interview Questions

Property: Auto Body Shop

HAI Project No. 9163

f. above ground storage tanks
Yes, fuel oil tank in use

g. underground storage tanks
No

h. backup generators
No

i. manmade pits, ponds, or lagoons?
No

21. If there are structures on the property, indicate the following:

a. Number and usages of structures on the property
4 1 - main office and shop w/ paint booth 1 - storage structure
1 - pole building for hydraulic lift
1 - steel container for chemical storage

b. Fuel source for heating the buildings
Fuel oil tank

c. Has heating oil ever been used/stored onsite?
Yes

d. Are any building plans or permits available?
Unknown

e. Source of drinking water: City, assumed

f. Wastewater disposal: City, assumed

Appendix D

Preliminary Title Report



First American Title Company of Oregon
National Commercial Services
200 SW Market Street, Suite 250
Portland, Oregon 97201

Title Officer: **Steve Manome**
Phone: **(503)219-8742**
Fax: **(866)678-0591**
E-mail **smanome@firstam.com**

File No: **NCS-840106-OR1**

PRELIMINARY TITLE REPORT

ALTA Owners Standard Coverage	Liability	\$	TBD	Premium	\$	TBD
ALTA Owners Extended Coverage	Liability	\$		Premium	\$	
ALTA Lenders Standard Coverage	Liability	\$		Premium	\$	
ALTA Lenders Extended Coverage	Liability	\$		Premium	\$	
ALTA Leasehold Standard Coverage	Liability	\$		Premium	\$	
ALTA Leasehold Extended Coverage	Liability	\$		Premium	\$	
Endorsements	Liability	\$		Premium	\$	
Govt Service Charge				Cost	\$	
Other					\$	

We are prepared to issue Title Insurance Policy or Policies in the form and amount shown above, insuring title to the following described land:

The land referred to in this report is described in Exhibit "A" attached hereto.

and as of **03/06/2017** at **8:00 a.m.**, title to an easement estate as to Parcel VII and the fee simple estate as to the remainder is vested in:

Esco Corporation, an Oregon corporation, formerly known as Newesco Corporation, an Oregon corporation

Subject to the exceptions, exclusions, and stipulations which are ordinarily part of such Policy form and the following:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.

3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.
5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

The exceptions to coverage 1-5 inclusive as set forth above will remain on any subsequently issued Standard Coverage Title Insurance Policy.

In order to remove these exceptions to coverage in the issuance of an Extended Coverage Policy the following items are required to be furnished to the Company; additional exceptions to coverage may be added upon review of such information:

- A. Survey or alternative acceptable to the company
 - B. Affidavit regarding possession
 - C. Proof that there is no new construction or remodeling of any improvement located on the premises. In the event of new construction or remodeling the following is required:
 - i. Satisfactory evidence that no construction liens will be filed; or
 - ii. Adequate security to protect against actual or potential construction liens;
 - iii. Payment of additional premiums as required by the Industry Rate Filing approved by the Insurance Division of the State of Oregon
6. City liens, if any, for the city of Portland.
- Note: An inquiry has NOT been made concerning the actual status of such liens. A fee of \$25.00 will be charged per tax account each time an inquiry request is made.
7. Unrecorded leases or periodic tenancies, if any.

The Following Matters Affect Parcel I:

8. Reservations and exceptions, including the terms and conditions thereof:

Reserving:	Mineral rights
Reserved By:	The United States of America
Recorded:	September 13, 1948
Recording Information:	Book 1291, page 83
9. Conditions and restrictions contained in Ordinance No. 144383, a copy of which was recorded November 15, 1977 in [Book 1212, page 1545](#).

10. Easement, including terms and provisions contained therein:
Recording Information: October 9, 1986 in [Book 1945, page 1392](#)
In Favor of: Portland General Electric Company, an Oregon corporation
For: Anchor

The Following Matters Affect Parcel II:

NONE

The Following Matters Affect Parcel III:

NONE

The Following Matters Affect Parcel IV:

11. Easement, including terms and provisions contained therein:
Recording Information: October 9, 1986 in [Book 1945, page 1388](#)
In Favor of: Portland General Electric Company, an Oregon corporation
For: Anchor

12. Covenants, conditions, restrictions and/or easements:
Recorded: June 2, 2005
Recording No.: Recording No. [2005-100090](#)

The Following Matters Affect Parcel V:

13. Easements for utilities over and across the premises formerly included within the boundaries of NW 25th Avenue now vacated pursuant to Ordinance No. 16089, dated January 11, 1907, if any such exists.

The Following Matters Affect Parcel VI:

14. Easement, including terms and provisions contained therein:
Recording Information: April 6, 1920 in [Book 798, page 409](#)
In Favor of: Northern Pacific Terminal Co. of Oregon
For: Railroad tracks
15. Covenants, conditions, restrictions and/or easements:
Recorded: February 5, 1927
Recording No.: [Book 1082, page 340](#)
16. Covenants, conditions, restrictions and/or easements:
Recorded: July 9, 1937
Recording No.: [Book 406, page 525](#)
17. Covenants, conditions, restrictions and/or easements:
Recorded: December 6, 1937
Recording No.: [Book 428, page 11](#)

18. Reservation of utilities in vacated NW York Street and the right to maintain the same as set forth in Ordinance No. 76884 a copy of which was recorded March 30, 1942 as [Book 672, page 118](#)
19. Covenants, conditions, restrictions and/or easements:
Recorded: June 9, 1944
Recording No.: [Book 842, page 409](#)
20. Covenants, conditions, restrictions and/or easements:
Recorded: June 18, 1945
Recording No.: [Book 950, page 365](#)
21. Easement, including terms and provisions contained therein:
Recording Information: December 17, 1947 in [Book 1229, page 383](#)
In Favor of: The Northern Pacific Terminal Company of Oregon
For: Railroad spur track
22. Conditions and restrictions contained in Ordinance No. 95120, a copy of which was recorded October 16, 1951 as [Book 1503, page 193](#).
23. Conditions and restrictions contained in Ordinance No. 112172, a copy of which was recorded July 14, 1960 as [Book 2018, page 416](#).
24. Covenants, conditions, restrictions and/or easements:
Recorded: January 19, 1962
Recording No.: [Book 2099, page 53](#)
25. Reservation of utilities in vacated NW 25th Avenue and the right to maintain the same as set forth in Ordinance No. 118015 a copy of which was recorded May 6, 1964 as [Book 36, page 84](#)
26. Reservation of utilities in vacated NW Wilson Street and the right to maintain the same as set forth in Ordinance No. 118764 a copy of which was recorded August 18, 1964 as [Book 109, page 205](#)
27. Easement, including terms and provisions contained therein:
Recording Information: March 31, 1965 in [Book 262, page 140](#)
In Favor of: The Northern Pacific Terminal Company of Oregon, Great Northern Railway Company and Spokane, Portland & Seattle Railway Company
For: Railroad "lead" track
28. Conditions and restrictions contained in Ordinance No. 123121, a copy of which was recorded September 9, 1966 as [Book 525, page 520](#).
29. Reservation of utilities in vacated NW 25th Avenue and the right to maintain the same as set forth in Ordinance No. 127031 a copy of which was recorded July 30, 1968 as [Book 632, page 972](#)

30. Easement, including terms and provisions contained therein:
Recording Information: September 13, 1968 in [Book 640, page 455](#)
In Favor of: Adjacent property owners
For: Ingress and egress
Affects: Vacated NW 25th Avenue in Tract C
31. Easement, including terms and provisions contained therein, as disclosed in Assignment of Easements:
Recording Information: December 6, 1973 in [Book 962, page 26](#)
In Favor of: Portland General Electric Company, a Maine corporation
For: Electric utility lines
32. Conditions and restrictions contained in Ordinance No. 139815, a copy of which was recorded July 22, 1975 as [Book 1052, page 718](#).
33. Reservation of utilities in vacated NW 24th Place and the right to maintain the same as set forth in Ordinance No. 151541 a copy of which was recorded October 25, 1982 as [Book 1624, page 2014](#)
34. Easement, including terms and provisions contained therein:
Recording Information: May 9, 1989 in [Book 2201, page 1233](#)
In Favor of: Pacific Northwest Bell Telephone Company, a Washington corporation
For: Telephone cables, steel pipes and above-ground cabinet
Affects: The North 5 feet of the South 10 feet of the East 5 feet of Lot 17, Block 8 in Parcel V
35. Covenants, conditions, restrictions and/or easements:
Recorded: October 3, 2002
Recording No.: [2002-177321](#)
36. Covenants, conditions, restrictions and/or easements:
Recorded: October 3, 2002
Recording No.: [2002-177322](#)

The Following Matters Affect Parcel VII:

37. Easement, including terms and provisions contained therein:
Recording Information: April 6, 1920 in [Book 798, page 409](#)
In Favor of: Northern Pacific Terminal Company of Oregon
For: Railroad tracks

A document recorded October 3, 2002 as Recording Nos. [2002177321](#) and [2002177322](#) of Official Records provides that the interest of the easement holder was transferred to Esco Corporation, an Oregon corporation.

38. Covenants, conditions, restrictions and/or easements:
 Recorded: October 3, 2002
 Recording No.: [2002177321](#)

39. Covenants, conditions, restrictions and/or easements:
 Recorded: October 3, 2002
 Recording No.: [2002177322](#)

The Following Matters Affect Parcel VIII:

40. An unrecorded easement dated May 9, 1916, including terms and provisions contained therein, as disclosed by Assignment of Easements:
 Recording Information: June 6, 1973 in [Book 962, page 26](#)
 In Favor of: Pacific Power & Light Company, a Maine corporation
 For: Electric utility lines

A document recorded June 6, 1973 as [Book 962, page 26](#) of Official Records provides that the interest of the easement holder was transferred to Portland General Electric Company.

41. Reservation of utilities in vacated street area and the right to maintain the same as set forth in Ordinance No. 149287 a copy of which was recorded October 25, 1982 as [Book 1624, page 2014](#)

(Affects Lot 12)

The Following Matters Affect Parcel IX:

NONE

The Following Matters Affect Parcel X:

NONE

The Following Matters Affect Parcel XI:

NONE

The Following Matters Affect Parcel XII:

42. The terms and provisions contained in the document entitled "Revocable Permit to Maintain Backflow Assembly in Right of Way" recorded February 10, 2010 as Recording No. [2010-019954](#) of Official Records.

-END OF EXCEPTIONS-

INFORMATIONAL NOTES

NOTE: This report does not include a search for Financing Statements filed in the office of the Secretary of State, or in a county other than the county wherein the premises are situated, and no liability is assumed if a Financing Statement is filed in the office of the County Clerk (Recorder) covering fixtures on the premises wherein the lands are described other than by metes and bounds or under the rectangular survey system or by recorded lot and book.

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$50,822.22
Code No.:	001
Map & Tax Lot No.	1N1E28BC-01600
Property ID/Key No.	R316331

(Affects Parcel I)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$84,172.15
Code No.:	001
Map & Tax Lot No.	1N1E28BC-01600-A
Property ID/Key No.	R646139

(Affects Parcel I - Machinery and equipment)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$284.05
Code No.:	001
Map & Tax Lot No.	1N1E28BC-01601
Property ID/Key No.	R493040

(Affects Parcel II)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$10,927.37
Code No.:	001
Map & Tax Lot No.	1N1E28BC-01500
Property ID/Key No.	R316299

(Affects Parcel III)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$41,950.30
Code No.:	001
Map & Tax Lot No.	1N1E28BC-01400
Property ID/Key No.	R316323

(Affects Parcel IV)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$7,787.15
Code No.:	001
Map & Tax Lot No.	1N1E28CC-00800
Property ID/Key No.	R309863

(Affects Parcel V)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$194,666.39
Code No.:	001
Map & Tax Lot No.	1N1E28C-00100
Property ID/Key No.	R316317

(Affects a portion of Parcel VI)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$85,875.33
Code No.:	001
Map & Tax Lot No.	1N1E28C-00100-A1
Property ID/Key No.	R646138

(Affects a portion of Parcel VI - Machinery and equipment)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$2,712.29
Code No.:	001
Map & Tax Lot No.	1N1E28C-00300
Property ID/Key No.	R316374

(Affects a portion of Parcel VI)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$1,827.16
Code No.:	001
Map & Tax Lot No.	1N1E28C-00201
Property ID/Key No.	R532631

(Affects a portion of Parcel VII)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$2,700.49
Code No.:	001
Map & Tax Lot No.	1N1E28C-00202
Property ID/Key No.	R532634

(Affects a portion of Parcel VII)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$3,316.42
Code No.:	001
Map & Tax Lot No.	1N1E28CB-00700
Property ID/Key No.	R295992

(Affects Parcel VIII, Lots 1 and 2)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$1,169.79
Code No.:	001
Map & Tax Lot No.	1N1E28CB-00800
Property ID/Key No.	R295993

(Affects Parcel VIII, Lot 12 - Land and improvements)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$7,723.52
Code No.:	001
Map & Tax Lot No.	1N1E28CB-00800-A1
Property ID/Key No.	R646137

(Affects Parcel VIII, Lot 12 - Machinery and equipment)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$9,185.01
Code No.:	001
Map & Tax Lot No.	1N1E28CB-02800
Property ID/Key No.	R148113

(Affects a portion of Parcel IX)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$2,040.64
Code No.:	001
Map & Tax Lot No.	1N1E28CB-02900
Property ID/Key No.	R148112

(Affects a portion of Parcel IX)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$3,698.90
Code No.:	001
Map & Tax Lot No.	1N1E28CB-03000
Property ID/Key No.	R148111

(Affects a portion of Parcel IX)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$6,903.26
Code No.:	001
Map & Tax Lot No.	1N1E28CB-03100
Property ID/Key No.	R148103

(Affects Parcel X)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$37,677.31
Code No.:	001
Map & Tax Lot No.	1N1E29DA-01700
Property ID/Key No.	R316380

(Affects Parcel XI - Land and improvements)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$3,066.38
Code No.:	001
Map & Tax Lot No.	1N1E29DA-01700-A1
Property ID/Key No.	R646136

(Affects Parcel XI-Machinery and equipment)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$15,440.54
Code No.:	001
Map & Tax Lot No.	1N1E28DD-00200
Property ID/Key No.	R227129

(Affects a portion of Parcel XII)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$1,840.37
Code No.:	001
Map & Tax Lot No.	1N1E28DD-00100
Property ID/Key No.	R227136

(Affects a portion of Parcel XII)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$38,773.84
Code No.:	001
Map & Tax Lot No.	1N1E28DD-01600
Property ID/Key No.	R227128

(Affects a portion of Parcel XII)

NOTE: Taxes for the year 2016-2017, paid in full.

Tax Amount:	\$28,188.73
Code No.:	001
Map & Tax Lot No.	1N1E28DD-01600-A2
Property ID/Key No.	R646135

(Affects a portion of Parcel XII - Machinery and equipment)

**THANK YOU FOR CHOOSING FIRST AMERICAN TITLE
WE KNOW YOU HAVE A CHOICE!**



First American Title Insurance Company of Oregon

SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006 EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - (i) the occupancy, use, or enjoyment of the Land;
 - (ii) the character, dimensions, or location of any improvement erected on the Land;
 - (iii) the subdivision of land; or
 - (iv) environmental protection;
 or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
 - (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
 - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
 - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - (c) resulting in no loss or damage to the Insured Claimant;
 - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
 - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
 - (a) a fraudulent conveyance or fraudulent transfer, or
 - (b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

2. American Land Title Association OWNER POLICY - 2006 EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - (i) the occupancy, use, or enjoyment of the Land;
 - (ii) the character, dimensions, or location of any improvement erected on the Land;
 - (iii) the subdivision of land; or
 - (iv) environmental protection;
 or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
 - (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
 - (a) created, suffered, assumed, or agreed to by the Insured Claimant;
 - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - (c) resulting in no loss or damage to the Insured Claimant;
 - (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risks 9 and 10); or
 - (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
 - (a) a fraudulent conveyance or fraudulent transfer; or
 - (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

Exhibit "A"

Real property in the County of Multnomah , State of Oregon, described as follows:

PARCEL I:

A tract of land situated in the Northwest quarter of Section 28, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah, and State of Oregon, being more particularly described as follows:

Beginning at the point of intersection of the Northeasterly line of N.W. Yeon Avenue with the division line between Tracts C and D as shown upon the Map of the Estate of Peter Guild, deceased, as divided among the heirs, pursuant to decree of partition entered February 28, 1873, Journal 8, page 640, J.R. 4508, and recorded in Deed Book X, page 56; thence North 47°90' West along the said Northeasterly line of N.W. Yeon Avenue, 208.56 feet to the Northwesterly line of that certain tract of land conveyed to Ferdinand Grass by Deed recorded July 11, 1892 in Deed [Book 182, page 15](#); thence continuing North 47°00' West along the said Northeasterly line of N.W. Yeon Avenue, 80 feet to a point; thence North 40°51' East along a line drawn parallel to the said Northwesterly line of the Ferdinand Grass Tract to a point in the Southerly right of way line of the N.P.R.R.; thence Southeasterly along the said Southerly right of way line of N.P.R.R. 559.83 feet, more or less, to the Northwesterly line of that certain tract of land conveyed to Portland Linseed Oil Company by Deed recorded July 7, 1888 in Deed [Book 103, page 450](#); thence Southwesterly along the said Northwesterly line of the Portland Linseed Oil Company Tract, 106.24 feet to the Northeasterly line of that certain 30 foot easement conveyed to The United States of America by Deed recorded March 5, 1 937 in P.S. Deed [Book 380, page 437](#); thence Northwesterly along the said Northeasterly line of said easement 37.6 feet, more or less, to the Northwesterly corner thereof; thence South 40°51' West along the Northwesterly line of said easement and along the Northwesterly line of that certain tract of land conveyed to The United States of America by said Deed recorded in P.S. Deed [Book 380, page 437](#), 295.87 feet to the said Northeasterly line of N.W. Yeon Avenue; thence North 47°00' West along the said Northeasterly line of N.W. Yeon Avenue, 235.24 feet to the place of beginning.

EXCEPTING THEREFROM a tract of land in the Northwest one-quarter of Section 28, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, described as follows:

Beginning at a point in the Northeasterly line of N.W. Yeon Avenue, North 47°00' West 100.0 feet from the intersection of said Northeasterly line of N.W. Yeon Avenue with the line between Tracts "C" and "D" of the subdivision of the Estate of Peter Guild as recorded at page 56 of Book X of the Deed Records of Multnomah County, Oregon; thence North 47°00' West along the Northeasterly line of N.W. Yeon Avenue, 188.56 feet; thence North 40°51' East parallel with the line between said Tracts "C and "D", 379.16 feet to the Southwesterly line of the Northern Pacific Railroad Company's right of way; thence South 48°43" East along said right of way, 188.43 feet; thence South 40°51' West 384.75 feet to the place of beginning.

PARCEL II:

A tract of land situated in the Northwest quarter of Section 28, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah, and State of Oregon, being more particularly described as follows:

Beginning at the point of intersection of the Southeasterly line of Tract C of the subdivision of the Peter Guild Donation Land Claim, in Section 28, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, with the Northeasterly line of that certain

tract of land conveyed to The United States of America by Deed from C. F. Adams, et al, dated June 15, 1934 and recorded June 15, 1934 in P.S. Deed [Book 254, page 206](#); thence Northeasterly along said Southeasterly line of Tract C, 30 feet to the Southwesterly line of that certain tract of land conveyed to the Portland Linseed Oil Company by Deed recorded July 7, 1888 in Deed [Book 103, page 450](#); thence Northwesterly along the said Southwesterly line of the Portland Linseed Oil Company Tract and said line extended, 242.60 feet to a point; thence South 50°51' West 30 feet to the Northwesterly corner of that certain tract of land conveyed to The United States of America by Deed recorded March 5, 1937 in P.S. Deed [Book 380, page 437](#); thence South 47° East along the Northeasterly line of the said United States of America Tract, 242,60 feet to the point of beginning.

EXCEPTING THEREFROM that portion lying Northeasterly of the Southwesterly line of that tract of land described in that deed recorded June 30, 1964 in [Book 74, page 262](#).

PARCEL III:

Beginning in the South line of the tract of land marked Parcel "C" and set apart to one Frances L. Inman (then Frances L. Guild) in and by the partition deed between the heirs of Peter Guild, deceased, recorded at page 59, Book "X" of Records of Deeds of Multnomah County, Oregon, at a point 30 feet West of the center of the main tract of the Northern Pacific Railroad Company, running thence Northerly and parallel with and 30 feet distant from the center line of said railroad tract 205 feet; thence Westerly parallel with the South line of said Tract "C" 106.24 feet; thence Southerly and parallel with the center line of said railroad tract 205 feet to the South line of said Tract "C", and thence Easterly along said South line 106.24 feet to the place of beginning.

PARCEL IV:

TRACT A:

Part of Tract C of the subdivision of the Peter Guild Donation Land Claim, being in Section 28, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, being more particularly described as follows:

Beginning at a point which is 163.96 feet North 47°00' West of the intersection of the Southeasterly line of said Tract C with the Northeasterly line of Yeon Avenue, which point is the Southwest corner of that certain tract of land conveyed to the United State of America by deed recorded June 15, 1935 in [Book 254, page 206](#), Deed Records; thence North 47°00' West, along said line of Yeon Avenue, 78.64 feet; thence North 40°51' East, parallel to the Southeasterly line of said Tract C, 265.87 feet; thence South 47°00' East, parallel to the Northeasterly line of Yeon Avenue, 78.64 feet to a point which is the Northwest corner of said [Book 254, page 206](#); thence South 40°51' West 265.87 feet to the point of beginning.

TRACT B:

Part of Tract C of the subdivision of the Peter Guild Donation Land Claim, being in Section 28, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, being more particularly described as follows:

Beginning at the intersection of the Southeasterly line of said Tract C with the Northeasterly line of Yeon Avenue; thence North 47°00' West, along said line of Yeon Avenue 163.96 feet; thence North 40°51' East, parallel to the Southeasterly line of said Tract C, 265.87 feet; thence South 47°00' East, parallel to the Northeasterly line of Yeon Avenue, 163.96 feet to a point in the Southeasterly line of said Tract C; thence South 40°51' West 265.87 feet to the point of beginning.

PARCEL V:

Lots 11, 12, 13, 14 and the South one-half of lot 16, Block 6, WILSON'S ADDITION TO THE CITY OF PORTLAND, in the City of Portland, County of Multnomah and State of Oregon.

TOGETHER WITH that portion of NW 25th Street (now NW 25th Avenue) West of and adjoining said Lots 11 and 14, which inured thereto by Vacation Ordinance No. 16089, dated January 11, 1907.

PARCEL VI:

TRACT A:

A tract of land situated in the Southwest one-quarter of Section 28, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, described as follows:

Beginning at the intersection of the center line of 25th Street with the North line of NORTH PORTLAND; thence North $1^{\circ}27'$ West 539.28 feet along the centerline of 25th Street extended in a Northerly direction to the North line of a tract of land conveyed by deed recorded April 16, 1884 in [Book 73, page 221](#), Multnomah County Deed Records; thence North $80^{\circ}3'45''$ East, along the North boundary of said tract, 352.41 feet to the Northeast corner of said tract, said Northeast corner being the Northwest corner of Block 13 of DOSCHER'S SECOND ADDITION TO THE CITY OF PORTLAND; thence South $0^{\circ}34'15''$ West 604.28 feet to the Southeast corner of said tract, said Southeast corner being the Southwest corner of Block 5 of said DOSCHER'S SECOND ADDITION TO PORTLAND; thence North $85^{\circ}15'$ West 327.49 feet to the point of beginning.

EXCEPTING THEREFROM that portion lying within the boundaries of the Portland Terminal Railway Company's right of way.

TRACT B:

A tract of land situated in the Southeast one-quarter of Section 29, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, described as follows:

Beginning at the intersection of the center line of 25th Street with the North line of NORTH PORTLAND; thence North $1^{\circ}27'$ West 348.88 feet along the centerline of 25th Street extended in a Northerly direction; thence Southwesterly 189.15 feet on the arc of a curve to the left having a radius of 349.26 feet and a chord bearing South $48^{\circ}6'$ West; thence South $32^{\circ}35'$ West 261.33 feet to said Northerly line of NORTH PORTLAND; thence South $89^{\circ}15'$ East, along said Northerly line of NORTH PORTLAND, 288.65 feet to the point of beginning.

TRACT C:

Lots 3 through 11, inclusive, Block 1 and Lots 1 through 12, inclusive, Block 2, VERSTEEG'S ADDITION, in the City of Portland, County of Multnomah and State of Oregon.

TOGETHER WITH that portion of vacated NW 24th Place which inured thereto by Ordinance No. 149287, recorded October 25, 1982 in [Book 1624, page 2014](#).

ALSO TOGETHER WITH that portion of vacated NW 25th Street which inured thereto by Ordinance No. 127031, recorded July 30, 1968 in [Book 632, page 972](#).

TRACT D:

Lots 1 through 9, inclusive, Block 13, Lots 1 through 6, inclusive, Block 6, and Lots 1 and 2, Block 5, DOSCHER'S SECOND ADDITION, in the City of Portland, County of Multnomah and State of Oregon.

TOGETHER WITH that portion of vacated NW York Street which inured thereto by Ordinance No. 76884, recorded March 30, 1942 in [Book 672, page 118](#).

ALSO TOGETHER WITH that portion of vacated NW Roosevelt Street which inured thereto by Ordinance No. 52489.

TRACT E:

Lots 1 through 18, inclusive, Block 8, Lots 1 through 16, inclusive, Block 9 and Lots 1 through 8 and Lots 13 through 18, Block 10, NORTH PORTLAND, in the City of Portland, County of Multnomah and State of Oregon.

EXCEPTING THEREFROM those portions of Lots 7 and 13 lying Northwesterly of the Southeasterly line of the Portland Terminal Railway Company's right of way.

TOGETHER WITH that portion of vacated 25th Street which inured thereto by Ordinance No. 118015, recorded May 6, 1964 in [Book 36, page 84](#).

ALSO TOGETHER WITH that portion of vacated NW Wilson Street which inured thereto by Ordinance No. 118764, recorded August 18, 1964 in [Book 109, page 205](#).

PARCEL VII:

TRACT A:

A tract of land in the William Blackistone Donation Land Claim No. 53 situated in Sections 28 and 29, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

An easement and right-of-way, 20 feet in width, being 10 feet on each side of the centerline of the railroad track as located and staked out upon the ground, said centerline being more particularly described as follows:

Beginning at the intersection of the terminus of York Street with the centerline of said existing railroad track and running thence Westerly on a curve along the existing railroad track and springing therefrom on a curve to the left and South, to the North line of Lot 13, Block 10, NORTH PORTLAND, in the City of Portland, County of Multnomah and State of Oregon and the termination of said easement.

EXCEPT THEREFROM that portion thereof lying within the following described tract:

A tract of land situated in the William Blackistone Donation Land Claim No. 53 situated in Sections 28 and 29, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

Beginning at the intersection of the centerline of 25th Street with the North line of North Portland in said City of Portland and running thence North 1°27' West 539.28 feet along the centerline of said 25th Street extended in a Northerly direction to the North line of a tract of land described in Deed to William S. Ladd et al recorded in [Book 73, page 221](#), Records of Multnomah County, and running thence North 80°3'45" East along the North boundary of said tract 352.41 feet to the Northeast corner thereof (said Northeast corner being the Northwest corner of Block 13 of DOSCHER'S SECOND ADDITION TO THE CITY OF PORTLAND) and running thence South 0°34'15" West 504.28 feet to the Southeast corner of said tract (said Southeast corner being the Southwest corner of Block 5 of said DOSCHER'S SECOND ADDITION), and running thence North 89° 15' West 327.49 feet to the point of beginning.

TRACT B:

A tract of land situated in the William Blackistone Donation Land Claim No. 53 situated in Sections 28 and 29, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

An easement and right-of-way, 20 feet in width, being 10 feet on each side of the centerline of the railroad track as located and staked out upon the ground, said centerline being more particularly described as follows:

Beginning at the intersection of the terminus of York Street with the centerline of said existing railroad track and running thence on a curve to the North to a point that is approximately opposite of and 30 feet distant from the Southwest corner of Lot 6, Block 3, VERSTEEG'S ADDITION, in the City of Portland, County of Multnomah and State of Oregon; thence continuing in a Westerly direction along the existing railroad centerline to the East boundary line of 26th Street and the termination of said easement.

EXCEPT THEREFROM that portion thereof lying within the following described tract: A tract of land situated in the William Blackistone Donation Land Claim No. 53 situated in Sections 28 and 29, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

Beginning at the intersection of the centerline of 25th Street with the North line of North Portland in said City of Portland and running thence North $1^{\circ}27'$ West 539.28 feet along the centerline of said 25th Street extended in a Northerly direction to the North line of a tract of land described in Deed to William S. Ladd et al recorded in [Book 73, page 221](#), Records of Multnomah County, and running thence North $80^{\circ}3'45''$ East along the North boundary of said tract 352.41 feet to the Northeast corner thereof (said Northeast corner being the Northwest corner of Block 13 of DOSCHER'S SECOND ADDITION TO THE CITY OF PORTLAND) and running thence South $0^{\circ}34'15''$ West 504.28 feet to the Southeast corner of said tract (said Southeast corner being the Southwest corner of Block 5 of said DOSCHER'S SECOND ADDITION), and running thence North $89^{\circ}15'$ West 327.49 feet to the point of beginning.

TRACT C:

A tract of land in the William Blackistone Donation Land Claim No. 53 situated in Sections 28 and 29, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

An easement and right-of-way more particularly described as follows:

Beginning at a point 100 feet Easterly at right angles from the East boundary of NW 26th Street and 20 feet Southerly at right angles from the Southerly boundary of said VERSTEEG'S ADDITION, in the City of Portland, County of Multnomah and State of Oregon; thence South $76^{\circ}42'$ West 55.00 feet; thence South $70^{\circ}32'$ West 16.0 feet; thence on a curve to the left of 221.5 feet radius 52.4 feet, more or less, to a point in the Easterly boundary of NW 26th Street; thence North $1^{\circ}27'$ West along the Easterly boundary of said street 6.4 feet; thence continuing along the Easterly boundary of said NW 26th Street North $9^{\circ}56'$ West 7.16 feet to a point 20 feet distant at right angles from the Southerly boundary of said VERSTEEG'S ADDITION; thence North $80^{\circ}04'$ East 100.0 feet to point of beginning.

TRACT D:

A tract of land in the William Blackistone Donation Land Claim No. 53 situated in Sections 28 and 29, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

An easement and right-of-way, 20 feet in width, Rung 10 feet on each side of the railroad track as now located and staked out upon the ground extending from a point in the North boundary line of Lot 13, Block 10, NORTH PORTLAND, in the City of Portland, County of Multnomah and State of Oregon; thence on a curve through said Lot 13 and Lots 12, 7, 8 and 9 in said Block 10 and the termination of said easement.

TRACT E:

A tract of land in the William Blackistone Donation Land Claim No. 53 situated in Sections 28 and 29, Township 1 North, Range 1 East, Willamette Meridian, City of Portland, County of Multnomah, State of Oregon, more particularly described as follows:

An easement and right-of-way more particularly described as follows:

Beginning at a point in the West line of Block 10, NORTH PORTLAND, North 1°27' West 26.72 feet from the Southwest corner thereof; running thence Northeasterly 69.66 feet on a curve to the left having a radius of 230.49 feet, an initial tangent bearing North 73°50' East; thence North 56°31' East 14.95 feet; thence Northeasterly 65.26 feet on a curve to the left having a radius of 208.31 feet to a point in the Northerly line of that tract of land 20.00 feet wide described in [Book 805, Page 190](#); thence Southwesterly following said Northerly line to a point in the West line of said Block 10; thence North 1°27' West to the point of beginning.

PARCEL VIII:

Lots 1, 2 and 12, Block 1, VERSTEEG'S ADDITION TO EAST PORTLAND, in the City of Portland, County of Multnomah and State of Oregon.

TOGETHER WITH that portion of vacated NW 24th Place which inured to said Lot 12 by Ordinance No. 149287, a copy of which was recorded October 25, 1982 in [Book 1624, page 2014](#).

PARCEL IX:

Lots 3, 4, 5, 8, 9, 12, 13 and 18, Block 7, DOSCHER'S SECOND ADDITION, in the City of Portland, County of Multnomah and State of Oregon.

PARCEL X:

A portion of that tract of land described in [Book 2204, Page 2471](#), being Lots 1, 2, 6, and a portion of Lot 7, Block 4, DOSCHER'S SECOND ADDITION situated in the Northwest quarter of the Southwest quarter of Section 28, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, and being more particularly described as follows:

Beginning at a 1.17" copper disk stamped "Summit 59999LS" on the North line of said Lot 7, which bears South 89°55'02" East 38.67 feet from a 5/8" iron rod with yellow plastic cap inscribed "Summit 59999LS" marking the northwest corner of said Lot 7; thence along the North line of said Lot 7, and continuing along the North line of said Lots 6 and 1, South 89°55'02" East, 161.33 feet to a 5/8" iron rod with yellow plastic cap inscribed "Summit 59999LS" at the Northeast corner of said Lot 1; thence along the East line of said Lot 1 and continuing along the East line of said Lot 2, South 00°02'48" West, 87.80 feet to a 5/8" iron rod with yellow plastic cap inscribed "Summit 59999LS" at the Southeast corner of said Lot 2; thence along the South line of said Lot 2, and continuing along the South line of said Lots 6 and 7, North 87°30'55" West, 163.09 feet to a 5/8" iron rod with yellow plastic cap inscribed "Summit 59999LS" which bears South 87°30'55" East, 37.09 feet from a 5/8" iron rod with yellow plastic cap inscribed "Summit 59999LS" marking the Southwest corner of said Lot 7; thence leaving said South line of Lot 7, North 01°11'18" East, 80.98 feet to the point of beginning.

PARCEL XI:

TRACT A:

A tract of land in Wm. Blackistone Donation Land Claim and in Section 29, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, described as follows:

Beginning at the Northwest corner of Block 10, NORTH PORTLAND; thence North 1°27' West along the East line of N.W. 26th Avenue, 221.38 feet to the Northwest corner of the tract conveyed to Frank A. Bitar and Robert A. Bitar by deed recorded July 29, 1953 in Ps Deed [Book 1613, page 409](#) and the true point of beginning of the tract to be described; thence along the Northerly line of said Bitar tract, North 88°033' East 322 feet to the Westerly right of way line of the Northern Pacific Terminal Company; thence along said Westerly right of way line on an arc of a curve to the right, having a radius of 369.26 feet, 201.80 feet, more or less, to the center line of N.W. 25th Avenue in NORTH PORTLAND, extended Northerly; thence North 1°27' West along said center line of N.W. 25th Avenue extended, 132.30 feet, more or less, to the Southerly right of way line of the Northern Pacific Terminal company; thence along the Southerly line of said right of way, Westerly 113.29 feet on the arc of a curve to the left having a radius of 400.28 feet and chord bearing South 88°07' West; thence South 88°01' West 272.2 feet; thence South 76°42' West 55 feet; thence South 70°32' West 16 feet; and thence Westerly on the arc of a curve to the left having a radius of 221.5 feet and tangent to the last mentioned course 32.4 feet, more or less, to the Easterly line of N.W. 26th Avenue; thence South 1°27' East along said Easterly line of N.W. 26th Avenue, 193.82 feet-to the true point of beginning.

TRACT B:

A tract of land in Wm. Blackistone Donation Land Claim and in Section 29, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, described as follows:

That portion lying Southerly of Lot 6, Block 3, VERSTEEG'S ADDITION, Westerly of the center line of NW 25th Street, extended, and Northerly of the North line of the Northern Pacific Terminal Company railroad tract.

PARCEL XII:

Lots 1, 2, 3, 4, 5, 15, 16, 17 and 18, Block 11, NORTH PORTLAND, in the City of Portland, County of Multnomah and State of Oregon.

Appendix E

Environmental Data Resources, Inc.
Summary Radius Map™ Report

Appendix F

Subject Property: Hazardous Waste Generator Information
Oregon Department of Environmental Quality
Environmental Protection Agency

Oregon DEQ Hazardous Waste Site Report

[\[Close Report\]](#)



EPA ID:	ORD177076197	<i>Inactive (7/5/1995)</i>	
Common Name:	Business Mens Body Shop		
Employee count:	49	Activity Start:	4/1/1992
Location:	2404 NW NICOLAI PORTLAND OR 97210 MULTNOMAH County		
Latitude:	45.5405 45° 32' 26.0188"	Longitude:	-122.6995 -122° 41' 58.4314"
SIC Codes:	7532 - TOP, BODY, UPHOLSTERY REPAIR		

Facility is a Hazardous Waste Generator

Current Status: CEG as of 1/19/1993

Hazardous Waste Generation Reporting History

Report Year	Generator Status	Number of Waste Streams	Tons Generated	Sent Date	Received Date
1992	CEG	0		12/29/1992	01/19/1993
1991	CEG	0		11/01/1991	04/01/1992

ECHO

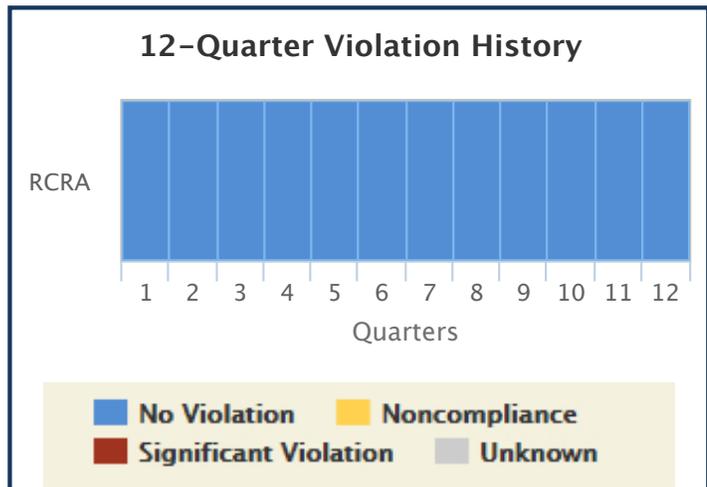


Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

BUSINESS MENS BODY SHOP
2404 NW NICOLAI, PORTLAND, OR 97210 ⓘ
 FRS (Facility Registry Service) ID: 110004789453
 EPA Region: 10
 Latitude: 45.540659
 Longitude: -122.701288
 Locational Data Source: FRS
 Industry: Repair and Maintenance
 Indian Country: N



Enforcement and Compliance Summary ⓘ

Statute	Insp (5 Years)	Date of Last Inspection	Compliance Status	Qtrs in NC (Non-Compliance) (of 12)	Qtrs in Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
RCRA	--	--	No Violation	0	0	--	--	--	--	--

Regulatory Information

Other Regulatory Reports

Clean Air Act (CAA): No Information	Air Emissions Inventory (EIS): No Information
Clean Water Act (CWA): No Information	Greenhouse Gas Emissions (eGGRT): No Information
Resource Conservation and Recovery Act (RCRA): Inactive () Other (ORD177076197)	Toxic Releases (TRI): No Information
Safe Drinking Water Act (SDWA): No Information	

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110004789453					N	45.540659	-122.701288
RCR	RCRA	ORD177076197	Other	Inactive ()			N	45.540605	-122.700956

Facility Address

System	Statute	Identifier	Facility Name	Facility Address
FRS		110004789453	BUSINESS MENS BODY SHOP	2404 NW NICOLAI, PORTLAND, OR 97210
RCR	RCRA	ORD177076197	BUSINESS MENS BODY SHOP	2404 NW NICOLAI, PORTLAND, OR 97210

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Desc
No data records returned			

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCR	ORD177076197	811121	Automotive Body, Paint, And Interior Repair And Maintenance

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)
No data records returned			

Enforcement and Compliance

Compliance Monitoring History (5 years)

Statute	Source ID	System	Inspection Type	Lead Agency	Date	Finding
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No data records returned

Entries in italics are not considered inspections in official counts.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Non-compliance)/HPV (High Priority Violation)	Description	Current As Of	Qtrs in NC (Non-Compliance) (of 12)
RCRA	ORD177076197	No		05/06/2017	0

Three Year Compliance Status by Quarter

Statute	Program/Pollutant/Violation Type	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12
RCRA (Source ID: ORD177076197)		07/01-09/30/14	10/01-12/31/14	01/01-03/31/15	04/01-06/30/15	07/01-09/30/15	10/01-12/31/15	01/01-03/31/16	04/01-06/30/16	07/01-09/30/16	10/01-12/31/16	01/01-03/31/17	04/01-06/30/17
RCRA	Facility-Level Status												

Informal Enforcement Actions (5 Years)

Statute	System	Source ID	Type of Action	Lead Agency	Date
No data records returned					

Formal Enforcement Actions (5 Years)

Statute	Source ID	Type of Action	Lead Agency	Date	Penalty	Penalty Description
No data records returned						

ICIS (Integrated Compliance Information System) Case History (5 years)

Primary Law/Section	Case No.	Case Type	Lead Agency	Case Name	Issued/Filed Date	Settlement Date	Federal Penalty	State/Local Penalty	SEP (Supplemental Environmental Project) Cost	Comp Action Cost
No data records returned										

Environmental Conditions

Water Quality

Permit ID	Combined Sewer System?	Number of CSO (Combined Sewer Overflow) Outfalls	12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Waterbody Name (ICIS (Integrated Compliance Information System))	Impaired Waters	Impaired Class	Causes of Impairment(s) by Group(s)	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?
No data records returned									

Waterbody Designated Uses

Reach Code	Waterbody Name	Exceptional Use	Recreational Use	Aquatic Life Use	Shellfish Use	Beach Closure Within Last Year	Beach Closure Within Last Two Years
No data records returned							

Air Quality

Non-Attainment Area?	Pollutant(s)
No	Ozone
No	Lead
Yes	Particulate Matter
No	Sulfur Dioxide

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-site Releases	Total Off-site Releases
No data records returned								

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name
No data records returned

Demographic Profile

Demographic Profile of Surrounding Area (3 Miles)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 US Census and American Community Survey data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table (LRT) when available.

Radius of Area:	3	Land Area:	93%	Households in Area:	62,044
Center Latitude:	45.540659	Water Area:	7%	Housing Units in Area:	68,020

Center Longitude:	-122.701288	Population Density:	4,694/sq.mi.	Households on Public Assistance:	1,506
Total Persons:	123,671	Percent Minority:	24%	Persons Below Poverty Level:	40,854

Race Breakdown	Persons (%)	Age Breakdown	Persons (%)
White:	97,196 (79%)	Child 5 years and younger:	5,116 (4%)
African-American:	10,459 (8%)	Minors 17 years and younger:	15,074 (12%)
Hispanic-Origin:	7,964 (6%)	Adults 18 years and older:	108,597 (88%)
Asian/Pacific Islander:	6,195 (5%)	Seniors 65 years and older:	12,327 (10%)
American Indian:	1,172 (1%)		
Other/Multiracial:	8,649 (7%)		

Education Level (Persons 25 & older)	Persons (%)	Income Breakdown	Households (%)
Less than 9th Grade:	2,334 (2.63%)	Less than \$15,000:	12,370 (20.65%)
9th through 12th Grade:	3,971 (4.48%)	\$15,000 - \$25,000:	6,758 (11.28%)
High School Diploma:	12,896 (14.54%)	\$25,000 - \$50,000:	13,369 (22.32%)
Some College/2-yr:	23,111 (26.05%)	\$50,000 - \$75,000:	9,810 (16.38%)
B.S./B.A. or More:	46,389 (52.3%)	Greater than \$75,000:	17,598 (29.38%)



**Envirofacts
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BUSINESS MENS BODY SHOP

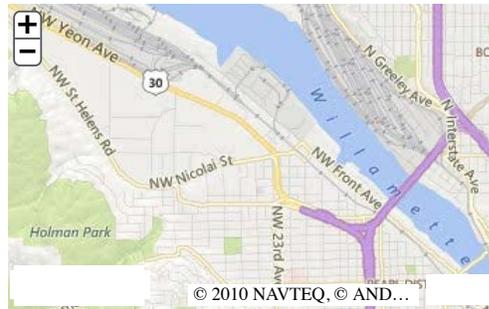
Handler ID: ORD177076197
2404 NW NICOLAI
PORTLAND, OR 97210

County Name: MULTNOMAH

Latitude: 45.540659
Longitude: -122.701288

Hazardous Waste Generator:

Owner Name: AMEDEE TREMBLAY



*You can navigate within the map with your mouse.

No BIENNIAL REPORT data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PHONE	TYPE OF CONTACT
						Public
NO DATA ENTERED	NO DATA ENTERED					Permit
AMEDEE TREMBLAY	2404 NW NICOLAI ST	PORTLAND	OR	97210	503-223-7157	Permit

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE
Not in a universe

No PROCESS INFORMATION is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

NAICS CODE	NAICS DESCRIPTION
811121	AUTOMOTIVE BODY, PAINT, AND INTERIOR REPAIR AND MAINTENANCE

No Waste Codes are available for the facility listed above.

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Total Number of Facilities Retrieved: 1

Last updated on 5/9/2017

Appendix G

ESCO Site: Regulatory Records
Oregon Department of Environmental Quality
Environmental Protection Agency

M E M O R A N D U M

TO: Project File DATE: February 14, 2018
FROM: Eric Tuppan PROJECT: ESC-003-001/041
RE: Phase II Environmental Site Assessment: Class-N-Kustom Property at 2404
NW Nicolai Street

This memorandum documents results of field activities at the referenced property owned by ESCO Corporation. These tasks follow a Phase I Environmental Site Assessments for the property performed by Hahn and Associates, Inc. (HAI) and reported on June 8, 2017.

The objectives of the investigative tasks were to evaluate whether historical activities or uses at the property adversely affected environmental conditions. To that end, the following tasks were completed:

- Completed a surface geophysical survey to assess the potential presence of underground storage tanks (USTs) associated with former industrial/commercial operations, or historical houses or structures that may have pre-dated more recent uses of the property.
- Drilled six soil borings on the property as shown on Figure 1, three to a depth of 25 ft and three to a depth of 5 ft, to assess the soil quality of the property.
- Collected soil samples from the borings and completed a comprehensive suite of analysis for organic chemicals and trace metals.

Results of the field and laboratory tasks are summarized below. In addition, the soil quality data are compared with the Oregon Department of Environmental Quality's (DEQ) risk-based concentrations (RBCs) for the anticipated future land use for this property.

SCOPE OF WORK

Geophysics

A geophysical survey was performed by Ralph Soule of GeoPotential, with oversight by Ben Uhl of Hahn and Associates, Inc., on October 8 2017 (see Attachment C). The survey followed three steps:

- The first involved mapping the entire property with a magnetic survey to detect whether buried ferrous (iron-bearing) objects were present.

- If a magnetic anomaly was identified, a ground penetrating radar (GPR) survey was conducted to map subsurface features such as USTs, utilities, or backfilled pits.
- Additional details about subsurface anomalies identified by the magnetic survey and GPR were further delineated with hand-held pipe and cable locators that map the locations, depths, sizes and shapes of the objects.

A map from the geophysical report is shown in Figure 2. No magnetic anomalies indicating a UST were detected on the property.

Push Probe Drilling and Sampling

Six soil borings were drilled as follows:

- Three borings to a depth of 25 feet below ground surface and three borings to a depth of 5 feet below ground surface.
- Soil samples were collected at: 1 ft, 5 ft, 10 ft, 15 ft, 20 ft and 25 ft. The top (shallow) 3 samples were analyzed unless visual or olfactory evidence of contamination was apparent during sampling, or analytical contamination was suspected to extend deeper based on initial analysis of the top 3 samples.

Locations of the deeper borings targeted areas where historical activities were reported in the Phase I ESA. As follows, these included: former chemical storage shed (soil boring EB-24), potential historical sink hole (EB-23), and near the air compressor and oil tank (EB-25). Shallow borings targeted lower use areas.

Drilling and Logging Procedures. Push probe borings were drilled by Cascade Drilling, L.P., using a track-mounted Geoprobe rig. A geologist registered in the State of Oregon was present during field activities to observe and document drilling and sampling procedures, perform field screening of soil materials, select and prepare samples for laboratory analysis, and prepare lithologic logs for each boring.

After reaching final depths, the soil borings were backfilled with 3/8-inch bentonite chips to within one foot of the ground surface. Since the site was unpaved, the upper several inch six inches of each boring was filled with gravel to match the surrounding surface.

Soil Sampling and Screening Procedures. Continuous soil cores were collected by advancing a 5-foot long, 1.5-inch inside diameter (ID) Macro-Core sampler fitted with a clear PVC sleeve. The full length of each soil core was examined for soil type and the potential presence of contamination. The properties of each soil core were noted in the field by the geologist and recorded on the field logs (copies of final logs can be found in Attachment A).

Samples from each core were retained for chemical analysis and placed in glass jars capped with Teflon-lined lids. Standard protocols, including chain-of-custody documentation, were followed for collecting soil samples that were to be tested at the analytical laboratory.

The soil samples were field-screened for the presence of potential contamination by visual, olfactory, sheen test, and headspace vapor methods. Screening for the presence of organic vapors was also completed using a photoionization detector (PID) equipped with a 10.6-ev lamp. The results of the headspace screening were recorded on the boring log in parts per million (ppm).

Analytical Testing

Soil samples were collected every five feet in the soil borings beginning with the surface interval through the total depth. For each boring, soils were tested from the upper three depth intervals, with the deeper samples placed on hold at the laboratory. Tested soil intervals generally corresponded to the following:

- 0.5 to 1.0 ft.
- 4 to 5 ft.
- 9 to 10 ft.

Testing was conducted at Apex Labs in Tigard, Oregon. The suite of analytes included total petroleum hydrocarbons (TPH) as diesel and gasoline, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and a suite of 14 metals. The laboratory report can be found in Attachment B.

FINDINGS

Lithology

The lithology consisted of up to a 2.3-foot-thick layer of gravelly sand or silt, below which were native fine-grained sediments of interbedded silt and fine sand. From extensive site characterization work in this area, the fine-grained unit is laterally continuous at adjacent properties and common for this part of Portland. Regionally, this unit is part of the fine-grained Pleistocene Flood Deposits comprised of silt and clay overbank sediments. The unit was not saturated at either this or nearby properties. Detailed descriptions of the soils can be found on the boring logs in Attachment A.

Analytical Results

The following observations can be made about the organic compounds:

- Concentrations of TPH as oil and a trace of diesel were detected in the shallow fill material, but not in the underlying native silt.

- Concentrations for PCBs above the Method Reporting Limit (MRL) were detected in surface fill material in five of borings. These were limited to Aroclors 1242 and 1260. Aroclors 1242 and 1254 were detected at trace concentrations in EB-27 at a depth of 4 to 5 feet.
- Multiple PAHs were detected in the surface fill interval, but none were detected in the underlying native silt.
- No VOCs were detected in either the surface fill or underlying native silt.
- Most of the metals detected were comparable to background concentrations for the Portland area as established by the Oregon DEQ, with several above background.

Comparison with Risk-Based Concentrations

Relevant soil quality criteria include Oregon's RBCs and EPA's Regional Screening Levels (RSLs) are shown at the bottom of the attached tables. Shallow surface soils exceeded industrial exposure RSLs for PCBs at four of the locations, and many of the PAHs in surface soils, including Benzo(a)pyrene equivalents, exceeded Oregon DEQ RBCs for urban residential or occupational receptors. With regard to trace metals that were detected above background concentrations (cadmium, copper, mercury, silver, and zinc), each was significantly below its respective RBC.

Attachments: Table 1 – Total Petroleum Hydrocarbons
Table 2 – Polychlorinated Biphenyls
Table 3 – Polycyclic Aromatic Hydrocarbons
Table 4 – Benzo(a)Pyrene Equivalents
Table 5 – Trace Metals
Table 6 – Volatile Organic Compounds
Figure 1 – Boring Locations for Class-N-Kustom
Figure 2 – Magnetic Map
Attachment A – Boring Logs
Attachment B – Laboratory Reports
Attachment C – Geophysics Report

**Table 1
Total Petroleum Hydrocarbons
Class-N-Kustom, Area 1 - Phase II Testing**

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	Diesel	Oil	Gasoline
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	mg/Kg	25.0 U	272 F03,Q42	6.82 U
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	mg/Kg	25.0 U	50.0 U	6.08 U
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	mg/Kg	20.3 Ja	31.7 Ja	5.84 U
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	mg/Kg	25.0 U	50.0 U	5.92 U
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	mg/Kg	25.0 U	50.0 U	7.45 U
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	mg/Kg	25.0 U	91.4	7.27 U
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	mg/Kg	25.0 U	50.0 U	7.23 U
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	mg/Kg	25.0 U	50.0 U	5.97 U
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	mg/Kg	25.0 U	161	4.93 U
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	mg/Kg	25.0 U	50.0 U	6.22 U
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	mg/Kg	25.0 U	50.0 U	7.89 U
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	mg/Kg	25.0 U	648	4.51 U
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	mg/Kg	26.3 U	52.5 U	6.83 U
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	mg/Kg	101 U	626	5.76 U
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	mg/Kg	25.0 U	50.0 U	6.59 U

U: The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

Ja: Estimated Result, detected below the lowest point of the calibration curve, but above the specified MDL.

F03: The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.

Q42: Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits.

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	mg/kg	1,100	1,100	1,200
--Soil ingestion, contact, inhalation (Urb Res)	mg/kg	2,200	2,200	2,500
--Soil ingestion, contact, inhalation (Occup)	mg/kg	14,000	14,000	20,000
--Soil ingestion, contact, inhalation (Const. W)	mg/kg	4,600	4,600	9,700
--Soil ingestion, contact, inhalation (Excv. W)	mg/kg	>Max	>Max	>Max
--Leaching to Groundwater (res/Urban Res)	mg/kg	9,500	9,500	31
--Vapor Intrusion to Buildings (Occup)	mg/kg	>Max	>Max	>Max
DEQ Background Concentrations (2013)	mg/kg	—	—	—
Clean Fill	mg/kg	—	—	—

**Table 2
Polychlorinated Biphenyls
Class-N-Kustom, Area 1 - Phase II Testing**

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs as Aroclors
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	µg/Kg	11.5 U	11.5 U	11.5 U	11.5 U	11.5 U	11.5 U	19.5 U,R02	
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	µg/Kg	11.5 U	11.5 U	11.5 U	11.5 U	11.5 U	11.5 U	11.5 U	
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	µg/Kg	108 U	108 U	108 U	3080	108 U	108 U	99.6 Ja	3179.6
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	µg/Kg	10.8 U	10.8 U	10.8 U	10.8 U	10.8 U	10.8 U	10.8 U	
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	µg/Kg	11.9 U	11.9 U	11.9 U	11.9 U	11.9 U	11.9 U	11.9 U	
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	µg/Kg	11.7 U	11.7 U	11.7 U	425	11.7 U	11.7 U	9.63 Ja	434.6
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	µg/Kg	11.8 U	11.8 U	11.8 U	11.8 U	11.8 U	11.8 U	11.8 U	
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	µg/Kg	10.5 U	10.5 U	10.5 U	10.5 U	10.5 U	10.5 U	10.5 U	
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	µg/Kg	212 U	212 U	212 U	4880	212 U	212 U	190 Ja	5070
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	µg/Kg	11.0 U	11.0 U	11.0 U	15.6	11.0 U	11.0 U	11.0 U	15.6
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	µg/Kg	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	12.0 U	
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	µg/Kg	427 U	427 U	427 U	9690 P10	427 U	427 U	1370 P10	11060
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	µg/Kg	11.8 U	11.8 U	11.8 U	11.8 U	11.8 U	11.8 U	11.8 U	
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	µg/Kg	106 U	106 U	106 U	1820	106 U	106 U	126 P10	1946
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	µg/Kg	11.2 U	11.2 U	11.2 U	8.50 Ja	11.2 U	8.59 Ja	11.2 U	17.09

U: The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
 Ja: Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
 R02: reporting limits raised to account for interference from coeluting organic compounds present in the sample.
 P10: Result estimated due to the presence of multiple PCB Aroclors and/or matrix interference.

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	µg/Kg	—	—	—	—	—	—	—	—	—	—	—	233
--Soil ingestion, contact, inhalation (Urb Res)	µg/Kg	—	—	—	—	—	—	—	—	—	—	—	330
--Soil ingestion, contact, inhalation (Occup)	µg/Kg	—	—	—	—	—	—	—	—	—	—	—	590
--Soil ingestion, contact, inhalation (Const. W)	µg/Kg	—	—	—	—	—	—	—	—	—	—	—	4,900
--Soil ingestion, contact, inhalation (Excv. W)	µg/Kg	—	—	—	—	—	—	—	—	—	—	—	140,000
--Leaching to Groundwater (res/Urban Res)	µg/Kg	—	—	—	—	—	—	—	—	—	—	—	240/1,100

DEQ Background Concentrations (2013)

Clean Fill	µg/Kg	—	—	—	—	—	—	—	—	—	—	—	200
RBC-Generic Remedy (Industrial)	µg/Kg	—	—	—	—	—	—	—	—	—	—	—	7,500
EPA Regional screening levels (Resident) EPA November 2017	µg/Kg	4100	200	170	230	230	240	240	240	240	240	240	—
EPA Regional screening levels (Industrial) EPA November 2017	µg/Kg	27000	830	720	950	950	970	990	990	990	990	990	—
BES Trigger Level for CSA Stormwater Infiltration	µg/Kg	—	—	—	—	—	—	—	—	—	—	—	500

Table 3
Polycyclic Aromatic Hydrocarbons
Class-N-Kustom, Area 1 - Phase II Testing

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	µg/Kg	12.9 U	92.4	236	1540 MJ	2990	2790 MJ	846 MJ	3010	2060 MJ	313
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	µg/Kg	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	µg/Kg	11.5 U	13.4	18.0	64.8 MJ	78.2	103 MJ	34.0 MJ	62.7	93.7 MJ	9.67 Ja
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	µg/Kg	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	µg/Kg	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	µg/Kg	13.3 U	13.3 U	13.3 U	13.3 U	13.3 U	7.59 Ja	13.3 U	9.66 Ja	13.3 U	13.3 U
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	µg/Kg	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	µg/Kg	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	µg/Kg	11.7 U	12.6	12.0	59.5 MJ	85.5	135 MJ	43.4 MJ	163	84.4 MJ	19.9
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	µg/Kg	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	µg/Kg	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	µg/Kg	106 U	106 U	92.8 Ja	447 MJ	471	666 MJ	260 MJ	535	510 MJ	83.7 Ja
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	µg/Kg	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	µg/Kg	57.0 U	57.0 U	57.0 U	339 MJ	528	897 MJ	240 MJ	822	509 MJ	94.0
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	µg/Kg	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U

U: not detected at the value shown.

J/Ja: Estimated Result.

MJ: Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	µg/Kg	4.7E+06	—	23000000	150	15	150	1,500	—	15,000	15
--Soil ingestion, contact, inhalation (Urb Res)	µg/Kg	9.4E+06	—	47000000	340	34	340	3,400	—	34,000	34
--Soil ingestion, contact, inhalation (Occup)	µg/Kg	7.0E+07	—	3.5E+08	2,900	290	2,900	29,000	—	290,000	290
--Soil ingestion, contact, inhalation (Const. W)	µg/Kg	2.1E+07	—	1.1E+08	24,000	2,400	24,000	240,000	—	2.4E+06	2,400
--Leaching to Groundwater	µg/Kg	>Csat	—	>Csat	640	600	6,200	>Csat	—	>Csat	2,000
DEQ Background Concentrations (2013)	µg/Kg	—	—	—	—	—	—	—	—	—	—
Clean Fill	µg/Kg	29,000	—	29,000	150	15	150	1,100	—	14,000	15

Table 3
Polycyclic Aromatic Hydrocarbons
Class-N-Kustom, Area 1 - Phase II Testing

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	µg/Kg	12.6 Ja	3610	18.7	2610	11.3 Ja	29.6	209	908	6610
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	µg/Kg	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U	12.4 U
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	µg/Kg	11.5 U	143	7.72 Ja	64.0	11.5 U	11.5 U	7.71 Ja	119	174
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	µg/Kg	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U	12.3 U
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	µg/Kg	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U	13.5 U
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	µg/Kg	13.3 U	13.3 U	13.3 U	8.08 Ja	13.3 U	13.3 U	13.3 U	13.3 U	13.3 U
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	µg/Kg	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U	13.1 U
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	µg/Kg	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	µg/Kg	11.7 U	86.8	11.7 U	131	11.7 U	7.13 Ja	13.4	49.0	90.9
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	µg/Kg	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	µg/Kg	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U	13.8 U
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	µg/Kg	106 U	690	106 U	463	106 U	106 U	106 U	432	732
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	µg/Kg	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U	13.0 U
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	µg/Kg	57.0 U	424	57.0 U	658	57.0 U	57.0 U	57.0 U	103	571
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	µg/Kg	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U	12.6 U

U: not detected at the value shown.

J/Ja: Estimated Result.

MJ: Due to matrix interference, this analyte cannot be accurately quantif

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	µg/Kg	—	2.4E+06	3.1E+06	150	5,300	—	1.8E+06
--Soil ingestion, contact, inhalation (Urb Res)	µg/Kg	—	4.8E+06	6.3E+06	340	25,000	—	3.6E+06
--Soil ingestion, contact, inhalation (Occup)	µg/Kg	—	3.0E+07	4.7E+07	2,900	23,000	—	2.3E+07
--Soil ingestion, contact, inhalation (Const. W)	µg/Kg	—	1.0E+07	1.4E+07	24,000	580,000	—	7.5E+06
--Leaching to Groundwater	µg/Kg	—	>Csat	>Csat	>Csat	77	—	>Csat
DEQ Background Concentrations (2013)	µg/Kg	—	—	—	—	—	—	—
Clean Fill	µg/Kg	2	29,000	29,000	150	87	—	1,700,000

Table 4
Benzo(a)Pyrene Equivalents
Class-N-Kustom, Area 1 - Phase II Testing

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Indeno(1,2,3-cd)pyrene	BaP Equivalent-MRL/2
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	µg/Kg	1540 MJ	2990	2790 MJ	846 MJ	3010	2060 MJ	313	2610	4,132
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	µg/Kg	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	15.0 U
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	µg/Kg	64.8 MJ	78.2	103 MJ	34 MJ	62.7	93.7 MJ	9.67 Ja	64	116
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	µg/Kg	6.15 U	6.15 U	6.15 U	6.15 U	6.15 U	6.15 U	6.15 U	6.15 U	14.9 U
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	µg/Kg	6.75 U	6.75 U	6.75 U	6.75 U	6.75 U	6.75 U	6.75 U	6.75 U	16.3 U
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	µg/Kg	6.65 U	6.65 U	7.59 Ja	6.65 U	9.66 Ja	6.65 U	6.65 U	8.08 Ja	16.4 U/J
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	µg/Kg	6.55 U	6.55 U	6.55 U	6.55 U	6.55 U	6.55 U	6.55 U	6.55 U	15.9 U
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	µg/Kg	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	5.7 U	13.8 U
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	µg/Kg	59.5 MJ	85.5	135 MJ	43.4 MJ	163	84.4 MJ	19.9	131	145
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	µg/Kg	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	14.8 U
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	µg/Kg	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	16.7 U
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	µg/Kg	447 MJ	471	666 MJ	260 MJ	535	510 MJ	83.7 Ja	463	749
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	µg/Kg	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U	6.5 U	15.7 U
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	µg/Kg	339 MJ	528	897 MJ	240 MJ	822	509 MJ	94	658	849
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	µg/Kg	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	6.3 U	15.2 U

U: The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
 Ja: Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
 MJ: Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	µg/Kg	150	15	150	1,500	—	15,000	15	150	15
--Soil ingestion, contact, inhalation (Urb Res)	µg/Kg	340	34	340	3,400	—	34,000	34	340	34
--Soil ingestion, contact, inhalation (Occup)	µg/Kg	2,900	290	2,900	29,000	—	290,000	290	2,900	290
--Soil ingestion, contact, inhalation (Const. W)	µg/Kg	24,000	2,400	24,000	240,000	—	2.4E+06	2,400	24,000	2,400
--Soil ingestion, contact, inhalation (Exc. W)	µg/Kg									67000 >C _s
--Leaching to Groundwater	µg/Kg	640	600	6,200	>C _{sat}	—	>C _{sat}	2,000	>C _{sat}	
DEQ Background Concentrations (2013)	µg/Kg	—	—	—	—	—	—	—	—	—
Clean Fill	µg/Kg	150	15	150	1,100	—	14,000	15	150	

**Table 5
Trace Metals
Class-N-Kustom, Area 1 - Phase II Testing**

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	Arsenic	Barium	Boron	Cadmium	Chromium	Copper	Lead
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	mg/Kg	9.99	291	13	1.58	58.6	58.0	372
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	mg/Kg	15.2	156	3.6 J	0.354	32.0	22.6	17.0
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	mg/Kg	7.05	226	4.6 J	0.699	20.6	59.8	207
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	mg/Kg	12.1	158	4.0 J	0.265	22.0	16.6	15.1
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	mg/Kg	8.21	156	2.4 J	0.439	17.0	23.3	12.1
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	mg/Kg	7.76	166	2.7 J	0.642	21.1	48.4	44.1
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	mg/Kg	7.84	149	2.3 J	0.376	23.5	25.0	13.7
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	mg/Kg	3.08	122	5.8 U	0.399	10.7	16.3	5.76
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	mg/Kg	6.43	177	5.4 J	2.68	18.4	488	339
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	mg/Kg	9.93	149	2.9 J	0.373	18.0	23.3	13.9
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	mg/Kg	7.73	123	2.0 J	0.416	13.1	22.0	10.4
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	mg/Kg	8.61	239	12	22.7	38.6	1160	4320
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	mg/Kg	13.6	184	2.6 J	0.336	22.8	25.1	13.8
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	mg/Kg	10.0	210	4.1 J	2.85	24.7	256	319
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	mg/Kg	11.3	227	2.9 J	0.456	21.9	33.3	31.0

U: not detected at the limit shown.
J: estimated conc. detected <MRL and >MDL.

RBDM RBC												
--Soil ingestion, contact, inhalation (Res)	mg/Kg	0.43	15,000	—	78	120,000	3,100	400				
--Soil ingestion, contact, inhalation (Urb Res)	mg/Kg	1.0	31,000	—	160	230,000	6,200	400				
--Soil ingestion, contact, inhalation (Occup)	mg/Kg	1.9	220,000	—	1,100	>Max	47,000	800				
--Soil ingestion, contact, inhalation (Const. W)	mg/Kg	15	69,000	—	350	530,000	14,000	800				
--Soil ingestion, contact, inhalation (Excav. W)	mg/Kg	420	>max	—	9,700	>Max	390,000	800				
--Leaching to Groundwater	mg/Kg	—	—	—	—	—	—	30				
DEQ Background Concentrations (2013)	mg/Kg	8.791	791.6	—	0.627	75.79	33.75	79.06				
Clean Fill	mg/Kg	8.8	790	—	0.63	76	34	28				
NORM Standard (OAR-333-117)	mg/Kg	—	—	—	—	—	—	—				
BES Trigger Level for CSA Stormwater Infiltration	mg/Kg	100	—	—	20	100	40	100				

**Table 5
Trace Metals
Class-N-Kustom, Area 1 - Phase II Testing**

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	Mercury	Molybdenum	Nickel	Selenium	Silver	Uranium	Zinc
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	mg/Kg	0.503	6.88	34.1	1.33 U	0.331	0.93	641
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	mg/Kg	0.109 U	1.36 U	18.6	1.36 U	0.272 U	1.3	88.8
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	mg/Kg	0.185	1.18 U	14.2	1.18 U	0.260	1.0	197
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	mg/Kg	0.106 U	1.33 U	14.4	1.33 U	0.265 U	1.0	80.0
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	mg/Kg	0.113 U	1.42 U	18.5	1.42 U	0.283 U	1.1	69.6
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	mg/Kg	0.114 U	1.43 U	18.5	1.43 U	0.285 U	1.1	96.3
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	mg/Kg	0.120 U	0.843 J	18.6	1.50 U	0.301 U	0.86	72.0
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	mg/Kg	0.0998 U	1.25 U	15.7	1.25 U	0.249 U	0.71	53.7
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	mg/Kg	1.11	1.87	18.7	1.27 U	0.279	1.3	407
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	mg/Kg	0.103 U	1.29 U	18.2	1.29 U	0.258 U	1.2	66.9
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	mg/Kg	0.123 U	1.54 U	15.2	1.54 U	0.308 U	0.98	66.9
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	mg/Kg	1.65	6.57	49.9	1.15 U	3.35	0.97	797
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	mg/Kg	0.117 U	1.46 U	20.2	1.46 U	0.292 U	1.2	78.0
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	mg/Kg	0.249	1.16 Ja	38.3	1.34 U	0.428	1.1	338
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	mg/Kg	0.111 U	1.38 U	22.6	1.38 U	0.276 U	1.3	85.3

U: not detected at the limit shown.

J: estimated conc. detected <MRL and >MDL.

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	mg/Kg	23	—	1,500	—	390	—	—
--Soil ingestion, contact, inhalation (Urb Res)	mg/Kg	47	—	3,100	—	780	—	—
--Soil ingestion, contact, inhalation (Occup)	mg/Kg	350	—	22,000	—	5,800	—	—
--Soil ingestion, contact, inhalation (Const. W)	mg/Kg	110	—	7,000	—	1,800	—	—
--Soil ingestion, contact, inhalation (Excav. W)	mg/Kg	2,900	—	190,000	—	49,000	—	—
--Leaching to Groundwater	mg/Kg	—	—	—	—	—	—	—
DEQ Background Concentrations (2013)	mg/Kg	0.23	—	47.35	0.71	0.818	—	182.9
Clean Fill	mg/Kg	0.23	—	47	0.71	—	5	180
NORM Standard (OAR-333-117)	mg/Kg	—	—	—	—	—	500	—
BES Trigger Level for CSA Stormwater Infiltration	mg/Kg	4	20	100	20	100	—	370

Table 6
Volatile Organic Compounds
Class-N-Kustom, Area 1 - Phase II Testing

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	2-Butanone (MEK)	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	µg/Kg	1360 U	13.6 U	34.1 U	68.2 U	136 U	136 U	682 U	682 U	68.2 U	68.2 U	68.2 U	68.2 U	34.1 U	682 U	68.2 U	341 U
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	µg/Kg	1220 U	12.2 U	30.4 U	60.8 U	122 U	122 U	608 U	608 U	60.8 U	60.8 U	60.8 U	60.8 U	30.4 U	608 U	60.8 U	304 U
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	µg/Kg	1170 U	11.7 U	29.2 U	58.4 U	117 U	117 U	584 U	584 U	58.4 U	58.4 U	58.4 U	58.4 U	29.2 U	584 U	58.4 U	292 U
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	µg/Kg	1180 U	11.8 U	29.6 U	59.2 U	118 U	118 U	592 U	592 U	59.2 U	59.2 U	59.2 U	59.2 U	29.6 U	592 U	59.2 U	296 U
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	µg/Kg	1490 U	14.9 U	37.2 U	74.5 U	149 U	149 U	745 U	745 U	74.5 U	74.5 U	74.5 U	74.5 U	37.2 U	745 U	74.5 U	372 U
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	µg/Kg	1450 U	14.5 U	36.4 U	72.7 U	145 U	145 U	727 U	727 U	72.7 U	72.7 U	72.7 U	72.7 U	36.4 U	727 U	72.7 U	364 U
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	µg/Kg	1450 U	14.5 U	36.2 U	72.3 U	145 U	145 U	723 U	723 U	72.3 U	72.3 U	72.3 U	72.3 U	36.2 U	723 U	72.3 U	362 U
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	µg/Kg	1190 U	11.9 U	29.8 U	59.7 U	119 U	119 U	597 U	597 U	59.7 U	59.7 U	59.7 U	59.7 U	29.8 U	597 U	59.7 U	298 U
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	µg/Kg	986 U	9.9 U	24.6 U	49.3 U	99 U	99 U	493 U	493 U	49.3 U	49.3 U	49.3 U	49.3 U	24.6 U	493 U	49.3 U	246 U
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	µg/Kg	1240 U	12.4 U	31.1 U	62.2 U	124 U	124 U	622 U	622 U	62.2 U	62.2 U	62.2 U	62.2 U	31.1 U	622 U	62.2 U	311 U
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	µg/Kg	1580 U	15.8 U	39.4 U	78.9 U	158 U	158 U	789 U	789 U	78.9 U	78.9 U	78.9 U	78.9 U	39.4 U	789 U	78.9 U	394 U
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	µg/Kg	901 U	9.0 U	22.5 U	45.1 U	90 U	90 U	451 U	451 U	45.1 U	45.1 U	45.1 U	45.1 U	22.5 U	451 U	45.1 U	225 U
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	µg/Kg	1370 U	13.7 U	34.1 U	68.3 U	137 U	137 U	683 U	683 U	68.3 U	68.3 U	68.3 U	68.3 U	34.1 U	683 U	68.3 U	341 U
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	µg/Kg	1150 U	11.5 U	28.8 U	57.6 U	115 U	115 U	576 U	576 U	57.6 U	57.6 U	57.6 U	57.6 U	28.8 U	576 U	57.6 U	288 U
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	µg/Kg	1320 U	13.2 U	32.9 U	65.9 U	132 U	132 U	659 U	659 U	65.9 U	65.9 U	65.9 U	65.9 U	32.9 U	659 U	65.9 U	329 U

U: not detected at the value shown.

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	µg/Kg	8200	—	—
--Soil ingestion, contact, inhalation (Urb Res)	µg/Kg	24000	—	—
--Soil ingestion, contact, inhalation (Occup)	µg/Kg	37000	—	—
--Soil ingestion, contact, inhalation (Const. W)	µg/Kg	380000	—	—
--Soil ingestion, contact, inhalation (Excv. W)	µg/Kg	1E+07	—	—
--Leaching to Groundwater (res/Urban Res)	µg/Kg	23	—	—
--Vapor Intrusion to Buildings (occup)	µg/Kg	2100	—	—
DEQ Clean Fill	µg/Kg	9.3	—	—
Regional Screening Levels, Nov. 2017 (Resident)	µg/Kg	1200	3900	7800
Regional Screening Levels, Nov. 2017 (Industrial)	µg/Kg	5100	58000	1.2E+05

Table 6
Volatile Organic Compounds
Class-N-Kustom, Area 1 - Phase II Testing

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	Dibromochloromethane	1,2-Dibromoethane (EDB)	Dibromomethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane (EDC)	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	µg/Kg	68.2 U	68.2 U	341 U	136 U	68.2 U	68.2 U	34.1 U	34.1 U	34.1 U	136 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	µg/Kg	60.8 U	60.8 U	304 U	122 U	60.8 U	60.8 U	30.4 U	30.4 U	30.4 U	122 U	30.4 U	30.4 U	30.4 U	30.4 U	30.4 U	30.4 U
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	µg/Kg	58.4 U	58.4 U	292 U	117 U	58.4 U	58.4 U	29.2 U	29.2 U	29.2 U	117 U	29.2 U	29.2 U	29.2 U	29.2 U	29.2 U	29.2 U
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	µg/Kg	59.2 U	59.2 U	296 U	118 U	59.2 U	59.2 U	29.6 U	29.6 U	29.6 U	118 U	29.6 U	29.6 U	29.6 U	29.6 U	29.6 U	29.6 U
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	µg/Kg	74.5 U	74.5 U	372 U	149 U	74.5 U	74.5 U	37.2 U	37.2 U	37.2 U	149 U	37.2 U	37.2 U	37.2 U	37.2 U	37.2 U	37.2 U
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	µg/Kg	72.7 U	72.7 U	364 U	145 U	72.7 U	72.7 U	36.4 U	36.4 U	36.4 U	145 U	36.4 U	36.4 U	36.4 U	36.4 U	36.4 U	36.4 U
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	µg/Kg	72.3 U	72.3 U	362 U	145 U	72.3 U	72.3 U	36.2 U	36.2 U	36.2 U	145 U	36.2 U	36.2 U	36.2 U	36.2 U	36.2 U	36.2 U
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	µg/Kg	59.7 U	59.7 U	298 U	119 U	59.7 U	59.7 U	29.8 U	29.8 U	29.8 U	119 U	29.8 U	29.8 U	29.8 U	29.8 U	29.8 U	29.8 U
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	µg/Kg	49.3 U	49.3 U	246 U	99 U	49.3 U	49.3 U	24.6 U	24.6 U	24.6 U	99 U	24.6 U	24.6 U	24.6 U	24.6 U	24.6 U	24.6 U
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	µg/Kg	62.2 U	62.2 U	311 U	124 U	62.2 U	62.2 U	31.1 U	31.1 U	31.1 U	124 U	31.1 U	31.1 U	31.1 U	31.1 U	31.1 U	31.1 U
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	µg/Kg	78.9 U	78.9 U	394 U	158 U	78.9 U	78.9 U	39.4 U	39.4 U	39.4 U	158 U	39.4 U	39.4 U	39.4 U	39.4 U	39.4 U	39.4 U
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	µg/Kg	45.1 U	45.1 U	225 U	90 U	45.1 U	45.1 U	22.5 U	22.5 U	22.5 U	90 U	22.5 U	22.5 U	22.5 U	22.5 U	22.5 U	22.5 U
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	µg/Kg	68.3 U	68.3 U	341 U	137 U	68.3 U	68.3 U	34.1 U	34.1 U	34.1 U	137 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U	34.1 U
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	µg/Kg	57.6 U	57.6 U	288 U	115 U	57.6 U	57.6 U	28.8 U	28.8 U	28.8 U	115 U	28.8 U	28.8 U	28.8 U	28.8 U	28.8 U	28.8 U
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	µg/Kg	65.9 U	65.9 U	329 U	132 U	65.9 U	65.9 U	32.9 U	32.9 U	32.9 U	132 U	32.9 U	32.9 U	32.9 U	32.9 U	32.9 U	32.9 U

U: not detected at the value shown.

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	µg/Kg	5.8E+04	3600
--Soil ingestion, contact, inhalation (Urb Res)	µg/Kg	1.9E+05	1.2E+04
--Soil ingestion, contact, inhalation (Occup)	µg/Kg	2.6E+05	1.6E+04
--Soil ingestion, contact, inhalation (Const. W)	µg/Kg	3.2E+06	2.0E+05
--Soil ingestion, contact, inhalation (Excv. W)	µg/Kg	8.9E+07	5.6E+06
--Leaching to Groundwater (res/Urban Res)	µg/Kg	44/200	13
--Vapor Intrusion to Buildings (occup)	µg/Kg	5900	1000

DEQ Clean Fill

Regional Screening Levels, Nov. 2017 (Resident)	µg/Kg	37	1.4
Regional Screening Levels, Nov. 2017 (Industrial)	µg/Kg		

Table 6
Volatile Organic Compounds
Class-N-Kustom, Area 1 - Phase II Testing

Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	1,3-Dichloropropane	2,2-Dichloropropane	1,1-Dichloropropene	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	Ethylbenzene	Hexachlorobutadiene	2-Hexanone	Isopropylbenzene (cumene)	4-Isopropyltoluene	4-Methyl-2-pentanone (MIBK)	Methyl tert-butyl ether (MTBE)	Methylene chloride	Naphthalene	n-Propylbenzene	Styrene	1,1,1,2-Tetrachloroethane
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	µg/Kg	68.2 U	68.2 U	68.2 U	68.2 U	68.2 U	34.1 U	136 U	682 U	68.2 U	68.2 U	682 U	68.2 U	341 U	136 U	34.1 U	68.2 U	34.1 U
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	µg/Kg	60.8 U	60.8 U	60.8 U	60.8 U	60.8 U	30.4 U	122 U	608 U	60.8 U	60.8 U	608 U	60.8 U	304 U	122 U	30.4 U	60.8 U	30.4 U
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	µg/Kg	58.4 U	58.4 U	58.4 U	58.4 U	58.4 U	29.2 U	117 U	584 U	58.4 U	58.4 U	584 U	58.4 U	292 U	117 U	29.2 U	58.4 U	29.2 U
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	µg/Kg	59.2 U	59.2 U	59.2 U	59.2 U	59.2 U	29.6 U	118 U	592 U	59.2 U	59.2 U	592 U	59.2 U	296 U	118 U	29.6 U	59.2 U	29.6 U
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	µg/Kg	74.5 U	74.5 U	74.5 U	74.5 U	74.5 U	37.2 U	149 U	745 U	74.5 U	74.5 U	745 U	74.5 U	372 U	149 U	37.2 U	74.5 U	37.2 U
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	µg/Kg	72.7 U	72.7 U	72.7 U	72.7 U	72.7 U	36.4 U	145 U	727 U	72.7 U	72.7 U	727 U	72.7 U	364 U	145 U	36.4 U	72.7 U	36.4 U
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	µg/Kg	72.3 U	72.3 U	72.3 U	72.3 U	72.3 U	36.2 U	145 U	723 U	72.3 U	72.3 U	723 U	72.3 U	362 U	145 U	36.2 U	72.3 U	36.2 U
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	µg/Kg	59.7 U	59.7 U	59.7 U	59.7 U	59.7 U	29.8 U	119 U	597 U	59.7 U	59.7 U	597 U	59.7 U	298 U	119 U	29.8 U	59.7 U	29.8 U
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	µg/Kg	49.3 U	49.3 U	49.3 U	49.3 U	49.3 U	24.6 U	99 U	493 U	49.3 U	49.3 U	493 U	49.3 U	246 U	99 U	24.6 U	49.3 U	24.6 U
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	µg/Kg	62.2 U	62.2 U	62.2 U	62.2 U	62.2 U	31.1 U	124 U	622 U	62.2 U	62.2 U	622 U	62.2 U	311 U	124 U	31.1 U	62.2 U	31.1 U
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	µg/Kg	78.9 U	78.9 U	78.9 U	78.9 U	78.9 U	39.4 U	158 U	789 U	78.9 U	78.9 U	789 U	78.9 U	394 U	158 U	39.4 U	78.9 U	39.4 U
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	µg/Kg	45.1 U	45.1 U	45.1 U	45.1 U	45.1 U	22.5 U	90 U	451 U	45.1 U	45.1 U	451 U	45.1 U	225 U	90 U	22.5 U	45.1 U	22.5 U
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	µg/Kg	68.3 U	68.3 U	68.3 U	68.3 U	68.3 U	34.1 U	137 U	683 U	68.3 U	68.3 U	683 U	68.3 U	341 U	137 U	34.1 U	68.3 U	34.1 U
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	µg/Kg	57.6 U	57.6 U	57.6 U	57.6 U	57.6 U	28.8 U	115 U	576 U	57.6 U	57.6 U	576 U	57.6 U	288 U	115 U	28.8 U	57.6 U	28.8 U
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	µg/Kg	65.9 U	65.9 U	65.9 U	65.9 U	65.9 U	32.9 U	132 U	659 U	65.9 U	65.9 U	659 U	65.9 U	329 U	132 U	32.9 U	65.9 U	32.9 U

U: not detected at the value shown.

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	µg/Kg	3.4E+04	3.5E+06	—	5300	—
--Soil ingestion, contact, inhalation (Urb Res)	µg/Kg	1.1E+05	7.0E+06	—	25000	—
--Soil ingestion, contact, inhalation (Occup)	µg/Kg	1.5E+05	5.7E+07	—	23000	—
--Soil ingestion, contact, inhalation (Const. W)	µg/Kg	1.7E+06	2.7E+07	—	580000	—
--Soil ingestion, contact, inhalation (Excv. W)	µg/Kg	4.9E+07	7.5E+08	—	2E+07	—
--Leaching to Groundwater (res/Urban Res)	µg/Kg	220	1.4E+05	—	77	—
--Vapor Intrusion to Buildings (occup)	µg/Kg	17000	>Csat	—	83000	—
DEQ Clean Fill	µg/Kg	160	85200	—	87	—
Regional Screening Levels, Nov. 2017 (Resident)	µg/Kg					
Regional Screening Levels, Nov. 2017 (Industrial)	µg/Kg					

Table 6
Volatile Organic Compounds
Class-N-Kustom, Area 1 - Phase II Testing

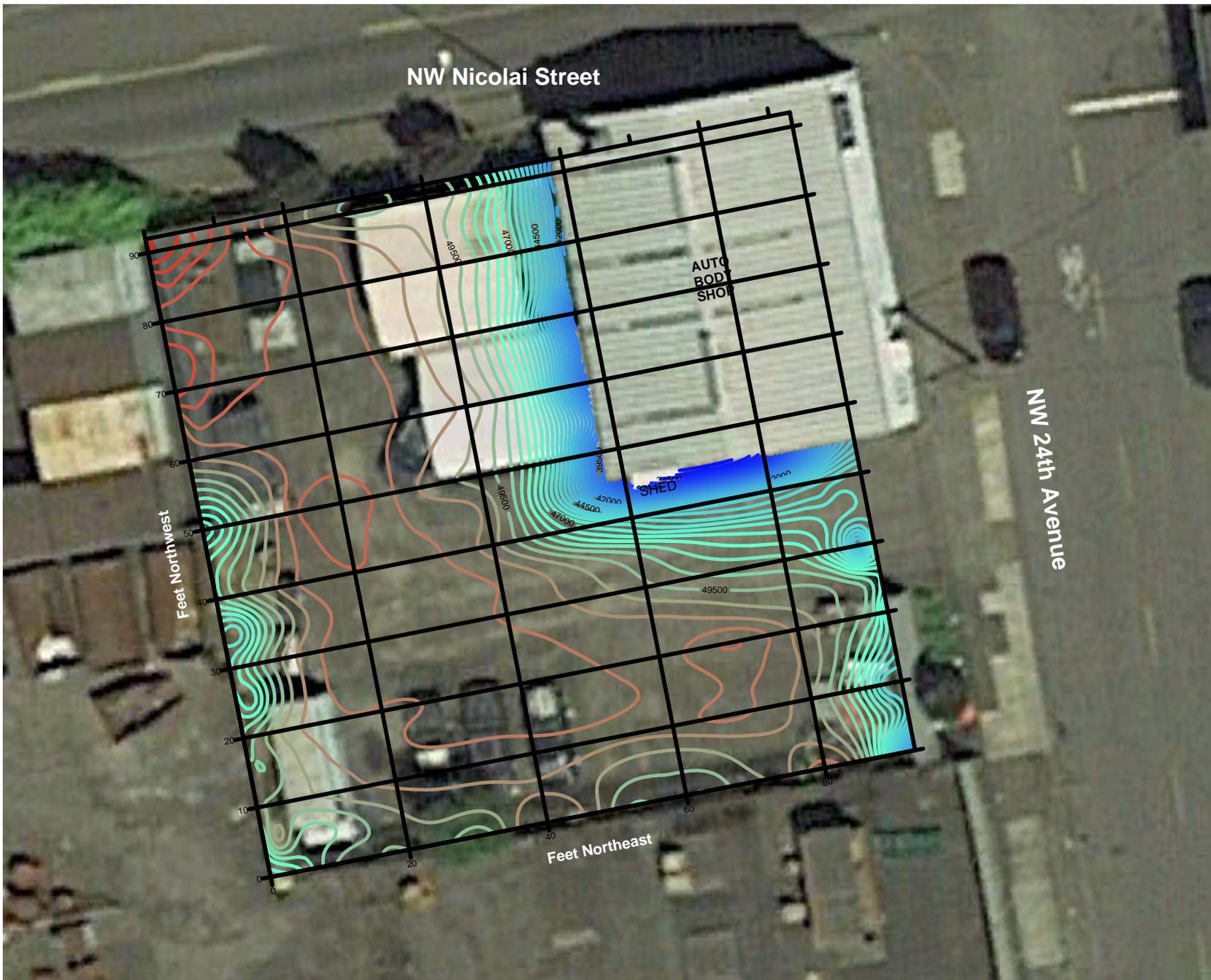
Lab Report	Date	Sample No	Boring/Well No.	Top Depth	Units	1,1,1,2-Tetrachloroethane	Tetrachloroethene (PCE)	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene (TCE)	Trichlorofluoromethane	1,1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl chloride	m,p-Xylene	o-Xylene
A7E0603	05/15/17	EB-22-051517-0.5-1.0	EB-22	0.5	µg/Kg	68.2 U	34.1 U	68.2 U	341 U	341 U	34.1 U	34.1 U	34.1 U	136 U	68.2 U	68.2 U	68.2 U	34.1 U	68.2 U	34.1 U
A7E0603	05/15/17	EB-22-051517-4.0-5.0	EB-22	4.0	µg/Kg	60.8 U	30.4 U	60.8 U	304 U	304 U	30.4 U	30.4 U	30.4 U	122 U	60.8 U	60.8 U	60.8 U	30.4 U	60.8 U	30.4 U
A7E0603	05/15/17	EB-23-051517-1.0-2.0	EB-23	1.0	µg/Kg	58.4 U	29.2 U	58.4 U	292 U	292 U	29.2 U	29.2 U	29.2 U	117 U	58.4 U	58.4 U	58.4 U	29.2 U	58.4 U	29.2 U
A7E0603	05/15/17	EB-23-051517-4.0-5.0	EB-23	4.0	µg/Kg	59.2 U	29.6 U	59.2 U	296 U	296 U	29.6 U	29.6 U	29.6 U	118 U	59.2 U	59.2 U	59.2 U	29.6 U	59.2 U	29.6 U
A7E0603	05/15/17	EB-23-051517-8.4-9.4	EB-23	8.4	µg/Kg	74.5 U	37.2 U	74.5 U	372 U	372 U	37.2 U	37.2 U	37.2 U	149 U	74.5 U	74.5 U	74.5 U	37.2 U	74.5 U	37.2 U
A7E0603	05/15/17	EB-24-051517-2.5-3.5	EB-24	2.5	µg/Kg	72.7 U	36.4 U	72.7 U	364 U	364 U	36.4 U	36.4 U	36.4 U	145 U	72.7 U	72.7 U	72.7 U	36.4 U	72.7 U	36.4 U
A7E0603	05/15/17	EB-24-051517-7.2-8.2	EB-24	7.2	µg/Kg	72.3 U	36.2 U	72.3 U	362 U	362 U	36.2 U	36.2 U	36.2 U	145 U	72.3 U	72.3 U	72.3 U	36.2 U	72.3 U	36.2 U
A7E0603	05/15/17	EB-24-051517-12.0-13.0	EB-24	12.0	µg/Kg	59.7 U	29.8 U	59.7 U	298 U	298 U	29.8 U	29.8 U	29.8 U	119 U	59.7 U	59.7 U	59.7 U	29.8 U	59.7 U	29.8 U
A7E0603	05/15/17	EB-25-051517-0.5-1.5	EB-25	0.5	µg/Kg	49.3 U	24.6 U	49.3 U	246 U	246 U	24.6 U	24.6 U	24.6 U	99 U	49.3 U	49.3 U	49.3 U	24.6 U	49.3 U	24.6 U
A7E0603	05/15/17	EB-25-051517-4.0-5.0	EB-25	4.0	µg/Kg	62.2 U	31.1 U	62.2 U	311 U	311 U	31.1 U	31.1 U	31.1 U	124 U	62.2 U	62.2 U	62.2 U	31.1 U	62.2 U	31.1 U
A7E0603	05/15/17	EB-25-051517-7.5-8.5	EB-25	7.5	µg/Kg	78.9 U	39.4 U	78.9 U	394 U	394 U	39.4 U	39.4 U	39.4 U	158 U	78.9 U	78.9 U	78.9 U	39.4 U	78.9 U	39.4 U
A7E0603	05/15/17	EB-26-051517-0.5-1.5	EB-26	0.5	µg/Kg	45.1 U	22.5 U	45.1 U	225 U	225 U	22.5 U	22.5 U	22.5 U	90 U	45.1 U	45.1 U	45.1 U	22.5 U	45.1 U	22.5 U
A7E0603	05/15/17	EB-26-051517-3.5-4.5	EB-26	3.5	µg/Kg	68.3 U	34.1 U	68.3 U	341 U	341 U	34.1 U	34.1 U	34.1 U	137 U	68.3 U	68.3 U	68.3 U	34.1 U	68.3 U	34.1 U
A7E0603	05/15/17	EB-27-051517-0.0-1.0	EB-27	0.0	µg/Kg	57.6 U	28.8 U	57.6 U	288 U	288 U	28.8 U	28.8 U	28.8 U	115 U	57.6 U	57.6 U	57.6 U	28.8 U	57.6 U	28.8 U
A7E0603	05/15/17	EB-27-051517-4.0-5.0	EB-27	4.0	µg/Kg	65.9 U	32.9 U	65.9 U	329 U	329 U	32.9 U	32.9 U	32.9 U	132 U	65.9 U	65.9 U	65.9 U	32.9 U	65.9 U	32.9 U

U: not detected at the value shown.

RBDM RBC

--Soil ingestion, contact, inhalation (Res)	µg/Kg	2.2E+05	5.8E+06	6700	110000	780000	1.4E+06	1.4E+06
--Soil ingestion, contact, inhalation (Urb Res)	µg/Kg	5.4E+05	1.2E+07	1.7E+04	220000	1.6E+06	2.9E+06	2.9E+06
--Soil ingestion, contact, inhalation (Occup)	µg/Kg	1.0E+06	8.8E+07	5.1E+04	2.0E+06	1.2E+07	2.5E+07	2.5E+07
--Soil ingestion, contact, inhalation (Const. W)	µg/Kg	1.8E+06	2.8E+07	4.2E+05	2.0E+06	3.5E+06	2.0E+07	2.0E+07
--Soil ingestion, contact, inhalation (Exc. W)	µg/Kg	5.0E+07	7.7E+08	1.3E+07	5.4E+07	9.8E+07	5.6E+08	5.6E+08
--Leaching to Groundwater (res/Urban Res)	µg/Kg	460	310	53	2800	50000	2.4E+04	2.4E+04
--Vapor Intrusion to Buildings (occup)	µg/Kg	36000	>Csat	2300	210000	>Max	>Csat	>Csat
DEQ Clean Fill	µg/Kg	2400	200000	20	16000	92000	25000	1000
Regional Screening Levels, Nov. 2017 (Resident)	µg/Kg							
Regional Screening Levels, Nov. 2017 (Industrial)	µg/Kg							





ENVIRONMENTAL & EXPLORATION GEOPHYSICS

22323 East Wild Fern Lane, Brightwood, Oregon 97011 • PH (503) 622-0154 • FAX (503) 622-0526
 WEB <http://www.geopotential.biz/> E-MAIL GeoPotential@geopotential.biz

LOCATION:

ESCO Corporation
 Class-N-Custom_ESCO-041
 Portland, OR

Figure 2. Magnetic Map
 (Contour Interval = 500 nT)

DATE: October 9, 2017

SUBSURFACE MAPPING SURVEY

PROJECT No. 9790

CLIENT:

TUPPAN CONSULTANTS, LLC

ATTACHMENT A
BORING LOGS

HAI

Hahn and Associates, Inc. Environmental Consultants

Site ID: **EB-22**Date(s): **5/15/17**Location: **2141 NW 25th Avenue**Logged By: **Ben Uhl**Checked By: **Eric Tuppan**Driller: **Cascade Drilling L.P.**Drilling Method: **GeoProbe 7720DT - Track Mounted**GS Elevation: **57.99**TOC: **Not Applicable**Sampling Method: **5-foot Macrocore**Northing: **690843.22**Easting: **7638072.70**Abandonment Details:Borehole Dia.: **2.25 inches**Total Depth: **5.0 feet bgs**Gravel 0 - 0.5 foot bgs
3/8 inch Bentonite Chip 1 - 5 feet bgsProject Number: **9141**Project Name: **ESCO Corporation**Remarks: **Vertical datum in NAVD88 and horizontal datum in Oregon State Plane.**

Elevation (ft)	Depth (ft)	Sample Interval	Sample Number	Recovery (ft) (core interval)	Blow Counts	PID (ppm)	Lithology	USCS Code	Lithologic Description	Groundwater	Boring Abandonment Details
55	1	☒	EB-22-051517-0.5-1.0	5 (0-5)		0.0		SM	(0.0 - 1.5 Feet): gravelly SAND with some silt, brown and dark brown, moist, loose, fine grained, poorly graded, no odor, no sheen via sheen test method, no discoloration.		
	2	ML						(1.5 - 2.6 Feet): SILT, gray, moist, hard, medium pasticity, some crushed red brick from 2.0 to 2.6 feet bgs, no odor, no sheen via sheen test method, no discoloration.			
	3	ML	(2.6 - 5.0 Feet): SILT, brown, moist, very hard, non plastic, no odor, no sheen via sheen test method, no discoloration.								
50	4	☒	EB-22-051517-1.0-2.0			0.0			End boring at 5.0 feet bgs.		
	5	☒									
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
45	14										
	15										
	16										
	17										
	18										
	19										
	40										

NOTES: bgs=below ground surface
GS=ground surfacePID=photoionization detector
ppm=parts per million

TOC=top of casing



**Hahn and Associates, Inc.
Environmental Consultants**

Site ID: **EB-23**

Date(s): **5/15/17**

Location: **2141 NW 25th Avenue**

Logged By: **Ben Uhl**

Checked By: **Eric Tuppan**

Driller: **Cascade Drilling L.P.**

Drilling Method: **GeoProbe 7720DT - Track Mounted**

GS Elevation: **58.04**

TOC: **Not Applicable**

Sampling Method: **5-foot Macrocore**

Northing: **690827.66**

Easting: **7638088.29**

Abandonment Details:

Gravel 0 - 1 foot bgs
3/8 inch Bentonite Chip 1 - 25 feet bgs

Borehole Dia.: **2.25 inches**

Total Depth: **25.0 feet bgs**

Project Number: **9141**

Project Name: **ESCO Corporation**

Remarks: **Vertical datum in NAVD88 and horizontal datum in Oregon State Plane.**

Elevation (ft)	Depth (ft)	Sample Interval	Sample Number	Recovery (ft) (core interval)	Blow Counts	PID (ppm)	Lithology	USCS Code	Lithologic Description	Groundwater	Boring Abandonment Details
55	1	-	EB-23-051517-1.0-2.0	5 (0-5)	0.0	0.0		SM	(0.0 - 1.0 Feet): gravelly SAND, brown, loose, moist, fine grained, poorly graded, no odor, no sheen via sheen test method, no discoloration. Gravel - medium grained, subangular.		
	ML							(1.0 - 5.0 Feet): SILT, brown, moist, hard to 4.2 feet bgs then very hard, non plastic, some crushed brick, no odor, no sheen via sheen test method, no discoloration.			
50	4	-	EB-23-051517-4.0-5.0	4.4 (5-10)	0.0	0.0		ML	(5.0 - 8.4 Feet): sandy SILT, brown, moist, soft, non plastic, no odor, no sheen via sheen test method, no discoloration.		
	9							SM	(8.4 - 9.4 Feet): SAND with some silt, brown, moist, loose, fine grained, poorly graded, no odor, no sheen via sheen test method, no discoloration.		
	10							ML	(9.4 - 10.0 Feet): No Recovery. (10.0 - 14.7 Feet): SILT with some sand, brown, moist, moderately hard, low plasticity, no odor, no sheen via sheen test method, no discoloration. Sand - fine grained, poorly graded.		
45	14	-	EB-23-051517-14.0-14.7	3 (15-20)	0.0	0.0		ML	(14.7 - 15.0 Feet): No Recovery. (15.0 - 16.0 Feet): SILT, brown, moist, moderately hard, low plasticity, no odor, no sheen via sheen test method, no discoloration		
	17							SM	(16.0 - 20.0 Feet): SAND, brown, loose, moist, fine grained, poorly graded, some silt from 16.9 to 17.2 feet bgs, no odor, no sheen via sheen test method, no discoloration.		
40	18	-	EB-23-051517-17.0-18.0								

NOTES: bgs=below ground surface
GS=ground surface

PID=photoionization detector
ppm=parts per million

TOC=top of casing



**Hahn and Associates, Inc.
Environmental Consultants**

Site ID: **EB-23**
Project Name: **ESCO Corporation**
Project Number: **9141**

Elevation (ft)	Depth (ft)	Sample Interval	Sample Number	Recovery (ft) (core interval)	Blow Counts	PID (ppm)	Lithology	USCS Code	Lithologic Description	Groundwater	Boring Abandonment Details
	21			3 (20-25)				SP	(20.0 - 23.0 Feet): SAND, brown, loose, moist, fine grained, poorly graded, no odor, no sheen via sheen test method, no discoloration.		
35	22	EB-23-051517-22.0-23.0			0.0	(23.0 - 25.0 Feet): No Recovery.					
	23								End boring at 25.0 feet bgs.		
	24										
	25										
	26										
	27										
30	28										
	29										
	30										
	31										
	32										
25	33										
	34										
	35										
	36										
	37										
20	38										
	39										
	40										
	41										
15	42										
	43										
	44										
	45										
	46										

NOTES: bgs=below ground surface PID=photoionization detector TOC=top of casing
GS=ground surface ppm=parts per million



**Hahn and Associates, Inc.
Environmental Consultants**

Site ID: **EB-24**

Date(s): **5/15/17**

Location: **2141 NW 25th Avenue**

Logged By: **Ben Uhl**

Checked By: **Eric Tuppan**

Driller: **Cascade Drilling L.P.**

Drilling Method: **GeoProbe 7720DT - Track Mounted**

GS Elevation: **58.44**

TOC: **Not Applicable**

Sampling Method: **5-foot Macrocore**

Northing: **690772.36**

Easting: **7638084.12**

Abandonment Details:

Gravel 0 - 1 foot bgs
3/8 inch Bentonite Chip 1 - 25 feet bgs

Borehole Dia.: **2.25 inches**

Total Depth: **25.0 feet bgs**

Project Number: **9141**

Project Name: **ESCO Corporation**

Remarks: **Vertical datum in NAVD88 and horizontal datum in Oregon State Plane.**

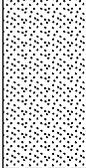
Elevation (ft)	Depth (ft)	Sample Interval	Sample Number	Recovery (ft) (core interval)	Blow Counts	PID (ppm)	Lithology	USCS Code	Lithologic Description	Groundwater	Boring Abandonment Details
55	1			3.5 (0-5)	0.0	0.0		GP	(0.2 - 1.0 Feet): gravelly SILT, brown, moist, soft, non plastic, rainbow sheen in water, no odor, no discoloration.		
	2							GM			
55	3	EB-24-051517-2.5-3.5		3.2 (5-10)	0.0	0.0		ML	(1.0 - 3.5 Feet): SILT with some sand, brown, moist, soft, low plasticity, rainbow sheen in water at 2.5 feet bgs, then no odor, no sheen, no discoloration. Sand is fine grained, poorly graded.		
	4										
50	5			3 (10-15)	0.0	0.0		ML	(5.0 - 8.2 Feet): SILT with some sand, brown, moist, soft, low plasticity, no odor, no sheen via sheen test method, no discoloration. Sand is fine grained, poorly graded.		
	6										
45	7	EB-24-051517-7.2-8.2		3 (15-20)	0.0	0.0		SP	(10.0 - 13.0 Feet): SAND, brown, moist, loose, fine grained, poorly graded, no odor, no sheen via sheen test method, no discoloration		
	8										
40	10	EB-24-051517-12.0-13.0		3 (15-20)	0.0	0.0		SP	(15.0 - 18.0 Feet): SAND, brown, moist, loose, fine grained, poorly graded, no odor, no sheen via sheen test method, no discoloration		
	11										
	12	EB-24-051517-17.0-18.0									
	13										
	14										
	15										
	16										
	17										
	18										
	19										

NOTES: bgs=below ground surface PID=photoionization detector TOC=top of casing
GS=ground surface ppm=parts per million

HAI

Hahn and Associates, Inc. Environmental Consultants

Site ID: EB-24
Project Name: ESCO Corporation
Project Number: 9141

Elevation (ft)	Depth (ft)	Sample Interval	Sample Number	Recovery (ft) (core interval)	Blow Counts	PID (ppm)	Lithology	USCS Code	Lithologic Description	Groundwater	Boring Abandonment Details
	21			3 (20-25)				SP	(20.0 - 23.0 Feet): SAND, brown, moist, loose, fine grained, poorly graded, no odor, no sheen via sheen test method, no discoloration		
	22	EB-24-051517-22.0-23.0			0.0				(23.0 - 25.0 Feet): No Recovery.		
	23										
	24										
	25								End boring at 25.0 feet bgs.		
	26										
	27										
	28										
	29										
	30										
	31										
	32										
	33										
	34										
	35										
	36										
	37										
	38										
	39										
	40										
	41										
	42										
	43										
	44										
	45										
	46										

NOTES: bgs=below ground surface PID=photoionization detector TOC=top of casing
GS=ground surface ppm=parts per million

HAI

Hahn and Associates, Inc. Environmental Consultants

 Site ID: **EB-25**

 Date(s): **5/15/17**

 Location: **2141 NW 25th Avenue**

 Logged By: **Ben Uhl**

 Checked By: **Eric Tuppan**

 Driller: **Cascade Drilling L.P.**

 Drilling Method: **GeoProbe 7720DT - Track Mounted**

 GS Elevation: **57.51**

 TOC: **Not Applicable**

 Sampling Method: **5-foot Macrocore**

 Northing: **6900805.74**

 Easting: **7638134.39**
Abandonment Details:

 Borehole Dia.: **2.25 inches**

 Total Depth: **25.0 feet bgs**

 Gravel 0 - 1 foot bgs
 3/8 inch Bentonite Chip 0 - 1 foot bgs

 Project Number: **9141**

 Project Name: **ESCO Corporation**

 Remarks: **Vertical datum in NAVD88 and horizontal datum in Oregon State Plane.**

Elevation (ft)	Depth (ft)	Sample Interval	Sample Number	Recovery (ft) (core interval)	Blow Counts	PID (ppm)	Lithology	USCS Code	Lithologic Description	Groundwater	Boring Abandonment Details			
55	1	0.5-1.5	EB-25-051517-0.5-1.5	0.5 (0-5)	0.0	0.0		GM	(0.0 - 2.3 Feet): gravelly SILT, brown, soft, moist, non plastic, some crushed brick, no odor, no sheen via sheen test method, no discoloration.					
	2												ML	(2.3 - 5.0 Feet): SILT, brown, soft, moist, low plasticity, no odor, no sheen via sheen test method, no discoloration.
50	4	4.0-5.0	EB-25-051517-4.0-5.0	3.5 (5-10)	0.0	0.0		ML	(5.0 - 8.5 Feet): sandy SILT, brown, soft, moist, non plastic, no odor, no sheen via sheen test method, no discoloration. Sand is fine grained, poorly graded.					
	8	7.5-8.5	EB-25-051517-7.5-8.5					0.0						(8.5 - 10.0 Feet): No Recovery.
	10							5 (10-15)					ML	(10.0 - 17.0 Feet): sandy SILT, brown, soft, moist, non plastic, no odor, no sheen via sheen test method, no discoloration. Sand is fine grained, poorly graded.
45	14	14.0-15.0	EB-25-051517-14.0-15.0	4 (15-20)	0.0	0.0								
	18	18.0-19.0	EB-25-051517-18.0-19.0					0.0					SP	(17.0 - 19.0 Feet): SAND, brown, wet, loose, fine grained, poorly graded, no odor, no sheen via sheen test method, no discoloration.
40	19							(19.0 - 20.0 Feet): No Recovery.						

 NOTES: bgs=below ground surface
 GS=ground surface

 PID=photoionization detector
 ppm=parts per million
 TOC=top of casing



**Hahn and Associates, Inc.
Environmental Consultants**

Site ID: **EB-25**
Project Name: **ESCO Corporation**
Project Number: **9141**

Elevation (ft)	Depth (ft)	Sample Interval	Sample Number	Recovery (ft) (core interval)	Blow Counts	PID (ppm)	Lithology	USCS Code	Lithologic Description	Groundwater	Boring Abandonment Details
	21			3.5 (20-25)				SP	(20.0 - 23.5 Feet): SAND, brown, wet to 22.5 feet bgs then moist, loose, fine grained, poorly graded, no odor, no sheen via sheen test method, no discoloration.		
35	22										
	23	EB-25-051517-22.5-23.5				0.0			(23.5 - 25.0 Feet): No Recovery.		
	24										
	25								End boring at 25.0 feet bgs.		
	26										
	27										
30	28										
	29										
	30										
	31										
	32										
25	33										
	34										
	35										
	36										
	37										
20	38										
	39										
	40										
	41										
	42										
15	43										
	44										
	45										
	46										

NOTES: bgs=below ground surface PID=photoionization detector TOC=top of casing
GS=ground surface ppm=parts per million

HAI

Hahn and Associates, Inc. Environmental Consultants

 Site ID: **EB-26**

 Date(s): **5/15/17**

 Location: **2141 NW 25th Avenue**

 Logged By: **Ben Uhl**

 Checked By: **Eric Tuppan**

 Driller: **Cascade Drilling L.P.**

 Drilling Method: **GeoProbe 7720DT - Track Mounted**

 GS Elevation: **57.64**

 TOC: **Not Applicable**

 Sampling Method: **5-foot Macrocore**

 Northing: **690782.23**

 Easting: **7638150.76**
Abandonment Details:

 Gravel 0 - 1 foot bgs
 3/8 inch Bentonite Chip 0 - 1 foot bgs

 Borehole Dia.: **2.25 inches**

 Total Depth: **5.0 feet bgs**

 Project Number: **9141**

 Project Name: **ESCO Corporation**

 Remarks: **Vertical datum in NAVD88 and horizontal datum in Oregon State Plane.**

Elevation (ft)	Depth (ft)	Sample Interval	Sample Number	Recovery (ft) (core interval)	Blow Counts	PID (ppm)	Lithology	USCS Code	Lithologic Description	Groundwater	Boring Abandonment Details
55	1		EB-26-051517-0.5-1.5	4.5 (0-5)		0.0		GM	(0.0 - 2.0 Feet): gravelly SILT, brown, moist, moderately soft, low plasticity, some crushed brick from 1.7 to 2.0 feet bgs, no odor, no sheen via sheen test method, no discoloration.		
	2		EB-26-051517-0.5-1.5			0.0					
	3										
	4		EB-26-051517-3.5-4.5			0.0					
50	5								(4.5 - 5.0 Feet): No Recovery.		
	6								End boring at 5.0 feet bgs.		
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
45	15										
	16										
	17										
	18										
	19										
40	20										
	21										

NOTES: bgs=below ground surface PID=photoionization detector TOC=top of casing
 GS=ground surface ppm=parts per million

HAI

Hahn and Associates, Inc. Environmental Consultants

Site ID: **EB-27**Date(s): **5/15/17**Location: **2141 NW 25th Avenue**Logged By: **Ben Uhl**Checked By: **Eric Tuppan**Driller: **Cascade Drilling L.P.**Drilling Method: **GeoProbe 7720DT - Track Mounted**GS Elevation: **58.14**TOC: **Not Applicable**Sampling Method: **5-foot Macrocore**Northing: **690780.94**Easting: **7638103.61**Abandonment Details:Borehole Dia.: **2.25 inches**Total Depth: **5.0 feet bgs**Gravel 0 - 1 foot bgs
3/8 inch Bentonite Chip 1 - 5 feet bgsProject Number: **9141**Project Name: **ESCO Corporation**Remarks: **Vertical datum in NAVD88 and horizontal datum in Oregon State Plane.**

Elevation (ft)	Depth (ft)	Sample Interval	Sample Number	Recovery (ft) (core interval)	Blow Counts	PID (ppm)	Lithology	USCS Code	Lithologic Description	Groundwater	Boring Abandonment Details
	1	EB-27-051517-0.0-1.0		5 (0-5)		0.0		GM	(0.0 - 1.0 Feet): gravelly SILT, dark brown, moist, soft, non plastic, no odor, no sheen via sheen test method, no discoloration.		
	2							ML		(1.0 - 5.0 Feet): SILT, brown, moist, moderately hard, low plasticity, no odor, no sheen via sheen test method, no discoloration.	
-55	3										
	4	EB-27-051517-4.0-5.0				0.0					
	5								End boring at 5.0 feet bgs.		
	6										
	7										
-50	8										
	9										
	10										
	11										
	12										
-45	13										
	14										
	15										
	16										
	17										
-40	18										
	19										

NOTES: bgs=below ground surface PID=photoionization detector TOC=top of casing
 GS=ground surface ppm=parts per million

ATTACHMENT B
LABORATORY REPORTS

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Tuesday, June 6, 2017

Jeff Dresser
Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

RE: Esco / Esco-041

Enclosed are the results of analyses for work order A7E0603, which was received by the laboratory on 5/16/2017 at 1:42:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Client Services Manager

Page 1 of 109

Privileged and Confidential / Attorney Client Communication

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EB-22-051517-0.5-1.0	A7E0603-01	Soil	05/15/17 09:10	05/16/17 13:42
EB-22-051517-4.0-5.0	A7E0603-02	Soil	05/15/17 09:20	05/16/17 13:42
EB-23-051517-1.0-2.0	A7E0603-03	Soil	05/15/17 09:32	05/16/17 13:42
EB-23-051517-4.0-5.0	A7E0603-04	Soil	05/15/17 09:35	05/16/17 13:42
EB-23-051517-8.4-9.4	A7E0603-05	Soil	05/15/17 09:45	05/16/17 13:42
EB-24-051517-2.5-3.5	A7E0603-09	Soil	05/15/17 10:40	05/16/17 13:42
EB-24-051517-7.2-8.2	A7E0603-10	Soil	05/15/17 10:48	05/16/17 13:42
EB-24-051517-12.0-13.0	A7E0603-11	Soil	05/15/17 10:54	05/16/17 13:42
EB-25-051517-0.5-1.5	A7E0603-14	Soil	05/15/17 11:30	05/16/17 13:42
EB-25-051517-4.0-5.0	A7E0603-15	Soil	05/15/17 11:40	05/16/17 13:42
EB-25-051517-7.5-8.5	A7E0603-16	Soil	05/15/17 11:50	05/16/17 13:42
EB-26-051517-0.5-1.5	A7E0603-20	Soil	05/15/17 12:40	05/16/17 13:42
EB-26-051517-3.5-4.5	A7E0603-21	Soil	05/15/17 12:45	05/16/17 13:42
EB-27-051517-0.0-1.0	A7E0603-22	Soil	05/15/17 12:55	05/16/17 13:42
EB-27-051517-4.0-5.0	A7E0603-23	Soil	05/15/17 13:00	05/16/17 13:42

Apex Laboratories



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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil		Batch: 7050909			
Diesel	ND	12.3	25.0	mg/kg dry	1	05/19/17 22:37	NWTPH-Dx	
Oil	272	24.6	50.0	"	"	"	"	F-03, Q-42
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>			
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil		Batch: 7050909			
Diesel	ND	10.9	25.0	mg/kg dry	1	05/19/17 23:39	NWTPH-Dx	
Oil	ND	21.8	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 86 %</i>		<i>Limits: 50-150 %</i>			
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil		Batch: 7050909			
Diesel	20.3	10.7	25.0	mg/kg dry	1	05/19/17 23:59	NWTPH-Dx	Ja
Oil	31.7	21.4	50.0	"	"	"	"	Ja
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 82 %</i>		<i>Limits: 50-150 %</i>			
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil		Batch: 7050909			
Diesel	ND	11.7	25.0	mg/kg dry	1	05/20/17 00:20	NWTPH-Dx	
Oil	ND	23.4	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 68 %</i>		<i>Limits: 50-150 %</i>			
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil		Batch: 7050909			
Diesel	ND	12.0	25.0	mg/kg dry	1	05/20/17 00:41	NWTPH-Dx	
Oil	ND	24.0	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 75 %</i>		<i>Limits: 50-150 %</i>			
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil		Batch: 7050909			
Diesel	ND	12.4	25.0	mg/kg dry	1	05/20/17 01:01	NWTPH-Dx	
Oil	91.4	24.9	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>			
EB-24-051517-7.2-8.2 (A7E0603-10)			Matrix: Soil		Batch: 7050909			
Diesel	ND	12.0	25.0	mg/kg dry	1	05/20/17 01:22	NWTPH-Dx	
Oil	ND	24.1	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 76 %</i>		<i>Limits: 50-150 %</i>			
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil		Batch: 7050909			
Diesel	ND	10.4	25.0	mg/kg dry	1	05/20/17 01:42	NWTPH-Dx	
Oil	ND	20.8	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 79 %</i>		<i>Limits: 50-150 %</i>			

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Lisa Domenighini, Client Services Manager

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil		Batch: 7050909			
Diesel	ND	10.6	25.0	mg/kg dry	1	05/20/17 02:03	NWTPH-Dx	
Oil	161	21.1	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 83 %</i>		<i>Limits: 50-150 %</i>		"	"
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil		Batch: 7050909			
Diesel	ND	11.9	25.0	mg/kg dry	1	05/19/17 21:56	NWTPH-Dx	
Oil	ND	23.7	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 69 %</i>		<i>Limits: 50-150 %</i>		"	"
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil		Batch: 7050909			
Diesel	ND	11.8	25.0	mg/kg dry	1	05/19/17 22:17	NWTPH-Dx	
Oil	ND	23.6	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 64 %</i>		<i>Limits: 50-150 %</i>		"	"
EB-26-051517-0.5-1.5 (A7E0603-20)			Matrix: Soil		Batch: 7050909			
Diesel	ND	9.61	25.0	mg/kg dry	1	05/19/17 22:37	NWTPH-Dx	
Oil	648	19.2	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 86 %</i>		<i>Limits: 50-150 %</i>		"	"
EB-26-051517-3.5-4.5 (A7E0603-21)			Matrix: Soil		Batch: 7050909			
Diesel	ND	13.1	26.3	mg/kg dry	1	05/19/17 23:18	NWTPH-Dx	
Oil	ND	26.3	52.5	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 64 %</i>		<i>Limits: 50-150 %</i>		"	"
EB-27-051517-0.0-1.0 (A7E0603-22)			Matrix: Soil		Batch: 7050909			
Diesel	ND	50.6	101	mg/kg dry	5	05/19/17 23:39	NWTPH-Dx	
Oil	626	101	203	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		"	" S-05
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil		Batch: 7050911			
Diesel	ND	11.9	25.0	mg/kg dry	1	05/22/17 10:19	NWTPH-Dx	
Oil	ND	23.9	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 68 %</i>		<i>Limits: 50-150 %</i>		"	"

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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil		Batch: 7050846			
Gasoline Range Organics	ND	3.41	6.82	mg/kg dry	50	05/18/17 19:22	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 120 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil		Batch: 7050846			
Gasoline Range Organics	ND	3.04	6.08	mg/kg dry	50	05/18/17 20:16	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 117 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil		Batch: 7050846			
Gasoline Range Organics	ND	2.92	5.84	mg/kg dry	50	05/18/17 20:42	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 116 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	2.96	5.92	mg/kg dry	50	05/20/17 23:19	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>96 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	3.72	7.45	mg/kg dry	50	05/20/17 23:46	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>96 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	3.64	7.27	mg/kg dry	50	05/21/17 00:13	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>96 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-24-051517-7.2-8.2 (A7E0603-10)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	3.62	7.23	mg/kg dry	50	05/21/17 00:40	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 104 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>96 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	2.98	5.97	mg/kg dry	50	05/21/17 01:07	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>94 %</i>		<i>Limits: 50-150 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	2.46	4.93	mg/kg dry	50	05/21/17 01:34	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>95 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	3.11	6.22	mg/kg dry	50	05/21/17 02:01	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>95 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	3.94	7.89	mg/kg dry	50	05/21/17 02:29	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>97 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-26-051517-0.5-1.5 (A7E0603-20)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	2.25	4.51	mg/kg dry	50	05/21/17 02:56	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 104 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>97 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-26-051517-3.5-4.5 (A7E0603-21)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	3.41	6.83	mg/kg dry	50	05/21/17 03:50	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 104 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>97 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-27-051517-0.0-1.0 (A7E0603-22)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	2.88	5.76	mg/kg dry	50	05/21/17 04:17	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>95 %</i>		<i>Limits: 50-150 %</i>		"	"	"
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil		Batch: 7050780			
Gasoline Range Organics	ND	3.29	6.59	mg/kg dry	50	05/21/17 04:44	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>96 %</i>		<i>Limits: 50-150 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil		Batch: 7050846			
Acetone	ND	682	1360	ug/kg dry	50	05/18/17 19:22	5035A/8260B	
Benzene	ND	6.82	13.6	"	"	"	"	
Bromobenzene	ND	17.1	34.1	"	"	"	"	
Bromochloromethane	ND	34.1	68.2	"	"	"	"	
Bromodichloromethane	ND	68.2	136	"	"	"	"	
Bromoform	ND	68.2	136	"	"	"	"	
Bromomethane	ND	682	682	"	"	"	"	
2-Butanone (MEK)	ND	341	682	"	"	"	"	
n-Butylbenzene	ND	34.1	68.2	"	"	"	"	
sec-Butylbenzene	ND	34.1	68.2	"	"	"	"	
tert-Butylbenzene	ND	34.1	68.2	"	"	"	"	
Carbon tetrachloride	ND	34.1	68.2	"	"	"	"	
Chlorobenzene	ND	17.1	34.1	"	"	"	"	
Chloroethane	ND	341	682	"	"	"	"	
Chloroform	ND	34.1	68.2	"	"	"	"	
Chloromethane	ND	171	341	"	"	"	"	
2-Chlorotoluene	ND	34.1	68.2	"	"	"	"	
4-Chlorotoluene	ND	34.1	68.2	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	171	341	"	"	"	"	
Dibromochloromethane	ND	68.2	136	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	34.1	68.2	"	"	"	"	
Dibromomethane	ND	34.1	68.2	"	"	"	"	
1,2-Dichlorobenzene	ND	17.1	34.1	"	"	"	"	
1,3-Dichlorobenzene	ND	17.1	34.1	"	"	"	"	
1,4-Dichlorobenzene	ND	17.1	34.1	"	"	"	"	
Dichlorodifluoromethane	ND	68.2	136	"	"	"	"	
1,1-Dichloroethane	ND	17.1	34.1	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	17.1	34.1	"	"	"	"	
1,1-Dichloroethene	ND	17.1	34.1	"	"	"	"	
cis-1,2-Dichloroethene	ND	17.1	34.1	"	"	"	"	
trans-1,2-Dichloroethene	ND	17.1	34.1	"	"	"	"	
1,2-Dichloropropane	ND	17.1	34.1	"	"	"	"	
1,3-Dichloropropane	ND	34.1	68.2	"	"	"	"	
2,2-Dichloropropane	ND	34.1	68.2	"	"	"	"	
1,1-Dichloropropene	ND	34.1	68.2	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil		Batch: 7050846			
cis-1,3-Dichloropropene	ND	34.1	68.2	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	34.1	68.2	"	"	"	"	
Ethylbenzene	ND	17.1	34.1	"	"	"	"	
Hexachlorobutadiene	ND	68.2	136	"	"	"	"	
2-Hexanone	ND	341	682	"	"	"	"	
Isopropylbenzene	ND	34.1	68.2	"	"	"	"	
4-Isopropyltoluene	ND	34.1	68.2	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	341	682	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	34.1	68.2	"	"	"	"	
Methylene chloride	ND	171	341	"	"	"	"	
Naphthalene	ND	68.2	136	"	"	"	"	
n-Propylbenzene	ND	17.1	34.1	"	"	"	"	
Styrene	ND	34.1	68.2	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	17.1	34.1	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	34.1	68.2	"	"	"	"	
Tetrachloroethene (PCE)	ND	17.1	34.1	"	"	"	"	
Toluene	ND	34.1	68.2	"	"	"	"	
1,2,3-Trichlorobenzene	ND	171	341	"	"	"	"	
1,2,4-Trichlorobenzene	ND	171	341	"	"	"	"	
1,1,1-Trichloroethane	ND	17.1	34.1	"	"	"	"	
1,1,2-Trichloroethane	ND	17.1	34.1	"	"	"	"	
Trichloroethene (TCE)	ND	17.1	34.1	"	"	"	"	
Trichlorofluoromethane	ND	68.2	136	"	"	"	"	
1,2,3-Trichloropropane	ND	34.1	68.2	"	"	"	"	
1,2,4-Trimethylbenzene	ND	34.1	68.2	"	"	"	"	
1,3,5-Trimethylbenzene	ND	34.1	68.2	"	"	"	"	
Vinyl chloride	ND	17.1	34.1	"	"	"	"	
m,p-Xylene	ND	34.1	68.2	"	"	"	"	
o-Xylene	ND	17.1	34.1	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 70-130 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group	Project: Esco	
7100 SW Hampton St. Suite 235	Project Number: Esco-041	Reported:
Tigard, OR 97223	Project Manager: Jeff Dresser	06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil		Batch: 7050846			
Acetone	ND	608	1220	ug/kg dry	50	05/18/17 20:16	5035A/8260B	
Benzene	ND	6.08	12.2	"	"	"	"	
Bromobenzene	ND	15.2	30.4	"	"	"	"	
Bromochloromethane	ND	30.4	60.8	"	"	"	"	
Bromodichloromethane	ND	60.8	122	"	"	"	"	
Bromoform	ND	60.8	122	"	"	"	"	
Bromomethane	ND	608	608	"	"	"	"	
2-Butanone (MEK)	ND	304	608	"	"	"	"	
n-Butylbenzene	ND	30.4	60.8	"	"	"	"	
sec-Butylbenzene	ND	30.4	60.8	"	"	"	"	
tert-Butylbenzene	ND	30.4	60.8	"	"	"	"	
Carbon tetrachloride	ND	30.4	60.8	"	"	"	"	
Chlorobenzene	ND	15.2	30.4	"	"	"	"	
Chloroethane	ND	304	608	"	"	"	"	
Chloroform	ND	30.4	60.8	"	"	"	"	
Chloromethane	ND	152	304	"	"	"	"	
2-Chlorotoluene	ND	30.4	60.8	"	"	"	"	
4-Chlorotoluene	ND	30.4	60.8	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	152	304	"	"	"	"	
Dibromochloromethane	ND	60.8	122	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	30.4	60.8	"	"	"	"	
Dibromomethane	ND	30.4	60.8	"	"	"	"	
1,2-Dichlorobenzene	ND	15.2	30.4	"	"	"	"	
1,3-Dichlorobenzene	ND	15.2	30.4	"	"	"	"	
1,4-Dichlorobenzene	ND	15.2	30.4	"	"	"	"	
Dichlorodifluoromethane	ND	60.8	122	"	"	"	"	
1,1-Dichloroethane	ND	15.2	30.4	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	15.2	30.4	"	"	"	"	
1,1-Dichloroethene	ND	15.2	30.4	"	"	"	"	
cis-1,2-Dichloroethene	ND	15.2	30.4	"	"	"	"	
trans-1,2-Dichloroethene	ND	15.2	30.4	"	"	"	"	
1,2-Dichloropropane	ND	15.2	30.4	"	"	"	"	
1,3-Dichloropropane	ND	30.4	60.8	"	"	"	"	
2,2-Dichloropropane	ND	30.4	60.8	"	"	"	"	
1,1-Dichloropropene	ND	30.4	60.8	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil		Batch: 7050846			
cis-1,3-Dichloropropene	ND	30.4	60.8	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	30.4	60.8	"	"	"	"	
Ethylbenzene	ND	15.2	30.4	"	"	"	"	
Hexachlorobutadiene	ND	60.8	122	"	"	"	"	
2-Hexanone	ND	304	608	"	"	"	"	
Isopropylbenzene	ND	30.4	60.8	"	"	"	"	
4-Isopropyltoluene	ND	30.4	60.8	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	304	608	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	30.4	60.8	"	"	"	"	
Methylene chloride	ND	152	304	"	"	"	"	
Naphthalene	ND	60.8	122	"	"	"	"	
n-Propylbenzene	ND	15.2	30.4	"	"	"	"	
Styrene	ND	30.4	60.8	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	15.2	30.4	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	30.4	60.8	"	"	"	"	
Tetrachloroethene (PCE)	ND	15.2	30.4	"	"	"	"	
Toluene	ND	30.4	60.8	"	"	"	"	
1,2,3-Trichlorobenzene	ND	152	304	"	"	"	"	
1,2,4-Trichlorobenzene	ND	152	304	"	"	"	"	
1,1,1-Trichloroethane	ND	15.2	30.4	"	"	"	"	
1,1,2-Trichloroethane	ND	15.2	30.4	"	"	"	"	
Trichloroethene (TCE)	ND	15.2	30.4	"	"	"	"	
Trichlorofluoromethane	ND	60.8	122	"	"	"	"	
1,2,3-Trichloropropane	ND	30.4	60.8	"	"	"	"	
1,2,4-Trimethylbenzene	ND	30.4	60.8	"	"	"	"	
1,3,5-Trimethylbenzene	ND	30.4	60.8	"	"	"	"	
Vinyl chloride	ND	15.2	30.4	"	"	"	"	
m,p-Xylene	ND	30.4	60.8	"	"	"	"	
o-Xylene	ND	15.2	30.4	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>		<i>97 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>Limits: 70-130 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

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Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil		Batch: 7050846			
Acetone	ND	584	1170	ug/kg dry	50	05/18/17 20:42	5035A/8260B	
Benzene	ND	5.84	11.7	"	"	"	"	
Bromobenzene	ND	14.6	29.2	"	"	"	"	
Bromochloromethane	ND	29.2	58.4	"	"	"	"	
Bromodichloromethane	ND	58.4	117	"	"	"	"	
Bromoform	ND	58.4	117	"	"	"	"	
Bromomethane	ND	584	584	"	"	"	"	
2-Butanone (MEK)	ND	292	584	"	"	"	"	
n-Butylbenzene	ND	29.2	58.4	"	"	"	"	
sec-Butylbenzene	ND	29.2	58.4	"	"	"	"	
tert-Butylbenzene	ND	29.2	58.4	"	"	"	"	
Carbon tetrachloride	ND	29.2	58.4	"	"	"	"	
Chlorobenzene	ND	14.6	29.2	"	"	"	"	
Chloroethane	ND	292	584	"	"	"	"	
Chloroform	ND	29.2	58.4	"	"	"	"	
Chloromethane	ND	146	292	"	"	"	"	
2-Chlorotoluene	ND	29.2	58.4	"	"	"	"	
4-Chlorotoluene	ND	29.2	58.4	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	146	292	"	"	"	"	
Dibromochloromethane	ND	58.4	117	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	29.2	58.4	"	"	"	"	
Dibromomethane	ND	29.2	58.4	"	"	"	"	
1,2-Dichlorobenzene	ND	14.6	29.2	"	"	"	"	
1,3-Dichlorobenzene	ND	14.6	29.2	"	"	"	"	
1,4-Dichlorobenzene	ND	14.6	29.2	"	"	"	"	
Dichlorodifluoromethane	ND	58.4	117	"	"	"	"	
1,1-Dichloroethane	ND	14.6	29.2	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	14.6	29.2	"	"	"	"	
1,1-Dichloroethene	ND	14.6	29.2	"	"	"	"	
cis-1,2-Dichloroethene	ND	14.6	29.2	"	"	"	"	
trans-1,2-Dichloroethene	ND	14.6	29.2	"	"	"	"	
1,2-Dichloropropane	ND	14.6	29.2	"	"	"	"	
1,3-Dichloropropane	ND	29.2	58.4	"	"	"	"	
2,2-Dichloropropane	ND	29.2	58.4	"	"	"	"	
1,1-Dichloropropene	ND	29.2	58.4	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil		Batch: 7050846			
cis-1,3-Dichloropropene	ND	29.2	58.4	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	29.2	58.4	"	"	"	"	
Ethylbenzene	ND	14.6	29.2	"	"	"	"	
Hexachlorobutadiene	ND	58.4	117	"	"	"	"	
2-Hexanone	ND	292	584	"	"	"	"	
Isopropylbenzene	ND	29.2	58.4	"	"	"	"	
4-Isopropyltoluene	ND	29.2	58.4	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	292	584	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	29.2	58.4	"	"	"	"	
Methylene chloride	ND	146	292	"	"	"	"	
Naphthalene	ND	58.4	117	"	"	"	"	
n-Propylbenzene	ND	14.6	29.2	"	"	"	"	
Styrene	ND	29.2	58.4	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	14.6	29.2	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	29.2	58.4	"	"	"	"	
Tetrachloroethene (PCE)	ND	14.6	29.2	"	"	"	"	
Toluene	ND	29.2	58.4	"	"	"	"	
1,2,3-Trichlorobenzene	ND	146	292	"	"	"	"	
1,2,4-Trichlorobenzene	ND	146	292	"	"	"	"	
1,1,1-Trichloroethane	ND	14.6	29.2	"	"	"	"	
1,1,2-Trichloroethane	ND	14.6	29.2	"	"	"	"	
Trichloroethene (TCE)	ND	14.6	29.2	"	"	"	"	
Trichlorofluoromethane	ND	58.4	117	"	"	"	"	
1,2,3-Trichloropropane	ND	29.2	58.4	"	"	"	"	
1,2,4-Trimethylbenzene	ND	29.2	58.4	"	"	"	"	
1,3,5-Trimethylbenzene	ND	29.2	58.4	"	"	"	"	
Vinyl chloride	ND	14.6	29.2	"	"	"	"	
m,p-Xylene	ND	29.2	58.4	"	"	"	"	
o-Xylene	ND	14.6	29.2	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

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Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil		Batch: 7050780			
Acetone	ND	592	1180	ug/kg dry	50	05/20/17 23:19	5035A/8260B	
Benzene	ND	5.92	11.8	"	"	"	"	
Bromobenzene	ND	14.8	29.6	"	"	"	"	
Bromochloromethane	ND	29.6	59.2	"	"	"	"	
Bromodichloromethane	ND	59.2	118	"	"	"	"	
Bromoform	ND	59.2	118	"	"	"	"	
Bromomethane	ND	592	592	"	"	"	"	
2-Butanone (MEK)	ND	296	592	"	"	"	"	
n-Butylbenzene	ND	29.6	59.2	"	"	"	"	
sec-Butylbenzene	ND	29.6	59.2	"	"	"	"	
tert-Butylbenzene	ND	29.6	59.2	"	"	"	"	
Carbon tetrachloride	ND	59.2	118	"	"	"	"	
Chlorobenzene	ND	14.8	29.6	"	"	"	"	
Chloroethane	ND	296	592	"	"	"	"	EST
Chloroform	ND	29.6	59.2	"	"	"	"	
Chloromethane	ND	148	296	"	"	"	"	
2-Chlorotoluene	ND	29.6	59.2	"	"	"	"	
4-Chlorotoluene	ND	29.6	59.2	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	148	296	"	"	"	"	
Dibromochloromethane	ND	59.2	118	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	29.6	59.2	"	"	"	"	
Dibromomethane	ND	29.6	59.2	"	"	"	"	
1,2-Dichlorobenzene	ND	14.8	29.6	"	"	"	"	
1,3-Dichlorobenzene	ND	14.8	29.6	"	"	"	"	
1,4-Dichlorobenzene	ND	14.8	29.6	"	"	"	"	
Dichlorodifluoromethane	ND	59.2	118	"	"	"	"	
1,1-Dichloroethane	ND	14.8	29.6	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	14.8	29.6	"	"	"	"	
1,1-Dichloroethene	ND	14.8	29.6	"	"	"	"	
cis-1,2-Dichloroethene	ND	14.8	29.6	"	"	"	"	
trans-1,2-Dichloroethene	ND	14.8	29.6	"	"	"	"	
1,2-Dichloropropane	ND	14.8	29.6	"	"	"	"	
1,3-Dichloropropane	ND	29.6	59.2	"	"	"	"	
2,2-Dichloropropane	ND	29.6	59.2	"	"	"	"	
1,1-Dichloropropene	ND	29.6	59.2	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	29.6	59.2	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	29.6	59.2	"	"	"	"	
Ethylbenzene	ND	14.8	29.6	"	"	"	"	
Hexachlorobutadiene	ND	59.2	118	"	"	"	"	
2-Hexanone	ND	296	592	"	"	"	"	
Isopropylbenzene	ND	29.6	59.2	"	"	"	"	
4-Isopropyltoluene	ND	29.6	59.2	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	296	592	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	29.6	59.2	"	"	"	"	
Methylene chloride	ND	148	296	"	"	"	"	
Naphthalene	ND	59.2	118	"	"	"	"	
n-Propylbenzene	ND	14.8	29.6	"	"	"	"	
Styrene	ND	29.6	59.2	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	14.8	29.6	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	29.6	59.2	"	"	"	"	
Tetrachloroethene (PCE)	ND	14.8	29.6	"	"	"	"	
Toluene	ND	29.6	59.2	"	"	"	"	
1,2,3-Trichlorobenzene	ND	148	296	"	"	"	"	
1,2,4-Trichlorobenzene	ND	148	296	"	"	"	"	
1,1,1-Trichloroethane	ND	14.8	29.6	"	"	"	"	
1,1,2-Trichloroethane	ND	14.8	29.6	"	"	"	"	
Trichloroethene (TCE)	ND	14.8	29.6	"	"	"	"	
Trichlorofluoromethane	ND	59.2	118	"	"	"	"	EST
1,2,3-Trichloropropane	ND	29.6	59.2	"	"	"	"	
1,2,4-Trimethylbenzene	ND	29.6	59.2	"	"	"	"	
1,3,5-Trimethylbenzene	ND	29.6	59.2	"	"	"	"	
Vinyl chloride	ND	14.8	29.6	"	"	"	"	
m,p-Xylene	ND	29.6	59.2	"	"	"	"	
o-Xylene	ND	14.8	29.6	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil		Batch: 7050780			
Acetone	ND	745	1490	ug/kg dry	50	05/20/17 23:46	5035A/8260B	
Benzene	ND	7.45	14.9	"	"	"	"	
Bromobenzene	ND	18.6	37.2	"	"	"	"	
Bromochloromethane	ND	37.2	74.5	"	"	"	"	
Bromodichloromethane	ND	74.5	149	"	"	"	"	
Bromoform	ND	74.5	149	"	"	"	"	
Bromomethane	ND	745	745	"	"	"	"	
2-Butanone (MEK)	ND	372	745	"	"	"	"	
n-Butylbenzene	ND	37.2	74.5	"	"	"	"	
sec-Butylbenzene	ND	37.2	74.5	"	"	"	"	
tert-Butylbenzene	ND	37.2	74.5	"	"	"	"	
Carbon tetrachloride	ND	74.5	149	"	"	"	"	
Chlorobenzene	ND	18.6	37.2	"	"	"	"	
Chloroethane	ND	372	745	"	"	"	"	EST
Chloroform	ND	37.2	74.5	"	"	"	"	
Chloromethane	ND	186	372	"	"	"	"	
2-Chlorotoluene	ND	37.2	74.5	"	"	"	"	
4-Chlorotoluene	ND	37.2	74.5	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	186	372	"	"	"	"	
Dibromochloromethane	ND	74.5	149	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	37.2	74.5	"	"	"	"	
Dibromomethane	ND	37.2	74.5	"	"	"	"	
1,2-Dichlorobenzene	ND	18.6	37.2	"	"	"	"	
1,3-Dichlorobenzene	ND	18.6	37.2	"	"	"	"	
1,4-Dichlorobenzene	ND	18.6	37.2	"	"	"	"	
Dichlorodifluoromethane	ND	74.5	149	"	"	"	"	
1,1-Dichloroethane	ND	18.6	37.2	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	18.6	37.2	"	"	"	"	
1,1-Dichloroethene	ND	18.6	37.2	"	"	"	"	
cis-1,2-Dichloroethene	ND	18.6	37.2	"	"	"	"	
trans-1,2-Dichloroethene	ND	18.6	37.2	"	"	"	"	
1,2-Dichloropropane	ND	18.6	37.2	"	"	"	"	
1,3-Dichloropropane	ND	37.2	74.5	"	"	"	"	
2,2-Dichloropropane	ND	37.2	74.5	"	"	"	"	
1,1-Dichloropropene	ND	37.2	74.5	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	37.2	74.5	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	37.2	74.5	"	"	"	"	
Ethylbenzene	ND	18.6	37.2	"	"	"	"	
Hexachlorobutadiene	ND	74.5	149	"	"	"	"	
2-Hexanone	ND	372	745	"	"	"	"	
Isopropylbenzene	ND	37.2	74.5	"	"	"	"	
4-Isopropyltoluene	ND	37.2	74.5	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	372	745	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	37.2	74.5	"	"	"	"	
Methylene chloride	ND	186	372	"	"	"	"	
Naphthalene	ND	74.5	149	"	"	"	"	
n-Propylbenzene	ND	18.6	37.2	"	"	"	"	
Styrene	ND	37.2	74.5	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	18.6	37.2	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	37.2	74.5	"	"	"	"	
Tetrachloroethene (PCE)	ND	18.6	37.2	"	"	"	"	
Toluene	ND	37.2	74.5	"	"	"	"	
1,2,3-Trichlorobenzene	ND	186	372	"	"	"	"	
1,2,4-Trichlorobenzene	ND	186	372	"	"	"	"	
1,1,1-Trichloroethane	ND	18.6	37.2	"	"	"	"	
1,1,2-Trichloroethane	ND	18.6	37.2	"	"	"	"	
Trichloroethene (TCE)	ND	18.6	37.2	"	"	"	"	
Trichlorofluoromethane	ND	74.5	149	"	"	"	"	EST
1,2,3-Trichloropropane	ND	37.2	74.5	"	"	"	"	
1,2,4-Trimethylbenzene	ND	37.2	74.5	"	"	"	"	
1,3,5-Trimethylbenzene	ND	37.2	74.5	"	"	"	"	
Vinyl chloride	ND	18.6	37.2	"	"	"	"	
m,p-Xylene	ND	37.2	74.5	"	"	"	"	
o-Xylene	ND	18.6	37.2	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil		Batch: 7050780			
Acetone	ND	727	1450	ug/kg dry	50	05/21/17 00:13	5035A/8260B	
Benzene	ND	7.27	14.5	"	"	"	"	
Bromobenzene	ND	18.2	36.4	"	"	"	"	
Bromochloromethane	ND	36.4	72.7	"	"	"	"	
Bromodichloromethane	ND	72.7	145	"	"	"	"	
Bromoform	ND	72.7	145	"	"	"	"	
Bromomethane	ND	727	727	"	"	"	"	
2-Butanone (MEK)	ND	364	727	"	"	"	"	
n-Butylbenzene	ND	36.4	72.7	"	"	"	"	
sec-Butylbenzene	ND	36.4	72.7	"	"	"	"	
tert-Butylbenzene	ND	36.4	72.7	"	"	"	"	
Carbon tetrachloride	ND	72.7	145	"	"	"	"	
Chlorobenzene	ND	18.2	36.4	"	"	"	"	
Chloroethane	ND	364	727	"	"	"	"	EST
Chloroform	ND	36.4	72.7	"	"	"	"	
Chloromethane	ND	182	364	"	"	"	"	
2-Chlorotoluene	ND	36.4	72.7	"	"	"	"	
4-Chlorotoluene	ND	36.4	72.7	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	182	364	"	"	"	"	
Dibromochloromethane	ND	72.7	145	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	36.4	72.7	"	"	"	"	
Dibromomethane	ND	36.4	72.7	"	"	"	"	
1,2-Dichlorobenzene	ND	18.2	36.4	"	"	"	"	
1,3-Dichlorobenzene	ND	18.2	36.4	"	"	"	"	
1,4-Dichlorobenzene	ND	18.2	36.4	"	"	"	"	
Dichlorodifluoromethane	ND	72.7	145	"	"	"	"	
1,1-Dichloroethane	ND	18.2	36.4	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	18.2	36.4	"	"	"	"	
1,1-Dichloroethene	ND	18.2	36.4	"	"	"	"	
cis-1,2-Dichloroethene	ND	18.2	36.4	"	"	"	"	
trans-1,2-Dichloroethene	ND	18.2	36.4	"	"	"	"	
1,2-Dichloropropane	ND	18.2	36.4	"	"	"	"	
1,3-Dichloropropane	ND	36.4	72.7	"	"	"	"	
2,2-Dichloropropane	ND	36.4	72.7	"	"	"	"	
1,1-Dichloropropene	ND	36.4	72.7	"	"	"	"	

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7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	36.4	72.7	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	36.4	72.7	"	"	"	"	
Ethylbenzene	ND	18.2	36.4	"	"	"	"	
Hexachlorobutadiene	ND	72.7	145	"	"	"	"	
2-Hexanone	ND	364	727	"	"	"	"	
Isopropylbenzene	ND	36.4	72.7	"	"	"	"	
4-Isopropyltoluene	ND	36.4	72.7	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	364	727	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	36.4	72.7	"	"	"	"	
Methylene chloride	ND	182	364	"	"	"	"	
Naphthalene	ND	72.7	145	"	"	"	"	
n-Propylbenzene	ND	18.2	36.4	"	"	"	"	
Styrene	ND	36.4	72.7	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	18.2	36.4	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	36.4	72.7	"	"	"	"	
Tetrachloroethene (PCE)	ND	18.2	36.4	"	"	"	"	
Toluene	ND	36.4	72.7	"	"	"	"	
1,2,3-Trichlorobenzene	ND	182	364	"	"	"	"	
1,2,4-Trichlorobenzene	ND	182	364	"	"	"	"	
1,1,1-Trichloroethane	ND	18.2	36.4	"	"	"	"	
1,1,2-Trichloroethane	ND	18.2	36.4	"	"	"	"	
Trichloroethene (TCE)	ND	18.2	36.4	"	"	"	"	
Trichlorofluoromethane	ND	72.7	145	"	"	"	"	EST
1,2,3-Trichloropropane	ND	36.4	72.7	"	"	"	"	
1,2,4-Trimethylbenzene	ND	36.4	72.7	"	"	"	"	
1,3,5-Trimethylbenzene	ND	36.4	72.7	"	"	"	"	
Vinyl chloride	ND	18.2	36.4	"	"	"	"	
m,p-Xylene	ND	36.4	72.7	"	"	"	"	
o-Xylene	ND	18.2	36.4	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-7.2-8.2 (A7E0603-10)			Matrix: Soil		Batch: 7050780			
Acetone	ND	723	1450	ug/kg dry	50	05/21/17 00:40	5035A/8260B	
Benzene	ND	7.23	14.5	"	"	"	"	
Bromobenzene	ND	18.1	36.2	"	"	"	"	
Bromochloromethane	ND	36.2	72.3	"	"	"	"	
Bromodichloromethane	ND	72.3	145	"	"	"	"	
Bromoform	ND	72.3	145	"	"	"	"	
Bromomethane	ND	723	723	"	"	"	"	
2-Butanone (MEK)	ND	362	723	"	"	"	"	
n-Butylbenzene	ND	36.2	72.3	"	"	"	"	
sec-Butylbenzene	ND	36.2	72.3	"	"	"	"	
tert-Butylbenzene	ND	36.2	72.3	"	"	"	"	
Carbon tetrachloride	ND	72.3	145	"	"	"	"	
Chlorobenzene	ND	18.1	36.2	"	"	"	"	
Chloroethane	ND	362	723	"	"	"	"	EST
Chloroform	ND	36.2	72.3	"	"	"	"	
Chloromethane	ND	181	362	"	"	"	"	
2-Chlorotoluene	ND	36.2	72.3	"	"	"	"	
4-Chlorotoluene	ND	36.2	72.3	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	181	362	"	"	"	"	
Dibromochloromethane	ND	72.3	145	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	36.2	72.3	"	"	"	"	
Dibromomethane	ND	36.2	72.3	"	"	"	"	
1,2-Dichlorobenzene	ND	18.1	36.2	"	"	"	"	
1,3-Dichlorobenzene	ND	18.1	36.2	"	"	"	"	
1,4-Dichlorobenzene	ND	18.1	36.2	"	"	"	"	
Dichlorodifluoromethane	ND	72.3	145	"	"	"	"	
1,1-Dichloroethane	ND	18.1	36.2	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	18.1	36.2	"	"	"	"	
1,1-Dichloroethene	ND	18.1	36.2	"	"	"	"	
cis-1,2-Dichloroethene	ND	18.1	36.2	"	"	"	"	
trans-1,2-Dichloroethene	ND	18.1	36.2	"	"	"	"	
1,2-Dichloropropane	ND	18.1	36.2	"	"	"	"	
1,3-Dichloropropane	ND	36.2	72.3	"	"	"	"	
2,2-Dichloropropane	ND	36.2	72.3	"	"	"	"	
1,1-Dichloropropene	ND	36.2	72.3	"	"	"	"	

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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-7.2-8.2 (A7E0603-10)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	36.2	72.3	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	36.2	72.3	"	"	"	"	
Ethylbenzene	ND	18.1	36.2	"	"	"	"	
Hexachlorobutadiene	ND	72.3	145	"	"	"	"	
2-Hexanone	ND	362	723	"	"	"	"	
Isopropylbenzene	ND	36.2	72.3	"	"	"	"	
4-Isopropyltoluene	ND	36.2	72.3	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	362	723	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	36.2	72.3	"	"	"	"	
Methylene chloride	ND	181	362	"	"	"	"	
Naphthalene	ND	72.3	145	"	"	"	"	
n-Propylbenzene	ND	18.1	36.2	"	"	"	"	
Styrene	ND	36.2	72.3	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	18.1	36.2	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	36.2	72.3	"	"	"	"	
Tetrachloroethene (PCE)	ND	18.1	36.2	"	"	"	"	
Toluene	ND	36.2	72.3	"	"	"	"	
1,2,3-Trichlorobenzene	ND	181	362	"	"	"	"	
1,2,4-Trichlorobenzene	ND	181	362	"	"	"	"	
1,1,1-Trichloroethane	ND	18.1	36.2	"	"	"	"	
1,1,2-Trichloroethane	ND	18.1	36.2	"	"	"	"	
Trichloroethene (TCE)	ND	18.1	36.2	"	"	"	"	
Trichlorofluoromethane	ND	72.3	145	"	"	"	"	EST
1,2,3-Trichloropropane	ND	36.2	72.3	"	"	"	"	
1,2,4-Trimethylbenzene	ND	36.2	72.3	"	"	"	"	
1,3,5-Trimethylbenzene	ND	36.2	72.3	"	"	"	"	
Vinyl chloride	ND	18.1	36.2	"	"	"	"	
m,p-Xylene	ND	36.2	72.3	"	"	"	"	
o-Xylene	ND	18.1	36.2	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil		Batch: 7050780			
Acetone	ND	597	1190	ug/kg dry	50	05/21/17 01:07	5035A/8260B	
Benzene	ND	5.97	11.9	"	"	"	"	
Bromobenzene	ND	14.9	29.8	"	"	"	"	
Bromochloromethane	ND	29.8	59.7	"	"	"	"	
Bromodichloromethane	ND	59.7	119	"	"	"	"	
Bromoform	ND	59.7	119	"	"	"	"	
Bromomethane	ND	597	597	"	"	"	"	
2-Butanone (MEK)	ND	298	597	"	"	"	"	
n-Butylbenzene	ND	29.8	59.7	"	"	"	"	
sec-Butylbenzene	ND	29.8	59.7	"	"	"	"	
tert-Butylbenzene	ND	29.8	59.7	"	"	"	"	
Carbon tetrachloride	ND	59.7	119	"	"	"	"	
Chlorobenzene	ND	14.9	29.8	"	"	"	"	
Chloroethane	ND	298	597	"	"	"	"	EST
Chloroform	ND	29.8	59.7	"	"	"	"	
Chloromethane	ND	149	298	"	"	"	"	
2-Chlorotoluene	ND	29.8	59.7	"	"	"	"	
4-Chlorotoluene	ND	29.8	59.7	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	149	298	"	"	"	"	
Dibromochloromethane	ND	59.7	119	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	29.8	59.7	"	"	"	"	
Dibromomethane	ND	29.8	59.7	"	"	"	"	
1,2-Dichlorobenzene	ND	14.9	29.8	"	"	"	"	
1,3-Dichlorobenzene	ND	14.9	29.8	"	"	"	"	
1,4-Dichlorobenzene	ND	14.9	29.8	"	"	"	"	
Dichlorodifluoromethane	ND	59.7	119	"	"	"	"	
1,1-Dichloroethane	ND	14.9	29.8	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	14.9	29.8	"	"	"	"	
1,1-Dichloroethene	ND	14.9	29.8	"	"	"	"	
cis-1,2-Dichloroethene	ND	14.9	29.8	"	"	"	"	
trans-1,2-Dichloroethene	ND	14.9	29.8	"	"	"	"	
1,2-Dichloropropane	ND	14.9	29.8	"	"	"	"	
1,3-Dichloropropane	ND	29.8	59.7	"	"	"	"	
2,2-Dichloropropane	ND	29.8	59.7	"	"	"	"	
1,1-Dichloropropene	ND	29.8	59.7	"	"	"	"	

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Lisa Domenighini, Client Services Manager

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7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	29.8	59.7	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	29.8	59.7	"	"	"	"	
Ethylbenzene	ND	14.9	29.8	"	"	"	"	
Hexachlorobutadiene	ND	59.7	119	"	"	"	"	
2-Hexanone	ND	298	597	"	"	"	"	
Isopropylbenzene	ND	29.8	59.7	"	"	"	"	
4-Isopropyltoluene	ND	29.8	59.7	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	298	597	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	29.8	59.7	"	"	"	"	
Methylene chloride	ND	149	298	"	"	"	"	
Naphthalene	ND	59.7	119	"	"	"	"	
n-Propylbenzene	ND	14.9	29.8	"	"	"	"	
Styrene	ND	29.8	59.7	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	14.9	29.8	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	29.8	59.7	"	"	"	"	
Tetrachloroethene (PCE)	ND	14.9	29.8	"	"	"	"	
Toluene	ND	29.8	59.7	"	"	"	"	
1,2,3-Trichlorobenzene	ND	149	298	"	"	"	"	
1,2,4-Trichlorobenzene	ND	149	298	"	"	"	"	
1,1,1-Trichloroethane	ND	14.9	29.8	"	"	"	"	
1,1,2-Trichloroethane	ND	14.9	29.8	"	"	"	"	
Trichloroethene (TCE)	ND	14.9	29.8	"	"	"	"	
Trichlorofluoromethane	ND	59.7	119	"	"	"	"	EST
1,2,3-Trichloropropane	ND	29.8	59.7	"	"	"	"	
1,2,4-Trimethylbenzene	ND	29.8	59.7	"	"	"	"	
1,3,5-Trimethylbenzene	ND	29.8	59.7	"	"	"	"	
Vinyl chloride	ND	14.9	29.8	"	"	"	"	
m,p-Xylene	ND	29.8	59.7	"	"	"	"	
o-Xylene	ND	14.9	29.8	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

Bridgewater Group	Project: Esco	
7100 SW Hampton St. Suite 235	Project Number: Esco-041	Reported:
Tigard, OR 97223	Project Manager: Jeff Dresser	06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil		Batch: 7050780			
Acetone	ND	493	986	ug/kg dry	50	05/21/17 01:34	5035A/8260B	
Benzene	ND	4.93	9.86	"	"	"	"	
Bromobenzene	ND	12.3	24.6	"	"	"	"	
Bromochloromethane	ND	24.6	49.3	"	"	"	"	
Bromodichloromethane	ND	49.3	98.6	"	"	"	"	
Bromoform	ND	49.3	98.6	"	"	"	"	
Bromomethane	ND	493	493	"	"	"	"	
2-Butanone (MEK)	ND	246	493	"	"	"	"	
n-Butylbenzene	ND	24.6	49.3	"	"	"	"	
sec-Butylbenzene	ND	24.6	49.3	"	"	"	"	
tert-Butylbenzene	ND	24.6	49.3	"	"	"	"	
Carbon tetrachloride	ND	49.3	98.6	"	"	"	"	
Chlorobenzene	ND	12.3	24.6	"	"	"	"	
Chloroethane	ND	246	493	"	"	"	"	EST
Chloroform	ND	24.6	49.3	"	"	"	"	
Chloromethane	ND	123	246	"	"	"	"	
2-Chlorotoluene	ND	24.6	49.3	"	"	"	"	
4-Chlorotoluene	ND	24.6	49.3	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	123	246	"	"	"	"	
Dibromochloromethane	ND	49.3	98.6	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	24.6	49.3	"	"	"	"	
Dibromomethane	ND	24.6	49.3	"	"	"	"	
1,2-Dichlorobenzene	ND	12.3	24.6	"	"	"	"	
1,3-Dichlorobenzene	ND	12.3	24.6	"	"	"	"	
1,4-Dichlorobenzene	ND	12.3	24.6	"	"	"	"	
Dichlorodifluoromethane	ND	49.3	98.6	"	"	"	"	
1,1-Dichloroethane	ND	12.3	24.6	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	12.3	24.6	"	"	"	"	
1,1-Dichloroethene	ND	12.3	24.6	"	"	"	"	
cis-1,2-Dichloroethene	ND	12.3	24.6	"	"	"	"	
trans-1,2-Dichloroethene	ND	12.3	24.6	"	"	"	"	
1,2-Dichloropropane	ND	12.3	24.6	"	"	"	"	
1,3-Dichloropropane	ND	24.6	49.3	"	"	"	"	
2,2-Dichloropropane	ND	24.6	49.3	"	"	"	"	
1,1-Dichloropropene	ND	24.6	49.3	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	24.6	49.3	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	24.6	49.3	"	"	"	"	
Ethylbenzene	ND	12.3	24.6	"	"	"	"	
Hexachlorobutadiene	ND	49.3	98.6	"	"	"	"	
2-Hexanone	ND	246	493	"	"	"	"	
Isopropylbenzene	ND	24.6	49.3	"	"	"	"	
4-Isopropyltoluene	ND	24.6	49.3	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	246	493	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	24.6	49.3	"	"	"	"	
Methylene chloride	ND	123	246	"	"	"	"	
Naphthalene	ND	49.3	98.6	"	"	"	"	
n-Propylbenzene	ND	12.3	24.6	"	"	"	"	
Styrene	ND	24.6	49.3	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	12.3	24.6	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	24.6	49.3	"	"	"	"	
Tetrachloroethene (PCE)	ND	12.3	24.6	"	"	"	"	
Toluene	ND	24.6	49.3	"	"	"	"	
1,2,3-Trichlorobenzene	ND	123	246	"	"	"	"	
1,2,4-Trichlorobenzene	ND	123	246	"	"	"	"	
1,1,1-Trichloroethane	ND	12.3	24.6	"	"	"	"	
1,1,2-Trichloroethane	ND	12.3	24.6	"	"	"	"	
Trichloroethene (TCE)	ND	12.3	24.6	"	"	"	"	
Trichlorofluoromethane	ND	49.3	98.6	"	"	"	"	EST
1,2,3-Trichloropropane	ND	24.6	49.3	"	"	"	"	
1,2,4-Trimethylbenzene	ND	24.6	49.3	"	"	"	"	
1,3,5-Trimethylbenzene	ND	24.6	49.3	"	"	"	"	
Vinyl chloride	ND	12.3	24.6	"	"	"	"	
m,p-Xylene	ND	24.6	49.3	"	"	"	"	
o-Xylene	ND	12.3	24.6	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil		Batch: 7050780			
Acetone	ND	622	1240	ug/kg dry	50	05/21/17 02:01	5035A/8260B	
Benzene	ND	6.22	12.4	"	"	"	"	
Bromobenzene	ND	15.5	31.1	"	"	"	"	
Bromochloromethane	ND	31.1	62.2	"	"	"	"	
Bromodichloromethane	ND	62.2	124	"	"	"	"	
Bromoform	ND	62.2	124	"	"	"	"	
Bromomethane	ND	622	622	"	"	"	"	
2-Butanone (MEK)	ND	311	622	"	"	"	"	
n-Butylbenzene	ND	31.1	62.2	"	"	"	"	
sec-Butylbenzene	ND	31.1	62.2	"	"	"	"	
tert-Butylbenzene	ND	31.1	62.2	"	"	"	"	
Carbon tetrachloride	ND	62.2	124	"	"	"	"	
Chlorobenzene	ND	15.5	31.1	"	"	"	"	
Chloroethane	ND	311	622	"	"	"	"	EST
Chloroform	ND	31.1	62.2	"	"	"	"	
Chloromethane	ND	155	311	"	"	"	"	
2-Chlorotoluene	ND	31.1	62.2	"	"	"	"	
4-Chlorotoluene	ND	31.1	62.2	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	155	311	"	"	"	"	
Dibromochloromethane	ND	62.2	124	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	31.1	62.2	"	"	"	"	
Dibromomethane	ND	31.1	62.2	"	"	"	"	
1,2-Dichlorobenzene	ND	15.5	31.1	"	"	"	"	
1,3-Dichlorobenzene	ND	15.5	31.1	"	"	"	"	
1,4-Dichlorobenzene	ND	15.5	31.1	"	"	"	"	
Dichlorodifluoromethane	ND	62.2	124	"	"	"	"	
1,1-Dichloroethane	ND	15.5	31.1	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	15.5	31.1	"	"	"	"	
1,1-Dichloroethene	ND	15.5	31.1	"	"	"	"	
cis-1,2-Dichloroethene	ND	15.5	31.1	"	"	"	"	
trans-1,2-Dichloroethene	ND	15.5	31.1	"	"	"	"	
1,2-Dichloropropane	ND	15.5	31.1	"	"	"	"	
1,3-Dichloropropane	ND	31.1	62.2	"	"	"	"	
2,2-Dichloropropane	ND	31.1	62.2	"	"	"	"	
1,1-Dichloropropene	ND	31.1	62.2	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group	Project: Esco	
7100 SW Hampton St. Suite 235	Project Number: Esco-041	Reported:
Tigard, OR 97223	Project Manager: Jeff Dresser	06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	31.1	62.2	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	31.1	62.2	"	"	"	"	
Ethylbenzene	ND	15.5	31.1	"	"	"	"	
Hexachlorobutadiene	ND	62.2	124	"	"	"	"	
2-Hexanone	ND	311	622	"	"	"	"	
Isopropylbenzene	ND	31.1	62.2	"	"	"	"	
4-Isopropyltoluene	ND	31.1	62.2	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	311	622	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	31.1	62.2	"	"	"	"	
Methylene chloride	ND	155	311	"	"	"	"	
Naphthalene	ND	62.2	124	"	"	"	"	
n-Propylbenzene	ND	15.5	31.1	"	"	"	"	
Styrene	ND	31.1	62.2	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	15.5	31.1	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	31.1	62.2	"	"	"	"	
Tetrachloroethene (PCE)	ND	15.5	31.1	"	"	"	"	
Toluene	ND	31.1	62.2	"	"	"	"	
1,2,3-Trichlorobenzene	ND	155	311	"	"	"	"	
1,2,4-Trichlorobenzene	ND	155	311	"	"	"	"	
1,1,1-Trichloroethane	ND	15.5	31.1	"	"	"	"	
1,1,2-Trichloroethane	ND	15.5	31.1	"	"	"	"	
Trichloroethene (TCE)	ND	15.5	31.1	"	"	"	"	
Trichlorofluoromethane	ND	62.2	124	"	"	"	"	EST
1,2,3-Trichloropropane	ND	31.1	62.2	"	"	"	"	
1,2,4-Trimethylbenzene	ND	31.1	62.2	"	"	"	"	
1,3,5-Trimethylbenzene	ND	31.1	62.2	"	"	"	"	
Vinyl chloride	ND	15.5	31.1	"	"	"	"	
m,p-Xylene	ND	31.1	62.2	"	"	"	"	
o-Xylene	ND	15.5	31.1	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil		Batch: 7050780			
Acetone	ND	789	1580	ug/kg dry	50	05/21/17 02:29	5035A/8260B	
Benzene	ND	7.89	15.8	"	"	"	"	
Bromobenzene	ND	19.7	39.4	"	"	"	"	
Bromochloromethane	ND	39.4	78.9	"	"	"	"	
Bromodichloromethane	ND	78.9	158	"	"	"	"	
Bromoform	ND	78.9	158	"	"	"	"	
Bromomethane	ND	789	789	"	"	"	"	
2-Butanone (MEK)	ND	394	789	"	"	"	"	
n-Butylbenzene	ND	39.4	78.9	"	"	"	"	
sec-Butylbenzene	ND	39.4	78.9	"	"	"	"	
tert-Butylbenzene	ND	39.4	78.9	"	"	"	"	
Carbon tetrachloride	ND	78.9	158	"	"	"	"	
Chlorobenzene	ND	19.7	39.4	"	"	"	"	
Chloroethane	ND	394	789	"	"	"	"	EST
Chloroform	ND	39.4	78.9	"	"	"	"	
Chloromethane	ND	197	394	"	"	"	"	
2-Chlorotoluene	ND	39.4	78.9	"	"	"	"	
4-Chlorotoluene	ND	39.4	78.9	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	197	394	"	"	"	"	
Dibromochloromethane	ND	78.9	158	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	39.4	78.9	"	"	"	"	
Dibromomethane	ND	39.4	78.9	"	"	"	"	
1,2-Dichlorobenzene	ND	19.7	39.4	"	"	"	"	
1,3-Dichlorobenzene	ND	19.7	39.4	"	"	"	"	
1,4-Dichlorobenzene	ND	19.7	39.4	"	"	"	"	
Dichlorodifluoromethane	ND	78.9	158	"	"	"	"	
1,1-Dichloroethane	ND	19.7	39.4	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	19.7	39.4	"	"	"	"	
1,1-Dichloroethene	ND	19.7	39.4	"	"	"	"	
cis-1,2-Dichloroethene	ND	19.7	39.4	"	"	"	"	
trans-1,2-Dichloroethene	ND	19.7	39.4	"	"	"	"	
1,2-Dichloropropane	ND	19.7	39.4	"	"	"	"	
1,3-Dichloropropane	ND	39.4	78.9	"	"	"	"	
2,2-Dichloropropane	ND	39.4	78.9	"	"	"	"	
1,1-Dichloropropene	ND	39.4	78.9	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	39.4	78.9	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	39.4	78.9	"	"	"	"	
Ethylbenzene	ND	19.7	39.4	"	"	"	"	
Hexachlorobutadiene	ND	78.9	158	"	"	"	"	
2-Hexanone	ND	394	789	"	"	"	"	
Isopropylbenzene	ND	39.4	78.9	"	"	"	"	
4-Isopropyltoluene	ND	39.4	78.9	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	394	789	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	39.4	78.9	"	"	"	"	
Methylene chloride	ND	197	394	"	"	"	"	
Naphthalene	ND	78.9	158	"	"	"	"	
n-Propylbenzene	ND	19.7	39.4	"	"	"	"	
Styrene	ND	39.4	78.9	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	19.7	39.4	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	39.4	78.9	"	"	"	"	
Tetrachloroethene (PCE)	ND	19.7	39.4	"	"	"	"	
Toluene	ND	39.4	78.9	"	"	"	"	
1,2,3-Trichlorobenzene	ND	197	394	"	"	"	"	
1,2,4-Trichlorobenzene	ND	197	394	"	"	"	"	
1,1,1-Trichloroethane	ND	19.7	39.4	"	"	"	"	
1,1,2-Trichloroethane	ND	19.7	39.4	"	"	"	"	
Trichloroethene (TCE)	ND	19.7	39.4	"	"	"	"	
Trichlorofluoromethane	ND	78.9	158	"	"	"	"	EST
1,2,3-Trichloropropane	ND	39.4	78.9	"	"	"	"	
1,2,4-Trimethylbenzene	ND	39.4	78.9	"	"	"	"	
1,3,5-Trimethylbenzene	ND	39.4	78.9	"	"	"	"	
Vinyl chloride	ND	19.7	39.4	"	"	"	"	
m,p-Xylene	ND	39.4	78.9	"	"	"	"	
o-Xylene	ND	19.7	39.4	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-26-051517-0.5-1.5 (A7E0603-20)			Matrix: Soil		Batch: 7050780			
Acetone	ND	451	901	ug/kg dry	50	05/21/17 02:56	5035A/8260B	
Benzene	ND	4.51	9.01	"	"	"	"	
Bromobenzene	ND	11.3	22.5	"	"	"	"	
Bromochloromethane	ND	22.5	45.1	"	"	"	"	
Bromodichloromethane	ND	45.1	90.1	"	"	"	"	
Bromoform	ND	45.1	90.1	"	"	"	"	
Bromomethane	ND	451	451	"	"	"	"	
2-Butanone (MEK)	ND	225	451	"	"	"	"	
n-Butylbenzene	ND	22.5	45.1	"	"	"	"	
sec-Butylbenzene	ND	22.5	45.1	"	"	"	"	
tert-Butylbenzene	ND	22.5	45.1	"	"	"	"	
Carbon tetrachloride	ND	45.1	90.1	"	"	"	"	
Chlorobenzene	ND	11.3	22.5	"	"	"	"	
Chloroethane	ND	225	451	"	"	"	"	EST
Chloroform	ND	22.5	45.1	"	"	"	"	
Chloromethane	ND	113	225	"	"	"	"	
2-Chlorotoluene	ND	22.5	45.1	"	"	"	"	
4-Chlorotoluene	ND	22.5	45.1	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	113	225	"	"	"	"	
Dibromochloromethane	ND	45.1	90.1	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	22.5	45.1	"	"	"	"	
Dibromomethane	ND	22.5	45.1	"	"	"	"	
1,2-Dichlorobenzene	ND	11.3	22.5	"	"	"	"	
1,3-Dichlorobenzene	ND	11.3	22.5	"	"	"	"	
1,4-Dichlorobenzene	ND	11.3	22.5	"	"	"	"	
Dichlorodifluoromethane	ND	45.1	90.1	"	"	"	"	
1,1-Dichloroethane	ND	11.3	22.5	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	11.3	22.5	"	"	"	"	
1,1-Dichloroethene	ND	11.3	22.5	"	"	"	"	
cis-1,2-Dichloroethene	ND	11.3	22.5	"	"	"	"	
trans-1,2-Dichloroethene	ND	11.3	22.5	"	"	"	"	
1,2-Dichloropropane	ND	11.3	22.5	"	"	"	"	
1,3-Dichloropropane	ND	22.5	45.1	"	"	"	"	
2,2-Dichloropropane	ND	22.5	45.1	"	"	"	"	
1,1-Dichloropropene	ND	22.5	45.1	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-26-051517-0.5-1.5 (A7E0603-20)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	22.5	45.1	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	22.5	45.1	"	"	"	"	
Ethylbenzene	ND	11.3	22.5	"	"	"	"	
Hexachlorobutadiene	ND	45.1	90.1	"	"	"	"	
2-Hexanone	ND	225	451	"	"	"	"	
Isopropylbenzene	ND	22.5	45.1	"	"	"	"	
4-Isopropyltoluene	ND	22.5	45.1	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	225	451	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	22.5	45.1	"	"	"	"	
Methylene chloride	ND	113	225	"	"	"	"	
Naphthalene	ND	45.1	90.1	"	"	"	"	
n-Propylbenzene	ND	11.3	22.5	"	"	"	"	
Styrene	ND	22.5	45.1	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	11.3	22.5	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	22.5	45.1	"	"	"	"	
Tetrachloroethene (PCE)	ND	11.3	22.5	"	"	"	"	
Toluene	ND	22.5	45.1	"	"	"	"	
1,2,3-Trichlorobenzene	ND	113	225	"	"	"	"	
1,2,4-Trichlorobenzene	ND	113	225	"	"	"	"	
1,1,1-Trichloroethane	ND	11.3	22.5	"	"	"	"	
1,1,2-Trichloroethane	ND	11.3	22.5	"	"	"	"	
Trichloroethene (TCE)	ND	11.3	22.5	"	"	"	"	
Trichlorofluoromethane	ND	45.1	90.1	"	"	"	"	EST
1,2,3-Trichloropropane	ND	22.5	45.1	"	"	"	"	
1,2,4-Trimethylbenzene	ND	22.5	45.1	"	"	"	"	
1,3,5-Trimethylbenzene	ND	22.5	45.1	"	"	"	"	
Vinyl chloride	ND	11.3	22.5	"	"	"	"	
m,p-Xylene	ND	22.5	45.1	"	"	"	"	
o-Xylene	ND	11.3	22.5	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-26-051517-3.5-4.5 (A7E0603-21)			Matrix: Soil		Batch: 7050780			
Acetone	ND	683	1370	ug/kg dry	50	05/21/17 03:50	5035A/8260B	
Benzene	ND	6.83	13.7	"	"	"	"	
Bromobenzene	ND	17.1	34.1	"	"	"	"	
Bromochloromethane	ND	34.1	68.3	"	"	"	"	
Bromodichloromethane	ND	68.3	137	"	"	"	"	
Bromoform	ND	68.3	137	"	"	"	"	
Bromomethane	ND	683	683	"	"	"	"	
2-Butanone (MEK)	ND	341	683	"	"	"	"	
n-Butylbenzene	ND	34.1	68.3	"	"	"	"	
sec-Butylbenzene	ND	34.1	68.3	"	"	"	"	
tert-Butylbenzene	ND	34.1	68.3	"	"	"	"	
Carbon tetrachloride	ND	68.3	137	"	"	"	"	
Chlorobenzene	ND	17.1	34.1	"	"	"	"	
Chloroethane	ND	341	683	"	"	"	"	EST
Chloroform	ND	34.1	68.3	"	"	"	"	
Chloromethane	ND	171	341	"	"	"	"	
2-Chlorotoluene	ND	34.1	68.3	"	"	"	"	
4-Chlorotoluene	ND	34.1	68.3	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	171	341	"	"	"	"	
Dibromochloromethane	ND	68.3	137	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	34.1	68.3	"	"	"	"	
Dibromomethane	ND	34.1	68.3	"	"	"	"	
1,2-Dichlorobenzene	ND	17.1	34.1	"	"	"	"	
1,3-Dichlorobenzene	ND	17.1	34.1	"	"	"	"	
1,4-Dichlorobenzene	ND	17.1	34.1	"	"	"	"	
Dichlorodifluoromethane	ND	68.3	137	"	"	"	"	
1,1-Dichloroethane	ND	17.1	34.1	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	17.1	34.1	"	"	"	"	
1,1-Dichloroethene	ND	17.1	34.1	"	"	"	"	
cis-1,2-Dichloroethene	ND	17.1	34.1	"	"	"	"	
trans-1,2-Dichloroethene	ND	17.1	34.1	"	"	"	"	
1,2-Dichloropropane	ND	17.1	34.1	"	"	"	"	
1,3-Dichloropropane	ND	34.1	68.3	"	"	"	"	
2,2-Dichloropropane	ND	34.1	68.3	"	"	"	"	
1,1-Dichloropropene	ND	34.1	68.3	"	"	"	"	

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7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-26-051517-3.5-4.5 (A7E0603-21)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	34.1	68.3	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	34.1	68.3	"	"	"	"	
Ethylbenzene	ND	17.1	34.1	"	"	"	"	
Hexachlorobutadiene	ND	68.3	137	"	"	"	"	
2-Hexanone	ND	341	683	"	"	"	"	
Isopropylbenzene	ND	34.1	68.3	"	"	"	"	
4-Isopropyltoluene	ND	34.1	68.3	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	341	683	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	34.1	68.3	"	"	"	"	
Methylene chloride	ND	171	341	"	"	"	"	
Naphthalene	ND	68.3	137	"	"	"	"	
n-Propylbenzene	ND	17.1	34.1	"	"	"	"	
Styrene	ND	34.1	68.3	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	17.1	34.1	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	34.1	68.3	"	"	"	"	
Tetrachloroethene (PCE)	ND	17.1	34.1	"	"	"	"	
Toluene	ND	34.1	68.3	"	"	"	"	
1,2,3-Trichlorobenzene	ND	171	341	"	"	"	"	
1,2,4-Trichlorobenzene	ND	171	341	"	"	"	"	
1,1,1-Trichloroethane	ND	17.1	34.1	"	"	"	"	
1,1,2-Trichloroethane	ND	17.1	34.1	"	"	"	"	
Trichloroethene (TCE)	ND	17.1	34.1	"	"	"	"	
Trichlorofluoromethane	ND	68.3	137	"	"	"	"	EST
1,2,3-Trichloropropane	ND	34.1	68.3	"	"	"	"	
1,2,4-Trimethylbenzene	ND	34.1	68.3	"	"	"	"	
1,3,5-Trimethylbenzene	ND	34.1	68.3	"	"	"	"	
Vinyl chloride	ND	17.1	34.1	"	"	"	"	
m,p-Xylene	ND	34.1	68.3	"	"	"	"	
o-Xylene	ND	17.1	34.1	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-27-051517-0.0-1.0 (A7E0603-22)			Matrix: Soil		Batch: 7050780			
Acetone	ND	576	1150	ug/kg dry	50	05/21/17 04:17	5035A/8260B	
Benzene	ND	5.76	11.5	"	"	"	"	
Bromobenzene	ND	14.4	28.8	"	"	"	"	
Bromochloromethane	ND	28.8	57.6	"	"	"	"	
Bromodichloromethane	ND	57.6	115	"	"	"	"	
Bromoform	ND	57.6	115	"	"	"	"	
Bromomethane	ND	576	576	"	"	"	"	
2-Butanone (MEK)	ND	288	576	"	"	"	"	
n-Butylbenzene	ND	28.8	57.6	"	"	"	"	
sec-Butylbenzene	ND	28.8	57.6	"	"	"	"	
tert-Butylbenzene	ND	28.8	57.6	"	"	"	"	
Carbon tetrachloride	ND	57.6	115	"	"	"	"	
Chlorobenzene	ND	14.4	28.8	"	"	"	"	
Chloroethane	ND	288	576	"	"	"	"	EST
Chloroform	ND	28.8	57.6	"	"	"	"	
Chloromethane	ND	144	288	"	"	"	"	
2-Chlorotoluene	ND	28.8	57.6	"	"	"	"	
4-Chlorotoluene	ND	28.8	57.6	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	144	288	"	"	"	"	
Dibromochloromethane	ND	57.6	115	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	28.8	57.6	"	"	"	"	
Dibromomethane	ND	28.8	57.6	"	"	"	"	
1,2-Dichlorobenzene	ND	14.4	28.8	"	"	"	"	
1,3-Dichlorobenzene	ND	14.4	28.8	"	"	"	"	
1,4-Dichlorobenzene	ND	14.4	28.8	"	"	"	"	
Dichlorodifluoromethane	ND	57.6	115	"	"	"	"	
1,1-Dichloroethane	ND	14.4	28.8	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	14.4	28.8	"	"	"	"	
1,1-Dichloroethene	ND	14.4	28.8	"	"	"	"	
cis-1,2-Dichloroethene	ND	14.4	28.8	"	"	"	"	
trans-1,2-Dichloroethene	ND	14.4	28.8	"	"	"	"	
1,2-Dichloropropane	ND	14.4	28.8	"	"	"	"	
1,3-Dichloropropane	ND	28.8	57.6	"	"	"	"	
2,2-Dichloropropane	ND	28.8	57.6	"	"	"	"	
1,1-Dichloropropene	ND	28.8	57.6	"	"	"	"	

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7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-27-051517-0.0-1.0 (A7E0603-22)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	28.8	57.6	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	28.8	57.6	"	"	"	"	
Ethylbenzene	ND	14.4	28.8	"	"	"	"	
Hexachlorobutadiene	ND	57.6	115	"	"	"	"	
2-Hexanone	ND	288	576	"	"	"	"	
Isopropylbenzene	ND	28.8	57.6	"	"	"	"	
4-Isopropyltoluene	ND	28.8	57.6	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	288	576	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	28.8	57.6	"	"	"	"	
Methylene chloride	ND	144	288	"	"	"	"	
Naphthalene	ND	57.6	115	"	"	"	"	
n-Propylbenzene	ND	14.4	28.8	"	"	"	"	
Styrene	ND	28.8	57.6	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	14.4	28.8	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	28.8	57.6	"	"	"	"	
Tetrachloroethene (PCE)	ND	14.4	28.8	"	"	"	"	
Toluene	ND	28.8	57.6	"	"	"	"	
1,2,3-Trichlorobenzene	ND	144	288	"	"	"	"	
1,2,4-Trichlorobenzene	ND	144	288	"	"	"	"	
1,1,1-Trichloroethane	ND	14.4	28.8	"	"	"	"	
1,1,2-Trichloroethane	ND	14.4	28.8	"	"	"	"	
Trichloroethene (TCE)	ND	14.4	28.8	"	"	"	"	
Trichlorofluoromethane	ND	57.6	115	"	"	"	"	EST
1,2,3-Trichloropropane	ND	28.8	57.6	"	"	"	"	
1,2,4-Trimethylbenzene	ND	28.8	57.6	"	"	"	"	
1,3,5-Trimethylbenzene	ND	28.8	57.6	"	"	"	"	
Vinyl chloride	ND	14.4	28.8	"	"	"	"	
m,p-Xylene	ND	28.8	57.6	"	"	"	"	
o-Xylene	ND	14.4	28.8	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil		Batch: 7050780			
Acetone	ND	659	1320	ug/kg dry	50	05/21/17 04:44	5035A/8260B	
Benzene	ND	6.59	13.2	"	"	"	"	
Bromobenzene	ND	16.5	32.9	"	"	"	"	
Bromochloromethane	ND	32.9	65.9	"	"	"	"	
Bromodichloromethane	ND	65.9	132	"	"	"	"	
Bromoform	ND	65.9	132	"	"	"	"	
Bromomethane	ND	659	659	"	"	"	"	
2-Butanone (MEK)	ND	329	659	"	"	"	"	
n-Butylbenzene	ND	32.9	65.9	"	"	"	"	
sec-Butylbenzene	ND	32.9	65.9	"	"	"	"	
tert-Butylbenzene	ND	32.9	65.9	"	"	"	"	
Carbon tetrachloride	ND	65.9	132	"	"	"	"	
Chlorobenzene	ND	16.5	32.9	"	"	"	"	
Chloroethane	ND	329	659	"	"	"	"	EST
Chloroform	ND	32.9	65.9	"	"	"	"	
Chloromethane	ND	165	329	"	"	"	"	
2-Chlorotoluene	ND	32.9	65.9	"	"	"	"	
4-Chlorotoluene	ND	32.9	65.9	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	165	329	"	"	"	"	
Dibromochloromethane	ND	65.9	132	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	32.9	65.9	"	"	"	"	
Dibromomethane	ND	32.9	65.9	"	"	"	"	
1,2-Dichlorobenzene	ND	16.5	32.9	"	"	"	"	
1,3-Dichlorobenzene	ND	16.5	32.9	"	"	"	"	
1,4-Dichlorobenzene	ND	16.5	32.9	"	"	"	"	
Dichlorodifluoromethane	ND	65.9	132	"	"	"	"	
1,1-Dichloroethane	ND	16.5	32.9	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	16.5	32.9	"	"	"	"	
1,1-Dichloroethene	ND	16.5	32.9	"	"	"	"	
cis-1,2-Dichloroethene	ND	16.5	32.9	"	"	"	"	
trans-1,2-Dichloroethene	ND	16.5	32.9	"	"	"	"	
1,2-Dichloropropane	ND	16.5	32.9	"	"	"	"	
1,3-Dichloropropane	ND	32.9	65.9	"	"	"	"	
2,2-Dichloropropane	ND	32.9	65.9	"	"	"	"	
1,1-Dichloropropene	ND	32.9	65.9	"	"	"	"	

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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil		Batch: 7050780			
cis-1,3-Dichloropropene	ND	32.9	65.9	ug/kg dry	50	"	5035A/8260B	
trans-1,3-Dichloropropene	ND	32.9	65.9	"	"	"	"	
Ethylbenzene	ND	16.5	32.9	"	"	"	"	
Hexachlorobutadiene	ND	65.9	132	"	"	"	"	
2-Hexanone	ND	329	659	"	"	"	"	
Isopropylbenzene	ND	32.9	65.9	"	"	"	"	
4-Isopropyltoluene	ND	32.9	65.9	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	329	659	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	32.9	65.9	"	"	"	"	
Methylene chloride	ND	165	329	"	"	"	"	
Naphthalene	ND	65.9	132	"	"	"	"	
n-Propylbenzene	ND	16.5	32.9	"	"	"	"	
Styrene	ND	32.9	65.9	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	16.5	32.9	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	32.9	65.9	"	"	"	"	
Tetrachloroethene (PCE)	ND	16.5	32.9	"	"	"	"	
Toluene	ND	32.9	65.9	"	"	"	"	
1,2,3-Trichlorobenzene	ND	165	329	"	"	"	"	
1,2,4-Trichlorobenzene	ND	165	329	"	"	"	"	
1,1,1-Trichloroethane	ND	16.5	32.9	"	"	"	"	
1,1,2-Trichloroethane	ND	16.5	32.9	"	"	"	"	
Trichloroethene (TCE)	ND	16.5	32.9	"	"	"	"	
Trichlorofluoromethane	ND	65.9	132	"	"	"	"	EST
1,2,3-Trichloropropane	ND	32.9	65.9	"	"	"	"	
1,2,4-Trimethylbenzene	ND	32.9	65.9	"	"	"	"	
1,3,5-Trimethylbenzene	ND	32.9	65.9	"	"	"	"	
Vinyl chloride	ND	16.5	32.9	"	"	"	"	
m,p-Xylene	ND	32.9	65.9	"	"	"	"	
o-Xylene	ND	16.5	32.9	"	"	"	"	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix: Soil					
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil		Batch: 7050887		C-07		
Aroclor 1016	ND	5.73	11.5		ug/kg dry	1	05/22/17 14:10	EPA 8082A	
Aroclor 1221	ND	5.73	11.5		"	"	"	"	
Aroclor 1232	ND	11.5	11.5		"	"	"	"	
Aroclor 1242	ND	5.73	11.5		"	"	"	"	
Aroclor 1248	ND	5.73	11.5		"	"	"	"	
Aroclor 1254	ND	5.73	11.5		"	"	"	"	
Aroclor 1260	ND	19.5	19.5		"	"	"	"	R-02
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 72-126 %</i>		"	"	"	
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil		Batch: 7050887		C-07		
Aroclor 1016	ND	5.77	11.5		ug/kg dry	1	05/22/17 15:21	EPA 8082A	
Aroclor 1221	ND	5.77	11.5		"	"	"	"	
Aroclor 1232	ND	5.77	11.5		"	"	"	"	
Aroclor 1242	ND	5.77	11.5		"	"	"	"	
Aroclor 1248	ND	5.77	11.5		"	"	"	"	
Aroclor 1254	ND	5.77	11.5		"	"	"	"	
Aroclor 1260	ND	5.77	11.5		"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 72-126 %</i>		"	"	"	
EB-23-051517-1.0-2.0 (A7E0603-03RE2)			Matrix: Soil		Batch: 7050887		C-07		
Aroclor 1016	ND	54.2	108		ug/kg dry	10	05/25/17 14:53	EPA 8082A	
Aroclor 1221	ND	54.2	108		"	"	"	"	
Aroclor 1232	ND	54.2	108		"	"	"	"	
Aroclor 1242	3080	54.2	108		"	"	"	"	
Aroclor 1248	ND	54.2	108		"	"	"	"	
Aroclor 1254	ND	54.2	108		"	"	"	"	
Aroclor 1260	99.6	54.2	108		"	"	"	"	Ja
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 72-126 %</i>		"	"	"	
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil		Batch: 7050887		C-07		
Aroclor 1016	ND	5.40	10.8		ug/kg dry	1	05/23/17 13:15	EPA 8082A	
Aroclor 1221	ND	5.40	10.8		"	"	"	"	
Aroclor 1232	ND	5.40	10.8		"	"	"	"	
Aroclor 1242	ND	5.40	10.8		"	"	"	"	
Aroclor 1248	ND	5.40	10.8		"	"	"	"	
Aroclor 1254	ND	5.40	10.8		"	"	"	"	
Aroclor 1260	ND	5.40	10.8		"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit						
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil		Batch: 7050887				C-07
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 94 %</i>		<i>Limits: 72-126 %</i>		1	"	EPA 8082A
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil		Batch: 7050887				C-07
Aroclor 1016	ND	5.96	11.9		ug/kg dry	1	05/23/17 13:51	EPA 8082A	
Aroclor 1221	ND	5.96	11.9		"	"	"	"	
Aroclor 1232	ND	5.96	11.9		"	"	"	"	
Aroclor 1242	ND	5.96	11.9		"	"	"	"	
Aroclor 1248	ND	5.96	11.9		"	"	"	"	
Aroclor 1254	ND	5.96	11.9		"	"	"	"	
Aroclor 1260	ND	5.96	11.9		"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 83 %</i>		<i>Limits: 72-126 %</i>		"	"	"
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil		Batch: 7050887				C-07
Aroclor 1016	ND	5.84	11.7		ug/kg dry	1	05/23/17 14:26	EPA 8082A	
Aroclor 1221	ND	5.84	11.7		"	"	"	"	
Aroclor 1232	ND	5.84	11.7		"	"	"	"	
Aroclor 1242	425	5.84	11.7		"	"	"	"	
Aroclor 1248	ND	5.84	11.7		"	"	"	"	
Aroclor 1254	ND	5.84	11.7		"	"	"	"	
Aroclor 1260	9.63	5.84	11.7		"	"	"	"	Ja
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 84 %</i>		<i>Limits: 72-126 %</i>		"	"	"
EB-24-051517-7.2-8.2 (A7E0603-10)			Matrix: Soil		Batch: 7050887				C-07
Aroclor 1016	ND	5.91	11.8		ug/kg dry	1	05/23/17 15:02	EPA 8082A	
Aroclor 1221	ND	5.91	11.8		"	"	"	"	
Aroclor 1232	ND	5.91	11.8		"	"	"	"	
Aroclor 1242	ND	5.91	11.8		"	"	"	"	
Aroclor 1248	ND	5.91	11.8		"	"	"	"	
Aroclor 1254	ND	5.91	11.8		"	"	"	"	
Aroclor 1260	ND	5.91	11.8		"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 91 %</i>		<i>Limits: 72-126 %</i>		"	"	"
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil		Batch: 7050887				C-07
Aroclor 1016	ND	5.25	10.5		ug/kg dry	1	05/23/17 12:22	EPA 8082A	
Aroclor 1221	ND	5.25	10.5		"	"	"	"	
Aroclor 1232	ND	5.25	10.5		"	"	"	"	
Aroclor 1242	ND	5.25	10.5		"	"	"	"	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil		Batch: 7050887			C-07
Aroclor 1248	ND	5.25	10.5	ug/kg dry	1	"	EPA 8082A	
Aroclor 1254	ND	5.25	10.5	"	"	"	"	
Aroclor 1260	ND	5.25	10.5	"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 72-126 %</i>		"	"	"
EB-25-051517-0.5-1.5 (A7E0603-14RE2)			Matrix: Soil		Batch: 7050887			C-07
Aroclor 1016	ND	106	212	ug/kg dry	20	05/25/17 15:49	EPA 8082A	
Aroclor 1221	ND	106	212	"	"	"	"	
Aroclor 1232	ND	106	212	"	"	"	"	
Aroclor 1242	4880	106	212	"	"	"	"	
Aroclor 1248	ND	106	212	"	"	"	"	
Aroclor 1254	ND	106	212	"	"	"	"	
Aroclor 1260	190	106	212	"	"	"	"	Ja
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 72-126 %</i>		"	"	S-05
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil		Batch: 7050887			C-07
Aroclor 1016	ND	5.49	11.0	ug/kg dry	1	05/23/17 13:33	EPA 8082A	
Aroclor 1221	ND	5.49	11.0	"	"	"	"	
Aroclor 1232	ND	5.49	11.0	"	"	"	"	
Aroclor 1242	15.6	5.49	11.0	"	"	"	"	
Aroclor 1248	ND	5.49	11.0	"	"	"	"	
Aroclor 1254	ND	5.49	11.0	"	"	"	"	
Aroclor 1260	ND	5.49	11.0	"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 72-126 %</i>		"	"	"
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil		Batch: 7050887			C-07
Aroclor 1016	ND	5.98	12.0	ug/kg dry	1	05/24/17 15:56	EPA 8082A	
Aroclor 1221	ND	5.98	12.0	"	"	"	"	
Aroclor 1232	ND	5.98	12.0	"	"	"	"	
Aroclor 1242	ND	5.98	12.0	"	"	"	"	
Aroclor 1248	ND	5.98	12.0	"	"	"	"	
Aroclor 1254	ND	5.98	12.0	"	"	"	"	
Aroclor 1260	ND	5.98	12.0	"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 72-126 %</i>		"	"	"
EB-26-051517-0.5-1.5 (A7E0603-20RE3)			Matrix: Soil		Batch: 7051165			C-07
Aroclor 1016	ND	214	427	ug/kg dry	40	05/31/17 09:52	EPA 8082A	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix					
EB-26-051517-0.5-1.5 (A7E0603-20RE3)			Matrix: Soil		Batch: 7051165			C-07	
Aroclor 1221	ND	214	427		ug/kg dry	40	"	EPA 8082A	
Aroclor 1232	ND	214	427		"	"	"	"	
Aroclor 1242	9690	214	427		"	"	"	"	P-10
Aroclor 1248	ND	214	427		"	"	"	"	
Aroclor 1254	ND	214	427		"	"	"	"	
Aroclor 1260	1370	214	427		"	"	"	"	P-10
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 174 %</i>		<i>Limits: 72-126 %</i>		"	"	"	S-05
EB-26-051517-3.5-4.5 (A7E0603-21RE1)			Matrix: Soil		Batch: 7050887			C-07	
Aroclor 1016	ND	5.90	11.8		ug/kg dry	1	05/25/17 17:39	EPA 8082A	
Aroclor 1221	ND	5.90	11.8		"	"	"	"	
Aroclor 1232	ND	5.90	11.8		"	"	"	"	
Aroclor 1242	ND	5.90	11.8		"	"	"	"	
Aroclor 1248	ND	5.90	11.8		"	"	"	"	
Aroclor 1254	ND	5.90	11.8		"	"	"	"	
Aroclor 1260	ND	5.90	11.8		"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 72-126 %</i>		"	"	"	
EB-27-051517-0.0-1.0 (A7E0603-22RE1)			Matrix: Soil		Batch: 7050887			C-07	
Aroclor 1016	ND	53.1	106		ug/kg dry	10	05/25/17 18:34	EPA 8082A	
Aroclor 1221	ND	53.1	106		"	"	"	"	
Aroclor 1232	ND	53.1	106		"	"	"	"	
Aroclor 1242	1820	53.1	106		"	"	"	"	
Aroclor 1248	ND	53.1	106		"	"	"	"	
Aroclor 1254	ND	53.1	106		"	"	"	"	
Aroclor 1260	126	53.1	106		"	"	"	"	P-10
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 72-126 %</i>		"	"	"	S-05
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil		Batch: 7050887			C-07	
Aroclor 1016	ND	5.61	11.2		ug/kg dry	1	05/24/17 18:22	EPA 8082A	
Aroclor 1221	ND	5.61	11.2		"	"	"	"	
Aroclor 1232	ND	5.61	11.2		"	"	"	"	
Aroclor 1242	8.50	5.61	11.2		"	"	"	"	Ja
Aroclor 1248	ND	5.61	11.2		"	"	"	"	
Aroclor 1254	8.59	5.61	11.2		"	"	"	"	Ja
Aroclor 1260	ND	5.61	11.2		"	"	"	"	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil		Batch: 7050887			C-07
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 87 %</i>	<i>Limits: 72-126 %</i>	1	"	EPA 8082A	

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Lisa Domenighini, Client Services Manager

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Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.44	12.9	ug/kg dry	1	05/19/17 20:59	EPA 8270D (SIM)	
Acenaphthylene	92.4	6.44	12.9	"	"	"	"	
Anthracene	236	6.44	12.9	"	"	"	"	
Benz(a)anthracene	1540	6.44	12.9	"	"	"	"	M-02
Benzo(a)pyrene	2990	6.44	12.9	"	"	"	"	
Benzo(b)fluoranthene	2790	6.44	12.9	"	"	"	"	M-02
Benzo(k)fluoranthene	846	6.44	12.9	"	"	"	"	M-02
Benzo(g,h,i)perylene	3010	6.44	12.9	"	"	"	"	
Chrysene	2060	6.44	12.9	"	"	"	"	M-02
Dibenz(a,h)anthracene	313	6.44	12.9	"	"	"	"	
Dibenzofuran	12.6	6.44	12.9	"	"	"	"	Ja
Fluoranthene	3610	6.44	12.9	"	"	"	"	
Fluorene	18.7	6.44	12.9	"	"	"	"	
Indeno(1,2,3-cd)pyrene	2610	6.44	12.9	"	"	"	"	
1-Methylnaphthalene	11.3	6.44	12.9	"	"	"	"	Ja
2-Methylnaphthalene	29.6	6.44	12.9	"	"	"	"	
Naphthalene	209	6.44	12.9	"	"	"	"	
Phenanthrene	908	6.44	12.9	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 44-120 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>		<i>92 %</i>		<i>Limits: 54-127 %</i>	"	"	"	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-0.5-1.0 (A7E0603-01RE1)			Matrix: Soil		Batch: 7050902			
Pyrene	6610	64.4	129	ug/kg dry	10	05/22/17 15:09	EPA 8270D (SIM)	
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.19	12.4	ug/kg dry	1	05/19/17 21:52	EPA 8270D (SIM)	
Acenaphthylene	ND	6.19	12.4	"	"	"	"	
Anthracene	ND	6.19	12.4	"	"	"	"	
Benz(a)anthracene	ND	6.19	12.4	"	"	"	"	
Benzo(a)pyrene	ND	6.19	12.4	"	"	"	"	
Benzo(b)fluoranthene	ND	6.19	12.4	"	"	"	"	
Benzo(k)fluoranthene	ND	6.19	12.4	"	"	"	"	
Benzo(g,h,i)perylene	ND	6.19	12.4	"	"	"	"	
Chrysene	ND	6.19	12.4	"	"	"	"	
Dibenz(a,h)anthracene	ND	6.19	12.4	"	"	"	"	
Dibenzofuran	ND	6.19	12.4	"	"	"	"	
Fluoranthene	ND	6.19	12.4	"	"	"	"	
Fluorene	ND	6.19	12.4	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	6.19	12.4	"	"	"	"	
1-Methylnaphthalene	ND	6.19	12.4	"	"	"	"	
2-Methylnaphthalene	ND	6.19	12.4	"	"	"	"	
Naphthalene	ND	6.19	12.4	"	"	"	"	
Phenanthrene	ND	6.19	12.4	"	"	"	"	
Pyrene	ND	6.19	12.4	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>95 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

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Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	5.77	11.5	ug/kg dry	1	05/19/17 22:18	EPA 8270D (SIM)	
Acenaphthylene	13.4	5.77	11.5	"	"	"	"	
Anthracene	18.0	5.77	11.5	"	"	"	"	
Benz(a)anthracene	64.8	5.77	11.5	"	"	"	"	M-02
Benzo(a)pyrene	78.2	5.77	11.5	"	"	"	"	
Benzo(b)fluoranthene	103	5.77	11.5	"	"	"	"	M-02
Benzo(k)fluoranthene	34.0	5.77	11.5	"	"	"	"	M-02
Benzo(g,h,i)perylene	62.7	5.77	11.5	"	"	"	"	
Chrysene	93.7	5.77	11.5	"	"	"	"	M-02
Dibenz(a,h)anthracene	9.67	5.77	11.5	"	"	"	"	Ja
Dibenzofuran	ND	5.77	11.5	"	"	"	"	
Fluoranthene	143	5.77	11.5	"	"	"	"	
Fluorene	7.72	5.77	11.5	"	"	"	"	Ja
Indeno(1,2,3-cd)pyrene	64.0	5.77	11.5	"	"	"	"	
1-Methylnaphthalene	ND	5.77	11.5	"	"	"	"	
2-Methylnaphthalene	ND	5.77	11.5	"	"	"	"	
Naphthalene	7.71	5.77	11.5	"	"	"	"	Ja
Phenanthrene	119	5.77	11.5	"	"	"	"	
Pyrene	174	5.77	11.5	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>			<i>Recovery: 80 %</i>	<i>Limits: 44-120 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>			<i>97 %</i>	<i>Limits: 54-127 %</i>	"	"	"	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.17	12.3	ug/kg dry	1	05/19/17 22:44	EPA 8270D (SIM)	
Acenaphthylene	ND	6.17	12.3	"	"	"	"	
Anthracene	ND	6.17	12.3	"	"	"	"	
Benz(a)anthracene	ND	6.17	12.3	"	"	"	"	
Benzo(a)pyrene	ND	6.17	12.3	"	"	"	"	
Benzo(b)fluoranthene	ND	6.17	12.3	"	"	"	"	
Benzo(k)fluoranthene	ND	6.17	12.3	"	"	"	"	
Benzo(g,h,i)perylene	ND	6.17	12.3	"	"	"	"	
Chrysene	ND	6.17	12.3	"	"	"	"	
Dibenz(a,h)anthracene	ND	6.17	12.3	"	"	"	"	
Dibenzofuran	ND	6.17	12.3	"	"	"	"	
Fluoranthene	ND	6.17	12.3	"	"	"	"	
Fluorene	ND	6.17	12.3	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	6.17	12.3	"	"	"	"	
1-Methylnaphthalene	ND	6.17	12.3	"	"	"	"	
2-Methylnaphthalene	ND	6.17	12.3	"	"	"	"	
Naphthalene	ND	6.17	12.3	"	"	"	"	
Phenanthrene	ND	6.17	12.3	"	"	"	"	
Pyrene	ND	6.17	12.3	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>97 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.74	13.5	ug/kg dry	1	05/19/17 23:10	EPA 8270D (SIM)	
Acenaphthylene	ND	6.74	13.5	"	"	"	"	
Anthracene	ND	6.74	13.5	"	"	"	"	
Benz(a)anthracene	ND	6.74	13.5	"	"	"	"	
Benzo(a)pyrene	ND	6.74	13.5	"	"	"	"	
Benzo(b)fluoranthene	ND	6.74	13.5	"	"	"	"	
Benzo(k)fluoranthene	ND	6.74	13.5	"	"	"	"	
Benzo(g,h,i)perylene	ND	6.74	13.5	"	"	"	"	
Chrysene	ND	6.74	13.5	"	"	"	"	
Dibenz(a,h)anthracene	ND	6.74	13.5	"	"	"	"	
Dibenzofuran	ND	6.74	13.5	"	"	"	"	
Fluoranthene	ND	6.74	13.5	"	"	"	"	
Fluorene	ND	6.74	13.5	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	6.74	13.5	"	"	"	"	
1-Methylnaphthalene	ND	6.74	13.5	"	"	"	"	
2-Methylnaphthalene	ND	6.74	13.5	"	"	"	"	
Naphthalene	ND	6.74	13.5	"	"	"	"	
Phenanthrene	ND	6.74	13.5	"	"	"	"	
Pyrene	ND	6.74	13.5	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>			<i>Recovery: 74 %</i>	<i>Limits: 44-120 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>			<i>87 %</i>	<i>Limits: 54-127 %</i>	"	"	"	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.63	13.3	ug/kg dry	1	05/19/17 14:43	EPA 8270D (SIM)	
Acenaphthylene	ND	6.63	13.3	"	"	"	"	
Anthracene	ND	6.63	13.3	"	"	"	"	
Benz(a)anthracene	ND	6.63	13.3	"	"	"	"	
Benzo(a)pyrene	ND	6.63	13.3	"	"	"	"	
Benzo(b)fluoranthene	7.59	6.63	13.3	"	"	"	"	Ja
Benzo(k)fluoranthene	ND	6.63	13.3	"	"	"	"	
Benzo(g,h,i)perylene	9.66	6.63	13.3	"	"	"	"	Ja
Chrysene	ND	6.63	13.3	"	"	"	"	
Dibenz(a,h)anthracene	ND	6.63	13.3	"	"	"	"	
Dibenzofuran	ND	6.63	13.3	"	"	"	"	
Fluoranthene	ND	6.63	13.3	"	"	"	"	
Fluorene	ND	6.63	13.3	"	"	"	"	
Indeno(1,2,3-cd)pyrene	8.08	6.63	13.3	"	"	"	"	Ja
1-Methylnaphthalene	ND	6.63	13.3	"	"	"	"	
2-Methylnaphthalene	ND	6.63	13.3	"	"	"	"	
Naphthalene	ND	6.63	13.3	"	"	"	"	
Phenanthrene	ND	6.63	13.3	"	"	"	"	
Pyrene	ND	6.63	13.3	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>101 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-7.2-8.2 (A7E0603-10)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.57	13.1	ug/kg dry	1	05/19/17 15:09	EPA 8270D (SIM)	
Acenaphthylene	ND	6.57	13.1	"	"	"	"	
Anthracene	ND	6.57	13.1	"	"	"	"	
Benz(a)anthracene	ND	6.57	13.1	"	"	"	"	
Benzo(a)pyrene	ND	6.57	13.1	"	"	"	"	
Benzo(b)fluoranthene	ND	6.57	13.1	"	"	"	"	
Benzo(k)fluoranthene	ND	6.57	13.1	"	"	"	"	
Benzo(g,h,i)perylene	ND	6.57	13.1	"	"	"	"	
Chrysene	ND	6.57	13.1	"	"	"	"	
Dibenz(a,h)anthracene	ND	6.57	13.1	"	"	"	"	
Dibenzofuran	ND	6.57	13.1	"	"	"	"	
Fluoranthene	ND	6.57	13.1	"	"	"	"	
Fluorene	ND	6.57	13.1	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	6.57	13.1	"	"	"	"	
1-Methylnaphthalene	ND	6.57	13.1	"	"	"	"	
2-Methylnaphthalene	ND	6.57	13.1	"	"	"	"	
Naphthalene	ND	6.57	13.1	"	"	"	"	
Phenanthrene	ND	6.57	13.1	"	"	"	"	
Pyrene	ND	6.57	13.1	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	5.71	11.4	ug/kg dry	1	05/19/17 15:35	EPA 8270D (SIM)	
Acenaphthylene	ND	5.71	11.4	"	"	"	"	
Anthracene	ND	5.71	11.4	"	"	"	"	
Benz(a)anthracene	ND	5.71	11.4	"	"	"	"	
Benzo(a)pyrene	ND	5.71	11.4	"	"	"	"	
Benzo(b)fluoranthene	ND	5.71	11.4	"	"	"	"	
Benzo(k)fluoranthene	ND	5.71	11.4	"	"	"	"	
Benzo(g,h,i)perylene	ND	5.71	11.4	"	"	"	"	
Chrysene	ND	5.71	11.4	"	"	"	"	
Dibenz(a,h)anthracene	ND	5.71	11.4	"	"	"	"	
Dibenzofuran	ND	5.71	11.4	"	"	"	"	
Fluoranthene	ND	5.71	11.4	"	"	"	"	
Fluorene	ND	5.71	11.4	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	5.71	11.4	"	"	"	"	
1-Methylnaphthalene	ND	5.71	11.4	"	"	"	"	
2-Methylnaphthalene	ND	5.71	11.4	"	"	"	"	
Naphthalene	ND	5.71	11.4	"	"	"	"	
Phenanthrene	ND	5.71	11.4	"	"	"	"	
Pyrene	ND	5.71	11.4	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 84 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>97 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	5.86	11.7	ug/kg dry	1	05/19/17 16:01	EPA 8270D (SIM)	
Acenaphthylene	12.6	5.86	11.7	"	"	"	"	
Anthracene	12.0	5.86	11.7	"	"	"	"	
Benz(a)anthracene	59.5	5.86	11.7	"	"	"	"	M-02
Benzo(a)pyrene	85.5	5.86	11.7	"	"	"	"	
Benzo(b)fluoranthene	135	5.86	11.7	"	"	"	"	M-02
Benzo(k)fluoranthene	43.4	5.86	11.7	"	"	"	"	M-02
Benzo(g,h,i)perylene	163	5.86	11.7	"	"	"	"	
Chrysene	84.4	5.86	11.7	"	"	"	"	M-02
Dibenz(a,h)anthracene	19.9	5.86	11.7	"	"	"	"	
Dibenzofuran	ND	5.86	11.7	"	"	"	"	
Fluoranthene	86.8	5.86	11.7	"	"	"	"	
Fluorene	ND	5.86	11.7	"	"	"	"	
Indeno(1,2,3-cd)pyrene	131	5.86	11.7	"	"	"	"	
1-Methylnaphthalene	ND	5.86	11.7	"	"	"	"	
2-Methylnaphthalene	7.13	5.86	11.7	"	"	"	"	Ja
Naphthalene	13.4	5.86	11.7	"	"	"	"	
Phenanthrene	49.0	5.86	11.7	"	"	"	"	
Pyrene	90.9	5.86	11.7	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 83 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>96 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.10	12.2	ug/kg dry	1	05/19/17 16:27	EPA 8270D (SIM)	
Acenaphthylene	ND	6.10	12.2	"	"	"	"	
Anthracene	ND	6.10	12.2	"	"	"	"	
Benz(a)anthracene	ND	6.10	12.2	"	"	"	"	
Benzo(a)pyrene	ND	6.10	12.2	"	"	"	"	
Benzo(b)fluoranthene	ND	6.10	12.2	"	"	"	"	
Benzo(k)fluoranthene	ND	6.10	12.2	"	"	"	"	
Benzo(g,h,i)perylene	ND	6.10	12.2	"	"	"	"	
Chrysene	ND	6.10	12.2	"	"	"	"	
Dibenz(a,h)anthracene	ND	6.10	12.2	"	"	"	"	
Dibenzofuran	ND	6.10	12.2	"	"	"	"	
Fluoranthene	ND	6.10	12.2	"	"	"	"	
Fluorene	ND	6.10	12.2	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	6.10	12.2	"	"	"	"	
1-Methylnaphthalene	ND	6.10	12.2	"	"	"	"	
2-Methylnaphthalene	ND	6.10	12.2	"	"	"	"	
Naphthalene	ND	6.10	12.2	"	"	"	"	
Phenanthrene	ND	6.10	12.2	"	"	"	"	
Pyrene	ND	6.10	12.2	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>87 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.88	13.8	ug/kg dry	1	05/19/17 16:53	EPA 8270D (SIM)	
Acenaphthylene	ND	6.88	13.8	"	"	"	"	
Anthracene	ND	6.88	13.8	"	"	"	"	
Benz(a)anthracene	ND	6.88	13.8	"	"	"	"	
Benzo(a)pyrene	ND	6.88	13.8	"	"	"	"	
Benzo(b)fluoranthene	ND	6.88	13.8	"	"	"	"	
Benzo(k)fluoranthene	ND	6.88	13.8	"	"	"	"	
Benzo(g,h,i)perylene	ND	6.88	13.8	"	"	"	"	
Chrysene	ND	6.88	13.8	"	"	"	"	
Dibenz(a,h)anthracene	ND	6.88	13.8	"	"	"	"	
Dibenzofuran	ND	6.88	13.8	"	"	"	"	
Fluoranthene	ND	6.88	13.8	"	"	"	"	
Fluorene	ND	6.88	13.8	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	6.88	13.8	"	"	"	"	
1-Methylnaphthalene	ND	6.88	13.8	"	"	"	"	
2-Methylnaphthalene	ND	6.88	13.8	"	"	"	"	
Naphthalene	ND	6.88	13.8	"	"	"	"	
Phenanthrene	ND	6.88	13.8	"	"	"	"	
Pyrene	ND	6.88	13.8	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-26-051517-0.5-1.5 (A7E0603-20)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	53.1	106	ug/kg dry	10	05/19/17 17:19	EPA 8270D (SIM)	
Acenaphthylene	ND	53.1	106	"	"	"	"	
Anthracene	92.8	53.1	106	"	"	"	"	Ja
Benz(a)anthracene	447	53.1	106	"	"	"	"	M-02
Benzo(a)pyrene	471	53.1	106	"	"	"	"	
Benzo(b)fluoranthene	666	53.1	106	"	"	"	"	M-02
Benzo(k)fluoranthene	260	53.1	106	"	"	"	"	M-02
Benzo(g,h,i)perylene	535	53.1	106	"	"	"	"	
Chrysene	510	53.1	106	"	"	"	"	M-02
Dibenz(a,h)anthracene	83.7	53.1	106	"	"	"	"	Ja
Dibenzofuran	ND	53.1	106	"	"	"	"	
Fluoranthene	690	53.1	106	"	"	"	"	
Fluorene	ND	53.1	106	"	"	"	"	
Indeno(1,2,3-cd)pyrene	463	53.1	106	"	"	"	"	
1-Methylnaphthalene	ND	53.1	106	"	"	"	"	
2-Methylnaphthalene	ND	53.1	106	"	"	"	"	
Naphthalene	ND	53.1	106	"	"	"	"	
Phenanthrene	432	53.1	106	"	"	"	"	
Pyrene	732	53.1	106	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>116 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Lisa Domenighini, Client Services Manager

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-26-051517-3.5-4.5 (A7E0603-21)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.49	13.0	ug/kg dry	1	05/19/17 17:45	EPA 8270D (SIM)	
Acenaphthylene	ND	6.49	13.0	"	"	"	"	
Anthracene	ND	6.49	13.0	"	"	"	"	
Benz(a)anthracene	ND	6.49	13.0	"	"	"	"	
Benzo(a)pyrene	ND	6.49	13.0	"	"	"	"	
Benzo(b)fluoranthene	ND	6.49	13.0	"	"	"	"	
Benzo(k)fluoranthene	ND	6.49	13.0	"	"	"	"	
Benzo(g,h,i)perylene	ND	6.49	13.0	"	"	"	"	
Chrysene	ND	6.49	13.0	"	"	"	"	
Dibenz(a,h)anthracene	ND	6.49	13.0	"	"	"	"	
Dibenzofuran	ND	6.49	13.0	"	"	"	"	
Fluoranthene	ND	6.49	13.0	"	"	"	"	
Fluorene	ND	6.49	13.0	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	6.49	13.0	"	"	"	"	
1-Methylnaphthalene	ND	6.49	13.0	"	"	"	"	
2-Methylnaphthalene	ND	6.49	13.0	"	"	"	"	
Naphthalene	ND	6.49	13.0	"	"	"	"	
Phenanthrene	ND	6.49	13.0	"	"	"	"	
Pyrene	ND	6.49	13.0	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>				<i>Recovery: 70 %</i>	<i>Limits: 44-120 %</i>	"	"	"
<i>p-Terphenyl-d14 (Surr)</i>				<i>77 %</i>	<i>Limits: 54-127 %</i>	"	"	"

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-27-051517-0.0-1.0 (A7E0603-22)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	28.5	57.0	ug/kg dry	5	05/19/17 18:11	EPA 8270D (SIM)	
Acenaphthylene	ND	28.5	57.0	"	"	"	"	
Anthracene	ND	28.5	57.0	"	"	"	"	
Benz(a)anthracene	339	28.5	57.0	"	"	"	"	M-02
Benzo(a)pyrene	528	28.5	57.0	"	"	"	"	
Benzo(b)fluoranthene	897	28.5	57.0	"	"	"	"	M-02
Benzo(k)fluoranthene	240	28.5	57.0	"	"	"	"	M-02
Benzo(g,h,i)perylene	822	28.5	57.0	"	"	"	"	
Chrysene	509	28.5	57.0	"	"	"	"	M-02
Dibenz(a,h)anthracene	94.0	28.5	57.0	"	"	"	"	
Dibenzofuran	ND	28.5	57.0	"	"	"	"	
Fluoranthene	424	28.5	57.0	"	"	"	"	
Fluorene	ND	28.5	57.0	"	"	"	"	
Indeno(1,2,3-cd)pyrene	658	28.5	57.0	"	"	"	"	
1-Methylnaphthalene	ND	28.5	57.0	"	"	"	"	
2-Methylnaphthalene	ND	28.5	57.0	"	"	"	"	
Naphthalene	ND	28.5	57.0	"	"	"	"	
Phenanthrene	103	28.5	57.0	"	"	"	"	
Pyrene	571	28.5	57.0	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 89 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil		Batch: 7050902			
Acenaphthene	ND	6.29	12.6	ug/kg dry	1	05/19/17 18:37	EPA 8270D (SIM)	
Acenaphthylene	ND	6.29	12.6	"	"	"	"	
Anthracene	ND	6.29	12.6	"	"	"	"	
Benz(a)anthracene	ND	6.29	12.6	"	"	"	"	
Benzo(a)pyrene	ND	6.29	12.6	"	"	"	"	
Benzo(b)fluoranthene	ND	6.29	12.6	"	"	"	"	
Benzo(k)fluoranthene	ND	6.29	12.6	"	"	"	"	
Benzo(g,h,i)perylene	ND	6.29	12.6	"	"	"	"	
Chrysene	ND	6.29	12.6	"	"	"	"	
Dibenz(a,h)anthracene	ND	6.29	12.6	"	"	"	"	
Dibenzofuran	ND	6.29	12.6	"	"	"	"	
Fluoranthene	ND	6.29	12.6	"	"	"	"	
Fluorene	ND	6.29	12.6	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	6.29	12.6	"	"	"	"	
1-Methylnaphthalene	ND	6.29	12.6	"	"	"	"	
2-Methylnaphthalene	ND	6.29	12.6	"	"	"	"	
Naphthalene	ND	6.29	12.6	"	"	"	"	
Phenanthrene	ND	6.29	12.6	"	"	"	"	
Pyrene	ND	6.29	12.6	"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 44-120 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>86 %</i>		<i>Limits: 54-127 %</i>		"	"	"

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil					
Batch: 7050988								
Arsenic	9.99	0.663	1.33	mg/kg dry	10	05/23/17 20:32	EPA 6020A	
Barium	291	0.663	1.33	"	"	"	"	
Cadmium	1.58	0.133	0.265	"	"	"	"	
Chromium	58.6	0.663	1.33	"	"	"	"	
Copper	58.0	0.663	1.33	"	"	"	"	
Lead	372	0.133	0.265	"	"	"	"	
Mercury	0.503	0.0530	0.106	"	"	"	"	
Molybdenum	6.88	0.663	1.33	"	"	"	"	
Nickel	34.1	0.663	1.33	"	"	"	"	
Selenium	ND	0.663	1.33	"	"	"	"	
Silver	0.331	0.133	0.265	"	"	"	"	
Zinc	641	2.65	5.30	"	"	"	"	
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil					
Batch: 7050988								
Arsenic	15.2	0.680	1.36	mg/kg dry	10	05/23/17 20:35	EPA 6020A	
Barium	156	0.680	1.36	"	"	"	"	
Cadmium	0.354	0.136	0.272	"	"	"	"	
Chromium	32.0	0.680	1.36	"	"	"	"	
Copper	22.6	0.680	1.36	"	"	"	"	
Lead	17.0	0.136	0.272	"	"	"	"	
Mercury	ND	0.0544	0.109	"	"	"	"	
Molybdenum	ND	0.680	1.36	"	"	"	"	
Nickel	18.6	0.680	1.36	"	"	"	"	
Selenium	ND	0.680	1.36	"	"	"	"	
Silver	ND	0.136	0.272	"	"	"	"	
Zinc	88.8	2.72	5.44	"	"	"	"	
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil					
Batch: 7050988								
Arsenic	7.05	0.592	1.18	mg/kg dry	10	05/23/17 20:39	EPA 6020A	
Barium	226	0.592	1.18	"	"	"	"	
Cadmium	0.699	0.118	0.237	"	"	"	"	
Chromium	20.6	0.592	1.18	"	"	"	"	
Copper	59.8	0.592	1.18	"	"	"	"	
Lead	207	0.118	0.237	"	"	"	"	
Mercury	0.185	0.0474	0.0947	"	"	"	"	

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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil					
Molybdenum	ND	0.592	1.18	mg/kg dry	10	"	EPA 6020A	
Nickel	14.2	0.592	1.18	"	"	"	"	
Selenium	ND	0.592	1.18	"	"	"	"	
Silver	0.260	0.118	0.237	"	"	"	"	
Zinc	197	2.37	4.74	"	"	"	"	
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil					
Batch: 7050988								
Arsenic	12.1	0.664	1.33	mg/kg dry	10	05/23/17 20:42	EPA 6020A	
Barium	158	0.664	1.33	"	"	"	"	
Cadmium	0.265	0.133	0.265	"	"	"	"	
Chromium	22.0	0.664	1.33	"	"	"	"	
Copper	16.6	0.664	1.33	"	"	"	"	
Lead	15.1	0.133	0.265	"	"	"	"	
Mercury	ND	0.0531	0.106	"	"	"	"	
Molybdenum	ND	0.664	1.33	"	"	"	"	
Nickel	14.4	0.664	1.33	"	"	"	"	
Selenium	ND	0.664	1.33	"	"	"	"	
Silver	ND	0.133	0.265	"	"	"	"	
Zinc	80.0	2.65	5.31	"	"	"	"	
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil					
Batch: 7050988								
Arsenic	8.21	0.708	1.42	mg/kg dry	10	05/23/17 20:45	EPA 6020A	
Barium	156	0.708	1.42	"	"	"	"	
Cadmium	0.439	0.142	0.283	"	"	"	"	
Chromium	17.0	0.708	1.42	"	"	"	"	
Copper	23.3	0.708	1.42	"	"	"	"	
Lead	12.1	0.142	0.283	"	"	"	"	
Mercury	ND	0.0566	0.113	"	"	"	"	
Molybdenum	ND	0.708	1.42	"	"	"	"	
Nickel	18.5	0.708	1.42	"	"	"	"	
Selenium	ND	0.708	1.42	"	"	"	"	
Silver	ND	0.142	0.283	"	"	"	"	
Zinc	69.6	2.83	5.66	"	"	"	"	
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil					
Batch: 7050988								

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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-2.5-3.5 (A7E0603-09) Matrix: Soil								
Arsenic	7.76	0.713	1.43	mg/kg dry	10	05/23/17 20:58	EPA 6020A	
Barium	166	0.713	1.43	"	"	"	"	
Cadmium	0.642	0.143	0.285	"	"	"	"	
Chromium	21.1	0.713	1.43	"	"	"	"	
Copper	48.4	0.713	1.43	"	"	"	"	
Lead	44.1	0.143	0.285	"	"	"	"	
Mercury	ND	0.0570	0.114	"	"	"	"	
Molybdenum	ND	0.713	1.43	"	"	"	"	
Nickel	18.5	0.713	1.43	"	"	"	"	
Selenium	ND	0.713	1.43	"	"	"	"	
Silver	ND	0.143	0.285	"	"	"	"	
Zinc	96.3	2.85	5.70	"	"	"	"	
EB-24-051517-7.2-8.2 (A7E0603-10) Matrix: Soil								
Batch: 7050988								
Arsenic	7.84	0.752	1.50	mg/kg dry	10	05/23/17 21:01	EPA 6020A	
Barium	149	0.752	1.50	"	"	"	"	
Cadmium	0.376	0.150	0.301	"	"	"	"	
Chromium	23.5	0.752	1.50	"	"	"	"	
Copper	25.0	0.752	1.50	"	"	"	"	
Lead	13.7	0.150	0.301	"	"	"	"	
Mercury	ND	0.0602	0.120	"	"	"	"	
Molybdenum	0.843	0.752	1.50	"	"	"	"	Ja
Nickel	18.6	0.752	1.50	"	"	"	"	
Selenium	ND	0.752	1.50	"	"	"	"	
Silver	ND	0.150	0.301	"	"	"	"	
Zinc	72.0	3.01	6.02	"	"	"	"	
EB-24-051517-12.0-13.0 (A7E0603-11) Matrix: Soil								
Batch: 7050988								
Arsenic	3.08	0.624	1.25	mg/kg dry	10	05/23/17 21:04	EPA 6020A	
Barium	122	0.624	1.25	"	"	"	"	
Cadmium	0.399	0.125	0.249	"	"	"	"	
Chromium	10.7	0.624	1.25	"	"	"	"	
Copper	16.3	0.624	1.25	"	"	"	"	
Lead	5.76	0.125	0.249	"	"	"	"	
Mercury	ND	0.0499	0.0998	"	"	"	"	

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Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil					
Molybdenum	ND	0.624	1.25	mg/kg dry	10	"	EPA 6020A	
Nickel	15.7	0.624	1.25	"	"	"	"	
Selenium	ND	0.624	1.25	"	"	"	"	
Silver	ND	0.125	0.249	"	"	"	"	
Zinc	53.7	2.49	4.99	"	"	"	"	
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil					
Batch: 7050988								
Arsenic	6.43	0.635	1.27	mg/kg dry	10	05/23/17 21:07	EPA 6020A	
Barium	177	0.635	1.27	"	"	"	"	
Cadmium	2.68	0.127	0.254	"	"	"	"	
Chromium	18.4	0.635	1.27	"	"	"	"	
Copper	488	0.635	1.27	"	"	"	"	
Lead	339	0.127	0.254	"	"	"	"	
Mercury	1.11	0.0508	0.102	"	"	"	"	
Molybdenum	1.87	0.635	1.27	"	"	"	"	
Nickel	18.7	0.635	1.27	"	"	"	"	
Selenium	ND	0.635	1.27	"	"	"	"	
Silver	0.279	0.127	0.254	"	"	"	"	
Zinc	407	2.54	5.08	"	"	"	"	
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil					
Batch: 7050988								
Arsenic	9.93	0.644	1.29	mg/kg dry	10	05/23/17 21:10	EPA 6020A	
Barium	149	0.644	1.29	"	"	"	"	
Cadmium	0.373	0.129	0.258	"	"	"	"	
Chromium	18.0	0.644	1.29	"	"	"	"	
Copper	23.3	0.644	1.29	"	"	"	"	
Lead	13.9	0.129	0.258	"	"	"	"	
Mercury	ND	0.0515	0.103	"	"	"	"	
Molybdenum	ND	0.644	1.29	"	"	"	"	
Nickel	18.2	0.644	1.29	"	"	"	"	
Selenium	ND	0.644	1.29	"	"	"	"	
Silver	ND	0.129	0.258	"	"	"	"	
Zinc	66.9	2.58	5.15	"	"	"	"	
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil					
Batch: 7050988								

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Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-25-051517-7.5-8.5 (A7E0603-16) Matrix: Soil								
Arsenic	7.73	0.770	1.54	mg/kg dry	10	05/23/17 21:13	EPA 6020A	
Barium	123	0.770	1.54	"	"	"	"	
Cadmium	0.416	0.154	0.308	"	"	"	"	
Chromium	13.1	0.770	1.54	"	"	"	"	
Copper	22.0	0.770	1.54	"	"	"	"	
Lead	10.4	0.154	0.308	"	"	"	"	
Mercury	ND	0.0616	0.123	"	"	"	"	
Molybdenum	ND	0.770	1.54	"	"	"	"	
Nickel	15.2	0.770	1.54	"	"	"	"	
Selenium	ND	0.770	1.54	"	"	"	"	
Silver	ND	0.154	0.308	"	"	"	"	
Zinc	66.9	3.08	6.16	"	"	"	"	
EB-26-051517-0.5-1.5 (A7E0603-20) Matrix: Soil								
Batch: 7051034								
Arsenic	8.61	0.574	1.15	mg/kg dry	10	05/25/17 19:49	EPA 6020A	
Barium	239	0.574	1.15	"	"	"	"	
Cadmium	22.7	0.115	0.230	"	"	"	"	
Chromium	38.6	0.574	1.15	"	"	"	"	
Copper	1160	0.574	1.15	"	"	"	"	
Mercury	1.65	0.0459	0.0919	"	"	"	"	
Molybdenum	6.57	0.574	1.15	"	"	"	"	
Nickel	49.9	0.574	1.15	"	"	"	"	
Selenium	ND	0.574	1.15	"	"	"	"	
Silver	3.35	0.115	0.230	"	"	"	"	
Zinc	797	2.30	4.59	"	"	"	"	
EB-26-051517-0.5-1.5 (A7E0603-20RE1) Matrix: Soil								
Batch: 7051034								
Lead	4320	1.15	2.30	mg/kg dry	100	05/26/17 14:29	EPA 6020A	
EB-26-051517-3.5-4.5 (A7E0603-21) Matrix: Soil								
Batch: 7051034								
Arsenic	13.6	0.730	1.46	mg/kg dry	10	05/25/17 19:52	EPA 6020A	
Barium	184	0.730	1.46	"	"	"	"	
Cadmium	0.336	0.146	0.292	"	"	"	"	
Chromium	22.8	0.730	1.46	"	"	"	"	
Copper	25.1	0.730	1.46	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-26-051517-3.5-4.5 (A7E0603-21)			Matrix: Soil					
Mercury	ND	0.0584	0.117	mg/kg dry	10	"	EPA 6020A	
Molybdenum	ND	0.730	1.46	"	"	"	"	
Nickel	20.2	0.730	1.46	"	"	"	"	
Selenium	ND	0.730	1.46	"	"	"	"	
Silver	ND	0.146	0.292	"	"	"	"	
Zinc	78.0	2.92	5.84	"	"	"	"	
EB-26-051517-3.5-4.5 (A7E0603-21RE1)			Matrix: Soil					
Batch: 7051034								
Lead	13.8	0.146	0.292	mg/kg dry	10	05/26/17 14:25	EPA 6020A	
EB-27-051517-0.0-1.0 (A7E0603-22)			Matrix: Soil					
Batch: 7051034								
Arsenic	10.0	0.669	1.34	mg/kg dry	10	05/25/17 19:55	EPA 6020A	
Barium	210	0.669	1.34	"	"	"	"	
Cadmium	2.85	0.134	0.268	"	"	"	"	
Chromium	24.7	0.669	1.34	"	"	"	"	
Copper	256	0.669	1.34	"	"	"	"	
Lead	319	0.134	0.268	"	"	"	"	
Mercury	0.249	0.0535	0.107	"	"	"	"	
Molybdenum	1.16	0.669	1.34	"	"	"	"	Ja
Nickel	38.3	0.669	1.34	"	"	"	"	
Selenium	ND	0.669	1.34	"	"	"	"	
Silver	0.428	0.134	0.268	"	"	"	"	
Zinc	338	2.68	5.35	"	"	"	"	
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil					
Batch: 7051034								
Arsenic	11.3	0.691	1.38	mg/kg dry	10	05/25/17 19:58	EPA 6020A	
Barium	227	0.691	1.38	"	"	"	"	
Cadmium	0.456	0.138	0.276	"	"	"	"	
Chromium	21.9	0.691	1.38	"	"	"	"	
Copper	33.3	0.691	1.38	"	"	"	"	
Lead	31.0	0.138	0.276	"	"	"	"	
Mercury	ND	0.0553	0.111	"	"	"	"	
Molybdenum	ND	0.691	1.38	"	"	"	"	
Nickel	22.6	0.691	1.38	"	"	"	"	
Selenium	ND	0.691	1.38	"	"	"	"	

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Lisa Domenighini, Client Services Manager

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Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil					
Silver	ND	0.138	0.276	mg/kg dry	10	"	EPA 6020A	
Zinc	85.3	2.76	5.53	"	"	"	"	

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Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil		Batch: 7050908			
% Solids	76.5	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil		Batch: 7050908			
% Solids	78.4	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil		Batch: 7050908			
% Solids	83.3	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil		Batch: 7050908			
% Solids	79.0	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil		Batch: 7050908			
% Solids	71.4	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil		Batch: 7050908			
% Solids	74.0	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-24-051517-7.2-8.2 (A7E0603-10)			Matrix: Soil		Batch: 7050908			
% Solids	73.0	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil		Batch: 7050908			
% Solids	85.7	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil		Batch: 7050908			
% Solids	84.3	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil		Batch: 7050908			
% Solids	78.1	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil		Batch: 7050908			
% Solids	71.2	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-26-051517-0.5-1.5 (A7E0603-20)			Matrix: Soil		Batch: 7050908			
% Solids	91.3	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-26-051517-3.5-4.5 (A7E0603-21)			Matrix: Soil		Batch: 7050908			
% Solids	74.0	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-27-051517-0.0-1.0 (A7E0603-22)			Matrix: Soil		Batch: 7050908			
% Solids	83.0	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil		Batch: 7050908			
% Solids	76.5	1.00	1.00	% by Weight	1	05/22/17 07:38	EPA 8000C	

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Lisa Domenighini, Client Services Manager

Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

Weck Laboratories, Inc.

ANALYTICAL SAMPLE RESULTS (Subcontracted)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	80.8	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	77.1	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	80.3	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	76.4	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	73.2	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	74.0	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-24-051517-7.2-8.2 (A7E0603-10)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	73.6	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	86.0	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	82.0	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	76.3	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil	Batch: W7E1303				
Batch: W7E1303								
% Solids	71.8	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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Weck Laboratories, Inc.

ANALYTICAL SAMPLE RESULTS (Subcontracted)

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
EB-26-051517-0.5-1.5 (A7E0603-20)			Matrix: Soil		Batch: W7E1303			
Batch: W7E1303								
% Solids	82.5	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-26-051517-3.5-4.5 (A7E0603-21)			Matrix: Soil		Batch: W7E1303			
Batch: W7E1303								
% Solids	73.7	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-27-051517-0.0-1.0 (A7E0603-22)			Matrix: Soil		Batch: W7E1303			
Batch: W7E1303								
% Solids	80.6	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil		Batch: W7E1303			
Batch: W7E1303								
% Solids	76.2	---	0.100	% by Weight	1	05/24/17 13:22	EPA 160.3M	

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Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

Weck Laboratories, Inc.

ANALYTICAL SAMPLE RESULTS (Subcontracted)

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
EB-22-051517-0.5-1.0 (A7E0603-01)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	13	1.6	6.2	mg/kg dry	1	06/01/17 14:23	EPA 6020A	
Uranium, Total	0.93	0.25	0.62	"	"	"	"	
EB-22-051517-4.0-5.0 (A7E0603-02)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	3.6	1.6	6.5	mg/kg dry	1	06/01/17 14:27	EPA 6020A	J
Uranium, Total	1.3	0.26	0.65	"	"	"	"	
EB-23-051517-1.0-2.0 (A7E0603-03)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	4.6	1.6	6.2	mg/kg dry	1	06/01/17 14:31	EPA 6020A	J
Uranium, Total	1.0	0.25	0.62	"	"	"	"	
EB-23-051517-4.0-5.0 (A7E0603-04)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	4.0	1.7	6.5	mg/kg dry	1	06/01/17 14:34	EPA 6020A	J
Uranium, Total	1.0	0.26	0.65	"	"	"	"	
EB-23-051517-8.4-9.4 (A7E0603-05)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	2.4	1.7	6.8	mg/kg dry	1	06/01/17 14:38	EPA 6020A	J
Uranium, Total	1.1	0.27	0.68	"	"	"	"	
EB-24-051517-2.5-3.5 (A7E0603-09)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	2.7	1.7	6.8	mg/kg dry	1	06/01/17 14:42	EPA 6020A	J
Uranium, Total	1.1	0.27	0.68	"	"	"	"	
EB-24-051517-7.2-8.2 (A7E0603-10)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	2.3	1.7	6.8	mg/kg dry	1	06/01/17 14:46	EPA 6020A	J
Uranium, Total	0.86	0.27	0.68	"	"	"	"	
EB-24-051517-12.0-13.0 (A7E0603-11)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	ND	1.5	5.8	mg/kg dry	1	06/01/17 14:49	EPA 6020A	
Uranium, Total	0.71	0.23	0.58	"	"	"	"	
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil	Batch: W7E1302				

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Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

Weck Laboratories, Inc.

ANALYTICAL SAMPLE RESULTS (Subcontracted)

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
EB-25-051517-0.5-1.5 (A7E0603-14)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	5.4	1.5	6.1	mg/kg dry	1	06/01/17 14:53	EPA 6020A	J
Uranium, Total	1.3	0.24	0.61	"	"	"	"	
EB-25-051517-4.0-5.0 (A7E0603-15)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	2.9	1.7	6.6	mg/kg dry	1	06/01/17 14:57	EPA 6020A	J
Uranium, Total	1.2	0.26	0.66	"	"	"	"	
EB-25-051517-7.5-8.5 (A7E0603-16)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	2.0	1.8	7.0	mg/kg dry	1	06/01/17 15:12	EPA 6020A	J
Uranium, Total	0.98	0.28	0.70	"	"	"	"	
EB-26-051517-0.5-1.5 (A7E0603-20)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	12	1.5	6.1	mg/kg dry	1	06/01/17 15:16	EPA 6020A	
Uranium, Total	0.97	0.24	0.61	"	"	"	"	
EB-26-051517-3.5-4.5 (A7E0603-21)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	2.6	1.7	6.8	mg/kg dry	1	06/01/17 15:19	EPA 6020A	J
Uranium, Total	1.2	0.27	0.68	"	"	"	"	
EB-27-051517-0.0-1.0 (A7E0603-22)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	4.1	1.6	6.2	mg/kg dry	1	06/01/17 15:23	EPA 6020A	J
Uranium, Total	1.1	0.25	0.62	"	"	"	"	
EB-27-051517-4.0-5.0 (A7E0603-23)			Matrix: Soil	Batch: W7E1302				
Batch: W7E1302								
Boron, Total	2.9	1.7	6.6	mg/kg dry	1	06/01/17 15:27	EPA 6020A	J
Uranium, Total	1.3	0.26	0.66	"	"	"	"	

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050909 - EPA 3546 (Fuels)						Soil						
Blank (7050909-BLK1)						Prepared: 05/19/17 12:15 Analyzed: 05/19/17 21:56						
NWTPH-Dx												
Diesel	ND	8.33	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	16.7	50.0	"	"	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (7050909-BS1)						Prepared: 05/19/17 12:15 Analyzed: 05/19/17 22:17						
NWTPH-Dx												
Diesel	114	10.0	25.0	mg/kg wet	1	125	---	91	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (7050909-DUP1)						Prepared: 05/19/17 12:15 Analyzed: 05/19/17 22:58						
QC Source Sample: EB-22-051517-0.5-1.0 (A7E0603-01)												
NWTPH-Dx												
Diesel	ND	12.2	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	176	24.5	50.0	"	"	---	272	---	---	43	30%	F-03, Q-04
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Batch 7050911 - EPA 3546 (Fuels)						Soil						
Blank (7050911-BLK1)						Prepared: 05/19/17 13:34 Analyzed: 05/19/17 21:55						
NWTPH-Dx												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	"	"	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (7050911-BS1)						Prepared: 05/19/17 13:34 Analyzed: 05/19/17 22:14						
NWTPH-Dx												
Diesel	115	10.0	25.0	mg/kg wet	1	125	---	92	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (7050911-DUP1)						Prepared: 05/19/17 13:34 Analyzed: 05/22/17 10:40						
QC Source Sample: EB-27-051517-4.0-5.0 (A7E0603-23)												
NWTPH-Dx												
Diesel	ND	11.9	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	23.9	50.0	"	"	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050780 - EPA 5035A						Soil						
Blank (7050780-BLK1)						Prepared: 05/20/17 14:00 Analyzed: 05/20/17 20:09						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur) Recovery: 97 % Limits: 50-150 % Dilution: 1x</i>												
<i>1,4-Difluorobenzene (Sur) 95 % 50-150 % "</i>												
LCS (7050780-BS2)						Prepared: 05/20/17 14:00 Analyzed: 05/20/17 19:42						
NWTPH-Gx (MS)												
Gasoline Range Organics	28.5	2.50	5.00	mg/kg wet	50	25.0	---	114	70-130%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur) Recovery: 100 % Limits: 50-150 % Dilution: 1x</i>												
<i>1,4-Difluorobenzene (Sur) 100 % 50-150 % "</i>												
Duplicate (7050780-DUP2)						Prepared: 05/15/17 12:40 Analyzed: 05/21/17 03:23						
QC Source Sample: EB-26-051517-0.5-1.5 (A7E0603-20)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	2.37	4.74	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur) Recovery: 103 % Limits: 50-150 % Dilution: 1x</i>												
<i>1,4-Difluorobenzene (Sur) 96 % 50-150 % "</i>												

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Lisa Domenighini, Client Services Manager

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 5035A						Soil						
Blank (7050846-BLK1)						Prepared: 05/18/17 08:30 Analyzed: 05/18/17 11:36						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (7050846-BS2)						Prepared: 05/18/17 08:30 Analyzed: 05/18/17 11:09						
NWTPH-Gx (MS)												
Gasoline Range Organics	29.0	2.50	5.00	mg/kg wet	50	25.0	---	116	70-130%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 112 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (7050846-DUP2)						Prepared: 05/15/17 09:10 Analyzed: 05/18/17 19:49						
QC Source Sample: EB-22-051517-0.5-1.0 (A7E0603-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	3.56	7.13	mg/kg dry	50	---	ND	---	---	---	---	30%
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 119 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>"</i>						

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Lisa Domenighini, Client Services Manager

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Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050780 - EPA 5035A						Soil						
Blank (7050780-BLK1)						Prepared: 05/20/17 14:00 Analyzed: 05/20/17 20:09						
5035A/8260B												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	"	"	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Bromodichloromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	"	"	---	---	---	---	---	---	
Bromomethane	ND	333	333	"	"	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	"	"	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Carbon tetrachloride	ND	33.3	66.7	"	"	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Chloroethane	ND	167	333	"	"	---	---	---	---	---	---	EST
Chloroform	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	"	"	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	"	"	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloropropane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	"	"	---	---	---	---	---	---	

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050780 - EPA 5035A						Soil						
Blank (7050780-BLK1)						Prepared: 05/20/17 14:00 Analyzed: 05/20/17 20:09						
5035A/8260B												
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	"	"	---	---	---	---	---	---	
2-Hexanone	ND	167	333	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Methylene chloride	ND	83.3	167	"	"	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	EST
1,2,3-Trichloropropane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	"	"	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 100 % Limits: 70-130 % Dilution: 1x
 Toluene-d8 (Surr) 101 % 70-130 % "
 4-Bromofluorobenzene (Surr) 100 % 70-130 % "

LCS (7050780-BS1) Prepared: 05/20/17 14:00 Analyzed: 05/20/17 19:15

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Lisa Domenighini, Client Services Manager

Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050780 - EPA 5035A						Soil						
LCS (7050780-BS1)						Prepared: 05/20/17 14:00 Analyzed: 05/20/17 19:15						
5035A/8260B												
Acetone	1800	500	1000	ug/kg wet	50	2000	---	90	65-135%	---	---	
Benzene	1010	5.00	10.0	"	"	1000	---	101	"	---	---	
Bromobenzene	1050	12.5	25.0	"	"	"	---	105	"	---	---	
Bromochloromethane	1020	25.0	50.0	"	"	"	---	102	"	---	---	
Bromodichloromethane	1020	50.0	100	"	"	"	---	102	"	---	---	
Bromoform	1040	50.0	100	"	"	"	---	104	"	---	---	
Bromomethane	1100	500	500	"	"	"	---	110	"	---	---	
2-Butanone (MEK)	1910	250	500	"	"	2000	---	96	"	---	---	
n-Butylbenzene	1050	25.0	50.0	"	"	1000	---	105	"	---	---	
sec-Butylbenzene	1080	25.0	50.0	"	"	"	---	108	"	---	---	
tert-Butylbenzene	1020	25.0	50.0	"	"	"	---	102	"	---	---	
Carbon tetrachloride	990	50.0	100	"	"	"	---	99	"	---	---	
Chlorobenzene	1040	12.5	25.0	"	"	"	---	104	"	---	---	
Chloroethane	1100	250	500	"	"	"	---	110	"	---	---	EST
Chloroform	1070	25.0	50.0	"	"	"	---	107	"	---	---	
Chloromethane	1000	125	250	"	"	"	---	100	"	---	---	
2-Chlorotoluene	1100	25.0	50.0	"	"	"	---	110	"	---	---	
4-Chlorotoluene	1010	25.0	50.0	"	"	"	---	101	"	---	---	
1,2-Dibromo-3-chloropropane	831	125	250	"	"	"	---	83	"	---	---	
Dibromochloromethane	1050	50.0	100	"	"	"	---	105	"	---	---	
1,2-Dibromoethane (EDB)	1050	25.0	50.0	"	"	"	---	105	"	---	---	
Dibromomethane	1060	25.0	50.0	"	"	"	---	106	"	---	---	
1,2-Dichlorobenzene	1020	12.5	25.0	"	"	"	---	102	"	---	---	
1,3-Dichlorobenzene	1050	12.5	25.0	"	"	"	---	105	"	---	---	
1,4-Dichlorobenzene	1000	12.5	25.0	"	"	"	---	100	"	---	---	
Dichlorodifluoromethane	962	50.0	100	"	"	"	---	96	"	---	---	
1,1-Dichloroethane	1080	12.5	25.0	"	"	"	---	108	"	---	---	
1,2-Dichloroethane (EDC)	1080	12.5	25.0	"	"	"	---	108	"	---	---	
1,1-Dichloroethene	1010	12.5	25.0	"	"	"	---	101	"	---	---	
cis-1,2-Dichloroethene	1080	12.5	25.0	"	"	"	---	108	"	---	---	
trans-1,2-Dichloroethene	1090	12.5	25.0	"	"	"	---	109	"	---	---	
1,2-Dichloropropane	1070	12.5	25.0	"	"	"	---	107	"	---	---	
1,3-Dichloropropane	1060	25.0	50.0	"	"	"	---	106	"	---	---	
2,2-Dichloropropane	1230	25.0	50.0	"	"	"	---	123	"	---	---	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050780 - EPA 5035A						Soil						
LCS (7050780-BS1)						Prepared: 05/20/17 14:00 Analyzed: 05/20/17 19:15						
5035A/8260B												
1,1-Dichloropropene	1130	25.0	50.0	ug/kg wet	"	"	---	113	"	---	---	
cis-1,3-Dichloropropene	1070	25.0	50.0	"	"	"	---	107	"	---	---	
trans-1,3-Dichloropropene	990	25.0	50.0	"	"	"	---	99	"	---	---	
Ethylbenzene	998	12.5	25.0	"	"	"	---	100	"	---	---	
Hexachlorobutadiene	1090	50.0	100	"	"	"	---	109	"	---	---	
2-Hexanone	1920	250	500	"	"	2000	---	96	"	---	---	
Isopropylbenzene	1040	25.0	50.0	"	"	1000	---	104	"	---	---	
4-Isopropyltoluene	1070	25.0	50.0	"	"	"	---	107	"	---	---	
4-Methyl-2-pentanone (MiBK)	1930	250	500	"	"	2000	---	97	"	---	---	
Methyl tert-butyl ether (MTBE)	994	25.0	50.0	"	"	1000	---	99	"	---	---	
Methylene chloride	1030	125	250	"	"	"	---	103	"	---	---	
Naphthalene	998	50.0	100	"	"	"	---	100	"	---	---	
n-Propylbenzene	1040	12.5	25.0	"	"	"	---	104	"	---	---	
Styrene	1070	25.0	50.0	"	"	"	---	107	"	---	---	
1,1,1,2-Tetrachloroethane	1060	12.5	25.0	"	"	"	---	106	"	---	---	
1,1,2,2-Tetrachloroethane	1030	25.0	50.0	"	"	"	---	103	"	---	---	
Tetrachloroethene (PCE)	1070	12.5	25.0	"	"	"	---	107	"	---	---	
Toluene	984	25.0	50.0	"	"	"	---	98	"	---	---	
1,2,3-Trichlorobenzene	1050	125	250	"	"	"	---	105	"	---	---	
1,2,4-Trichlorobenzene	1050	125	250	"	"	"	---	105	"	---	---	
1,1,1-Trichloroethane	1090	12.5	25.0	"	"	"	---	109	"	---	---	
1,1,2-Trichloroethane	1050	12.5	25.0	"	"	"	---	105	"	---	---	
Trichloroethene (TCE)	1000	12.5	25.0	"	"	"	---	100	"	---	---	
Trichlorofluoromethane	1090	50.0	100	"	"	"	---	109	"	---	---	EST
1,2,3-Trichloropropane	1030	25.0	50.0	"	"	"	---	103	"	---	---	
1,2,4-Trimethylbenzene	1040	25.0	50.0	"	"	"	---	104	"	---	---	
1,3,5-Trimethylbenzene	1040	25.0	50.0	"	"	"	---	104	"	---	---	
Vinyl chloride	1040	12.5	25.0	"	"	"	---	104	"	---	---	
m,p-Xylene	2070	25.0	50.0	"	"	2000	---	104	"	---	---	
o-Xylene	1020	12.5	25.0	"	"	1000	---	102	"	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 101 % Limits: 70-130 % Dilution: 1x
 Toluene-d8 (Surr) 99 % 70-130 % "
 4-Bromofluorobenzene (Surr) 99 % 70-130 % "

Duplicate (7050780-DUP2)

Prepared: 05/15/17 12:40 Analyzed: 05/21/17 03:23

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Lisa Domenighini, Client Services Manager

Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050780 - EPA 5035A						Soil						
Duplicate (7050780-DUP2)						Prepared: 05/15/17 12:40 Analyzed: 05/21/17 03:23						
QC Source Sample: EB-26-051517-0.5-1.5 (A7E0603-20)												
5035A/8260B												
Acetone	ND	474	948	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	4.74	9.48	"	"	---	ND	---	---	---	30%	
Bromobenzene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
Bromochloromethane	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
Bromodichloromethane	ND	47.4	94.8	"	"	---	ND	---	---	---	30%	
Bromoform	ND	47.4	94.8	"	"	---	ND	---	---	---	30%	
Bromomethane	ND	474	474	"	"	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	237	474	"	"	---	ND	---	---	---	30%	
n-Butylbenzene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	47.4	94.8	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	237	474	"	"	---	ND	---	---	---	30%	EST
Chloroform	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
Chloromethane	ND	118	237	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	118	237	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	47.4	94.8	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	47.4	94.8	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050780 - EPA 5035A						Soil						
Duplicate (7050780-DUP2)						Prepared: 05/15/17 12:40 Analyzed: 05/21/17 03:23						
QC Source Sample: EB-26-051517-0.5-1.5 (A7E0603-20)												
5035A/8260B												
2,2-Dichloropropane	ND	23.7	47.4	ug/kg dry	"	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	47.4	94.8	"	"	---	ND	---	---	---	30%	
2-Hexanone	ND	237	474	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	237	474	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	118	237	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	47.4	94.8	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
Styrene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
Toluene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	118	237	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	118	237	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	47.4	94.8	"	"	---	ND	---	---	---	30%	EST
1,2,3-Trichloropropane	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
Vinyl chloride	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	
m,p-Xylene	ND	23.7	47.4	"	"	---	ND	---	---	---	30%	
o-Xylene	ND	11.8	23.7	"	"	---	ND	---	---	---	30%	

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 101 %

Limits: 70-130 %

Dilution: 1x

Toluene-d8 (Surr)

99 %

70-130 %

"

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7050780 - EPA 5035A

Soil

Duplicate (7050780-DUP2)

Prepared: 05/15/17 12:40 Analyzed: 05/21/17 03:23

QC Source Sample: EB-26-051517-0.5-1.5 (A7E0603-20)

5035A/8260B

Surr: 4-Bromofluorobenzene (Surr)

Recovery: 100 %

Limits: 70-130 %

Dilution: 1x

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Lisa Domenighini, Client Services Manager

Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 5035A						Soil						
Blank (7050846-BLK1)						Prepared: 05/18/17 08:30 Analyzed: 05/18/17 11:36						
5035A/8260B												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	"	"	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Bromodichloromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	"	"	---	---	---	---	---	---	
Bromomethane	ND	333	333	"	"	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	"	"	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Chloroethane	ND	167	333	"	"	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	"	"	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	"	"	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloropropane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	"	"	---	---	---	---	---	---	

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Lisa Domenighini, Client Services Manager

Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 5035A						Soil						
Blank (7050846-BLK1)						Prepared: 05/18/17 08:30 Analyzed: 05/18/17 11:36						
5035A/8260B												
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	"	"	---	---	---	---	---	---	
2-Hexanone	ND	167	333	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Methylene chloride	ND	83.3	167	"	"	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	"	"	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 105 % Limits: 70-130 % Dilution: 1x
 Toluene-d8 (Surr) 99 % 70-130 % "
 4-Bromofluorobenzene (Surr) 101 % 70-130 % "

LCS (7050846-BS1)

Prepared: 05/18/17 08:30 Analyzed: 05/18/17 10:42

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 5035A						Soil						
LCS (7050846-BS1)						Prepared: 05/18/17 08:30 Analyzed: 05/18/17 10:42						
5035A/8260B												
Acetone	2110	500	1000	ug/kg wet	50	2000	---	105	65-135%	---	---	
Benzene	1080	5.00	10.0	"	"	1000	---	108	"	---	---	
Bromobenzene	994	12.5	25.0	"	"	"	---	99	"	---	---	
Bromochloromethane	1150	25.0	50.0	"	"	"	---	115	"	---	---	
Bromodichloromethane	1110	50.0	100	"	"	"	---	111	"	---	---	
Bromoform	882	50.0	100	"	"	"	---	88	"	---	---	
Bromomethane	986	500	500	"	"	"	---	99	"	---	---	
2-Butanone (MEK)	2220	250	500	"	"	2000	---	111	"	---	---	
n-Butylbenzene	970	25.0	50.0	"	"	1000	---	97	"	---	---	
sec-Butylbenzene	991	25.0	50.0	"	"	"	---	99	"	---	---	
tert-Butylbenzene	970	25.0	50.0	"	"	"	---	97	"	---	---	
Carbon tetrachloride	1020	25.0	50.0	"	"	"	---	102	"	---	---	
Chlorobenzene	970	12.5	25.0	"	"	"	---	97	"	---	---	
Chloroethane	806	250	500	"	"	"	---	81	"	---	---	
Chloroform	1110	25.0	50.0	"	"	"	---	111	"	---	---	
Chloromethane	852	125	250	"	"	"	---	85	"	---	---	
2-Chlorotoluene	994	25.0	50.0	"	"	"	---	99	"	---	---	
4-Chlorotoluene	983	25.0	50.0	"	"	"	---	98	"	---	---	
1,2-Dibromo-3-chloropropane	804	125	250	"	"	"	---	80	"	---	---	
Dibromochloromethane	936	50.0	100	"	"	"	---	94	"	---	---	
1,2-Dibromoethane (EDB)	1090	25.0	50.0	"	"	"	---	109	"	---	---	
Dibromomethane	1070	25.0	50.0	"	"	"	---	107	"	---	---	
1,2-Dichlorobenzene	942	12.5	25.0	"	"	"	---	94	"	---	---	
1,3-Dichlorobenzene	950	12.5	25.0	"	"	"	---	95	"	---	---	
1,4-Dichlorobenzene	928	12.5	25.0	"	"	"	---	93	"	---	---	
Dichlorodifluoromethane	654	50.0	100	"	"	"	---	65	"	---	---	
1,1-Dichloroethane	1070	12.5	25.0	"	"	"	---	107	"	---	---	
1,2-Dichloroethane (EDC)	1160	12.5	25.0	"	"	"	---	116	"	---	---	
1,1-Dichloroethene	1080	12.5	25.0	"	"	"	---	108	"	---	---	
cis-1,2-Dichloroethene	1110	12.5	25.0	"	"	"	---	111	"	---	---	
trans-1,2-Dichloroethene	1160	12.5	25.0	"	"	"	---	116	"	---	---	
1,2-Dichloropropane	1120	12.5	25.0	"	"	"	---	112	"	---	---	
1,3-Dichloropropane	1020	25.0	50.0	"	"	"	---	102	"	---	---	
2,2-Dichloropropane	1280	25.0	50.0	"	"	"	---	128	"	---	---	

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Lisa Domenighini, Client Services Manager

Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 5035A						Soil						
LCS (7050846-BS1)						Prepared: 05/18/17 08:30 Analyzed: 05/18/17 10:42						
5035A/8260B												
1,1-Dichloropropene	1120	25.0	50.0	ug/kg wet	"	"	---	112	"	---	---	
cis-1,3-Dichloropropene	1020	25.0	50.0	"	"	"	---	102	"	---	---	
trans-1,3-Dichloropropene	999	25.0	50.0	"	"	"	---	100	"	---	---	
Ethylbenzene	969	12.5	25.0	"	"	"	---	97	"	---	---	
Hexachlorobutadiene	896	50.0	100	"	"	"	---	90	"	---	---	
2-Hexanone	2220	250	500	"	"	2000	---	111	"	---	---	
Isopropylbenzene	1020	25.0	50.0	"	"	1000	---	102	"	---	---	
4-Isopropyltoluene	997	25.0	50.0	"	"	"	---	100	"	---	---	
4-Methyl-2-pentanone (MiBK)	2220	250	500	"	"	2000	---	111	"	---	---	
Methyl tert-butyl ether (MTBE)	1120	25.0	50.0	"	"	1000	---	112	"	---	---	
Methylene chloride	1040	125	250	"	"	"	---	104	"	---	---	
Naphthalene	855	50.0	100	"	"	"	---	86	"	---	---	
n-Propylbenzene	968	12.5	25.0	"	"	"	---	97	"	---	---	
Styrene	930	25.0	50.0	"	"	"	---	93	"	---	---	
1,1,1,2-Tetrachloroethane	956	12.5	25.0	"	"	"	---	96	"	---	---	
1,1,2,2-Tetrachloroethane	934	25.0	50.0	"	"	"	---	93	"	---	---	
Tetrachloroethene (PCE)	1050	12.5	25.0	"	"	"	---	105	"	---	---	
Toluene	936	25.0	50.0	"	"	"	---	94	"	---	---	
1,2,3-Trichlorobenzene	949	125	250	"	"	"	---	95	"	---	---	
1,2,4-Trichlorobenzene	927	125	250	"	"	"	---	93	"	---	---	
1,1,1-Trichloroethane	1140	12.5	25.0	"	"	"	---	114	"	---	---	
1,1,2-Trichloroethane	1020	12.5	25.0	"	"	"	---	102	"	---	---	
Trichloroethene (TCE)	1120	12.5	25.0	"	"	"	---	112	"	---	---	
Trichlorofluoromethane	973	50.0	100	"	"	"	---	97	"	---	---	
1,2,3-Trichloropropane	913	25.0	50.0	"	"	"	---	91	"	---	---	
1,2,4-Trimethylbenzene	1010	25.0	50.0	"	"	"	---	101	"	---	---	
1,3,5-Trimethylbenzene	1000	25.0	50.0	"	"	"	---	100	"	---	---	
Vinyl chloride	906	12.5	25.0	"	"	"	---	91	"	---	---	
m,p-Xylene	1960	25.0	50.0	"	"	2000	---	98	"	---	---	
o-Xylene	1040	12.5	25.0	"	"	1000	---	104	"	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 106 % Limits: 70-130 % Dilution: 1x
Toluene-d8 (Surr) 99 % 70-130 % "
4-Bromofluorobenzene (Surr) 101 % 70-130 % "

Duplicate (7050846-DUP2)

Prepared: 05/15/17 09:10 Analyzed: 05/18/17 19:49

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 5035A						Soil						
Duplicate (7050846-DUP2)						Prepared: 05/15/17 09:10 Analyzed: 05/18/17 19:49						
QC Source Sample: EB-22-051517-0.5-1.0 (A7E0603-01)												
5035A/8260B												
Acetone	ND	713	1430	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	7.84	7.13	14.3	"	"	---	ND	---	---	---	30%	Ja
Bromobenzene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
Bromochloromethane	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
Bromodichloromethane	ND	71.3	143	"	"	---	ND	---	---	---	30%	
Bromoform	ND	71.3	143	"	"	---	ND	---	---	---	30%	
Bromomethane	ND	713	713	"	"	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	356	713	"	"	---	ND	---	---	---	30%	
n-Butylbenzene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	356	713	"	"	---	ND	---	---	---	30%	
Chloroform	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
Chloromethane	ND	178	356	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	178	356	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	71.3	143	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	71.3	143	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050846 - EPA 5035A												
Soil												
Duplicate (7050846-DUP2)						Prepared: 05/15/17 09:10 Analyzed: 05/18/17 19:49						
QC Source Sample: EB-22-051517-0.5-1.0 (A7E0603-01)												
5035A/8260B												
2,2-Dichloropropane	ND	35.6	71.3	ug/kg dry	"	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	71.3	143	"	"	---	ND	---	---	---	30%	
2-Hexanone	ND	356	713	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	356	713	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	178	356	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	71.3	143	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
Styrene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
Toluene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	178	356	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	178	356	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	71.3	143	"	"	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
Vinyl chloride	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	
m,p-Xylene	ND	35.6	71.3	"	"	---	ND	---	---	---	30%	
o-Xylene	ND	17.8	35.6	"	"	---	ND	---	---	---	30%	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 109 % Limits: 70-130 % Dilution: 1x
Toluene-d8 (Surr) 97 % 70-130 % "

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7050846 - EPA 5035A

Soil

Duplicate (7050846-DUP2)

Prepared: 05/15/17 09:10 Analyzed: 05/18/17 19:49

QC Source Sample: EB-22-051517-0.5-1.0 (A7E0603-01)

5035A/8260B

Surr: 4-Bromofluorobenzene (Surr)

Recovery: 100 % Limits: 70-130 %

Dilution: 1x

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050887 - EPA 3546						Soil						
Blank (7050887-BLK1)						Prepared: 05/19/17 07:13 Analyzed: 05/22/17 13:34						C-07
EPA 8082A												
Aroclor 1016	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	4.17	8.33	"	"	---	---	---	---	---	---	
Aroclor 1232	ND	4.17	8.33	"	"	---	---	---	---	---	---	
Aroclor 1242	ND	4.17	8.33	"	"	---	---	---	---	---	---	
Aroclor 1248	ND	4.17	8.33	"	"	---	---	---	---	---	---	
Aroclor 1254	ND	4.17	8.33	"	"	---	---	---	---	---	---	
Aroclor 1260	ND	4.17	8.33	"	"	---	---	---	---	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 72-126 %</i>		<i>Dilution: 1x</i>						
LCS (7050887-BS1)						Prepared: 05/19/17 07:13 Analyzed: 05/22/17 13:52						C-07
EPA 8082A												
Aroclor 1016	147	5.00	10.0	ug/kg wet	1	250	---	59	47-134%	---	---	
Aroclor 1260	198	5.00	10.0	"	"	"	---	79	53-140%	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 72-126 %</i>		<i>Dilution: 1x</i>						
Duplicate (7050887-DUP1)						Prepared: 05/19/17 07:13 Analyzed: 05/22/17 14:45						C-07
QC Source Sample: EB-22-051517-0.5-1.0 (A7E0603-01)												
EPA 8082A												
Aroclor 1016	ND	5.57	11.1	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1221	ND	5.57	11.1	"	"	---	ND	---	---	---	30%	
Aroclor 1232	ND	5.57	11.1	"	"	---	ND	---	---	---	30%	
Aroclor 1242	ND	5.57	11.1	"	"	---	ND	---	---	---	30%	
Aroclor 1248	ND	5.57	11.1	"	"	---	ND	---	---	---	30%	
Aroclor 1254	ND	5.57	11.1	"	"	---	ND	---	---	---	30%	
Aroclor 1260	ND	17.8	17.8	"	"	---	ND	---	---	---	30%	R-02
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 92 %</i>		<i>Limits: 72-126 %</i>		<i>Dilution: 1x</i>						
Matrix Spike (7050887-MS1)						Prepared: 05/19/17 07:13 Analyzed: 05/23/17 14:44						C-07
QC Source Sample: EB-28-051517-18.0-19.0 (A7E0603-28)												
EPA 8082A												
Aroclor 1016	182	5.56	11.1	ug/kg dry	1	278	ND	66	47-134%	---	---	
Aroclor 1260	221	5.56	11.1	"	"	"	ND	80	53-140%	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 72-126 %</i>		<i>Dilution: 1x</i>						

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Lisa Domenighini, Client Services Manager

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7051165 - EPA 3546						Soil						
Blank (7051165-BLK1)						Prepared: 05/30/17 12:23 Analyzed: 05/31/17 08:41						C-07
EPA 8082A												
Aroclor 1016	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	4.55	9.09	"	"	---	---	---	---	---	---	
Aroclor 1232	ND	4.55	9.09	"	"	---	---	---	---	---	---	
Aroclor 1242	ND	4.55	9.09	"	"	---	---	---	---	---	---	
Aroclor 1248	ND	4.55	9.09	"	"	---	---	---	---	---	---	
Aroclor 1254	ND	4.55	9.09	"	"	---	---	---	---	---	---	
Aroclor 1260	ND	4.55	9.09	"	"	---	---	---	---	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 72-126 %</i>		<i>Dilution: 1x</i>						
LCS (7051165-BS1)						Prepared: 05/30/17 12:23 Analyzed: 05/31/17 08:58						C-07
EPA 8082A												
Aroclor 1016	214	5.00	10.0	ug/kg wet	1	250	---	86	47-134%	---	---	
Aroclor 1260	251	5.00	10.0	"	"	"	---	100	53-140%	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 72-126 %</i>		<i>Dilution: 1x</i>						
Duplicate (7051165-DUP2)						Prepared: 05/30/17 17:36 Analyzed: 05/31/17 10:27						C-07
QC Source Sample: EB-26-051517-0.5-1.5 (A7E0603-20RE3)												
EPA 8082A												
Aroclor 1016	ND	213	426	ug/kg dry	40	---	ND	---	---	---	30%	
Aroclor 1221	ND	213	426	"	"	---	ND	---	---	---	30%	
Aroclor 1232	ND	213	426	"	"	---	ND	---	---	---	30%	
Aroclor 1242	8960	213	426	"	"	---	9690	---	---	8	30%	P-10
Aroclor 1248	ND	213	426	"	"	---	ND	---	---	---	30%	
Aroclor 1254	ND	213	426	"	"	---	ND	---	---	---	30%	
Aroclor 1260	1200	213	426	"	"	---	1370	---	---	13	30%	P-10
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 181 %</i>		<i>Limits: 72-126 %</i>		<i>Dilution: 40x</i>						S-05

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Lisa Domenighini, Client Services Manager

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050902 - EPA 3546						Soil						
Blank (7050902-BLK2)						Prepared: 05/19/17 10:11 Analyzed: 05/22/17 14:43						
EPA 8270D (SIM)												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	---
Acenaphthylene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Anthracene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Benz(a)anthracene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Benzo(a)pyrene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Benzo(b)fluoranthene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Benzo(k)fluoranthene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Benzo(g,h,i)perylene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Chrysene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Dibenz(a,h)anthracene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Dibenzofuran	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Fluoranthene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Fluorene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
1-Methylnaphthalene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
2-Methylnaphthalene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Naphthalene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Phenanthrene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---
Pyrene	ND	4.55	9.09	"	"	---	---	---	---	---	---	---

Surr: 2-Fluorobiphenyl (Surr) Recovery: 83 % Limits: 44-120 % Dilution: 1x
 p-Terphenyl-d14 (Surr) 94 % 54-127 % "

LCS (7050902-BS1)						Prepared: 05/19/17 10:11 Analyzed: 05/19/17 20:33						
EPA 8270D (SIM)												
Acenaphthene	709	5.00	10.0	ug/kg wet	1	800	---	89	40-122%	---	---	---
Acenaphthylene	672	5.00	10.0	"	"	"	---	84	32-132%	---	---	---
Anthracene	786	5.00	10.0	"	"	"	---	98	47-123%	---	---	---
Benz(a)anthracene	708	5.00	10.0	"	"	"	---	88	49-126%	---	---	---
Benzo(a)pyrene	693	5.00	10.0	"	"	"	---	87	45-129%	---	---	---
Benzo(b)fluoranthene	694	5.00	10.0	"	"	"	---	87	45-132%	---	---	---
Benzo(k)fluoranthene	746	5.00	10.0	"	"	"	---	93	47-132%	---	---	---
Benzo(g,h,i)perylene	652	5.00	10.0	"	"	"	---	81	43-134%	---	---	---
Chrysene	718	5.00	10.0	"	"	"	---	90	50-124%	---	---	---
Dibenz(a,h)anthracene	703	5.00	10.0	"	"	"	---	88	45-134%	---	---	---
Dibenzofuran	741	5.00	10.0	"	"	"	---	93	44-120%	---	---	---

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Lisa Domenighini, Client Services Manager

Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050902 - EPA 3546												
Soil												
LCS (7050902-BS1) Prepared: 05/19/17 10:11 Analyzed: 05/19/17 20:33												
EPA 8270D (SIM)												
Fluoranthene	715	5.00	10.0	ug/kg wet	"	"	---	89	50-127%	---	---	
Fluorene	717	5.00	10.0	"	"	"	---	90	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	844	5.00	10.0	"	"	"	---	105	45-133%	---	---	
1-Methylnaphthalene	734	5.00	10.0	"	"	"	---	92	40-120%	---	---	
2-Methylnaphthalene	778	5.00	10.0	"	"	"	---	97	38-122%	---	---	
Naphthalene	723	5.00	10.0	"	"	"	---	90	35-123%	---	---	
Phenanthrene	702	5.00	10.0	"	"	"	---	88	50-121%	---	---	
Pyrene	706	5.00	10.0	"	"	"	---	88	47-127%	---	---	

Surr: 2-Fluorobiphenyl (Surr) Recovery: 90 % Limits: 44-120 % Dilution: 1x
p-Terphenyl-d14 (Surr) 103 % 54-127 % "

Duplicate (7050902-DUP1) Prepared: 05/19/17 10:11 Analyzed: 05/19/17 21:26

QC Source Sample: EB-22-051517-0.5-1.0 (A7E0603-01)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270D (SIM)												
Acenaphthene	8.39	6.47	12.9	ug/kg dry	1	---	ND	---	---	---	30%	Ja
Acenaphthylene	94.2	6.47	12.9	"	"	---	92.4	---	---	2	30%	
Anthracene	248	6.47	12.9	"	"	---	236	---	---	5	30%	
Benz(a)anthracene	1610	6.47	12.9	"	"	---	1540	---	---	4	30%	M-02
Benzo(a)pyrene	3160	6.47	12.9	"	"	---	2990	---	---	6	30%	
Benzo(b)fluoranthene	2910	6.47	12.9	"	"	---	2790	---	---	4	30%	M-02
Benzo(k)fluoranthene	877	6.47	12.9	"	"	---	846	---	---	4	30%	M-02
Benzo(g,h,i)perylene	2990	6.47	12.9	"	"	---	3010	---	---	0.7	30%	
Chrysene	2120	6.47	12.9	"	"	---	2060	---	---	3	30%	M-02
Dibenz(a,h)anthracene	327	6.47	12.9	"	"	---	313	---	---	4	30%	
Dibenzofuran	15.9	6.47	12.9	"	"	---	12.6	---	---	23	30%	
Fluoranthene	3810	6.47	12.9	"	"	---	3610	---	---	5	30%	
Fluorene	24.6	6.47	12.9	"	"	---	18.7	---	---	27	30%	
Indeno(1,2,3-cd)pyrene	2600	6.47	12.9	"	"	---	2610	---	---	0.4	30%	
1-Methylnaphthalene	13.8	6.47	12.9	"	"	---	11.3	---	---	20	30%	
2-Methylnaphthalene	34.8	6.47	12.9	"	"	---	29.6	---	---	16	30%	
Naphthalene	229	6.47	12.9	"	"	---	209	---	---	9	30%	
Phenanthrene	1010	6.47	12.9	"	"	---	908	---	---	11	30%	

Surr: 2-Fluorobiphenyl (Surr) Recovery: 83 % Limits: 44-120 % Dilution: 1x
p-Terphenyl-d14 (Surr) 101 % 54-127 % "

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050902 - EPA 3546												
Soil												
Duplicate (7050902-DUP2)						Prepared: 05/19/17 10:11 Analyzed: 05/22/17 15:35						
QC Source Sample: EB-22-051517-0.5-1.0 (A7E0603-01RE1)												
EPA 8270D (SIM)												
Pyrene	6610	64.7	129	ug/kg dry	10	---	6610	---	---	0.007	30%	
Matrix Spike (7050902-MS1)						Prepared: 05/19/17 10:12 Analyzed: 05/20/17 00:03						
QC Source Sample: EB-28-051517-18.0-19.0 (A7E0603-28)												
EPA 8270D (SIM)												
Acenaphthene	849	6.34	12.7	ug/kg dry	1	1010	ND	84	40-122%	---	---	
Acenaphthylene	806	6.34	12.7	"	"	"	ND	79	32-132%	---	---	
Anthracene	903	6.34	12.7	"	"	"	ND	89	47-123%	---	---	
Benz(a)anthracene	846	6.34	12.7	"	"	"	ND	83	49-126%	---	---	
Benzo(a)pyrene	828	6.34	12.7	"	"	"	ND	82	45-129%	---	---	
Benzo(b)fluoranthene	856	6.34	12.7	"	"	"	ND	84	45-132%	---	---	
Benzo(k)fluoranthene	869	6.34	12.7	"	"	"	ND	86	47-132%	---	---	
Benzo(g,h,i)perylene	747	6.34	12.7	"	"	"	ND	74	43-134%	---	---	
Chrysene	859	6.34	12.7	"	"	"	ND	85	50-124%	---	---	
Dibenz(a,h)anthracene	854	6.34	12.7	"	"	"	ND	84	45-134%	---	---	
Dibenzofuran	893	6.34	12.7	"	"	"	ND	88	44-120%	---	---	
Fluoranthene	818	6.34	12.7	"	"	"	ND	81	50-127%	---	---	
Fluorene	847	6.34	12.7	"	"	"	ND	84	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	993	6.34	12.7	"	"	"	ND	98	45-133%	---	---	
1-Methylnaphthalene	864	6.34	12.7	"	"	"	ND	85	40-120%	---	---	
2-Methylnaphthalene	916	6.34	12.7	"	"	"	ND	90	38-122%	---	---	
Naphthalene	862	6.34	12.7	"	"	"	ND	85	35-123%	---	---	
Phenanthrene	832	6.34	12.7	"	"	"	ND	82	50-121%	---	---	
Pyrene	799	6.34	12.7	"	"	"	ND	79	47-127%	---	---	

Surr: 2-Fluorobiphenyl (Surr) Recovery: 81 % Limits: 44-120 % Dilution: 1x
 p-Terphenyl-d14 (Surr) 97 % 54-127 % "

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050988 - EPA 3051A												
Soil												
Blank (7050988-BLK1)												
Prepared: 05/23/17 09:58 Analyzed: 05/23/17 19:45												
EPA 6020A												
Arsenic	ND	0.500	1.00	mg/kg wet	10	---	---	---	---	---	---	---
Barium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Cadmium	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Chromium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Copper	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Lead	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Mercury	ND	0.0400	0.0800	"	"	---	---	---	---	---	---	---
Molybdenum	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Nickel	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Selenium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Silver	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Zinc	ND	2.00	4.00	"	"	---	---	---	---	---	---	---

LCS (7050988-BS1)												
Prepared: 05/23/17 09:58 Analyzed: 05/23/17 19:48												
EPA 6020A												
Arsenic	49.3	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	---
Barium	51.2	0.500	1.00	"	"	"	---	102	"	---	---	---
Cadmium	51.6	0.100	0.200	"	"	"	---	103	"	---	---	---
Chromium	49.7	0.500	1.00	"	"	"	---	99	"	---	---	---
Copper	50.8	0.500	1.00	"	"	"	---	102	"	---	---	---
Lead	54.0	0.100	0.200	"	"	"	---	108	"	---	---	---
Mercury	1.03	0.0400	0.0800	"	"	1.00	---	103	"	---	---	---
Molybdenum	26.4	0.500	1.00	"	"	25.0	---	106	"	---	---	---
Nickel	50.0	0.500	1.00	"	"	50.0	---	100	"	---	---	---
Selenium	26.9	0.500	1.00	"	"	25.0	---	108	"	---	---	---
Silver	26.2	0.100	0.200	"	"	"	---	105	"	---	---	---
Zinc	48.8	2.00	4.00	"	"	50.0	---	98	"	---	---	---

Matrix Spike (7050988-MS2)												
Prepared: 05/23/17 09:58 Analyzed: 05/23/17 21:17												
QC Source Sample: EB-25-051517-7.5-8.5 (A7E0603-16)												
EPA 6020A												
Arsenic	82.0	0.767	1.53	mg/kg dry	10	76.7	7.73	97	75-125%	---	---	---
Barium	199	0.767	1.53	"	"	"	123	100	"	---	---	---
Cadmium	78.6	0.153	0.307	"	"	"	0.416	102	"	---	---	---
Chromium	88.2	0.767	1.53	"	"	"	13.1	98	"	---	---	---

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050988 - EPA 3051A						Soil						
Matrix Spike (7050988-MS2)						Prepared: 05/23/17 09:58 Analyzed: 05/23/17 21:17						
QC Source Sample: EB-25-051517-7.5-8.5 (A7E0603-16)												
EPA 6020A												
Copper	97.5	0.767	1.53	mg/kg dry	"	"	22.0	98	"	---	---	
Lead	89.7	0.153	0.307	"	"	"	10.4	103	"	---	---	
Mercury	1.55	0.0614	0.123	"	"	1.53	ND	101	"	---	---	
Molybdenum	40.7	0.767	1.53	"	"	38.3	ND	106	"	---	---	
Nickel	90.5	0.767	1.53	"	"	76.7	15.2	98	"	---	---	
Selenium	41.3	0.767	1.53	"	"	38.3	ND	108	"	---	---	
Silver	39.5	0.153	0.307	"	"	"	ND	103	"	---	---	
Zinc	137	3.07	6.14	"	"	76.7	66.9	91	"	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7051034 - EPA 3051A												
Soil												
Blank (7051034-BLK1)												
						Prepared: 05/24/17 09:48 Analyzed: 05/25/17 18:56						
EPA 6020A												
Arsenic	ND	0.500	1.00	mg/kg wet	10	---	---	---	---	---	---	---
Barium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Cadmium	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Chromium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Copper	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Lead	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Mercury	ND	0.0400	0.0800	"	"	---	---	---	---	---	---	---
Molybdenum	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Nickel	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Selenium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Silver	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Zinc	ND	2.00	4.00	"	"	---	---	---	---	---	---	---

LCS (7051034-BS1)												
						Prepared: 05/24/17 09:48 Analyzed: 05/25/17 19:07						
EPA 6020A												
Arsenic	51.2	0.500	1.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	---
Barium	52.9	0.500	1.00	"	"	"	---	106	"	---	---	---
Cadmium	50.8	0.100	0.200	"	"	"	---	101	"	---	---	---
Chromium	52.4	0.500	1.00	"	"	"	---	105	"	---	---	---
Copper	54.2	0.500	1.00	"	"	"	---	108	"	---	---	---
Lead	54.1	0.100	0.200	"	"	"	---	108	"	---	---	---
Mercury	1.07	0.0400	0.0800	"	"	1.00	---	107	"	---	---	---
Molybdenum	27.6	0.500	1.00	"	"	25.0	---	110	"	---	---	---
Nickel	52.5	0.500	1.00	"	"	50.0	---	105	"	---	---	---
Selenium	26.4	0.500	1.00	"	"	25.0	---	106	"	---	---	---
Silver	26.6	0.100	0.200	"	"	"	---	107	"	---	---	---
Zinc	50.5	2.00	4.00	"	"	50.0	---	101	"	---	---	---

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7050908 - Total Solids (Dry Weight)						Soil						
Duplicate (7050908-DUP2)						Prepared: 05/19/17 12:00 Analyzed: 05/22/17 07:38						
QC Source Sample: EB-22-051517-0.5-1.0 (A7E0603-01)												
EPA 8000C												
% Solids	77.9	1.00	1.00	% by Weight	1	---	76.5	---	---	2	10%	

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Weck Laboratories, Inc.

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch W7E1303 - General Preparation						Solid						
Duplicate (W7E1303-DUP1)						Prepared: 05/22/17 16:32 Analyzed: 05/24/17 13:22						
QC Source Sample: A7E0603-31 (7E22020-18)												
EPA 160.3M												
% Solids	74.2	---	0.100	% by Weight	1	---	74.5	---	---	0.5	20%	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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Weck Laboratories, Inc.

QUALITY CONTROL (QC) SAMPLE RESULTS

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch W7E1302 - EPA 3050M-SCL						Solid						
Blank (W7E1302-BLK1)						Prepared: 05/22/17 16:30 Analyzed: 06/01/17 14:04						
EPA 6020A												
Boron, Total	ND	1.3	5.0	mg/kg wet	1	---	---	---	---	---	---	---
Uranium, Total	ND	0.20	0.50	"	"	---	---	---	---	---	---	---
LCS (W7E1302-BS1)						Prepared: 05/22/17 16:30 Analyzed: 06/01/17 14:08						
EPA 6020A												
Boron, Total	47.7	1.3	5.0	mg/kg wet	1	50.0	---	95	80-120%	---	---	---
Uranium, Total	47.8	0.20	0.50	"	"	"	---	96	"	---	---	---
Matrix Spike (W7E1302-MS1)						Prepared: 05/22/17 16:30 Analyzed: 06/01/17 14:12						
QC Source Sample: A7E0603-01 (A7E0603-01)												
EPA 6020A												
Boron, Total	65.4	1.6	6.2	mg/kg dry	1	61.5	12.8	85	75-125%	---	---	---
Uranium, Total	58.0	0.25	0.62	"	"	"	0.931	93	"	---	---	---
Matrix Spike Dup (W7E1302-MSD1)						Prepared: 05/22/17 16:30 Analyzed: 06/01/17 14:16						
QC Source Sample: A7E0603-01 (A7E0603-01)												
EPA 6020A												
Boron, Total	65.6	1.6	6.2	mg/kg dry	1	60.0	12.8	88	75-125%	0.4	20%	---
Uranium, Total	60.1	0.25	0.62	"	"	"	0.931	99	"	4	20%	---

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 7050909							
A7E0603-01	Soil	NWTPH-Dx	05/15/17 09:10	05/19/17 12:15	10.62g/5mL	10g/5mL	0.94
A7E0603-02	Soil	NWTPH-Dx	05/15/17 09:20	05/19/17 12:15	11.68g/5mL	10g/5mL	0.86
A7E0603-03	Soil	NWTPH-Dx	05/15/17 09:32	05/19/17 12:15	11.22g/5mL	10g/5mL	0.89
A7E0603-04	Soil	NWTPH-Dx	05/15/17 09:35	05/19/17 12:15	10.83g/5mL	10g/5mL	0.92
A7E0603-05	Soil	NWTPH-Dx	05/15/17 09:45	05/19/17 12:15	11.68g/5mL	10g/5mL	0.86
A7E0603-09	Soil	NWTPH-Dx	05/15/17 10:40	05/19/17 12:15	10.86g/5mL	10g/5mL	0.92
A7E0603-10	Soil	NWTPH-Dx	05/15/17 10:48	05/19/17 12:15	11.37g/5mL	10g/5mL	0.88
A7E0603-11	Soil	NWTPH-Dx	05/15/17 10:54	05/19/17 12:15	11.23g/5mL	10g/5mL	0.89
A7E0603-14	Soil	NWTPH-Dx	05/15/17 11:30	05/19/17 12:15	11.23g/5mL	10g/5mL	0.89
A7E0603-15	Soil	NWTPH-Dx	05/15/17 11:40	05/19/17 12:15	10.78g/5mL	10g/5mL	0.93
A7E0603-16	Soil	NWTPH-Dx	05/15/17 11:50	05/19/17 12:15	11.91g/5mL	10g/5mL	0.84
A7E0603-20	Soil	NWTPH-Dx	05/15/17 12:40	05/19/17 12:15	11.4g/5mL	10g/5mL	0.88
A7E0603-21	Soil	NWTPH-Dx	05/15/17 12:45	05/19/17 12:15	10.3g/5mL	10g/5mL	0.97
A7E0603-22	Soil	NWTPH-Dx	05/15/17 12:55	05/19/17 12:15	11.89g/5mL	10g/5mL	0.84
Batch: 7050911							
A7E0603-23	Soil	NWTPH-Dx	05/15/17 13:00	05/19/17 13:34	10.96g/5mL	10g/5mL	0.91

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 7050780							
A7E0603-04	Soil	NWTPH-Gx (MS)	05/15/17 09:35	05/15/17 09:35	6.89g/5mL	5g/5mL	0.73
A7E0603-05	Soil	NWTPH-Gx (MS)	05/15/17 09:45	05/15/17 09:45	6.44g/5mL	5g/5mL	0.78
A7E0603-09	Soil	NWTPH-Gx (MS)	05/15/17 10:40	05/15/17 10:40	6.13g/5mL	5g/5mL	0.82
A7E0603-10	Soil	NWTPH-Gx (MS)	05/15/17 10:48	05/15/17 10:48	6.36g/5mL	5g/5mL	0.79
A7E0603-11	Soil	NWTPH-Gx (MS)	05/15/17 10:54	05/15/17 10:54	5.69g/5mL	5g/5mL	0.88
A7E0603-14	Soil	NWTPH-Gx (MS)	05/15/17 11:30	05/15/17 11:30	7.42g/5mL	5g/5mL	0.67
A7E0603-15	Soil	NWTPH-Gx (MS)	05/15/17 11:40	05/15/17 11:40	6.64g/5mL	5g/5mL	0.75
A7E0603-16	Soil	NWTPH-Gx (MS)	05/15/17 11:50	05/15/17 11:50	5.99g/5mL	5g/5mL	0.84
A7E0603-20	Soil	NWTPH-Gx (MS)	05/15/17 12:40	05/15/17 12:40	6.8g/5mL	5g/5mL	0.74
A7E0603-21	Soil	NWTPH-Gx (MS)	05/15/17 12:45	05/15/17 12:45	6.67g/5mL	5g/5mL	0.75
A7E0603-22	Soil	NWTPH-Gx (MS)	05/15/17 12:55	05/15/17 12:55	6.35g/5mL	5g/5mL	0.79
A7E0603-23	Soil	NWTPH-Gx (MS)	05/15/17 13:00	05/15/17 13:00	6.47g/5mL	5g/5mL	0.77

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Lisa Domenighini, Client Services Manager

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-041 Project Manager: Jeff Dresser	Reported: 06/06/17 10:14
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SAMPLE PREPARATION INFORMATION

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 7050846							
A7E0603-01	Soil	NWTPH-Gx (MS)	05/15/17 09:10	05/15/17 09:10	6.18g/5mL	5g/5mL	0.81
A7E0603-02	Soil	NWTPH-Gx (MS)	05/15/17 09:20	05/15/17 09:20	6.79g/5mL	5g/5mL	0.74
A7E0603-03	Soil	NWTPH-Gx (MS)	05/15/17 09:32	05/15/17 09:32	6.2g/5mL	5g/5mL	0.81

Volatile Organic Compounds by EPA 8260B

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 7050780							
A7E0603-04	Soil	5035A/8260B	05/15/17 09:35	05/15/17 09:35	6.89g/5mL	5g/5mL	0.73
A7E0603-05	Soil	5035A/8260B	05/15/17 09:45	05/15/17 09:45	6.44g/5mL	5g/5mL	0.78
A7E0603-09	Soil	5035A/8260B	05/15/17 10:40	05/15/17 10:40	6.13g/5mL	5g/5mL	0.82
A7E0603-10	Soil	5035A/8260B	05/15/17 10:48	05/15/17 10:48	6.36g/5mL	5g/5mL	0.79
A7E0603-11	Soil	5035A/8260B	05/15/17 10:54	05/15/17 10:54	5.69g/5mL	5g/5mL	0.88
A7E0603-14	Soil	5035A/8260B	05/15/17 11:30	05/15/17 11:30	7.42g/5mL	5g/5mL	0.67
A7E0603-15	Soil	5035A/8260B	05/15/17 11:40	05/15/17 11:40	6.64g/5mL	5g/5mL	0.75
A7E0603-16	Soil	5035A/8260B	05/15/17 11:50	05/15/17 11:50	5.99g/5mL	5g/5mL	0.84
A7E0603-20	Soil	5035A/8260B	05/15/17 12:40	05/15/17 12:40	6.8g/5mL	5g/5mL	0.74
A7E0603-21	Soil	5035A/8260B	05/15/17 12:45	05/15/17 12:45	6.67g/5mL	5g/5mL	0.75
A7E0603-22	Soil	5035A/8260B	05/15/17 12:55	05/15/17 12:55	6.35g/5mL	5g/5mL	0.79
A7E0603-23	Soil	5035A/8260B	05/15/17 13:00	05/15/17 13:00	6.47g/5mL	5g/5mL	0.77
Batch: 7050846							
A7E0603-01	Soil	5035A/8260B	05/15/17 09:10	05/15/17 09:10	6.18g/5mL	5g/5mL	0.81
A7E0603-02	Soil	5035A/8260B	05/15/17 09:20	05/15/17 09:20	6.79g/5mL	5g/5mL	0.74
A7E0603-03	Soil	5035A/8260B	05/15/17 09:32	05/15/17 09:32	6.2g/5mL	5g/5mL	0.81

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 7050887							
A7E0603-01	Soil	EPA 8082A	05/15/17 09:10	05/19/17 07:13	11.41g/5mL	10g/5mL	0.88
A7E0603-02	Soil	EPA 8082A	05/15/17 09:20	05/19/17 07:13	11.05g/5mL	10g/5mL	0.91
A7E0603-03RE2	Soil	EPA 8082A	05/15/17 09:32	05/19/17 07:13	11.07g/5mL	10g/5mL	0.90
A7E0603-04	Soil	EPA 8082A	05/15/17 09:35	05/19/17 07:13	11.73g/5mL	10g/5mL	0.85

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

SAMPLE PREPARATION INFORMATION

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A7E0603-05	Soil	EPA 8082A	05/15/17 09:45	05/19/17 07:13	11.75g/5mL	10g/5mL	0.85
A7E0603-09	Soil	EPA 8082A	05/15/17 10:40	05/19/17 07:13	11.58g/5mL	10g/5mL	0.86
A7E0603-10	Soil	EPA 8082A	05/15/17 10:48	05/19/17 07:13	11.59g/5mL	10g/5mL	0.86
A7E0603-11	Soil	EPA 8082A	05/15/17 10:54	05/19/17 07:13	11.12g/5mL	10g/5mL	0.90
A7E0603-14RE2	Soil	EPA 8082A	05/15/17 11:30	05/19/17 07:13	11.18g/5mL	10g/5mL	0.89
A7E0603-15	Soil	EPA 8082A	05/15/17 11:40	05/19/17 07:13	11.66g/5mL	10g/5mL	0.86
A7E0603-16	Soil	EPA 8082A	05/15/17 11:50	05/19/17 07:13	11.75g/5mL	10g/5mL	0.85
A7E0603-21RE1	Soil	EPA 8082A	05/15/17 12:45	05/19/17 07:13	11.46g/5mL	10g/5mL	0.87
A7E0603-22RE1	Soil	EPA 8082A	05/15/17 12:55	05/19/17 07:13	11.33g/5mL	10g/5mL	0.88
A7E0603-23	Soil	EPA 8082A	05/15/17 13:00	05/19/17 07:13	11.65g/5mL	10g/5mL	0.86
Batch: 7051165							
A7E0603-20RE3	Soil	EPA 8082A	05/15/17 12:40	05/30/17 17:35	10.26g/5mL	10g/5mL	0.98

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A7E0603-01	Soil	EPA 8270D (SIM)	05/15/17 09:10	05/19/17 10:11	10.15g/5mL	10g/5mL	0.99
A7E0603-01RE1	Soil	EPA 8270D (SIM)	05/15/17 09:10	05/19/17 10:11	10.15g/5mL	10g/5mL	0.99
A7E0603-02	Soil	EPA 8270D (SIM)	05/15/17 09:20	05/19/17 10:11	10.3g/5mL	10g/5mL	0.97
A7E0603-03	Soil	EPA 8270D (SIM)	05/15/17 09:32	05/19/17 10:11	10.4g/5mL	10g/5mL	0.96
A7E0603-04	Soil	EPA 8270D (SIM)	05/15/17 09:35	05/19/17 10:11	10.26g/5mL	10g/5mL	0.98
A7E0603-05	Soil	EPA 8270D (SIM)	05/15/17 09:45	05/19/17 10:11	10.39g/5mL	10g/5mL	0.96
A7E0603-09	Soil	EPA 8270D (SIM)	05/15/17 10:40	05/19/17 10:11	10.19g/5mL	10g/5mL	0.98
A7E0603-10	Soil	EPA 8270D (SIM)	05/15/17 10:48	05/19/17 10:11	10.42g/5mL	10g/5mL	0.96
A7E0603-11	Soil	EPA 8270D (SIM)	05/15/17 10:54	05/19/17 10:11	10.23g/5mL	10g/5mL	0.98
A7E0603-14	Soil	EPA 8270D (SIM)	05/15/17 11:30	05/19/17 10:11	10.12g/5mL	10g/5mL	0.99
A7E0603-15	Soil	EPA 8270D (SIM)	05/15/17 11:40	05/19/17 10:11	10.49g/5mL	10g/5mL	0.95
A7E0603-16	Soil	EPA 8270D (SIM)	05/15/17 11:50	05/19/17 10:11	10.21g/5mL	10g/5mL	0.98
A7E0603-20	Soil	EPA 8270D (SIM)	05/15/17 12:40	05/19/17 10:11	10.32g/5mL	10g/5mL	0.97
A7E0603-21	Soil	EPA 8270D (SIM)	05/15/17 12:45	05/19/17 10:11	10.42g/5mL	10g/5mL	0.96
A7E0603-22	Soil	EPA 8270D (SIM)	05/15/17 12:55	05/19/17 10:11	10.56g/5mL	10g/5mL	0.95
A7E0603-23	Soil	EPA 8270D (SIM)	05/15/17 13:00	05/19/17 10:11	10.39g/5mL	10g/5mL	0.96

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Lisa Domenighini, Client Services Manager

Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020 (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 7050988							
A7E0603-01	Soil	EPA 6020A	05/15/17 09:10	05/23/17 09:58	0.493g/50mL	0.5g/50mL	1.01
A7E0603-02	Soil	EPA 6020A	05/15/17 09:20	05/23/17 09:58	0.469g/50mL	0.5g/50mL	1.07
A7E0603-03	Soil	EPA 6020A	05/15/17 09:32	05/23/17 09:58	0.507g/50mL	0.5g/50mL	0.99
A7E0603-04	Soil	EPA 6020A	05/15/17 09:35	05/23/17 09:58	0.477g/50mL	0.5g/50mL	1.05
A7E0603-05	Soil	EPA 6020A	05/15/17 09:45	05/23/17 09:58	0.495g/50mL	0.5g/50mL	1.01
A7E0603-09	Soil	EPA 6020A	05/15/17 10:40	05/23/17 09:58	0.474g/50mL	0.5g/50mL	1.05
A7E0603-10	Soil	EPA 6020A	05/15/17 10:48	05/23/17 09:58	0.455g/50mL	0.5g/50mL	1.10
A7E0603-11	Soil	EPA 6020A	05/15/17 10:54	05/23/17 09:58	0.468g/50mL	0.5g/50mL	1.07
A7E0603-14	Soil	EPA 6020A	05/15/17 11:30	05/23/17 09:58	0.467g/50mL	0.5g/50mL	1.07
A7E0603-15	Soil	EPA 6020A	05/15/17 11:40	05/23/17 09:58	0.497g/50mL	0.5g/50mL	1.01
A7E0603-16	Soil	EPA 6020A	05/15/17 11:50	05/23/17 09:58	0.456g/50mL	0.5g/50mL	1.10
Batch: 7051034							
A7E0603-20	Soil	EPA 6020A	05/15/17 12:40	05/24/17 09:48	0.477g/50mL	0.5g/50mL	1.05
A7E0603-20RE1	Soil	EPA 6020A	05/15/17 12:40	05/24/17 09:48	0.477g/50mL	0.5g/50mL	1.05
A7E0603-21	Soil	EPA 6020A	05/15/17 12:45	05/24/17 09:48	0.463g/50mL	0.5g/50mL	1.08
A7E0603-21RE1	Soil	EPA 6020A	05/15/17 12:45	05/24/17 09:48	0.463g/50mL	0.5g/50mL	1.08
A7E0603-22	Soil	EPA 6020A	05/15/17 12:55	05/24/17 09:48	0.45g/50mL	0.5g/50mL	1.11
A7E0603-23	Soil	EPA 6020A	05/15/17 13:00	05/24/17 09:48	0.473g/50mL	0.5g/50mL	1.06

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 7050908							
A7E0603-01	Soil	EPA 8000C	05/15/17 09:10	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-02	Soil	EPA 8000C	05/15/17 09:20	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-03	Soil	EPA 8000C	05/15/17 09:32	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-04	Soil	EPA 8000C	05/15/17 09:35	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-05	Soil	EPA 8000C	05/15/17 09:45	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-09	Soil	EPA 8000C	05/15/17 10:40	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-10	Soil	EPA 8000C	05/15/17 10:48	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-11	Soil	EPA 8000C	05/15/17 10:54	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-14	Soil	EPA 8000C	05/15/17 11:30	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-15	Soil	EPA 8000C	05/15/17 11:40	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A7E0603-16	Soil	EPA 8000C	05/15/17 11:50	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-20	Soil	EPA 8000C	05/15/17 12:40	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-21	Soil	EPA 8000C	05/15/17 12:45	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-22	Soil	EPA 8000C	05/15/17 12:55	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA
A7E0603-23	Soil	EPA 8000C	05/15/17 13:00	05/19/17 12:00	1N/A/1N/A	1N/A/1N/A	NA

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Lisa Domenighini, Client Services Manager

Bridgewater Group
 7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**
 Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

Weck Laboratories, Inc.

SAMPLE PREPARATION INFORMATION

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Prep: General Preparation

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: W7E1303							
A7E0603-01	Soil	EPA 160.3M	05/15/17 09:10	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-02	Soil	EPA 160.3M	05/15/17 09:20	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-03	Soil	EPA 160.3M	05/15/17 09:32	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-04	Soil	EPA 160.3M	05/15/17 09:35	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-05	Soil	EPA 160.3M	05/15/17 09:45	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-09	Soil	EPA 160.3M	05/15/17 10:40	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-10	Soil	EPA 160.3M	05/15/17 10:48	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-11	Soil	EPA 160.3M	05/15/17 10:54	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-14	Soil	EPA 160.3M	05/15/17 11:30	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-15	Soil	EPA 160.3M	05/15/17 11:40	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-16	Soil	EPA 160.3M	05/15/17 11:50	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-20	Soil	EPA 160.3M	05/15/17 12:40	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-21	Soil	EPA 160.3M	05/15/17 12:45	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-22	Soil	EPA 160.3M	05/15/17 12:55	05/22/17 16:32	1g/1ml	1g/1ml	NA
A7E0603-23	Soil	EPA 160.3M	05/15/17 13:00	05/22/17 16:32	1g/1ml	1g/1ml	NA

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Prep: EPA 3050M-SCL

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: W7E1302							
A7E0603-01	Soil	EPA 6020A	05/15/17 09:10	05/22/17 16:30	1.01g/1000ml	1g/1000ml	0.99
A7E0603-02	Soil	EPA 6020A	05/15/17 09:20	05/22/17 16:30	1.038g/1000ml	1g/1000ml	0.96
A7E0603-03	Soil	EPA 6020A	05/15/17 09:32	05/22/17 16:30	1.042g/1000ml	1g/1000ml	0.96
A7E0603-04	Soil	EPA 6020A	05/15/17 09:35	05/22/17 16:30	1.036g/1000ml	1g/1000ml	0.97
A7E0603-05	Soil	EPA 6020A	05/15/17 09:45	05/22/17 16:30	1.024g/1000ml	1g/1000ml	0.98
A7E0603-09	Soil	EPA 6020A	05/15/17 10:40	05/22/17 16:30	1.034g/1000ml	1g/1000ml	0.97
A7E0603-10	Soil	EPA 6020A	05/15/17 10:48	05/22/17 16:30	1.041g/1000ml	1g/1000ml	0.96
A7E0603-11	Soil	EPA 6020A	05/15/17 10:54	05/22/17 16:30	1.022g/1000ml	1g/1000ml	0.98
A7E0603-14	Soil	EPA 6020A	05/15/17 11:30	05/22/17 16:30	1.037g/1000ml	1g/1000ml	0.96
A7E0603-15	Soil	EPA 6020A	05/15/17 11:40	05/22/17 16:30	1.033g/1000ml	1g/1000ml	0.97
A7E0603-16	Soil	EPA 6020A	05/15/17 11:50	05/22/17 16:30	1.04g/1000ml	1g/1000ml	0.96
A7E0603-20	Soil	EPA 6020A	05/15/17 12:40	05/22/17 16:30	1.011g/1000ml	1g/1000ml	0.99

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
 Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
 Project Manager: Jeff Dresser

Reported:
 06/06/17 10:14

Weck Laboratories, Inc.

SAMPLE PREPARATION INFORMATION

Metals (Non-Aqueous) by EPA 6000/7000 Series Methods

Prep: EPA 3050M-SCL

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A7E0603-21	Soil	EPA 6020A	05/15/17 12:45	05/22/17 16:30	1.024g/1000ml	1g/1000ml	0.98
A7E0603-22	Soil	EPA 6020A	05/15/17 12:55	05/22/17 16:30	1.041g/1000ml	1g/1000ml	0.96
A7E0603-23	Soil	EPA 6020A	05/15/17 13:00	05/22/17 16:30	1.045g/1000ml	1g/1000ml	0.96

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Lisa Domenighini, Client Services Manager

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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

Notes and Definitions

Qualifiers:

- C-07 Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- EST Result reported as an Estimated Value. Analyte failed initial calibration criteria.
- F-03 The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.
- J Estimated conc. detected <MRL and >MDL.
- Ja Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-02 Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- P-10 Result estimated due to the presence of multiple PCB Aroclors and/or matrix interference.
- Q-04 Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-42 Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
- R-02 The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-05 Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.

Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to 1/2 the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses.
- For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.

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Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041

Project Manager: Jeff Dresser

Reported:

06/06/17 10:14

Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.

--- QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

*** Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: **Esco-041**
Project Manager: **Jeff Dresser**

Reported:
06/06/17 10:14

A7EO 603

HAHN AND ASSOCIATES, INC. Environmental Management 434 NW Sixth Avenue, Suite 203 - Portland OR 97209 (503) 796-0117 - Fax (503) 227-2209		Laboratory Apex Laboratories Tigard, Oregon		CHAIN OF CUSTODY	
Project Manager: Eric Tappan / Jeff Dresser		Liquid with Sediment Sample		Samples Received at 4C (Y or N)	
Project No: ESCO-021		Test Matrix		Appropriate Containers Used (Y or N)	
Project Name: ESCO		Multi-Phase Sample		Provide Verbal Results (Y or N)	
Collected by: Ben Van		Test On (select):		Provide Preliminary File Results:	
Sample Number Prefix:		Matrix		Analytes to be Performed	
I = metals testing to include: As, Ba, B, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se, Ag, U, and Z.		Soil		Metals - ICP/AAS Priority Pollutant	
H. Hexd		Water		TCMP Metals (As, Ba, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se, Ag, U, and Z)	
Please provide results to Jeff Dresser (Bridgewater)		Other		Pesticides by EPA Method 8270	
		Number of Containers		Formaldehyde by 8125A	
Lab ID	Sample #	Date	Time	Sample Description	Remarks
EB-22-051517-0-5-1-0		15-May-17	9:10	EB-22 (0.5 - 1.0')	
EB-22-051517-4-0-5-0		15-May-17	9:20	4.0 - 5.0'	
EB-23-051517-1-0-2-0		15-May-17	9:32	EB-23 (1.0 - 2.0')	
EB-23-051517-4-0-5-0		15-May-17	9:35	4.0 - 5.0'	
EB-23-051517-8-4-9-4		15-May-17	9:45	8.4 - 9.4'	
EB-23-051517-14-0-14-7		15-May-17	9:56	14.0 - 14.7'	
EB-23-051517-17-0-18-0		15-May-17	10:10	17.0 - 18.0'	
EB-23-051517-22-0-23-0		15-May-17	10:15	22.0 - 23.0'	
EB-24-051517-2-5-3-5		15-May-17	10:40	EB-24 (2.5 - 3.5')	
EB-24-051517-7-2-8-2		15-May-17	10:48	7.5 - 8.2'	
EB-24-051517-12-0-13-0		15-May-17	10:54	12.0 - 13.0'	
EB-24-051517-17-0-18-0		15-May-17	11:05	17.0 - 18.0'	
EB-24-051517-22-0-23-0		15-May-17	11:15	22.0 - 23.0'	
EB-25-051517-0-5-1-5		15-May-17	11:30	EB-25 (0.5 - 1.5')	
EB-25-051517-4-0-5-0		15-May-17	11:40	4.0 - 5.0'	
EB-25-051517-7-5-8-5		15-May-17	11:50	7.5 - 8.5'	
EB-25-051517-14-0-15-0		15-May-17	12:05	14.0 - 15.0'	
EB-25-051517-18-0-19-0		15-May-17	12:15	18.0 - 19.0'	
EB-25-051517-22-5-23-5		15-May-17	12:30	22.5 - 23.5'	
EB-26-051517-0-5-1-5		15-May-17	12:40	EB-26 (0.5 - 1.5')	
EB-26-051517-3-5-4-5		15-May-17	12:45	3.5 - 4.5'	
EB-27-051517-0-0-1-0		15-May-17	12:55	EB-27 (0.0 - 1.0')	
EB-27-051517-4-0-5-0		15-May-17	13:00	4.0 - 5.0'	
EB-28-051517-0-5-1-5		15-May-17	13:58	EB-28 (0.5 - 1.5')	
EB-28-051517-3-5-4-5		15-May-17	14:10	3.5 - 4.5'	
EB-28-051517-9-0-10-0		15-May-17	14:18	9.0 - 10.0'	
EB-28-051517-13-0-14-0		15-May-17	14:30	13.0 - 14.0'	
EB-28-051517-18-0-19-0		15-May-17	14:38	18.0 - 19.0'	
EB-29-051517-1-5-2-5		15-May-17	15:05	EB-29 (1.5 - 2.5')	
EB-29-051517-4-0-5-0		15-May-17	15:15	4.0 - 5.0'	
EB-29-051517-9-0-10-0		15-May-17	15:20	9.0 - 10.0'	
EB-29-051517-14-0-15-0		15-May-17	15:28	14.0 - 15.0'	
EB-29-051517-19-0-20-0		15-May-17	15:40	19.0 - 20.0'	

Lisa Domenighini

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: Esco-041
Project Manager: Jeff Dresser

Reported:
06/06/17 10:14

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A7E0603

EB-27-051517-0.0-1.0 1/2 voas ID reads EB-27-051517-0.0-0.5,

EB-28-051517-0.5-1.5 1/2 voas ID reads EB-28-051517-0.5-1.5,
acc 5/15/17

EB-29-051517-9.0-10.0 1/2 voas no TID on Cont.,

~~EB-29-0517~~ EB-29-051517-14.0-15.0 1/2 voas no TID on Cont.
acc 5/15/17

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Lisa Domenighini, Client Services Manager

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ATTACHMENT C
GEOPHYSICS REPORT



ENVIRONMENTAL & EXPLORATION GEOPHYSICS

22323 East Wild Fern Lane, Brightwood, Oregon 97011 • PH (503) 622-0154 • FAX (503) 622-0526
WEB <http://www.geopotential.biz/> E-MAIL GeoPotential@geopotential.biz

SUMMARY REPORT

***SUBSURFACE MAPPING SURVEY
TO DETECT
UNDERGROUND STORAGE TANKS***

***ESCO Corporation
Class-N-Custom_ESCO-041
Portland, Oregon***

CLIENT

***TUPPAN CONSULTANTS LLC
460 Second Street, Suite 103
Lake Oswego, Oregon 97034***

DATE OF SURVEY

October 8, 2017

GeoPotential Project Number: 9790E

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SUMMARY

A Subsurface Mapping Survey (SMS) was conducted over parking lot/storage yard of an Auto Body shop (see Figure 1.) owned by the ESCO Corporation to search for possible residential USTS (heating oil tanks).

Magnetic Surveys, Ground Penetrating Radar (GPR) Surveys and hand held magnetic and electromagnetic scanners were used for the project.

No USTS were detected in the areas covered by the SMS.

INTRODUCTION

Ralph Soule of GeoPotential conducted the Subsurface Mapping Survey. Eric Tuppan was the representatives for TUPPAN CONSULTANTS. Fieldwork was conducted on October 8, 2017. The report was completed and e-mailed to TUPPAN CONSULTANTS on October 26, 2017.

Subsurface mapping surveys are geophysical surveys utilizing geophysical methods and data to detect and locate natural and manmade subsurface features. Magnetic Surveys are used to detect and map the locations of buried **ferrous** (iron-bearing) objects (see Appendix A). Ground Penetrating Radar (GPR) Surveys are used to map both natural and manmade subsurface features such as USTs, utilities, backfilled pits, etc. (see Appendix B.). Pipe and cable locators are used to map the locations of buried utilities and piping.

Once subsurface ferrous objects are detected from a magnetic survey then hand held scanners and GPR surveys are used to map the locations, depths, sizes and shapes of the objects.

SURVEY OBJECTIVES

The objective of this subsurface mapping survey was:

1. Search for USTS.

SURVEY SITE

The survey Site consisted of the parking lot/storage yard of an auto body shop (Figure 1). The Auto Body Shop is located at the intersection of NW Nicolai Street & NW 24th Avenue in Portland, Oregon. Historical maps provided by TUPPAN CONSULTANTS indicated residential houses had occupied this property prior to conversion to a storage yard. There were no surface indications of USTS.

SURVEY EQUIPMENT

The following geophysical instruments were used to conduct the survey:

- GEOMETRICS 858G Cesium Vapor Magnetometer (Magnetic Survey).
- Mala Easy locator Ground Penetrating Radar System with a 450 MHz antenna (GPR Survey).
- Schonstedt GA52 Magnetic Gradiometer.
- Aqua-Tronics A6 Pipe & Cable locator.
- Heath Sure Lock Pipe & Cable locator.

This equipment and the procedures used to meet the survey objectives of this project have been proven effective in detecting metallic objects and mapping non-metallic features such as disturbed soil from backfilled pits.

Geophysical techniques are excellent at detecting changes in the subsurface caused by natural and manmade objects; however, they are poor at actually identifying subsurface features. Complementary methods may be used to assist in the interpretation; however, the only sure way of identifying a buried feature is by excavation.

Brief descriptions of the magnetic method and the radar method are included in the Appendices.

PROCEDURE

Magnetic Survey

The Magnetic Survey consisted of acquiring magnetic readings along traverses using a 5 foot spacing between traverses over each of the Site. A rectangular grid was laid out over the site and used for navigation. Magnetic data were downloaded to a computer, processed and contoured to produce the Magnetic Map shown in Figure 2 for the Auto Body Shop. The Magnetic Map is plotted at a Contour Interval of 500 nT a contour interval sufficient to detect USTS.

In general buried ferrous objects will produce stronger positive magnetic anomalies that are shown as red contours on the Magnetic Map. Surface ferrous objects such as fences and buildings will in general produce negative magnetic anomalies shown as blue contours on the Magnetic Maps. No UST Magnetic Anomalies were detected over the Auto Body Shop (Figure 2).

Google Aerial Maps were used as underlays for the Magnetic Maps.

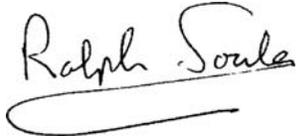
RESULTS

No USTS were identified from the Magnetic Survey.

LIMITATIONS

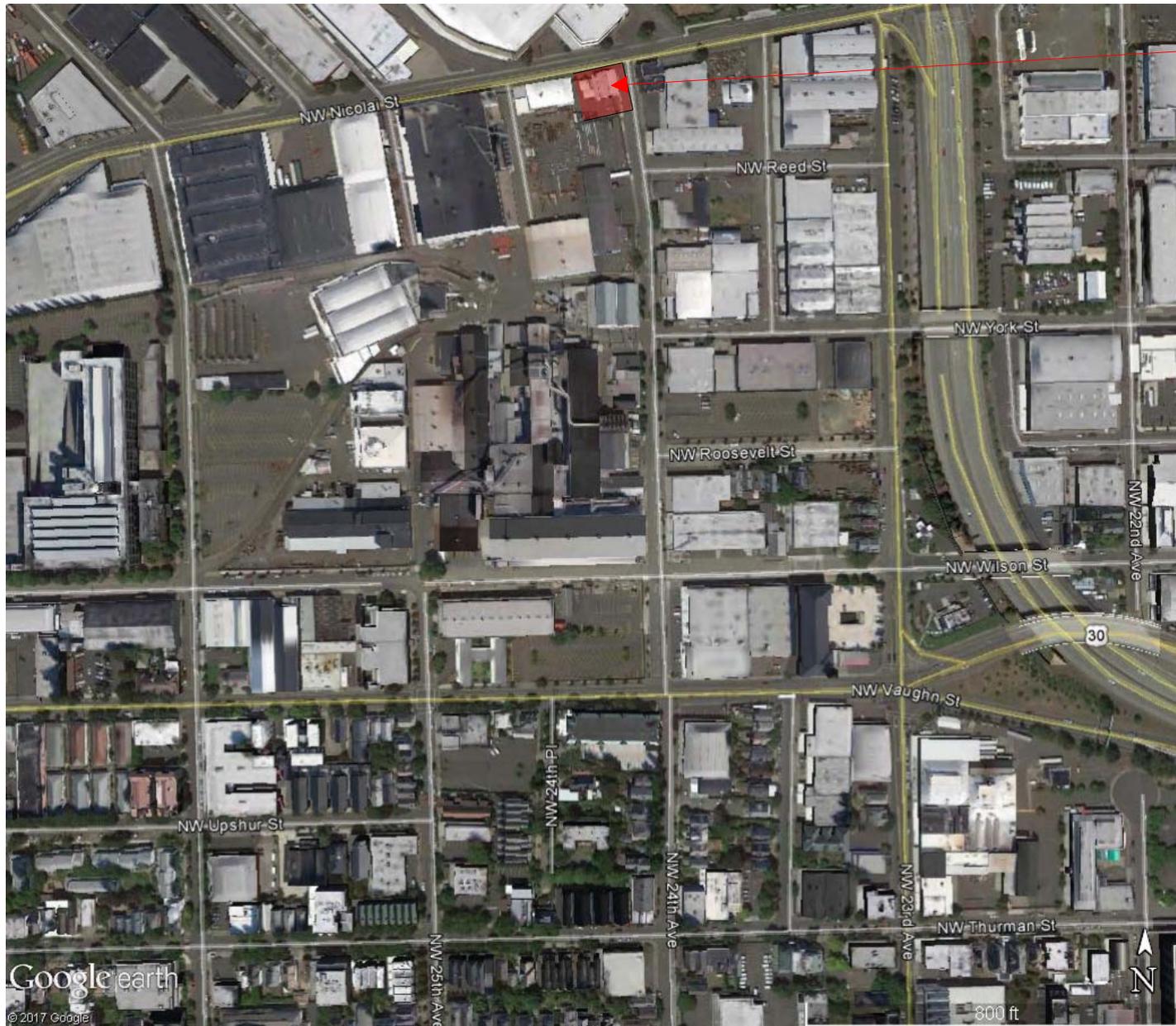
Limitations of magnetometer and GPR surveys can be seen in the Appendices.

Geophysical surveys consist of interpreting geophysical responses from subsurface features. Since a variety of subsurface features can produce identical geophysical responses, it is necessary to confirm the geophysical interpretation with intrusive investigations such as excavating or drilling. In addition, many subsurface features may produce no geophysical response.

A handwritten signature in cursive script that reads "Ralph Soule". The signature is written in black ink and is positioned above a horizontal line that serves as a separator between the signature and the printed name below.

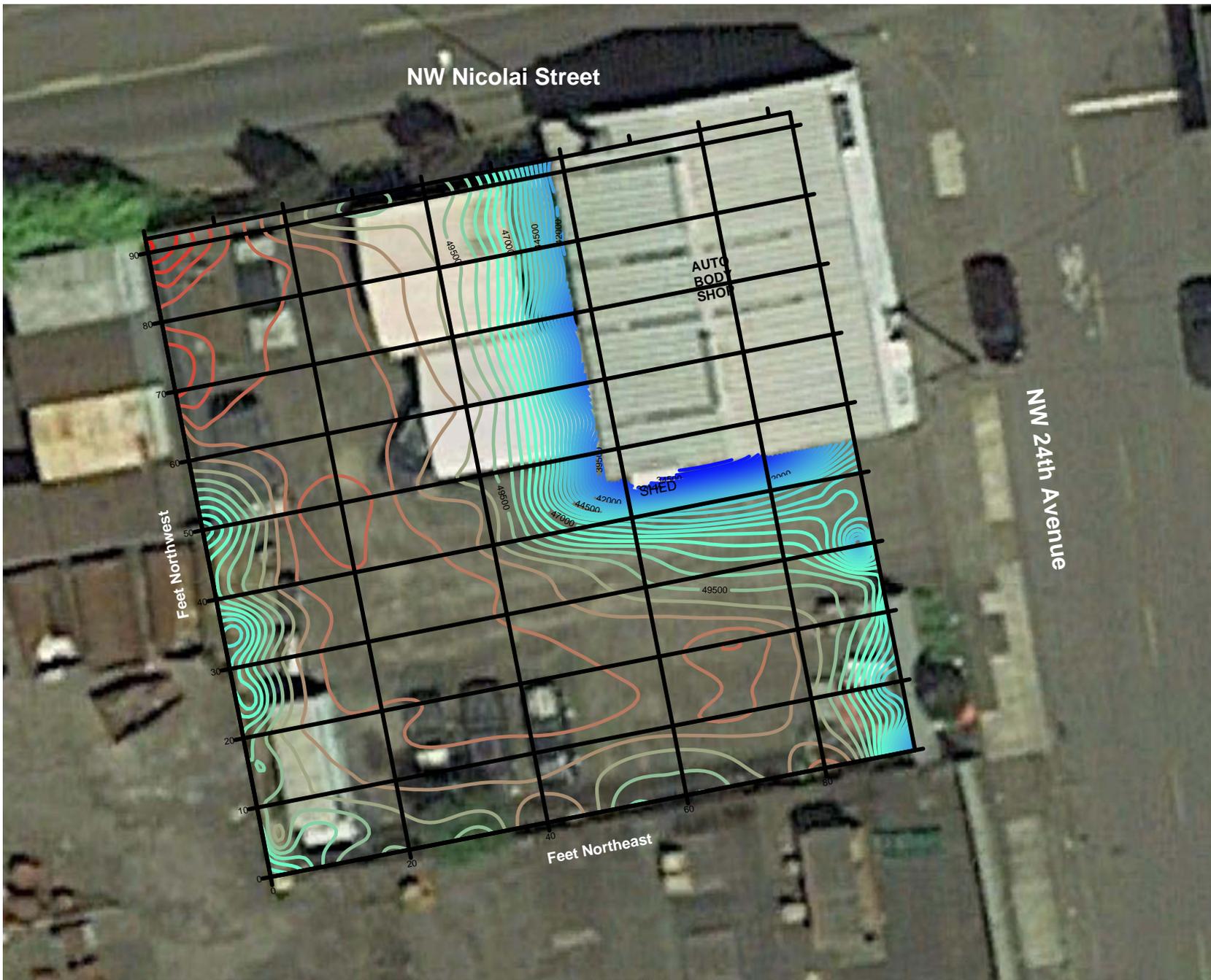
Ralph Soule
GeoPotential

October 26, 2017



Auto Body Shop

 <p>GeoPotential ENVIRONMENTAL & EXPLORATION GEOPHYSICS 22323 East Wild Fern Lane, Brightwood, Oregon 97011 • PH (503) 622-0154 • FAX (503) 622-0526 WEB http://www.geopotential.biz/ E-MAIL GeoPotential@geopotential.biz</p>	<p>LOCATION:</p> <p>ESCO Corporation Class-N-Custom_ESCO-041 Portland, OR</p>	<p>Figure 1. Location Map</p>
	<p>DATE: October 9, 2017</p>	
<p>SUBSURFACE MAPPING SURVEY</p>		<p>PROJECT No. 9790</p>



ENVIRONMENTAL & EXPLORATION GEOPHYSICS

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 WEB <http://www.geopotential.biz/> E-MAIL GeoPotential@geopotential.biz

LOCATION:

ESCO Corporation
 Class-N-Custom_ESCO-041
 Portland, OR

Figure 2. Magnetic Map
 (Contour Interval = 500 nT)

DATE: October 9, 2017

SUBSURFACE MAPPING SURVEY

PROJECT No. 9790

CLIENT:

TUPPAN CONSULTANTS, LLC



APPENDIX A MAGNETOMETER SURVEYS

The earth's magnetic field, measured in "nano Teslas" (nT), behaves like a bar magnet (a dipolar field), with the strongest magnetic field located at the poles, and the weakest field located near the equator. In the continental United States, the average field intensity varies widely, however, the average value is about 50,000 nT. Also, like the magnetic field around the bar magnet, the earth's magnetic field is inclined. This inclination in the continental United States varies between 60 and 75 degrees, generally depending upon the latitude of the measuring location. The earth's magnetic field varies constantly and, during sunspot activity, quite dramatically. A magnetometer is an electronic device that measures the intensity of the earth's magnetic field.

Naturally occurring geologic features and buried ferrous metal objects such as underground storage tanks, drums, ordnance, pipes and debris filled trenches produce both horizontal and vertical disturbances to the earth's local magnetic field. The objects causing these "anomalies" can be detected quickly and reliably using portable magnetometers.

The intensity of an anomaly is a function of the size, depth of burial and magnetic susceptibility of the object. As a rule of thumb, single drums buried several feet below the surface produce anomalies of about 200 nT relative to the normal undisturbed background and can be detected at a horizontal distance of about 15 feet, while large caches of drums can produce anomalies of many thousands of nT and may be detectable 50 feet away.

Magnetometers generally measure total intensity of the local magnetic field. A magnetic gradiometer is a variant of the magnetometer that measures both the horizontal and the vertical magnetic field at each survey point. It consists of two identical sensors located vertically on a staff and having a fixed separation. The intensity of the magnetic field caused by a buried metal object varies inversely with the distance between the object and the sensor. The relative intensities measured simultaneously at each sensor are used to determine the relative depth of burial of an object.

Relative depth estimates of buried metal objects can be made using a single sensor. In general, for a given object, the deeper the object is buried, the lower the amplitude and the wider the anomaly. Shallowly buried objects produce higher amplitude anomalies with closely spaced contour lines.

Magnetic surveys can only detect **ferrous metal** objects and cannot be used to identify the buried object. Estimates of the total mass of a buried object are difficult due to the physical properties of the object and other factors. Interference caused by observed surface metal objects limits the accuracy of the survey. The anomalies produced by fences, power lines, cars and buildings can easily mask the anomaly caused by an underground target.

Magnetic surveys are cost effective. Using the standard "step and wait" magnetometer, data from approximately 1000 points can be obtained in one field day corresponding to between 1 acre and about 5 acres depending on site conditions and survey goals. More modern cesium magnetometers collect up to 10 readings per second continuously, thus the operator can proceed without stopping. Many modern magnetometers use an audible signal to call attention to anomalous data as it is obtained. At some sites metallic objects can be detected and marked in the field at the time of the survey.

The use of a second, automatically recording "base station" magnetometer is highly recommended due to temporal variations in the earth's magnetic field. These changes must be removed from the field data before an accurate interpretation can be made, particularly when searching for small-buried objects.

Magnetic data are most commonly presented in two contour maps. The TOTAL MAGNETIC FIELD CONTOUR MAP shows the horizontal variation of the total intensity of the magnetic field and, therefore, the areal extent of anomalies. The GRADIOMETER CONTOUR MAPS show the horizontal variation of the vertical gradient of the magnetic field and indicate the relative depth of burial of the objects causing those anomalies. Color versions of these maps may be produced showing only the magnetic highs and lows.



APPENDIX B GROUND PENETRATING RADAR SURVEYS

Ground Penetrating Radar (GPR) can be a valuable tool to accurately locate both metallic and non-metallic UST's and utilities, buried drums and hazardous material at some sites. It may detect objects below reinforced concrete floors and slabs. GPR may delineate trenches and excavations and, under some conditions, it may be used to locate contaminant plumes. It has been used as an archaeological tool to look for buried artifacts. It may accurately profile fresh water lake bottoms either from a boat or from a frozen lake surface. GPR may be used to locate voids below roads and runways. GPR has numerous engineering applications. It can be used in non-destructive testing of engineering material, for example, locating rebar in concrete structures and determining the thickness of concrete and other structural material.

GPR uses short impulses of high frequency radio waves directed into the ground to acquire information about the subsurface. The energy radiated into the ground is reflected back to the antenna by features having different electrical properties to that of the surrounding material. The greater the contrast, the stronger the reflection. Typical reflectors include water table, bedrock, bedding, fractures, voids, contaminant plumes and man-made objects such as UST's and metal and plastic utilities. Materials having little electrical contrast like clay and concrete pipes may not produce strong reflections and may not be seen. Data are digitally recorded or downloaded to a laptop computer for filtering and processing.

The frequency of the radar signal used for a survey is a trade off. Low frequencies (250 MHz – 50 MHz) give better penetration but low resolution so that pipes and utilities may not be seen. Pipes and utilities may be seen using higher frequencies (500 MHz) but the depth of penetration may be limited to only a few feet especially in the wet, clayey soils found in many areas of the NW USA. The GPR frequency is dependent upon the antenna. Once an antenna is selected, nothing the operator can do can increase the depth of penetration.

Radar data is ambiguous. Many buried objects produce echoes that may be similar to the echo expected from the target object. Boulders and debris produce reflections that are similar to pipes and tanks. Subtle changes in the electrical properties along a traverse caused by changes in soil type, mineralogy, grain size, and moisture content all produce “noise” that can make interpretation difficult. Interpreting radargrams is an art as much as a science.

Under some conditions, although a UST itself may not be clearly visible in a GPR record, the excavation or trench in which the UST is buried is evident. Usually GPR data is used to compliment data from other “tools”. For example, a trench-like reflection but no clear UST reflection, combined with a “tank” shaped magnetic anomaly suggests the presence of a UST. Although the UST itself could not be seen using GPR, the radar showed a trench-like reflection. The magnetic data showed a large ferrous object. We would report a possible UST at that location.

GPR is often used in conjunction with magnetometer surveys. Magnetometer Surveys are very fast and large areas can be covered cost effectively. Magnetic anomalies are marked in the field, and then may be further investigated using radar.

GPR, like other geophysical tools, is excellent at detecting changes across a site, but it is poor at actually identifying the cause of the change. **The only definite way to identify buried objects is through excavation.**

ADVANTAGES - General

- When GPR data is properly interpreted subsurface objects can usually be confidently identified. This often requires the GPR data be combined with other geophysical data, surface features and historical information.
- GPR provides continuous records along traverses which, depending on the goal of the survey, may be interpreted in the field.
- At flat, open sites, for reconnaissance purposes, the antenna can be towed behind a vehicle at several mph.
- Many GPR antennas are shielded and are unaffected by surface and overhead objects and power lines.
- GPR can be used in conjunction with magnetic or EM surveys to accurately locate buried objects.

ADVANTAGES – Site specific

- With a low frequency antenna, in clean, dry, sandy soil, reflections from targets as deep as 100 feet are possible. Geologic features such as bedrock and cross bedding may be seen at some sites.
- The resolution of data is very high particularly for high frequency antennas.
- Shallow, man-made objects generally can be detected.
- Fiberglass UST's and plastic pipes can be detected using GPR.

LIMITATIONS - General

- To acquire the highest quality data, proper coupling between the antenna and the ground surface is necessary. Poor data may be obtained at sites covered with debris, an uneven surface, tall grass and brush. Objects located at curbs are difficult to see.
- Acquiring GPR data is slow. The antenna must be over the target. The signal from the antenna is cone-shaped. Reflections from objects to the side of the antenna may be seen, but their actual location relative to the antenna is not obvious.
- Penetration of the GPR signal is "site specific" and its depth of penetration at a particular site cannot be predicted ahead of time. Near surface conductive material, such as salty or contaminated ground water and wet, clay-rich soil, may attenuate the radar signal, limiting the effective depth of the survey to several feet. Reinforced concrete also can attenuate the signal. Rebar may produce reflections that look like pipes.

- GPR may not be cost-effective for some projects. For a detailed survey mapping underground storage tanks and utilities, it may be necessary to collect data in orthogonal directions at 5-foot line spacing.

LIMITATIONS – Interpretation

- Interpretation can be difficult. Radar data are ambiguous. Subsurface objects can be detected but, in general, they cannot be identified. USTs and utilities have a characteristic reflection, however, large rocks and boulders have a similar reflection.
- The reflection visible in a GPR record is very complex and may be caused by small changes in the electrical properties of the soil. The target in mind may not produce the reflection. Due to “noise”, the target may be missed. USTs and deep utilities may be missed if they are under debris and/or other pipes.
- Other methods may be necessary to aid in the interpretation of the data (use a magnetometer to detect a large metallic mass, then GPR to determine if the object is tank-like, or a utility locator to determine if there are feed lines and fill pipes leading to the object).
- Adequate contrast between the ground and the target is required to obtain reflections. UST’s may be missed if they are badly corroded. Utilities made of “earth” materials like clay and concrete may not be detected since their electrical properties are similar to the surrounding soil.
- To determine the depth to an object without "ground truth", assumptions must be made regarding soil properties. Even with ground truth at several locations on the same site, changes in material across a site (therefore changes in signal velocity) can cause errors in depth measurements at other locations.

APPENDIX B

SOIL DISPOSAL PROFILE AND TRANSACTION SUMMARY



Waste profile name: PCB Impacted Soils at Leased Property
ID: 9e5acb68-3c8d-4611-92a3-d45aca256cf6

Status: PENDING

GENERATOR

Name: ESCO Corporation
Address: 2141 NW 25th Avenue City: Portland State: OR Postal Code: 97210
County: _____
Contact: _____ Email: _____
Phone: _____ Fax: _____

MATERIAL ORIGIN

Address: 2141 NW 25th Avenue City: Portland State: OR Postal Code: 97210
County: _____
EPA ID: ORD009028259 State ID: N/A

DESTINATION WASTE FACILITY

Name: Wasco County LF
Address: 2550 Steele Road City: The Dalles State: OR Postal Code: 97058
County: _____
Contact: _____ Email: _____
Phone: _____ Fax: _____

BILLING

Name: ESCO-GFS/AP
Address: 433 Las Colinas Blvd. Suite 325 City: Irving State: TX Postal Code: 75039
County: _____
Contact: _____ Email: _____
Phone: _____ Fax: _____

TRANSPORTER

Transporter Name: Dietrich Trucking Inc.
Contact: _____ Email: _____
Phone: _____ Fax: _____

MATERIAL

Is this an Industrial Waste Stream? Yes No
Common Name: Low Level PCB Impacted Soils from leased property
Generation Process: PCB impacts to soil from salvage yard operations.
Preferred Disposal Methods: NH001
Source of Contamination: Dielectric and Coolant Fluids

MATERIAL COMPOSITION

Constituent Soil % TO 99.999%
Constituent PCBs 0.00085% TO 0.000969%
State Waste Codes: N/A
Color: Black, Brown, Gray
Physical state at 70° F: Solid Liquid Sludge Dust Other
pH N/A
Strong Odor No Describe Odor _____
Reactivity No
Flash Point < 140°F 140°-199°F > 200°F N/A

REGULATORY

EPA Hazardous Waste? Yes No
If No, Attached Non-Hazardous Determination Document(s) (Check all that apply)
 Process Knowledge Process Details _____
 SDS
 Certified Analytical Sample
Is the data derived from testing a representative sample in accordance with 40 CFR 261 and/or other applicable laws? Yes No
If Yes, Type of Analytical Sample Composite Grab Sample ID # EB-22-051517 - depth range to EB-27-051517 - depth range
 Exempt Waste
Applicable Exempt Waste Item _____

UST Corrective Action - 40 CFR 261.4 (b)(10) PCB Bulk Product Waste - 40 CFR 761.62 Oil & Gas E&P Waste - 40 CFR 261.4 (b)(5)
RCRA-Empty Containers - 40 CFR 261.7 Other

If Other, Provided reference _____

State Hazardous Waste? Yes No

Is this material non-hazardous due to treatment, delisting, or exclusion? Yes No

From an industry regulated under Benzene NESHAP? Yes No

Facility remediation subject to 40 CFR 63 GGGGG? Yes No

CERCLA or State-Mandated clean-up? Yes No

Regulated, Licensed or NORM Radioactive Waste? Yes No

Contains PCBs? Yes No

If Yes

Regulated by 40 CFR 761? Yes No

Remediation under 40 CFR 761.61 (a)? Yes No

PCB imported into the US? Yes No

Regulated and/or Untreated Medical/Infectious Waste? Yes No

Contains Asbestos? Yes No

Subject to RCRA Subpart CC controls? Yes No

SHIPPING & DOT

Event Frequency One Time On-Going

Estimated Annual Qty 5000

Unit of Measure Tons Yards Drums Gallons Other _____

Shipping Frequency

Once Daily Weekly Monthly Other _____

Qty Per Shipment 30 tons

Container Type Truck and pup

Container Size 10 to 15 cy each

USDOT Shipping Name N/A

PROFILE CERTIFICATION

I hereby certify that (1) all information submitted on this form and on supplemental materials is complete and accurate to the best of my knowledge and ability to determine; (2) the information provided herein, including any supplemental information, such as laboratory analytical, MSDS, etc., accurately describes the waste stream to be delivered to the facility and that all known or suspected hazards have been disclosed. I understand that, once the waste stream is approved by Destination Facility based on this information, any deviation in the source, composition, constituents or characteristics of the waste stream from the information described herein, may render the waste stream unacceptable for disposal, at the sole discretion of Destination Facility. I further understand that any deviation from the information contained herein will require immediate notification to the Destination Facility and cessation of disposal.

Pamela S Pawelek for ESCO Corporation

Certified on 5/7/18 by Pamela Pawelek as a Generator of ESCO Corporation

Date	Profile	Destination	Weigh Ticket No.	Weight (tons)	Hauler
6/4/2018	2042-18-092	Wasco	01-00255001	30.80	Dietrich
6/4/2018	2042-18-092	Wasco	01-00255004	27.23	Fillups
6/4/2018	2042-18-092	Wasco	01-00255011	31.86	Dietrich
6/4/2018	2042-18-092	Wasco	01-00255017	31.34	Dietrich
6/4/2018	2042-18-092	Wasco	01-00255026	31.87	Dietrich
6/4/2018	2042-18-092	Wasco	01-00255028	31.37	Dietrich
6/4/2018	2042-18-092	Wasco	01-00255054	30.74	Fillups
6/4/2018	2042-18-092	Wasco	01-00255055	29.08	Fillups
6/4/2018	2042-18-092	Wasco	01-00255077	31.81	Fillups
6/4/2018	2042-18-092	Wasco	01-00255081	31.96	Adventure
6/5/2018	2042-18-092	Wasco	01-00255153	31.25	Dietrich
6/5/2018	2042-18-092	Wasco	01-00255158	31.34	Dietrich
6/5/2018	2042-18-092	Wasco	01-00255173	31.00	Dietrich
6/5/2018	2042-18-092	Wasco	01-00255195	30.03	Fillups
6/5/2018	2042-18-092	Wasco	01-00255225	30.65	Fillups
6/6/2018	2042-18-092	Wasco	01-00255311	32.41	Dietrich
6/6/2018	2042-18-092	Wasco	01-00255330	32.14	Dietrich
6/6/2018	2042-18-092	Wasco	01-00255333	31.07	Dietrich
6/6/2018	2042-18-092	Wasco	01-00255378	27.32	Fillups
6/7/2018	2042-18-092	Wasco	01-00255485	31.34	Dietrich
6/12/2018	2042-18-092	Wasco	01-00256031	28.19	Fillups
6/12/2018	2042-18-092	Wasco	01-00256039	26.56	Fillups
6/12/2018	2042-18-092	Wasco	01-00256046	23.88	Fillups
6/12/2018	2042-18-092	Wasco	01-00256061	31.37	Adventure
6/12/2018	2042-18-092	Wasco	01-00256068	28.88	Adventure
6/12/2018	2042-18-092	Wasco	01-00256069	27.33	Sines
6/12/2018	2042-18-092	Wasco	01-00256070	30.78	Sines
6/12/2018	2042-18-092	Wasco	01-00256138	27.54	Fillups
6/12/2018	2042-18-092	Wasco	01-00256140	29.13	Fillups
6/12/2018	2042-18-092	Wasco	01-00256142	28.79	Fillups
6/12/2018	2042-18-092	Wasco	01-00256155	31.74	Adventure
6/12/2018	2042-18-092	Wasco	01-00256163	30.22	Sines
6/12/2018	2042-18-092	Wasco	01-00256164	28.26	Adventure
6/12/2018	2042-18-092	Wasco	01-00256167	29.61	Sines
6/13/2018	2042-18-092	Wasco	01-00256190	28.07	Fillups
			Total	1046.96	

APPENDIX C

HAHN FIELD NOTES EXCERPTS

CONTINUATION SHEET

Time	Task Description
10:49	Ralph indicates possible pit/abandoned tank along NW 24th Ave sidewalk across from NW Reed St. Approx 15' (N-S) by 7' (E-W) east west edge near street/sidewalk boundary, west edge near western sidewalk edge. Depth of base of pit/tank ~ 7' bgs GPS # 59 (N 45° 32.401, W 122° 42.065)
10:59	Start investigating geophysical anomalies in asphalt lot east of building 9.
11:09	Possible pit or disturbed soil near NW Nicolai. About 4' down to top of disturbed soil. 20' (E-W) x 5' (N-S) white circle on all tanks/disturbed soil is not closest to ground surface. GPS # 60. N 45° 32.434, W 122° 42.118
12:46	Commence near Building 5 suspected USI previously surveyed @ as S-16. Tank 16 GPS # 61 (N 45° 32.292, W 122° 42.223) top tank 4' bgs ~ 8' (N-S) x ~ 20' (E-W).
1330	Locate apparent tank 15, slightly east of map depiction top = circle area ~ 2' bgs - sloping out to end ~ 3 to 4' bgs GPS # 62 N 45° 32.344, W 122° 42.106 27' (E-W) x 5' (N-S)
1416	Locate apparent tank 17, just east of map depiction EV - 10' x 10' ~ 4' bgs. GPS unit # 63 N 45° 32.320, W 122° 42.098. 8' (N-S)
14:40	Re-mark tank 9 near building 30. See attached map for notes MOB to collect soil samples from Class-N-kuston. GPS # 64 + 65 Class-N-kuston soil sampling:
GPS	~ brick fragment
66	SE location = Class-N-kuston-SE-0.3-1.0 @ 15:11 (medium grain, poorly graded sand)
67	NW location = Class-N-kuston-NW-0.3-1.0 @ 15:15 (gravel w/ some silt, sand)
68	South location = Class-N-kuston-S-0.3-1.0 @ 15:20 (silt, sand, gravel, brick, wood)
69	NE location = Class-N-kuston-NE-0.3-1.0 @ 15:30 (silt, some sand, gravel, brick) → refusal @ all 4 locations @ 1.0' bgs
15:50	Lock up - offsite

Signed Bejan A. Uhe

CONTINUATION SHEET

Time	Task Description
12:59	Tank almost full exposed. All visible soil looks brown w/ no hydrocarbon odor. Almost ready to remove from ground
13:01	Tank up from ground ~ 3' soil beneath looks brown, doesn't appear that tank has leaked. No pitting/holes observed yet in tank.
13:29	Steve P. collects south end sample @ 6.5' bgs. Base of tank @ 5' bgs. Collect from back hoe RSV-SOUTH-6.5 @ 13:30 8 oz, 2oz, + 4 5035 Vials w/ methanol. Soil looks brown silt w/ some sand, no odor. 2 MeOH, 2 sodium bisulfate
13:40	Collect north west end sample @ 6.5' bgs brown amber jar ~ 2oz. " RSV-NORTH-6.5 @ 13:40 8oz, 2oz, 2 methanol, 2 sodium bisulfate silt w/ some sand looks clean, brown, moist, no odor.
14:06	Crew change tank. Will cut + load → stockpile on site for Rivergate Metals - tomorrow after fire Marshall visit
15:00	Collect soil sample for RCRA 8 Metals @ EB-26 Area @ Class-N-Kustom. Sample collected for landfill profile/disposal purposes. Collect 1 - 8oz jar " Class-N-Kustom-EB-26A-1.0 @ 15:00 - soil is silt w/ some gravel, brown, hard moist, non plastic, no odor. Metal debris just past 1.0' bgs


 5/9/18

Signed Bejan et al

Date: 5-19-18
Project: 914-21
Project Manager: B. Au

CONTINUATION SHEET

Time	Task Description
10:42	LEL elevated. Measurement collected through fill pipe.
10:57	I arrive @ Test Pit a GPR anomaly area east of exit gate near MW Nicolai (between building 9 & Class-N-kustom. Test pit installed on 5/18/18 by MW Demolition. Test pit 13' (E-W) x 2' (N-S) x 7' deep. 0.0-0.4 (ASPHALT (0.4-1.0) concrete/rubble (1.0-7.0') silt w/ some sand, brown, soft, moist, non plastic, no OSD - 1" pipe (N-S) through center of excavation w/ cut pipe just east on north wall. Both ~ 1.5' bgs. Reef informs me its conduit ^{not related to} ^{not that pipe} ^{prop to test pit}
11:04	Arrive @ Class-N-kustom to observe the two test pits each through areas where GPR anomalies were present. Southern anomaly area. Test pit @ 6' (E-W) x 2' (N-S) x 6' bgs). Concrete @ surface, then silt w/ some sand to 6' bgs. Lots of fill debris (ie bricks, wood, concrete). Soil brown w/ no odor. - looks like footing or foundation preset on east wall (concrete) to ~ 3.0' bgs. No evidence of UST. Disturbed soil only! North Pit: 10' (E-W) x 2' (N-S) x 6' (d). Silt w/ some sand, bricks, wood concrete, soil is brown w/ no odor or discoloration. No evidence of UST. Concrete ~ 2' off west end travelling east @ North-South through excavation @ 1.5' bgs (see photo) Some bricks visible on west excavation walls ~ 1.5' bgs @ various depths + some ^{fragments of} wood West + South walls.
11:25	Crew exposes Tank 17. ~ 4' (d) x 16' ^{20.6'} (l). Will measure when comes out. Feet on east end indicate vertical tank that was buried & used horizontally. Tank appantly full of diesel as measured through fill port.

Signed Bijan A. Au

HAHN AND ASSOCIATES, INC.
PROJECT FIELD NOTES / DAILY WORK REPORT

Date: 6-4-18
 Project: 9141-21
 Project Manager: BJA

WORK FORCE	EQUIPMENT	SITE
HAI <u>BJA</u>	Rental/Vendor	Conditions <u>Sunny</u>
Subcontractor	Rental/Vendor	Temperature <u>60-70's F</u>
Subcontractor		

HAI EQUIPMENT (mark with "X")

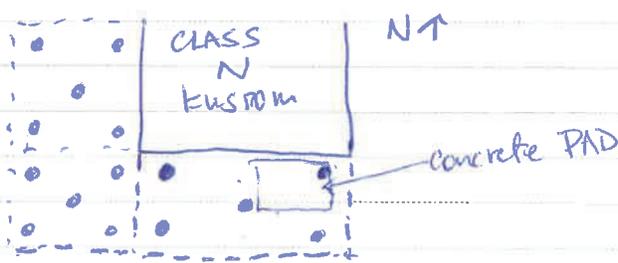
Air Pump (Sensidyne)	Interface Probe	Meter, Redox	Pump, Bladder	Roto-Hammer
Barricades/Signs	Magnetometer	Meter, Turbidity	Bladder Control Box	Shop Vac
Flow Cell	Meter, Cond/pH/Temp	PID / OVA	Pump, Inertial (Watera)	Soil Gas Manifold
Generator	Meter, DO	Power Tool	Pump, Peristaltic	UV Box
GPS Unit	Meter, Helium	Power Washer	Pump, Purge	Vacuum Box
Hand Auger	Meter, Multiprobe (YSI)	Pressure Transducer	Pump, Sump (Hand)	Water Level Indicator

HAI SUPPLIES (mark amt.)

Bailer (disposable)	Gloves, Nitrile (pr.)	Passive Diffusion Bags	Tubing, Poly
Bootie (pr.)	Gloves, Solvex (pr.)	Resp. Cartridges (pr.)	Tubing, Silastic
Caution Tape	Locking Caps	Sensidyne Tubes	Tubing, Teflon
Concrete (bags)	Locks	Stakes / Flags	Tyvek Coveralls
Drum Labels	Marking Paint		Water Filters

ACTIVITIES

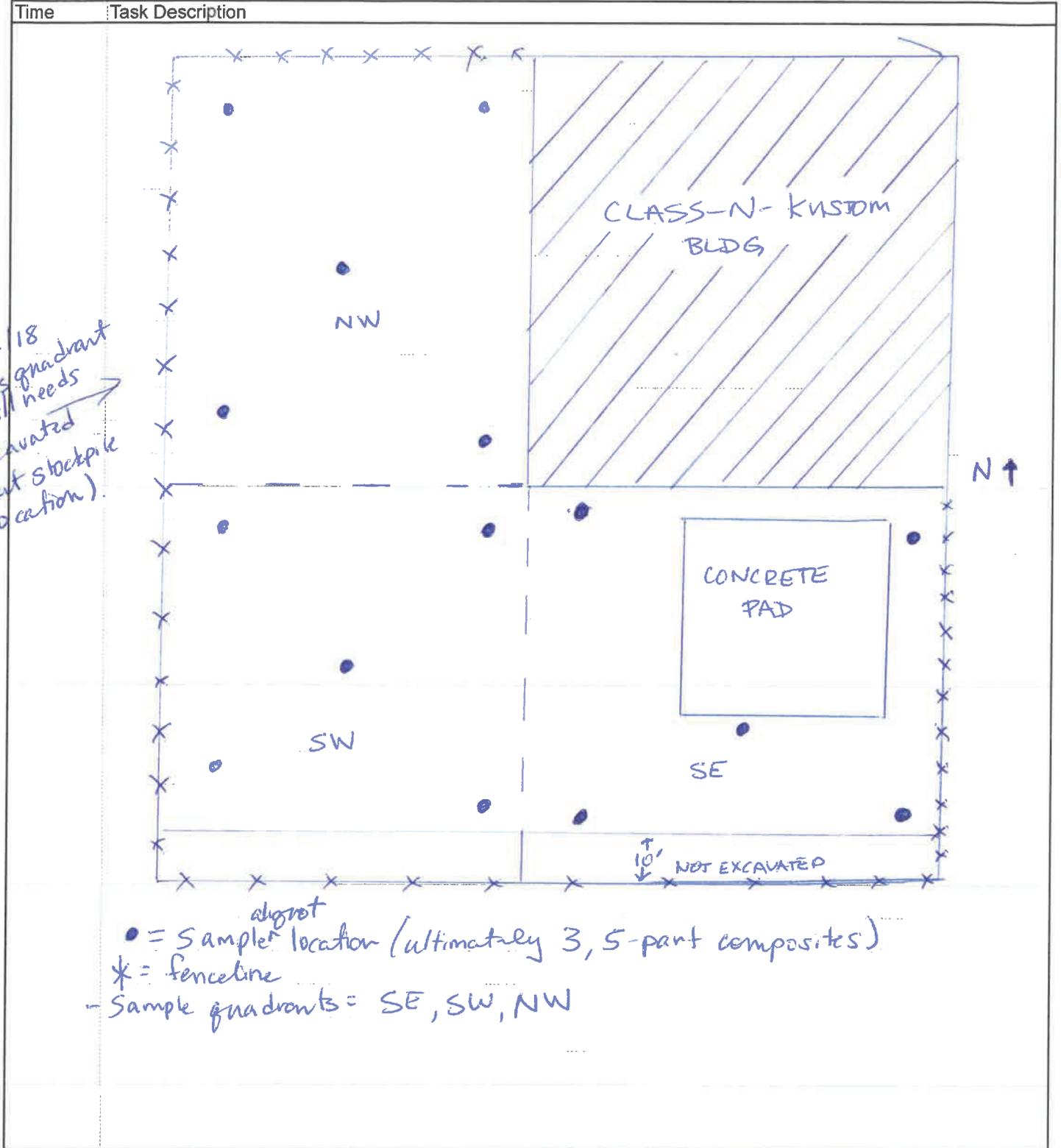
Leave Office: <u>8:30</u>	Arrive Site: <u>9:04</u>	Leave Site: <u>16:20</u>	Arrive Office: <u>16:40</u>	Field Expenses: <u>0</u>
Respirator Use/ Hours:	Minutes:	Vehicle: <u>Personal</u>	Mileage: <u>210</u>	

Time	Task Description
9:04	Arrive @ ESLO to continue UVT/sampling activities. NW Demo crew breaking up asphalt south of tank 14 to excavate to south. Soil on south pit wall has blueish tint w/ no odor.
9:45	Collect sample from Bldg 22 excavation (west wall - northern portion - north of central concrete.) No odor or discoloration to sample. - brown silty sand, no odor. Bldg-22-Excavation - West Wall - 10.0' @ 9:45 (1, 4oz jar - Dx)
10:39	Scope out sample area @ Class-N-kustom. Crew done excavation northern portion of property along north side of building to ESLO fence line
	
	- excavated area steps ~10' north of ESLO fence line.

Signed Beijan A. Uha

Date: 6-4-18
Project: 9141-21
Project Manager: BAW

CONTINUATION SHEET



Signed Benjamin A. Uhl

HAHN AND ASSOCIATES, INC.
PROJECT FIELD NOTES / DAILY WORK REPORT

Date: 6-6-18
 Project: 9141-21
 Project Manager: BAN

WORK FORCE	EQUIPMENT	SITE
HAI BAN	Rental/Vendor	Conditions Sunny
Subcontractor	Rental/Vendor	Temperature 70's F
Subcontractor		

HAI EQUIPMENT (mark with "X")

Air Pump (Sensidyne)	Interface Probe	Meter, Redox	Pump, Bladder	Roto-Hammer
Barricades/Signs	Magnetometer	Meter, Turbidity	Bladder Control Box	Shop Vac
Flow Cell	Meter, Cond/pH/Temp	PID / OVA	Pump, Inertial (Water)	Soil Gas Manifold
Generator	Meter, DO	Power Tool	Pump, Peristaltic	UV Box
GPS Unit	Meter, Helium	Power Washer	Pump, Purge	Vacuum Box
Hand Auger	Meter, Multiprobe (YSI)	Pressure Transducer	Pump, Sump (Hand)	Water Level Indicator

HAI SUPPLIES (mark amt.)

Bailer (disposable)	Gloves, Nitrile (pr.)	Passive Diffusion Bags	Tubing, Poly	
Bootie (pr.)	Gloves, Solvex (pr.)	Resp. Cartridges (pr.)	Tubing, Silastic	
Caution Tape	Locking Caps	Sensidyne Tubes	Tubing, Teflon	
Concrete (bags)	Locks	Stakes / Flags	Tyvek Coveralls	
Drum Labels	Marking Paint		Water Filters	

ACTIVITIES

Leave Office: 10:50	Arrive Site: 11:04	Leave Site: 16:10	Arrive Office: 16:20	Field Expenses: 0
Respirator Use/ Hours:	Minutes:	Vehicle: Personal	Mileage: 210	

Time	Task Description
11:04	Arrive @ ESCO to continue UST decommissioning / cleanup activities.
14:11	Complete w/ excavation measurements @ tank 17 + Bldg 22 excavation. Went to Class-N-Kustan to collect composite samples (3 total)

Signed Benjamin A. Uhe

HAHN AND ASSOCIATES, INC.
PROJECT FIELD NOTES / DAILY WORK REPORT

Date : 6-12-18
 Project: 9141-21
 Project Manager: BAU

WORK FORCE	EQUIPMENT	SITE
HAI <u>BAU</u>	Rental/Vendor <u>Ø</u>	Conditions <u>Sunny</u>
Subcontractor <u>Ø</u>	Rental/Vendor	Temperature <u>60-70°F</u>
Subcontractor		

HAI EQUIPMENT (mark with "X")

Air Pump (Sensidyne)	Interface Probe	Meter, Redox	Pump, Bladder	Roto-Hammer
Barricades/Signs	Magnetometer	Meter, Turbidity	Bladder Control Box	Shop Vac
Flow Cell	Meter, Cond/pH/Temp	PID / OVA	Pump, Inertial (Watera)	Soil Gas Manifold
Generator	Meter, DO	Power Tool	Pump, Peristaltic	UV Box
GPS Unit	Meter, Helium	Power Washer	Pump, Purge	Vacuum Box
Hand Auger	Meter, Multiprobe (YSI)	Pressure Transducer	Pump, Sump (Hand)	Water Level Indicator

HAI SUPPLIES (mark amt.)

Bailer (disposable)	Gloves, Nitrile (pr.)	Passive Diffusion Bags	Tubing, Poly
Bootie (pr.)	Gloves, Solvex (pr.)	Resp. Cartridges (pr.)	Tubing, Silastic
Caution Tape	Locking Caps	Sensidyne Tubes	Tubing, Teflon
Concrete (bags)	Locks	Stakes / Flags	Tyvek Coveralls
Drum Labels	Marking Paint		Water Filters

ACTIVITIES

Leave Office: <u>9:30</u>	Arrive Site: <u>9:45</u>	Leave Site: <u>1:40</u>	Arrive Office: <u>1:20</u>	Field Expenses: <u>ICE</u>
Respirator Use/ Hours: _____	Minutes: _____	Vehicle: <u>Personal</u>	Mileage: <u>~10</u>	

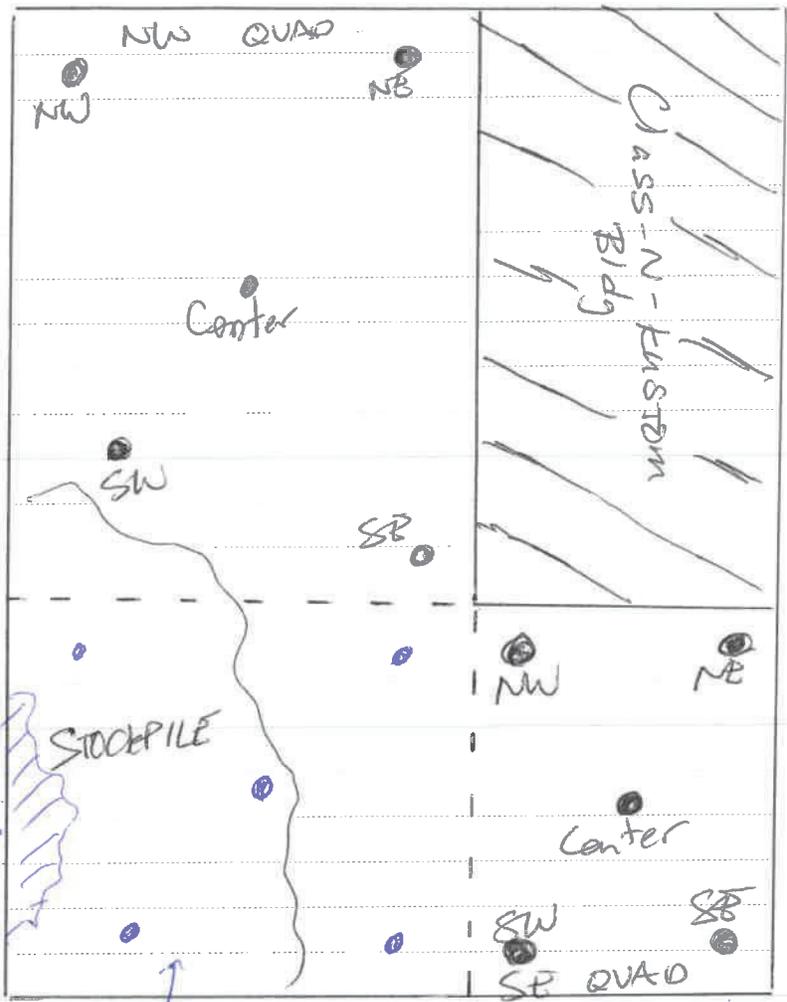
Time	Task Description
9:45	Arrive @ ESCO to collect confirmation soil samples @ Class-N-Kustom. Had PCB exceedances @ 2.0' bgs, therefore crew excavated to 4.0' bgs where appears to be native brown silt. Very minor/trace <u>Ø</u> No brick chunks observed to be present on pit floor. Soil had no odor.
	Collect 5-part composite (field composited) from NW + SE Quadrants
	- QUAD -
10:04	Class-N-SE-NE-4.0
10:06	Class-N-SE-NW-4.0
10:08	Class-N-SE-SE-4.0
10:10	Class-N-SE-SW-4.0
10:12	Class-N-SE-Center-4.0
10:15	Class-N-SE-Comp-4.0
	- QUAD -
	Class-N-NW-NE-4.0
	Class-N-NW-NW-4.0
	Class-N-NW-SW-4.0
	Class-N-NW-SE-4.0
	Class-N-NW-Center-4.0
	Class-N-NW-Comp-4.0 (10:30)

Signed Bejan G. Wm

CONTINUATION SHEET

Time	Task Description
------	------------------

NT



NOT TO SCALE

pile removed pm 6/12/18, then sampled

- Stockpile present SW quad. Crew plans to load out to day w/ samples collected tomorrow Am.

Signed Bayan a-uu

Date: 9/14/21 01:21:18
Project: 9141-21
Project Manager: BAN

CONTINUATION SHEET

Time	Task Description
11:30	Complete ice run & COC. Wait @ entrance for Apex Labs to pickup samples for PCB rush testing.
11:36	Apex arrives to pickup cooler of samples.
12:30	NW Demo crew almost complete w/ SW Quadrant soil removal to 4.0 bgs @ Class-N-kuston. Open completion.
13:00	Group meeting then sample SW @ QAD @ Class-N-kuston
	^{SW} Class-N-Quad-NW-4.0 @ 13:40 (PCBS) Class-N-SW@QAD-NE-4.0 @ 13:42 Class-N-SW@Quad-SW-4.0 @ 13:44 Class-N-SW @Quad-SE-4.0 @ 13:46 Class-N-SW @Quad-Center-4.0 @ 13:48 Class-N-SW @Quad-COMP-4.0 @ 13:50 → Field composite (stainless steel bowl).
13:28	Complete team meeting MOB to Class-N-kuston to sample SW Quadrant.
13:50	Complete soil sampling @ Class-N-kuston. Crew bringing in clean aggregate (railroad rock) for back fill - sloped 1/1 @ edges. Soil on floor SW Quad was silt, brown, moist, hard, non plastic, no odor or discoloration - no brick fragments or bricks.
14:00	MOB to HAI office.

Signed Benjamin A. Ube

Samples collected from each of the three quadrants on 6/6/18 & 6/12/18

(2.0') - Test composites + discretetes
(remove to 4.0' bgs)

Test 3 composites. Samples collected @ 4.0' bgs.



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Google Earth

HAHN AND ASSOCIATES, INC.

Environmental Management
434 NW Sixth Avenue, Suite 203 • Portland OR 97209
(503) 796-0717 • Fax (503) 227-2209

Laboratory

Apex Labs
Tigard, Oregon

CHAIN OF CUSTODY

Lab Project No. _____

Chain of Custody No. _____

Project Manager: Jeff Dresser
Project No.: ESCO-021
Project Name: ESCO
Collected by: Ben Uhl

Liquid with Sediment Sample

Multi-Phase Sample

Test One (which) _____

Test Filtrate _____ Test Sediment _____ Test Both _____
Test Separately _____ Shake _____

Samples Received at 4C (Y or N) _____
Appropriate Containers Used (Y or N) _____
Provide Verbal Results (Y or N) _____
Provide Preliminary Fax Results _____

Sample Number Prefix:

1 = metals testing to include: As, Ba, B, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se, Ag, U, and Zn.
H = Hold

Please provide results to Jeff Dresser (Bridgewater)

Lab ID	Sample #	Date	Time	Sample Description
	Class-N-SW Quad-NW-4.0	12-Jun-18	13:40	Class N (4.0' bgs)
	Class-N-SW Quad-NE-4.0	12-Jun-18	13:42	Class N (4.0' bgs)
	Class-N-SW Quad-SW-4.0	12-Jun-18	13:44	Class N (4.0' bgs)
	Class-N-SW Quad-SE-4.0	12-Jun-18	13:46	Class N (4.0' bgs)
	Class-N-SW Quad-Center-4.0	12-Jun-18	13:48	Class N (4.0' bgs)
	Class-N-SW Quad-Comp-4.0	12-Jun-18	13:50	Class N (4.0' bgs)

Matrix	Soil	Water	Other	Number of Containers	Analyses to be Performed							Remarks	
					NWTPH-Dx	NWTPH-Gx	PCB Aroclors (EPA 608/6082)	PAHs (EPA 8270D SIM)	SVOCs (EPA 8270D LL)	VOCs (8260C)	Metals ¹ by EPA Method 6020 (see lists comments)		
	x			1									
	x			1									H
	x			1									H
	x			1									H
	x			1									H
	x			1									H
													X Turn Around ASAP

Relinquished by: Ben Uhl Company: HAHN & ASSOC Date: 6/12/18 Time: _____ Received by: _____ Date: 6/12/18 Time: 5:44 Company: Apex Labs

Relinquished by: _____ Company: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____ Company: _____

Relinquished by: _____ Company: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____ Company: _____

HAHN AND ASSOCIATES, INC.

Environmental Management

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Laboratory

Apex Labs

Tigard, Oregon

CHAIN OF CUSTODY

Lab Project No.

Chain of Custody No.

Project Manager: Jeff Dresser
Project No.: ESCO-021
Project Name: ESCO
Collected by: Ben Uhl

Liquid with Sediment Sample

Test Filtrate: _____ Test Sediment: _____ Test Both: _____

Multi-Phase Sample

Test One (which): _____ Test Separately: _____ Shake: _____

Samples Received at 4C (Y or N) _____
Appropriate Containers Used (Y or N) _____
Provide Verbal Results (Y or N) _____
Provide Preliminary Fax Results _____

Sample Number Prefix:

1 = metals testing to include: As, Ba, B, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se, Ag, U, and Zn.

H = Hold

Please provide results to Jeff Dresser (Bridgewater)

Lab ID	Sample #	Date	Time	Sample Description	Matrix			Number of Containers	Analyses to be Performed							Remarks	
					Soil	Water	Other		NWTPH-Dx	NWTPH-Gx	PCB Aroclors (EPA 808/8082)	PAHs (EPA 8270D SIM)	SVOCs (EPA 8270D LL)	VOCs (8260C)	Metals by EPA Method 6020 (see lists comments)		
	Class-N-SE Quad-NW	06-Jun-18	14:30	Class N (2.0' bgs)	x			1									
	Class-N-SE Quad-NE	06-Jun-18	14:33	Class N (2.0' bgs)	x			1									
	Class-N-SE Quad-SW	06-Jun-18	14:36	Class N (2.0' bgs)	x			1									
	Class-N-SE Quad-SE	06-Jun-18	14:39	Class N (2.0' bgs)	x			1									
	Class-N-SE Quad-Center	06-Jun-18	14:42	Class N (2.0' bgs)	x			1									
	Class-N-SE Quad-Comp	= Comp of above SE Quad		Class N (2.0' bgs)													
	Class-N-SW Quad-NW	06-Jun-18	14:45	Class N (2.0' bgs)	x			1			X					X	Turn Around ASAP
	Class-N-SW Quad-NE	06-Jun-18	14:48	Class N (2.0' bgs)	x			1									
	Class-N-SW Quad-SW	06-Jun-18	14:51	Class N (2.0' bgs)	x			1									
	Class-N-SW Quad-SE	06-Jun-18	14:54	Class N (2.0' bgs)	x			1									
	Class-N-SW Quad-Center	06-Jun-18	14:57	Class N (2.0' bgs)	x			1									
	Class-N-SW Quad-Comp	= Comp of above SW Quad		Class N (2.0' bgs)													
	Class-N-NW Quad-NW	06-Jun-18	15:00	Class N (2.0' bgs)	x			1			X					X	Turn Around ASAP
	Class-N-NW Quad-NE	06-Jun-18	15:03	Class N (2.0' bgs)	x			1									
	Class-N-NW Quad-SW	06-Jun-18	15:06	Class N (2.0' bgs)	x			1									
	Class-N-NW Quad-SE	06-Jun-18	15:08	Class N (2.0' bgs)	x			1									
	Class-N-NW Quad-Center	06-Jun-18	15:10	Class N (2.0' bgs)	x			1									
	Class-N-NW Quad-Comp	= Comp of above NW Quad		Class N (2.0' bgs)							X					X	Turn Around ASAP

Relinquished by: *Ben Uhl* Company: HAHN & ASSOC Date: 6/7/18 Time: 942 Received by: *[Signature]* Company: Apex
 Relinquished by: _____ Company: _____ Date: _____ Time: _____ Received by: _____ Company: _____
 Relinquished by: _____ Company: _____ Date: _____ Time: _____ Received by: _____ Company: _____

APPENDIX D

LABORATORY ANALYTICAL REPORTS



Apex Laboratories, LLC

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Thursday, May 10, 2018

Jeff Dresser
Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

RE: A8E0189 - Esco - ESCO-021 (Class-N-Custom)

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A8E0189, which was received by the laboratory on 5/7/2018 at 9:12:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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Apex Laboratories, LLC

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: **ESCO-021 (Class-N-Custom)**
Project Manager: **Jeff Dresser**

Report ID:

A8E0189 - 05 10 18 1234

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Class-N-Kustom-SE-0.3-1.0	A8E0189-01	Soil	05/04/18 15:11	05/07/18 09:12
Class-N-Kustom-NW-0.3-1.0	A8E0189-02	Soil	05/04/18 15:15	05/07/18 09:12
Class-N-Kustom-S-0.3-1.0	A8E0189-03	Soil	05/04/18 15:20	05/07/18 09:12
Class-N-Kustom-NE-0.3-1.0	A8E0189-04	Soil	05/04/18 15:30	05/07/18 09:12

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Lisa Domenighini, Client Services Manager



Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: **ESCO-021 (Class-N-Custon**
Project Manager: **Jeff Dresser**

Report ID:
A8E0189 - 05 10 18 1234

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-Kustom-SE-0.3-1.0 (A8E0189-01)		Matrix: Soil		Batch: 8050543				C-07
Aroclor 1016	ND	5.29	10.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1221	ND	5.29	10.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1232	ND	5.29	10.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1242	6.08	5.29	10.6	ug/kg dry	1	05/08/18	EPA 8082A	J
Aroclor 1248	ND	5.29	10.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1254	ND	5.29	10.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1260	6.55	5.29	10.6	ug/kg dry	1	05/08/18	EPA 8082A	J
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 88 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>05/08/18</i>	<i>EPA 8082A</i>
Class-N-Kustom-NW-0.3-1.0 (A8E0189-02)		Matrix: Soil		Batch: 8050543				C-07
Aroclor 1016	ND	5.45	10.9	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1221	ND	5.45	10.9	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1232	ND	5.45	10.9	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1242	14.6	5.45	10.9	ug/kg dry	1	05/08/18	EPA 8082A	P-10
Aroclor 1248	ND	5.45	10.9	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1254	ND	5.45	10.9	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1260	24.2	5.45	10.9	ug/kg dry	1	05/08/18	EPA 8082A	P-10
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>05/08/18</i>	<i>EPA 8082A</i>
Class-N-Kustom-S-0.3-1.0 (A8E0189-03)		Matrix: Soil		Batch: 8050543				C-07
Aroclor 1016	ND	5.78	11.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1221	ND	5.78	11.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1232	ND	5.78	11.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1242	77.7	5.78	11.6	ug/kg dry	1	05/08/18	EPA 8082A	P-10
Aroclor 1248	ND	5.78	11.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1254	ND	5.78	11.6	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1260	43.1	5.78	11.6	ug/kg dry	1	05/08/18	EPA 8082A	P-10
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>05/08/18</i>	<i>EPA 8082A</i>
Class-N-Kustom-NE-0.3-1.0 (A8E0189-04)		Matrix: Soil		Batch: 8050543				C-07
Aroclor 1016	ND	5.47	10.9	ug/kg dry	1	05/08/18	EPA 8082A	

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custom) Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-Kustom-NE-0.3-1.0 (A8E0189-04)			Matrix: Soil					C-07
								Batch: 8050543
Aroclor 1221	ND	5.47	10.9	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1232	ND	5.47	10.9	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1242	10.8	5.47	10.9	ug/kg dry	1	05/08/18	EPA 8082A	J
Aroclor 1248	ND	5.47	10.9	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1254	ND	5.47	10.9	ug/kg dry	1	05/08/18	EPA 8082A	
Aroclor 1260	50.0	5.47	10.9	ug/kg dry	1	05/08/18	EPA 8082A	P-09
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>05/08/18</i>	<i>EPA 8082A</i>

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-Kustom-SE-0.3-1.0 (A8E0189-01)		Matrix: Soil		Batch: 8050517				
Acenaphthene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Acenaphthylene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Anthracene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Benz(a)anthracene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Chrysene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Dibenzofuran	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Fluoranthene	6.42	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	J
Fluorene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
1-Methylnaphthalene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
2-Methylnaphthalene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Naphthalene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Phenanthrene	ND	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	
Pyrene	8.68	5.17	10.3	ug/kg dry	1	05/08/18	EPA 8270D (SIM)	J
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 80 %</i>	<i>Limits: 44-120 %</i>		<i>1</i>	<i>05/08/18</i>	<i>EPA 8270D (SIM)</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>84 %</i>	<i>54-127 %</i>		<i>1</i>	<i>05/08/18</i>	<i>EPA 8270D (SIM)</i>	

Class-N-Kustom-NW-0.3-1.0 (A8E0189-02)		Matrix: Soil		Batch: 8050517				
Acenaphthene	ND	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Acenaphthylene	ND	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Anthracene	ND	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Benz(a)anthracene	122	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	M-05
Benzo(a)pyrene	138	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Benzo(b)fluoranthene	171	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	M-05
Benzo(k)fluoranthene	54.5	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	J

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-Kustom-NW-0.3-1.0 (A8E0189-02)			Matrix: Soil	Batch: 8050517				
Benzo(g,h,i)perylene	143	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Chrysene	179	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	M-05
Dibenz(a,h)anthracene	ND	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Dibenzofuran	ND	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Fluoranthene	244	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Fluorene	ND	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	111	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
1-Methylnaphthalene	ND	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
2-Methylnaphthalene	ND	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Naphthalene	ND	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Phenanthrene	261	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
Pyrene	345	53.2	106	ug/kg dry	10	05/08/18	EPA 8270D (SIM)	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 98 %</i>	<i>Limits: 44-120 %</i>		<i>10</i>	<i>05/08/18</i>	<i>EPA 8270D (SIM)</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>90 %</i>	<i>54-127 %</i>		<i>10</i>	<i>05/08/18</i>	<i>EPA 8270D (SIM)</i>	
Class-N-Kustom-S-0.3-1.0 (A8E0189-03)			Matrix: Soil	Batch: 8050517				
Acenaphthene	ND	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Acenaphthylene	38.6	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	J
Anthracene	ND	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Benz(a)anthracene	89.9	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	M-05
Benzo(a)pyrene	115	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Benzo(b)fluoranthene	147	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	M-05
Benzo(k)fluoranthene	47.8	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	J
Benzo(g,h,i)perylene	112	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Chrysene	131	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	M-05
Dibenz(a,h)anthracene	ND	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Dibenzofuran	ND	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Fluoranthene	162	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Fluorene	ND	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	97.5	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-Kustom-S-0.3-1.0 (A8E0189-03)		Matrix: Soil		Batch: 8050517				
1-Methylnaphthalene	ND	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
2-Methylnaphthalene	ND	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Naphthalene	36.4	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	J
Phenanthrene	90.6	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Pyrene	215	26.6	53.2	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 90 %</i>	<i>Limits: 44-120 %</i>		5	05/08/18	<i>EPA 8270D (SIM)</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>	<i>54-127 %</i>		5	05/08/18	<i>EPA 8270D (SIM)</i>	
Class-N-Kustom-NE-0.3-1.0 (A8E0189-04)		Matrix: Soil		Batch: 8050517				
Acenaphthene	ND	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Acenaphthylene	57.2	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Anthracene	41.8	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	J
Benz(a)anthracene	121	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	M-05
Benzo(a)pyrene	160	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Benzo(b)fluoranthene	191	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	M-05
Benzo(k)fluoranthene	61.0	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	M-05
Benzo(g,h,i)perylene	139	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Chrysene	181	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	M-05
Dibenz(a,h)anthracene	ND	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Dibenzofuran	ND	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Fluoranthene	280	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Fluorene	ND	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	125	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
1-Methylnaphthalene	ND	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
2-Methylnaphthalene	ND	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Naphthalene	ND	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Phenanthrene	195	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
Pyrene	360	27.3	54.7	ug/kg dry	5	05/08/18	EPA 8270D (SIM)	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 95 %</i>	<i>Limits: 44-120 %</i>		5	05/08/18	<i>EPA 8270D (SIM)</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>	<i>54-127 %</i>		5	05/08/18	<i>EPA 8270D (SIM)</i>	

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-Kustom-SE-0.3-1.0 (A8E0189-01)		Matrix: Soil		Batch: 8050539				
% Solids	93.1	1.00	1.00	% by Weight	1	05/09/18	EPA 8000C	
Class-N-Kustom-NW-0.3-1.0 (A8E0189-02)		Matrix: Soil		Batch: 8050539				
% Solids	88.3	1.00	1.00	% by Weight	1	05/09/18	EPA 8000C	
Class-N-Kustom-S-0.3-1.0 (A8E0189-03)		Matrix: Soil		Batch: 8050539				
% Solids	83.2	1.00	1.00	% by Weight	1	05/09/18	EPA 8000C	
Class-N-Kustom-NE-0.3-1.0 (A8E0189-04)		Matrix: Soil		Batch: 8050539				
% Solids	87.7	1.00	1.00	% by Weight	1	05/09/18	EPA 8000C	

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
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Batch 8050543 - EPA 3546 **Soil**

Blank (8050543-BLK1) Prepared: 05/08/18 09:35 Analyzed: 05/08/18 15:22 **C-07**

EPA 8082A

Aroclor 1016	ND	1.61	3.23	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	1.61	3.23	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1232	ND	1.61	3.23	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1242	ND	1.61	3.23	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1248	ND	1.61	3.23	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1254	ND	1.61	3.23	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1260	ND	1.61	3.23	ug/kg wet	1	---	---	---	---	---	---	

Surr: Decachlorobiphenyl (Surr) Recovery: 90 % Limits: 53-120 % Dilution: 1x

LCS (8050543-BS1) Prepared: 05/08/18 09:35 Analyzed: 05/08/18 15:39 **C-07**

EPA 8082A

Aroclor 1016	171	5.00	10.0	ug/kg wet	1	250	---	68	47-134%	---	---	
Aroclor 1260	199	5.00	10.0	ug/kg wet	1	250	---	80	53-140%	---	---	

Surr: Decachlorobiphenyl (Surr) Recovery: 95 % Limits: 53-120 % Dilution: 1x

Duplicate (8050543-DUP1) Prepared: 05/08/18 09:35 Analyzed: 05/08/18 16:33 **C-07**

QC Source Sample: Class-N-Kustom-SE-0.3-1.0 (A8E0189-01)

EPA 8082A

Aroclor 1016	ND	5.25	10.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1221	ND	5.25	10.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1232	ND	5.25	10.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1242	5.47	5.25	10.5	ug/kg dry	1	---	6.08	---	---	11	30%	J
Aroclor 1248	ND	5.25	10.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1254	ND	5.25	10.5	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1260	ND	5.25	10.5	ug/kg dry	1	---	6.55	---	---	***	30%	Q-05

Surr: Decachlorobiphenyl (Surr) Recovery: 88 % Limits: 53-120 % Dilution: 1x

Matrix Spike (8050543-MS1) Prepared: 05/08/18 09:35 Analyzed: 05/08/18 19:30 **C-07**

QC Source Sample: Non-SDG (A8E0190-01)

EPA 8082A

Aroclor 1016	208	5.72	11.4	ug/kg dry	1	286	ND	73	47-134%	---	---	
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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 8050543 - EPA 3546						Soil							
Matrix Spike (8050543-MS1)		Prepared: 05/08/18 09:35 Analyzed: 05/08/18 19:30						C-07					
QC Source Sample: Non-SDG (A8E0190-01)													
Aroclor 1260	237	5.72	11.4	ug/kg dry	1	286	16.7	77	53-140%	---	---		
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 53-120 %</i>		<i>Dilution: 1x</i>							

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Bridgewater Group	Project: Esco	
7100 SW Hampton St. Suite 235	Project Number: ESCO-021 (Class-N-Custon	Report ID:
Tigard, OR 97223	Project Manager: Jeff Dresser	A8E0189 - 05 10 18 1234

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8050517 - EPA 3546						Soil						
Blank (8050517-BLK1)		Prepared: 05/07/18 11:50 Analyzed: 05/07/18 15:09										
EPA 8270D (SIM)												
Acenaphthene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Acenaphthylene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Anthracene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Benz(a)anthracene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Benzo(a)pyrene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Benzo(b)fluoranthene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Benzo(k)fluoranthene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Benzo(g,h,i)perylene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Chrysene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Dibenz(a,h)anthracene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Dibenzofuran	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Fluoranthene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Fluorene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
1-Methylnaphthalene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
2-Methylnaphthalene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Naphthalene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Phenanthrene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
Pyrene	ND	4.17	8.33	ug/kg wet	1	---	---	---	---	---	---	---
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>101 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (8050517-BS1)		Prepared: 05/07/18 11:50 Analyzed: 05/07/18 15:35										
EPA 8270D (SIM)												
Acenaphthene	751	5.00	10.0	ug/kg wet	1	800	---	94	40-122%	---	---	---
Acenaphthylene	760	5.00	10.0	ug/kg wet	1	800	---	95	32-132%	---	---	---
Anthracene	733	5.00	10.0	ug/kg wet	1	800	---	92	47-123%	---	---	---
Benz(a)anthracene	747	5.00	10.0	ug/kg wet	1	800	---	93	49-126%	---	---	---
Benzo(a)pyrene	770	5.00	10.0	ug/kg wet	1	800	---	96	45-129%	---	---	---
Benzo(b)fluoranthene	777	5.00	10.0	ug/kg wet	1	800	---	97	45-132%	---	---	---
Benzo(k)fluoranthene	735	5.00	10.0	ug/kg wet	1	800	---	92	47-132%	---	---	---
Benzo(g,h,i)perylene	577	5.00	10.0	ug/kg wet	1	800	---	72	43-134%	---	---	---

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Lisa Domenighini, Client Services Manager



Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: **ESCO-021 (Class-N-Custon**
Project Manager: **Jeff Dresser**

Report ID:

A8E0189 - 05 10 18 1234

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8050517 - EPA 3546												
Soil												
LCS (8050517-BS1)												
			Prepared: 05/07/18 11:50			Analyzed: 05/07/18 15:35						
Chrysene	778	5.00	10.0	ug/kg wet	1	800	---	97	50-124%	---	---	
Dibenz(a,h)anthracene	756	5.00	10.0	ug/kg wet	1	800	---	95	45-134%	---	---	
Dibenzofuran	718	5.00	10.0	ug/kg wet	1	800	---	90	44-120%	---	---	
Fluoranthene	762	5.00	10.0	ug/kg wet	1	800	---	95	50-127%	---	---	
Fluorene	739	5.00	10.0	ug/kg wet	1	800	---	92	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	646	5.00	10.0	ug/kg wet	1	800	---	81	45-133%	---	---	
1-Methylnaphthalene	752	5.00	10.0	ug/kg wet	1	800	---	94	40-120%	---	---	
2-Methylnaphthalene	741	5.00	10.0	ug/kg wet	1	800	---	93	38-122%	---	---	
Naphthalene	731	5.00	10.0	ug/kg wet	1	800	---	91	35-123%	---	---	
Phenanthrene	741	5.00	10.0	ug/kg wet	1	800	---	93	50-121%	---	---	
Pyrene	768	5.00	10.0	ug/kg wet	1	800	---	96	47-127%	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 95 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		94 %		54-127 %		"						

Duplicate (8050517-DUP1)

Prepared: 05/07/18 11:50 Analyzed: 05/07/18 16:28

QC Source Sample: Non-SDG (A8E0083-01)

EPA 8270D (SIM)

Acenaphthene	ND	198	198	ug/kg dry	5	---	ND	---	---	---	30%	R-02
Acenaphthylene	ND	347	347	ug/kg dry	5	---	ND	---	---	---	30%	R-02
Anthracene	ND	207	207	ug/kg dry	5	---	ND	---	---	---	30%	R-02
Benz(a)anthracene	ND	62.7	62.7	ug/kg dry	5	---	ND	---	---	---	30%	R-02
Benzo(a)pyrene	ND	24.1	48.2	ug/kg dry	5	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	24.1	48.2	ug/kg dry	5	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	24.1	48.2	ug/kg dry	5	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	24.1	48.2	ug/kg dry	5	---	ND	---	---	---	30%	
Chrysene	ND	67.5	67.5	ug/kg dry	5	---	ND	---	---	---	30%	R-02
Dibenz(a,h)anthracene	ND	24.1	48.2	ug/kg dry	5	---	ND	---	---	---	30%	
Dibenzofuran	802	24.1	48.2	ug/kg dry	5	---	603	---	---	28	30%	
Fluoranthene	73.9	24.1	48.2	ug/kg dry	5	---	58.3	---	---	24	30%	
Fluorene	ND	627	627	ug/kg dry	5	---	ND	---	---	---	30%	R-02
Indeno(1,2,3-cd)pyrene	ND	24.1	48.2	ug/kg dry	5	---	ND	---	---	---	30%	
1-Methylnaphthalene	1020	24.1	48.2	ug/kg dry	5	---	752	---	---	30	30%	
2-Methylnaphthalene	856	24.1	48.2	ug/kg dry	5	---	635	---	---	30	30%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8050517 - EPA 3546												
Soil												
Duplicate (8050517-DUP1)			Prepared: 05/07/18 11:50 Analyzed: 05/07/18 16:28									
QC Source Sample: Non-SDG (A8E0083-01)												
Naphthalene	ND	328	328	ug/kg dry	5	---	ND	---	---	---	30%	R-02
Phenanthrene	1450	24.1	48.2	ug/kg dry	5	---	1080	---	---	29	30%	
Pyrene	332	24.1	48.2	ug/kg dry	5	---	248	---	---	29	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 152 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 5x</i>		<i>S-06</i>				
<i>p-Terphenyl-d14 (Surr)</i>		<i>136 %</i>		<i>54-127 %</i>		<i>"</i>		<i>S-06</i>				

Matrix Spike (8050517-MS1)												
Prepared: 05/07/18 11:50 Analyzed: 05/07/18 16:54												
QC Source Sample: Non-SDG (A8E0083-01)												
EPA 8270D (SIM)												
Acenaphthene	845	24.1	48.3	ug/kg dry	5	772	121	94	40-122%	---	---	
Acenaphthylene	843	24.1	48.3	ug/kg dry	5	772	258	76	32-132%	---	---	
Anthracene	914	24.1	48.3	ug/kg dry	5	772	143	100	47-123%	---	---	
Benz(a)anthracene	715	24.1	48.3	ug/kg dry	5	772	40.5	87	49-126%	---	---	
Benzo(a)pyrene	740	24.1	48.3	ug/kg dry	5	772	ND	96	45-129%	---	---	
Benzo(b)fluoranthene	763	24.1	48.3	ug/kg dry	5	772	ND	99	45-132%	---	---	
Benzo(k)fluoranthene	754	24.1	48.3	ug/kg dry	5	772	ND	98	47-132%	---	---	
Benzo(g,h,i)perylene	536	24.1	48.3	ug/kg dry	5	772	ND	69	43-134%	---	---	
Chrysene	775	24.1	48.3	ug/kg dry	5	772	44.3	95	50-124%	---	---	
Dibenz(a,h)anthracene	680	24.1	48.3	ug/kg dry	5	772	ND	88	45-134%	---	---	
Dibenzofuran	1270	24.1	48.3	ug/kg dry	5	772	603	86	44-120%	---	---	
Fluoranthene	885	24.1	48.3	ug/kg dry	5	772	58.3	107	50-127%	---	---	
Fluorene	1230	24.1	48.3	ug/kg dry	5	772	420	105	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	589	24.1	48.3	ug/kg dry	5	772	ND	76	45-133%	---	---	
1-Methylnaphthalene	1400	24.1	48.3	ug/kg dry	5	772	752	83	40-120%	---	---	
2-Methylnaphthalene	1260	24.1	48.3	ug/kg dry	5	772	635	81	38-122%	---	---	
Naphthalene	988	24.1	48.3	ug/kg dry	5	772	237	97	35-123%	---	---	
Phenanthrene	1740	24.1	48.3	ug/kg dry	5	772	1080	85	50-121%	---	---	
Pyrene	1120	24.1	48.3	ug/kg dry	5	772	248	113	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 5x</i>		<i>S-06</i>				
<i>p-Terphenyl-d14 (Surr)</i>		<i>96 %</i>		<i>54-127 %</i>		<i>"</i>		<i>S-06</i>				

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8050539 - Total Solids (Dry Weight)						Soil						
Duplicate (8050539-DUP1) Prepared: 05/08/18 09:26 Analyzed: 05/09/18 08:49												
<u>QC Source Sample: Non-SDG (A8E0130-01)</u>												
<u>EPA 8000C</u>												
% Solids	63.6	1.00	1.00	% by Weight	1	---	59.4	---	---	7	10%	
Duplicate (8050539-DUP2) Prepared: 05/08/18 09:26 Analyzed: 05/09/18 08:49												
<u>QC Source Sample: Non-SDG (A8E0130-11)</u>												
<u>EPA 8000C</u>												
% Solids	64.2	1.00	1.00	% by Weight	1	---	68.2	---	---	6	10%	
Duplicate (8050539-DUP3) Prepared: 05/08/18 09:26 Analyzed: 05/09/18 08:49												
<u>QC Source Sample: Class-N-Kustom-SE-0.3-1.0 (A8E0189-01)</u>												
<u>EPA 8000C</u>												
% Solids	92.7	1.00	1.00	% by Weight	1	---	93.1	---	---	0.4	10%	
Duplicate (8050539-DUP4) Prepared: 05/08/18 09:26 Analyzed: 05/09/18 08:49												
<u>QC Source Sample: Non-SDG (A8E0190-09)</u>												
<u>EPA 8000C</u>												
% Solids	94.9	1.00	1.00	% by Weight	1	---	94.6	---	---	0.3	10%	
Duplicate (8050539-DUP5) Prepared: 05/08/18 09:26 Analyzed: 05/09/18 08:49												
<u>QC Source Sample: Non-SDG (A8E0194-03)</u>												
<u>EPA 8000C</u>												
% Solids	83.3	1.00	1.00	% by Weight	1	---	84.0	---	---	0.9	10%	
Duplicate (8050539-DUP6) Prepared: 05/08/18 17:54 Analyzed: 05/09/18 08:49												
<u>QC Source Sample: Non-SDG (A8E0231-06)</u>												
<u>EPA 8000C</u>												
% Solids	88.9	1.00	1.00	% by Weight	1	---	89.0	---	---	0.2	10%	
Duplicate (8050539-DUP7) Prepared: 05/08/18 17:54 Analyzed: 05/09/18 08:49												
<u>QC Source Sample: Non-SDG (A8E0244-02)</u>												
<u>EPA 8000C</u>												

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8050539 - Total Solids (Dry Weight)						Soil						
Duplicate (8050539-DUP7)		Prepared: 05/08/18 17:54 Analyzed: 05/09/18 08:49										
<u>QC Source Sample: Non-SDG (A8E0244-02)</u>												
% Solids	82.9	1.00	1.00	% by Weight	1	---	82.1	---	---	1	10%	
Duplicate (8050539-DUP8)		Prepared: 05/08/18 18:43 Analyzed: 05/09/18 08:49										
<u>QC Source Sample: Non-SDG (A8E0250-02)</u>												
<u>EPA 8000C</u>												
% Solids	92.9	1.00	1.00	% by Weight	1	---	92.3	---	---	0.7	10%	
Duplicate (8050539-DUP9)		Prepared: 05/08/18 20:07 Analyzed: 05/09/18 08:49										
<u>QC Source Sample: Non-SDG (A8E0258-02)</u>												
<u>EPA 8000C</u>												
% Solids	80.6	1.00	1.00	% by Weight	1	---	79.9	---	---	0.9	10%	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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SAMPLE PREPARATION INFORMATION

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8050543							
A8E0189-01	Soil	EPA 8082A	05/04/18 15:11	05/08/18 09:35	10.16g/5mL	10g/5mL	0.98
A8E0189-02	Soil	EPA 8082A	05/04/18 15:15	05/08/18 09:35	10.38g/5mL	10g/5mL	0.96
A8E0189-03	Soil	EPA 8082A	05/04/18 15:20	05/08/18 09:35	10.39g/5mL	10g/5mL	0.96
A8E0189-04	Soil	EPA 8082A	05/04/18 15:30	05/08/18 09:35	10.41g/5mL	10g/5mL	0.96

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8050517							
A8E0189-01	Soil	EPA 8270D (SIM)	05/04/18 15:11	05/07/18 16:06	10.38g/5mL	10g/5mL	0.96
A8E0189-02	Soil	EPA 8270D (SIM)	05/04/18 15:15	05/07/18 16:06	10.65g/5mL	10g/5mL	0.94
A8E0189-03	Soil	EPA 8270D (SIM)	05/04/18 15:20	05/07/18 16:06	11.3g/5mL	10g/5mL	0.89
A8E0189-04	Soil	EPA 8270D (SIM)	05/04/18 15:30	05/07/18 16:06	10.42g/5mL	10g/5mL	0.96

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8050539							
A8E0189-01	Soil	EPA 8000C	05/04/18 15:11	05/08/18 09:26	1N/A/1N/A	1N/A/1N/A	NA
A8E0189-02	Soil	EPA 8000C	05/04/18 15:15	05/08/18 09:26	1N/A/1N/A	1N/A/1N/A	NA
A8E0189-03	Soil	EPA 8000C	05/04/18 15:20	05/08/18 09:26	1N/A/1N/A	1N/A/1N/A	NA
A8E0189-04	Soil	EPA 8000C	05/04/18 15:30	05/08/18 09:26	1N/A/1N/A	1N/A/1N/A	NA

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Lisa Domenighini, Client Services Manager



Bridgewater Group

**7100 SW Hampton St. Suite 235
Tigard, OR 97223**

Project: **Esco**

Project Number: **ESCO-021 (Class-N-Custon**
Project Manager: **Jeff Dresser**

Report ID:

A8E0189 - 05 10 18 1234

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

- C-07** Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- P-09** Due to weathering and/or the presence of an unknown mixture of PCB Congeners, the pattern does not match the standard used for calibration. Results are Estimated and based on the closest matching Aroclor.
- P-10** Result estimated due to the presence of multiple PCB Aroclors and/or matrix interference.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-06** Surrogate recovery is outside of established control limits.

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
 - " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
 - " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
 - " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source: In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the blank results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met. Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custon Project Manager: Jeff Dresser	<u>Report ID:</u> A8E0189 - 05 10 18 1234
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LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) | EPA ID: OR01039

All reported analytes are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Cert?
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All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details.

Apex Laboratories

Lisa Domenighini, Client Services Manager

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Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**
Project Number: **ESCO-021 (Class-N-Custon)**
Project Manager: **Jeff Dresser**

Report ID:
A8E0189 - 05 10 18 1234

A8E0189

CHAIN OF CUSTODY

Hahn and Associates, Inc. Environmental Management 434 NW Sixth Avenue, Suite 203 • Portland OR 97209 (503) 796-0717 • Fax: (503) 227-2269		Apex Laboratories Tigard, Oregon	Chain of Custody No.
Project Manager: Eric Tupper / Jeff Dresser Project No.: ESCO-021 (Class-N-Custon) Project Name: ES Collected by: Ben Uhl	Lab Project No.: 		Samples Received at: (Y or N) Appropriation Containers Used: (Y or N) Provide Verbal Results: (Y or N) Provide Preliminary Fax Results:
Liquid with Sediment Sample Test Phase: Multi-Phase Sample Test One (which): Test Two (which): Test Sediment: Shake Test Separately: Shake			
Matrix Matrix:			
Analyses to be Performed PCB Aroclors (EPA 808/8082) VOCs (8260C) Metals by EPA Method 8220 (see lists comments) PAHs (EPA 8270D SIM) SVOCs (EPA 8270D LL)			
Sample # Date Time Sample Description SE-0.3-1.0 04-May-18 15:11 0.3 - 1.0' bgs NW-0.3-1.0 04-May-18 15:15 0.3 - 1.0' bgs S-0.3-1.0 04-May-18 15:20 0.3 - 1.0' bgs NE-0.3-1.0 04-May-18 15:30 0.3 - 1.0' bgs	Number of Containers: Other: 2 Water: 2 Soil: 2	Matrix: Soil: X Water: X Other: X	Remarks: 5-day TAT 5-day TAT 5-day TAT 5-day TAT
Reimposed by: Ben Uhl Reimposed by: Ben Uhl Reimposed by:	Date: 5/18/18 Date: 5/18/18 Date:	Time: 0:12 Time: Time:	Received by: Brian Harrison Company: Apex Received by: Company:

Sample Number Prefix: Class-N-Kustom-
 1 = metals testing to include: As, Ba, Bi, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se, Ag, U, and Zn.
 H = Hold
 Please provide results to Jeff Dresser (Bridgewater)

Apex Laboratories

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Lisa Domenighini

Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 (Class-N-Custom) Project Manager: Jeff Dresser	Report ID: A8E0189 - 05 10 18 1234
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APEX LABS COOLER RECEIPT FORM

Client: hahn Element WO#: A8E0189

Project/Project #: ESCO-021 (class-N-Custom)

Delivery info:
Date/Time Received: 5/7/18 @ 9:12 By: BLP

Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Inspected by: BLP : 5/7/18 @ 10:09

Chain of Custody Included? Yes No Custody Seals? Yes No

Signed/Dated by Client? Yes No

Signed/Dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)	<u>35</u>						
Received on Ice? (Y/N)							
Temp. Blanks? (Y/N)							
Ice Type: (Gel/Real/Other)							
Condition:	<u>Good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No/NA

Samples Inspection: Inspected by: (Signature) : 5/7/18 @ 11:45

All Samples Intact? Yes No Comments: _____

Bottle Labels/COCs agree? Yes No Comments: _____

Containers/Volumes Received Appropriate for Analysis? Yes No Comments: _____

Do VOA Vials have Visible Headspace? Yes No NA

Comments: _____

Water Samples: pH Checked and Appropriate (except VOAs): Yes No NA

Comments: _____

Additional Information: _____

Labeled by: (Signature) Witness: ALCK Cooler Inspected by: (Signature) See Project Contact Form: Y

Lisa Domenighini



Apex Laboratories, LLC

12232 S.W. Garden Place

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Tuesday, June 12, 2018

Jeff Dresser
Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

RE: A8F0180 - Esco - ESCO-021

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A8F0180, which was received by the laboratory on 6/7/2018 at 9:42:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

A handwritten signature in black ink that reads "Lisa A. Domenighini".

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Client Services Manager

Page 1 of 23

Privileged and Confidential / Attorney Client Communication



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: <u>Esco</u> Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Class-N-SE Quad-NW	A8F0180-01	Soil	06/06/18 14:30	06/07/18 09:42
Class-N-SE Quad-NE	A8F0180-02	Soil	06/06/18 14:33	06/07/18 09:42
Class-N-SE Quad-SW	A8F0180-03	Soil	06/06/18 14:36	06/07/18 09:42
Class-N-SE Quad-SE	A8F0180-04	Soil	06/06/18 14:39	06/07/18 09:42
Class-N-SE Quad-Center	A8F0180-05	Soil	06/06/18 14:42	06/07/18 09:42
Class-N-SE Quad-Comp	A8F0180-06	Soil	06/06/18 14:30	06/07/18 09:42
Class-N-SW Quad-NW	A8F0180-07	Soil	06/06/18 14:45	06/07/18 09:42
Class-N-SW Quad-NE	A8F0180-08	Soil	06/06/18 14:48	06/07/18 09:42
Class-N-SW Quad-SW	A8F0180-09	Soil	06/06/18 14:51	06/07/18 09:42
Class-N-SW Quad-SE	A8F0180-10	Soil	06/06/18 14:54	06/07/18 09:42
Class-N-SW Quad-Center	A8F0180-11	Soil	06/06/18 14:57	06/07/18 09:42
Class-N-SW Quad-Comp	A8F0180-12	Soil	06/06/18 14:45	06/07/18 09:42
Class-N-NW Quad-NW	A8F0180-13	Soil	06/06/18 15:00	06/07/18 09:42
Class-N-NW Quad-NE	A8F0180-14	Soil	06/06/18 15:03	06/07/18 09:42
Class-N-NW Quad-SW	A8F0180-15	Soil	06/06/18 15:06	06/07/18 09:42
Class-N-NW Quad-SE	A8F0180-16	Soil	06/06/18 15:08	06/07/18 09:42
Class-N-NW Quad-Center	A8F0180-17	Soil	06/06/18 15:10	06/07/18 09:42
Class-N-NW Quad-Comp	A8F0180-18	Soil	06/06/18 15:00	06/07/18 09:42

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: **ESCO-021**

Project Manager: **Jeff Dresser**

Report ID:

A8F0180 - 06 11 18 1531

ANALYTICAL CASE NARRATIVE

Work Order: A8F0180

EPA Method 8082 PCB Analytical Notes.

Sample Class-N-SE Quad-Comp (A8F0180-06): Sample Aroclor concentration was extremely high compared to sample duplicate results. Original sample results were >100x the duplicate results. The sample was re-extracted and the results were approximately double the duplicate results and 75x less than the original results. This may be due to one of the discreet samples creating a non-homogenous sample matrix.

Mark Zehr
Organics Manager
6/8/2018

Apex Laboratories

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
Class-N-SE Quad-NW (A8F0180-01)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1242	141	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1248	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1254	52.2	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1260	16.0	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	
Class-N-SE Quad-NE (A8F0180-02RE1)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1242	893	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1248	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1254	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1260	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A		
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 53-120 %</i>		<i>5</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	<i>S-05</i>
Class-N-SE Quad-SW (A8F0180-03)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	10.8	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	10.8	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	10.8	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1242	138	---	10.8	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1248	ND	---	10.8	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1254	33.0	---	10.8	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1260	19.3	---	10.8	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	
Class-N-SE Quad-SE (A8F0180-04)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1242	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1248	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1254	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1260	ND	---	11.3	ug/kg dry	1	06/09/18	EPA 8082A		
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	

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Lisa Domenighini, Client Services Manager



Bridgewater Group	Project: Esco	
7100 SW Hampton St. Suite 235	Project Number: ESCO-021	Report ID:
Tigard, OR 97223	Project Manager: Jeff Dresser	A8F0180 - 06 11 18 1531

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
Class-N-SE Quad-Center (A8F0180-05RE1)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	55.4	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	55.4	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	55.4	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1242	1210	---	55.4	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1248	ND	---	55.4	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1254	ND	---	55.4	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1260	ND	---	55.4	ug/kg dry	5	06/09/18	EPA 8082A		
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 83 %</i>		<i>Limits: 53-120 %</i>		<i>5</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	<i>S-05</i>
Class-N-SE Quad-Comp (A8F0180-06RE4)		Matrix: Soil		Batch: 8060485				C-07, X	
Aroclor 1016	ND	---	1930	ug/kg dry	200	06/08/18	EPA 8082A		
Aroclor 1221	ND	---	1930	ug/kg dry	200	06/08/18	EPA 8082A		
Aroclor 1232	ND	---	1930	ug/kg dry	200	06/08/18	EPA 8082A		
Aroclor 1242	46000	---	1930	ug/kg dry	200	06/08/18	EPA 8082A		
Aroclor 1248	ND	---	1930	ug/kg dry	200	06/08/18	EPA 8082A		
Aroclor 1254	ND	---	1930	ug/kg dry	200	06/08/18	EPA 8082A		
Aroclor 1260	ND	---	1930	ug/kg dry	200	06/08/18	EPA 8082A		
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 53-120 %</i>		<i>200</i>	<i>06/08/18</i>	<i>EPA 8082A</i>	<i>S-05</i>
Class-N-SW Quad-NW (A8F0180-07)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1242	21.3	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1248	ND	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1254	11.1	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1260	ND	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A		
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 68 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	
Class-N-SW Quad-NE (A8F0180-08)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1242	432	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1248	ND	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1254	141	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1260	83.3	---	10.2	ug/kg dry	1	06/09/18	EPA 8082A	P-10	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-SW Quad-NE (A8F0180-08)		Matrix: Soil		Batch: 8060506				C-07
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 92 %</i>	<i>Limits: 53-120 %</i>	<i>1</i>	<i>06/09/18</i>	<i>EPA 8082A</i>		
Class-N-SW Quad-SW (A8F0180-09)		Matrix: Soil		Batch: 8060506				C-07
Aroclor 1016	ND	---	10.7	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1221	ND	---	10.7	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1232	ND	---	10.7	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1242	ND	---	10.7	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1248	ND	---	10.7	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1254	ND	---	10.7	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1260	ND	---	10.7	ug/kg dry	1	06/09/18	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 77 %</i>	<i>Limits: 53-120 %</i>	<i>1</i>	<i>06/09/18</i>	<i>EPA 8082A</i>		
Class-N-SW Quad-SE (A8F0180-10RE1)		Matrix: Soil		Batch: 8060506				C-07
Aroclor 1016	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A	
Aroclor 1221	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A	
Aroclor 1232	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A	
Aroclor 1242	741	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A	P-10
Aroclor 1248	ND	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A	
Aroclor 1254	411	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A	P-10
Aroclor 1260	78.6	---	55.3	ug/kg dry	5	06/09/18	EPA 8082A	P-10
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 78 %</i>	<i>Limits: 53-120 %</i>	<i>5</i>	<i>06/09/18</i>	<i>EPA 8082A</i>		<i>S-05</i>
Class-N-SW Quad-Center (A8F0180-11)		Matrix: Soil		Batch: 8060506				C-07
Aroclor 1016	ND	---	10.5	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1221	ND	---	10.5	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1232	ND	---	10.5	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1242	610	---	10.5	ug/kg dry	1	06/09/18	EPA 8082A	P-10
Aroclor 1248	ND	---	10.5	ug/kg dry	1	06/09/18	EPA 8082A	
Aroclor 1254	219	---	10.5	ug/kg dry	1	06/09/18	EPA 8082A	P-10
Aroclor 1260	78.9	---	10.5	ug/kg dry	1	06/09/18	EPA 8082A	P-10
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>	<i>Limits: 53-120 %</i>	<i>1</i>	<i>06/09/18</i>	<i>EPA 8082A</i>		
Class-N-SW Quad-Comp (A8F0180-12)		Matrix: Soil		Batch: 8060485				C-07
Aroclor 1016	ND	---	10.3	ug/kg dry	1	06/07/18	EPA 8082A	
Aroclor 1221	ND	---	10.3	ug/kg dry	1	06/07/18	EPA 8082A	
Aroclor 1232	ND	---	10.3	ug/kg dry	1	06/07/18	EPA 8082A	
Aroclor 1242	317	---	10.3	ug/kg dry	1	06/07/18	EPA 8082A	P-10
Aroclor 1248	ND	---	10.3	ug/kg dry	1	06/07/18	EPA 8082A	

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Bridgewater Group	Project: Esco	
7100 SW Hampton St. Suite 235	Project Number: ESCO-021	Report ID:
Tigard, OR 97223	Project Manager: Jeff Dresser	A8F0180 - 06 11 18 1531

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
Class-N-SW Quad-Comp (A8F0180-12)		Matrix: Soil		Batch: 8060485				C-07	
Aroclor 1254	87.8	---	10.3	ug/kg dry	1	06/07/18	EPA 8082A	P-10	
Aroclor 1260	34.0	---	10.3	ug/kg dry	1	06/07/18	EPA 8082A	P-10	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/07/18</i>	<i>EPA 8082A</i>	
Class-N-NW Quad-NW (A8F0180-13RE1)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	107	ug/kg dry	10	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	107	ug/kg dry	10	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	107	ug/kg dry	10	06/09/18	EPA 8082A		
Aroclor 1242	1000	---	107	ug/kg dry	10	06/09/18	EPA 8082A	P-10	
Aroclor 1248	ND	---	107	ug/kg dry	10	06/09/18	EPA 8082A		
Aroclor 1254	4170	---	107	ug/kg dry	10	06/09/18	EPA 8082A	P-10	
Aroclor 1260	ND	---	107	ug/kg dry	10	06/09/18	EPA 8082A		
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 164 %</i>		<i>Limits: 53-120 %</i>		<i>10</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	<i>S-06</i>
Class-N-NW Quad-NE (A8F0180-14)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	11.5	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	11.5	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	11.5	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1242	54.2	---	11.5	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1248	ND	---	11.5	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1254	98.7	---	11.5	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
Aroclor 1260	166	---	11.5	ug/kg dry	1	06/09/18	EPA 8082A	P-10	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	
Class-N-NW Quad-SW (A8F0180-15RE1)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	98.6	ug/kg dry	10	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	98.6	ug/kg dry	10	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	98.6	ug/kg dry	10	06/09/18	EPA 8082A		
Aroclor 1242	1060	---	98.6	ug/kg dry	10	06/09/18	EPA 8082A	P-10	
Aroclor 1248	ND	---	98.6	ug/kg dry	10	06/09/18	EPA 8082A		
Aroclor 1254	1940	---	98.6	ug/kg dry	10	06/09/18	EPA 8082A	P-10	
Aroclor 1260	321	---	98.6	ug/kg dry	10	06/09/18	EPA 8082A	P-10	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 133 %</i>		<i>Limits: 53-120 %</i>		<i>10</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	<i>S-05</i>
Class-N-NW Quad-SE (A8F0180-16)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	12.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	12.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	12.3	ug/kg dry	1	06/09/18	EPA 8082A		

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
Class-N-NW Quad-SE (A8F0180-16)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1242	ND	---	12.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1248	ND	---	12.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1254	ND	---	12.3	ug/kg dry	1	06/09/18	EPA 8082A		
Aroclor 1260	ND	---	12.3	ug/kg dry	1	06/09/18	EPA 8082A		
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	
Class-N-NW Quad-Center (A8F0180-17RE1)		Matrix: Soil		Batch: 8060506				C-07	
Aroclor 1016	ND	---	53.9	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1221	ND	---	53.9	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1232	ND	---	53.9	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1242	793	---	53.9	ug/kg dry	5	06/09/18	EPA 8082A	P-10	
Aroclor 1248	ND	---	53.9	ug/kg dry	5	06/09/18	EPA 8082A		
Aroclor 1254	1470	---	53.9	ug/kg dry	5	06/09/18	EPA 8082A	P-10	
Aroclor 1260	230	---	53.9	ug/kg dry	5	06/09/18	EPA 8082A	P-10	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 122 %</i>		<i>Limits: 53-120 %</i>		<i>5</i>	<i>06/09/18</i>	<i>EPA 8082A</i>	<i>S-06</i>
Class-N-NW Quad-Comp (A8F0180-18RE1)		Matrix: Soil		Batch: 8060485				C-07	
Aroclor 1016	ND	---	55.0	ug/kg dry	5	06/08/18	EPA 8082A		
Aroclor 1221	ND	---	55.0	ug/kg dry	5	06/08/18	EPA 8082A		
Aroclor 1232	ND	---	55.0	ug/kg dry	5	06/08/18	EPA 8082A		
Aroclor 1242	1240	---	55.0	ug/kg dry	5	06/08/18	EPA 8082A	P-10	
Aroclor 1248	ND	---	55.0	ug/kg dry	5	06/08/18	EPA 8082A		
Aroclor 1254	1750	---	55.0	ug/kg dry	5	06/08/18	EPA 8082A	P-10	
Aroclor 1260	254	---	55.0	ug/kg dry	5	06/08/18	EPA 8082A	P-10	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 114 %</i>		<i>Limits: 53-120 %</i>		<i>5</i>	<i>06/08/18</i>	<i>EPA 8082A</i>	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-SE Quad-NW (A8F0180-01)		Matrix: Soil		Batch: 8060517				
% Solids	85.3	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SE Quad-NE (A8F0180-02)		Matrix: Soil		Batch: 8060517				
% Solids	83.4	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SE Quad-SW (A8F0180-03)		Matrix: Soil		Batch: 8060517				
% Solids	87.0	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SE Quad-SE (A8F0180-04)		Matrix: Soil		Batch: 8060517				
% Solids	87.6	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SE Quad-Center (A8F0180-05)		Matrix: Soil		Batch: 8060517				
% Solids	85.3	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SE Quad-Comp (A8F0180-06)		Matrix: Soil		Batch: 8060463				
% Solids	85.1	---	1.00	% by Weight	1	06/08/18	EPA 8000C	
Class-N-SW Quad-NW (A8F0180-07)		Matrix: Soil		Batch: 8060517				
% Solids	91.4	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SW Quad-NE (A8F0180-08)		Matrix: Soil		Batch: 8060517				
% Solids	92.2	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SW Quad-SW (A8F0180-09)		Matrix: Soil		Batch: 8060517				
% Solids	89.8	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SW Quad-SE (A8F0180-10)		Matrix: Soil		Batch: 8060517				
% Solids	89.5	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SW Quad-Center (A8F0180-11)		Matrix: Soil		Batch: 8060517				
% Solids	89.2	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-SW Quad-Comp (A8F0180-12)		Matrix: Soil		Batch: 8060463				
% Solids	90.6	---	1.00	% by Weight	1	06/08/18	EPA 8000C	
Class-N-NW Quad-NW (A8F0180-13)		Matrix: Soil		Batch: 8060517				
% Solids	92.4	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-NW Quad-NE (A8F0180-14)		Matrix: Soil		Batch: 8060517				

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-NW Quad-NE (A8F0180-14)		Matrix: Soil		Batch: 8060517				
% Solids	81.8	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-NW Quad-SW (A8F0180-15)		Matrix: Soil		Batch: 8060517				
% Solids	95.0	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-NW Quad-SE (A8F0180-16)		Matrix: Soil		Batch: 8060517				
% Solids	80.5	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-NW Quad-Center (A8F0180-17)		Matrix: Soil		Batch: 8060517				
% Solids	86.9	---	1.00	% by Weight	1	06/11/18	EPA 8000C	
Class-N-NW Quad-Comp (A8F0180-18)		Matrix: Soil		Batch: 8060463				
% Solids	86.9	---	1.00	% by Weight	1	06/08/18	EPA 8000C	

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Bridgewater Group	Project: Esco	
7100 SW Hampton St. Suite 235	Project Number: ESCO-021	Report ID:
Tigard, OR 97223	Project Manager: Jeff Dresser	A8F0180 - 06 11 18 1531

QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8060485 - EPA 3546						Soil						
Blank (8060485-BLK1)		Prepared: 06/07/18 13:02		Analyzed: 06/07/18 17:31								C-07
EPA 8082A												
Aroclor 1016	ND	---	7.69	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	7.69	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	7.69	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	7.69	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	7.69	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	7.69	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	7.69	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		Recovery: 85 %		Limits: 53-120 %		Dilution: 1x						
LCS (8060485-BS1)		Prepared: 06/07/18 13:02		Analyzed: 06/07/18 17:49								C-07
EPA 8082A												
Aroclor 1016	179	---	10.0	ug/kg wet	1	250	---	72	47-134%	---	---	
Aroclor 1260	208	---	10.0	ug/kg wet	1	250	---	83	53-140%	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		Recovery: 88 %		Limits: 53-120 %		Dilution: 1x						
Duplicate (8060485-DUP1)		Prepared: 06/07/18 13:02		Analyzed: 06/07/18 18:44								C-07
QC Source Sample: Class-N-SE Quad-Comp (A8F0180-06)												
EPA 8082A												
Aroclor 1016	ND	---	9.62	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1221	ND	---	9.62	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1232	ND	---	9.62	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1242	354	---	9.62	ug/kg dry	1	---	ND	---	---	---	30%	P-10
Aroclor 1248	ND	---	9.62	ug/kg dry	1	---	ND	---	---	---	30%	
Aroclor 1254	62.8	---	9.62	ug/kg dry	1	---	ND	---	---	---	30%	P-10
Aroclor 1260	19.9	---	9.62	ug/kg dry	1	---	ND	---	---	---	30%	P-10
<i>Surr: Decachlorobiphenyl (Surr)</i>		Recovery: 75 %		Limits: 53-120 %		Dilution: 1x						
Matrix Spike (8060485-MS2)		Prepared: 06/07/18 13:02		Analyzed: 06/08/18 09:47								C-07, Q-43
QC Source Sample: Class-N-NW Quad-Comp (A8F0180-18RE1)												
EPA 8082A												
Aroclor 1016	1260	---	55.2	ug/kg dry	5	276	ND	457	47-134%	---	---	
Aroclor 1260	701	---	55.2	ug/kg dry	5	276	254	162	53-140%	---	---	

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Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8060485 - EPA 3546						Soil						
Matrix Spike (8060485-MS2)		Prepared: 06/07/18 13:02				Analyzed: 06/08/18 09:47				C-07, Q-43		
QC Source Sample: Class-N-NW Quad-Comp (A8F0180-18RE1)												
Surr: Decachlorobiphenyl (Surr)		Recovery: 109 %		Limits: 53-120 %		Dilution: 5x						

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 8060506 - EPA 3546						Soil							
Blank (8060506-BLK1)		Prepared: 06/08/18 09:32 Analyzed: 06/08/18 15:21						C-07					
EPA 8082A													
Aroclor 1016	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1221	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1232	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1242	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1248	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1254	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1260	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---		
<i>Surr: Decachlorobiphenyl (Surr)</i>		Recovery: 94 %		Limits: 53-120 %		<i>Dilution: 1x</i>							
LCS (8060506-BS1)		Prepared: 06/08/18 09:32 Analyzed: 06/08/18 15:39						C-07					
EPA 8082A													
Aroclor 1016	209	---	10.0	ug/kg wet	1	250	---	83	47-134%	---	---		
Aroclor 1260	228	---	10.0	ug/kg wet	1	250	---	91	53-140%	---	---		
<i>Surr: Decachlorobiphenyl (Surr)</i>		Recovery: 93 %		Limits: 53-120 %		<i>Dilution: 1x</i>							
Duplicate (8060506-DUP1)		Prepared: 06/08/18 09:32 Analyzed: 06/08/18 14:46						C-07					
QC Source Sample: Class-N-SE Quad-Comp (A8F0180-06RE1)													
EPA 8082A													
Aroclor 1016	ND	---	11.4	ug/kg dry	1	---	ND	---	---	---	30%		
Aroclor 1221	ND	---	11.4	ug/kg dry	1	---	ND	---	---	---	30%		
Aroclor 1232	ND	---	11.4	ug/kg dry	1	---	ND	---	---	---	30%		
Aroclor 1242	292	---	11.4	ug/kg dry	1	---	382	---	---	27	30%		
Aroclor 1248	ND	---	11.4	ug/kg dry	1	---	ND	---	---	---	30%		
Aroclor 1254	ND	---	11.4	ug/kg dry	1	---	ND	---	---	---	30%		
Aroclor 1260	15.6	---	11.4	ug/kg dry	1	---	21.1	---	---	30	30%	P-10	
<i>Surr: Decachlorobiphenyl (Surr)</i>		Recovery: 74 %		Limits: 53-120 %		<i>Dilution: 1x</i>							
Matrix Spike (8060506-MS1)		Prepared: 06/08/18 09:32 Analyzed: 06/08/18 14:46						C-07, Q-43					
QC Source Sample: Class-N-SW Quad-Comp (A8F0180-12RE1)													
EPA 8082A													
Aroclor 1016	473	---	10.8	ug/kg dry	1	271	ND	175	47-134%	---	---		
Aroclor 1260	286	---	10.8	ug/kg dry	1	271	48.7	88	53-140%	---	---		

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 8060506 - EPA 3546						Soil							
Matrix Spike (8060506-MS1)		Prepared: 06/08/18 09:32 Analyzed: 06/08/18 14:46						C-07, Q-43					
QC Source Sample: Class-N-SW Quad-Comp (A8F0180-12RE1)													
Surr: Decachlorobiphenyl (Surr)		Recovery: 93 %		Limits: 53-120 %		Dilution: 1x							

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8060463 - Total Solids (Dry Weight)						Soil						
No Client related Batch QC samples analyzed for this batch. See notes page for more information.												
Batch 8060517 - Total Solids (Dry Weight)						Soil						
Duplicate (8060517-DUP6)			Prepared: 06/08/18 18:55 Analyzed: 06/11/18 08:53									
QC Source Sample: Class-N-SE Quad-NW (A8F0180-01)												
EPA 8000C												
% Solids	85.1	---	1.00	% by Weight	1	---	85.3	---	---	0.2	10%	
Duplicate (8060517-DUP7)			Prepared: 06/08/18 18:55 Analyzed: 06/11/18 08:53									
QC Source Sample: Class-N-NW Quad-Center (A8F0180-17)												
EPA 8000C												
% Solids	87.1	---	1.00	% by Weight	1	---	86.9	---	---	0.2	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8060463							
A8F0180-06	Soil	EPA 8000C	06/06/18 14:30	06/07/18 19:49			NA
A8F0180-12	Soil	EPA 8000C	06/06/18 14:45	06/07/18 19:49			NA
A8F0180-18	Soil	EPA 8000C	06/06/18 15:00	06/07/18 19:49			NA
Batch: 8060517							
A8F0180-01	Soil	EPA 8000C	06/06/18 14:30	06/08/18 18:55			NA
A8F0180-02	Soil	EPA 8000C	06/06/18 14:33	06/08/18 18:55			NA
A8F0180-03	Soil	EPA 8000C	06/06/18 14:36	06/08/18 18:55			NA
A8F0180-04	Soil	EPA 8000C	06/06/18 14:39	06/08/18 18:55			NA
A8F0180-05	Soil	EPA 8000C	06/06/18 14:42	06/08/18 18:55			NA
A8F0180-07	Soil	EPA 8000C	06/06/18 14:45	06/08/18 18:55			NA
A8F0180-08	Soil	EPA 8000C	06/06/18 14:48	06/08/18 18:55			NA
A8F0180-09	Soil	EPA 8000C	06/06/18 14:51	06/08/18 18:55			NA
A8F0180-10	Soil	EPA 8000C	06/06/18 14:54	06/08/18 18:55			NA
A8F0180-11	Soil	EPA 8000C	06/06/18 14:57	06/08/18 18:55			NA
A8F0180-13	Soil	EPA 8000C	06/06/18 15:00	06/08/18 18:55			NA
A8F0180-14	Soil	EPA 8000C	06/06/18 15:03	06/08/18 18:55			NA
A8F0180-15	Soil	EPA 8000C	06/06/18 15:06	06/08/18 18:55			NA
A8F0180-16	Soil	EPA 8000C	06/06/18 15:08	06/08/18 18:55			NA
A8F0180-17	Soil	EPA 8000C	06/06/18 15:10	06/08/18 18:55			NA

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8060485							
A8F0180-06RE4	Soil	EPA 8082A	06/06/18 14:30	06/07/18 13:02	12.21g/5mL	10g/5mL	0.82
A8F0180-12	Soil	EPA 8082A	06/06/18 14:45	06/07/18 13:02	10.68g/5mL	10g/5mL	0.94
A8F0180-18RE1	Soil	EPA 8082A	06/06/18 15:00	06/07/18 13:02	10.47g/5mL	10g/5mL	0.96
Batch: 8060506							
A8F0180-01	Soil	EPA 8082A	06/06/18 14:30	06/08/18 17:16	10.36g/5mL	10g/5mL	0.97
A8F0180-02RE1	Soil	EPA 8082A	06/06/18 14:33	06/08/18 17:16	10.84g/5mL	10g/5mL	0.92
A8F0180-03	Soil	EPA 8082A	06/06/18 14:36	06/08/18 17:16	10.64g/5mL	10g/5mL	0.94
A8F0180-04	Soil	EPA 8082A	06/06/18 14:39	06/08/18 17:16	10.08g/5mL	10g/5mL	0.99
A8F0180-05RE1	Soil	EPA 8082A	06/06/18 14:42	06/08/18 17:16	10.58g/5mL	10g/5mL	0.95
A8F0180-07	Soil	EPA 8082A	06/06/18 14:45	06/08/18 17:16	10.72g/5mL	10g/5mL	0.93

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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SAMPLE PREPARATION INFORMATION

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A8F0180-08	Soil	EPA 8082A	06/06/18 14:48	06/08/18 17:16	10.62g/5mL	10g/5mL	0.94
A8F0180-09	Soil	EPA 8082A	06/06/18 14:51	06/08/18 17:16	10.4g/5mL	10g/5mL	0.96
A8F0180-10RE1	Soil	EPA 8082A	06/06/18 14:54	06/08/18 17:16	10.11g/5mL	10g/5mL	0.99
A8F0180-11	Soil	EPA 8082A	06/06/18 14:57	06/08/18 17:16	10.66g/5mL	10g/5mL	0.94
A8F0180-13RE1	Soil	EPA 8082A	06/06/18 15:00	06/08/18 17:16	10.08g/5mL	10g/5mL	0.99
A8F0180-14	Soil	EPA 8082A	06/06/18 15:03	06/08/18 17:16	10.61g/5mL	10g/5mL	0.94
A8F0180-15RE1	Soil	EPA 8082A	06/06/18 15:06	06/08/18 17:16	10.68g/5mL	10g/5mL	0.94
A8F0180-16	Soil	EPA 8082A	06/06/18 15:08	06/08/18 17:16	10.09g/5mL	10g/5mL	0.99
A8F0180-17RE1	Soil	EPA 8082A	06/06/18 15:10	06/08/18 17:16	10.67g/5mL	10g/5mL	0.94

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EPA ID: OR01039

<u>Bridgewater Group</u> 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: <u>Esco</u> Project Number: ESCO-021 Project Manager: Jeff Dresser	<u>Report ID:</u> A8F0180 - 06 11 18 1531
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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- C-07** Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- P-10** Result estimated due to the presence of multiple PCB Aroclors and/or matrix interference.
- Q-43** Matrix Spike recovery is not applicable due to interfering Aroclor(s) in source sample.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- S-06** Surrogate recovery is outside of established control limits.
- X** See Case Narrative.

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis:** Results for soil samples are generally reported on a 100% dry weight basis. The Result Basis is listed following the units as "dry", "wet", or "" (blank) designation.
 - "dry"** Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
 - "wet"** Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
 - ""** Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- "** QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** "** Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the blank results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Cert?
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Lisa Domenighini, Client Services Manager

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: **ESCO-021**
Project Manager: **Jeff Dresser**

Report ID:

A8F0180 - 06 11 18 1531

A8F0180

Project Information		Laboratory		CHAIN OF CUSTODY	
Hahn and Associates, Inc. Environmental Management 434 NW Sixth Avenue, Suite 203 • Portland, OR 97209 (503) 795-0717 • Fax: (503) 227-2209		Apex Labs Tigard, Oregon		Chain of Custody No.	
Project Manager: Jeff Dresser Project No: ESCO-021 Project Name: Esco Collected by: Ben Lih		Lab Project No.		Samples Received at Lab (Y or N) Appropriate Containers Used (Y or N) Provide Vial Results (Y or N) Provide Preliminary Fax Results	
Sample Information		Matrix		Analytes to be Performed	
Sample Number Prefix: 1 = metals testing to include: As, Ba, B, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se, Ag, U, and Zn. H = Hold Please provide results to Jeff Dresser (Bridgewater)		Matrix: Liquid with Sediment Sample Multi-Phase Sample Number of Containers		PCBs (EPA 8210) PAHs (EPA 8270 SIM) SVOCs (EPA 8270 LL) VOCs (EPA 8260 C)	
Lab ID	Sample #	Date	Time	Sample Description	Remarks
	Class-N-SE Quad-NW	06-Jun-18	14:30	Class N (2.0' bgs)	
	Class-N-SE Quad-NE	06-Jun-18	14:33	Class N (2.0' bgs)	
	Class-N-SE Quad-SW	06-Jun-18	14:36	Class N (2.0' bgs)	
	Class-N-SE Quad-SE	06-Jun-18	14:39	Class N (2.0' bgs)	
	Class-N-SE Quad-Center	06-Jun-18	14:42	Class N (2.0' bgs)	
	= Comp of above SE Quad			Class N (2.0' bgs)	
	Class-N-SW Quad-NW	06-Jun-18	14:45	Class N (2.0' bgs)	
	Class-N-SW Quad-NE	06-Jun-18	14:48	Class N (2.0' bgs)	
	Class-N-SW Quad-SW	06-Jun-18	14:51	Class N (2.0' bgs)	
	Class-N-SW Quad-SE	06-Jun-18	14:54	Class N (2.0' bgs)	
	Class-N-SW Quad-Center	06-Jun-18	14:57	Class N (2.0' bgs)	
	= Comp of above SW Quad			Class N (2.0' bgs)	
	Class-N-NW Quad-NW	06-Jun-18	15:00	Class N (2.0' bgs)	
	Class-N-NW Quad-NE	06-Jun-18	15:03	Class N (2.0' bgs)	
	Class-N-NW Quad-SW	06-Jun-18	15:06	Class N (2.0' bgs)	
	Class-N-NW Quad-SE	06-Jun-18	15:08	Class N (2.0' bgs)	
	Class-N-NW Quad-Center	06-Jun-18	15:10	Class N (2.0' bgs)	
	= Comp of above NW Quad			Class N (2.0' bgs)	
Remanufactured by: <i>Ben Lih</i> Remanufactured by: <i>Ben Lih</i> Remanufactured by: <i>Ben Lih</i>					
Date: 6/18/18 Time: 9:42 Received by: <i>Jeff Dresser</i> Received by: <i>Jeff Dresser</i> Received by: <i>Jeff Dresser</i>					



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: ESCO-021 Project Manager: Jeff Dresser	Report ID: A8F0180 - 06 11 18 1531
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APEX LABS COOLER RECEIPT FORM

Client: Hahn Element WO#: A8 F0180

Project/Project #: ESCO-021

Delivery info:
Date/Time Received: 6/7/18 @ 9:42 By: JD

Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Inspected by: JD : 6/7/18 @ 10:14

Chain of Custody Included? Yes No Custody Seals? Yes No

Signed/Dated by Client? Yes No

Signed/Dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)	<u>1.1</u>						
Received on Ice? (Y/N)	<input checked="" type="checkbox"/>						
Temp. Blanks? (Y/N)	<input checked="" type="checkbox"/>						
Ice Type: (Gel/Real/Other)	<input checked="" type="checkbox"/>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: good

If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No/NA

Samples Inspection: Inspected by: JD : 6/7/18 @ 10:25

All Samples Intact? Yes No Comments: _____

Bottle Labels/COCs agree? Yes No Comments: T on N-SW-Quad-NE label reads 14.45. T on N-SW-Quad-center label reads 14.51.

Containers/Volumes Received Appropriate for Analysis? Yes No Comments: _____

Do VOA Vials have Visible Headspace? Yes No NA

Comments: _____

Water Samples: pH Checked and Appropriate (except VOAs): Yes No NA

Comments: _____

Additional Information: _____

Labeled by: AM Witness: JD Cooler Inspected by: JD See Project Contact Form: Y

Lisa Domenighini



Apex Laboratories, LLC

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Wednesday, June 13, 2018

Jeff Dresser
Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

RE: A8F0379 - Esco - 9141-21

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A8F0379, which was received by the laboratory on 6/12/2018 at 11:35:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

A handwritten signature in black ink, reading "Lisa A. Domenighini".

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Lisa Domenighini, Client Services Manager

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Apex Laboratories, LLC

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

<u>Bridgewater Group</u> 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: <u>Esco</u> Project Number: 9141-21 Project Manager: Jeff Dresser	<u>Report ID:</u> A8F0379 - 06 13 18 1502
--	---	--

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Class-N-SE QUAD-COMP-4.0	A8F0379-06	Soil	06/12/18 10:15	06/12/18 11:35
Class-N-NW QUAD-COMP-4.0	A8F0379-12	Soil	06/12/18 10:30	06/12/18 11:35

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: 9141-21 Project Manager: Jeff Dresser	Report ID: A8F0379 - 06 13 18 1502
---	--	---

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-SE QUAD-COMP-4.0 (A8F0379-06)		Matrix: Soil		Batch: 8060642				C-07
Aroclor 1016	ND	---	12.3	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1221	ND	---	12.3	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1232	ND	---	12.3	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1242	ND	---	12.3	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1248	ND	---	12.3	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1254	ND	---	12.3	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1260	ND	---	12.3	ug/kg dry	1	06/13/18	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 67 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/13/18</i>	<i>EPA 8082A</i>
Class-N-NW QUAD-COMP-4.0 (A8F0379-12)		Matrix: Soil		Batch: 8060642				C-07
Aroclor 1016	ND	---	12.4	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1221	ND	---	12.4	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1232	ND	---	12.4	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1242	ND	---	12.4	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1248	ND	---	12.4	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1254	ND	---	12.4	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1260	ND	---	12.4	ug/kg dry	1	06/13/18	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 68 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/13/18</i>	<i>EPA 8082A</i>

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: 9141-21 Project Manager: Jeff Dresser	Report ID: A8F0379 - 06 13 18 1502
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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-SE QUAD-COMP-4.0 (A8F0379-06)		Matrix: Soil		Batch: 8060618				
% Solids	80.7	---	1.00	% by Weight	1	06/13/18	EPA 8000C	
Class-N-NW QUAD-COMP-4.0 (A8F0379-12)		Matrix: Soil		Batch: 8060618				
% Solids	79.2	---	1.00	% by Weight	1	06/13/18	EPA 8000C	

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: 9141-21 Project Manager: Jeff Dresser	Report ID: A8F0379 - 06 13 18 1502
---	--	--

QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8060642 - EPA 3546						Soil						
Blank (8060642-BLK1)		Prepared: 06/12/18 15:48 Analyzed: 06/13/18 08:32				C-07						
EPA 8082A												
Aroclor 1016	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 53-120 %</i>		<i>Dilution: 1x</i>						
LCS (8060642-BS1)						C-07						
Prepared: 06/12/18 15:48 Analyzed: 06/13/18 08:50												
EPA 8082A												
Aroclor 1016	160	---	10.0	ug/kg wet	1	250	---	64	47-134%	---	---	
Aroclor 1260	203	---	10.0	ug/kg wet	1	250	---	81	53-140%	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 53-120 %</i>		<i>Dilution: 1x</i>						

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: 9141-21 Project Manager: Jeff Dresser	Report ID: A8F0379 - 06 13 18 1502
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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-----------------	-------	----------	--------------	---------------	-------	--------------	-----	-----------	-------

Batch 8060618 - Total Solids (Dry Weight)

Soil

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8060618							
A8F0379-06	Soil	EPA 8000C	06/12/18 10:15	06/12/18 20:12			NA
A8F0379-12	Soil	EPA 8000C	06/12/18 10:30	06/12/18 20:12			NA

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 8060642							
A8F0379-06	Soil	EPA 8082A	06/12/18 10:15	06/12/18 15:48	10.11g/5mL	10g/5mL	0.99
A8F0379-12	Soil	EPA 8082A	06/12/18 10:30	06/12/18 15:48	10.17g/5mL	10g/5mL	0.98



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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: **9141-21**

Project Manager: **Jeff Dresser**

Report ID:

A8F0379 - 06 13 18 1502

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

C-07 Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: 9141-21 Project Manager: Jeff Dresser	Report ID: A8F0379 - 06 13 18 1502
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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis. The Result Basis is listed following the units as "dry", "wet", or "" (blank) designation.
 - "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
 - "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
 - "" Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: 9141-21 Project Manager: Jeff Dresser	Report ID: A8F0379 - 06 13 18 1502
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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the blank results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: 9141-21 Project Manager: Jeff Dresser	Report ID: A8F0379 - 06 13 18 1502
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LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Cert?
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Lisa Domenighini, Client Services Manager

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Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: Esco

Project Number: 9141-21

Project Manager: Jeff Dresser

Report ID:

A8F0379 - 06 13 18 1502

A 8F0379

HAHN AND ASSOCIATES, INC. Environmental Management 434 NW Sixth Avenue, Suite 203 • Portland OR 97209 (503) 796-0717 • Fax (503) 227-2209		Laboratory: <u>Apex Labs Tigard, OR</u> Lab Project No.: _____		CHAIN OF CUSTODY Chain of Custody No: _____	
Project Manager: <u>Jeff Dresser</u> Project No: <u>1141-21</u> Project Name: <u>Esco</u> Collected by: <u>Ben Uhl</u>		Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (only) _____ Test Separately _____ Shake _____		Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) _____ Provide Preliminary Fax Results _____	
Sample Number Prefix: <u>CLASS-N-</u> <u>RESULTS ASAP.</u> <u>-HOLD ALIQUOTS</u>		Matrix: _____ Number of Containers: _____		Analyses to be Performed: _____	
Lab ID Sample # Date Time Sample Description <u>SE QUAD-NW 4.0 1004 CLASS-N-</u> <u>SE QUAD-NW 4.0 1006 KUSTOM</u> <u>SE QUAD-SE 4.0 1008</u> <u>SE QUAD-SW 4.0 1010</u> <u>SE QUAD-Center 4.0 1012</u> <u>SE QUAD-CORNER 4.0 1015</u> <u>NW QUAD-NE 4.0 1020</u> <u>NW QUAD-NW 4.0 1022</u> <u>NW QUAD-SW 4.0 1024</u> <u>NW QUAD-SE 4.0 1026</u> <u>NW QUAD-Center 4.0 1028</u> <u>NW QUAD-CORNER 4.0 1030</u>		Soil _____ Water _____ Other _____ <u>PUBS</u>		Remarks: _____ <u>X ASAP</u> <u>X ASAP</u>	
Relinquished by: <u>Ben Uhl</u> Relinquished by: _____ Relinquished by: _____		Company: <u>HAHN & ASSOC</u> Company: _____ Company: _____		Date: <u>6/12/18</u> Date: _____ Date: _____	
Received by: _____ Received by: _____ Received by: _____		Time: _____ Time: _____ Time: _____		Company: _____ Company: _____ Company: _____	

Lisa Domenighini



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: 9141-21 Project Manager: Jeff Dresser	Report ID: A8F0379 - 06 13 18 1502
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APEX LABS COOLER RECEIPT FORM

Client: Bridgewater Element WO#: A8 F0379

Project/Project #: ESCO/9141-21

Delivery info:
Date/Time Received: 6/12/18 @ 11:35 By: BLP

Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Inspected by: BLP : 6/12/18 @ 11:59

Chain of Custody Included? Yes No Custody Seals? Yes No

Signed/Dated by Client? Yes No

Signed/Dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)	<u>5.9</u>						
Received on Ice? (Y/N)	<input checked="" type="checkbox"/>						
Temp. Blanks? (Y/N)	<input checked="" type="checkbox"/>						
Ice Type: (Gel/Real/Other)	<u>16.9* temp blank away from ice</u>						
Condition:	<u>good</u>						

Cooler out of temp? Possible reason why: _____

If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No/NA

Samples Inspection: Inspected by: BLP : 6/12/18 @ 12:00

All Samples Intact? Yes No Comments: _____

Bottle Labels/COCs agree? Yes No Comments: _____

Containers/Volumes Received Appropriate for Analysis? Yes No Comments: _____

Do VOA Vials have Visible Headspace? Yes No NA

Comments: _____

Water Samples: pH Checked and Appropriate (except VOAs): Yes No NA

Comments: _____

Additional Information: _____

Labeled by: [Signature] Witness: [Signature] Cooler Inspected by: [Signature] See Project Contact Form: Y

Lisa Domenighini



Apex Laboratories, LLC

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Wednesday, June 13, 2018

Jeff Dresser
Bridgewater Group
7100 SW Hampton St. Suite 235
Tigard, OR 97223

RE: A8F0406 - Esco - Esco-021

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A8F0406, which was received by the laboratory on 6/12/2018 at 3:44:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

A handwritten signature in black ink that reads "Lisa A. Domenighini".

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Lisa Domenighini, Client Services Manager

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Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

<u>Bridgewater Group</u> 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: <u>Esco</u> Project Number: Esco-021 Project Manager: Jeff Dresser	<u>Report ID:</u> A8F0406 - 06 13 18 1519
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Class-N-SW Quad-Comp-4.0	A8F0406-06	Soil	06/12/18 13:50	06/12/18 15:44

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Lisa Domenighini, Client Services Manager



Bridgewater Group	Project: Esco	
7100 SW Hampton St. Suite 235	Project Number: Esco-021	Report ID:
Tigard, OR 97223	Project Manager: Jeff Dresser	A8F0406 - 06 13 18 1519

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-SW Quad-Comp-4.0 (A8F0406-06)		Matrix: Soil		Batch: 8060642				C-07
Aroclor 1016	ND	---	11.5	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1221	ND	---	11.5	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1232	ND	---	11.5	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1242	ND	---	11.5	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1248	ND	---	11.5	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1254	ND	---	11.5	ug/kg dry	1	06/13/18	EPA 8082A	
Aroclor 1260	ND	---	11.5	ug/kg dry	1	06/13/18	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 53-120 %</i>		<i>1</i>	<i>06/13/18</i>	<i>EPA 8082A</i>

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Lisa Domenighini, Client Services Manager



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503-718-2323
EPA ID: OR01039

Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-021 Project Manager: Jeff Dresser	Report ID: A8F0406 - 06 13 18 1519
---	---	---

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
Class-N-SW Quad-Comp-4.0 (A8F0406-06)		Matrix: Soil		Batch: 8060618				
% Solids	79.1	---	1.00	% by Weight	1	06/13/18	EPA 8000C	

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Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-021 Project Manager: Jeff Dresser	Report ID: A8F0406 - 06 13 18 1519
---	---	--

QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 8060642 - EPA 3546						Soil						
Blank (8060642-BLK1)		Prepared: 06/12/18 15:48 Analyzed: 06/13/18 08:32				C-07						
EPA 8082A												
Aroclor 1016	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 53-120 %</i>		<i>Dilution: 1x</i>						
LCS (8060642-BS1)						C-07						
Prepared: 06/12/18 15:48 Analyzed: 06/13/18 08:50												
EPA 8082A												
Aroclor 1016	160	---	10.0	ug/kg wet	1	250	---	64	47-134%	---	---	
Aroclor 1260	203	---	10.0	ug/kg wet	1	250	---	81	53-140%	---	---	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 53-120 %</i>		<i>Dilution: 1x</i>						

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Lisa Domenighini, Client Services Manager



Bridgewater Group 7100 SW Hampton St. Suite 235 Tigard, OR 97223	Project: Esco Project Number: Esco-021 Project Manager: Jeff Dresser	Report ID: A8F0406 - 06 13 18 1519
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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC % REC	% REC Limits	RPD RPD	RPD Limit	Notes
---------	--------	-----------------	-----------------	-------	----------	--------------	---------------	-------------	--------------	---------	-----------	-------

Batch 8060618 - Total Solids (Dry Weight)

Soil

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 8060618</u>							
A8F0406-06	Soil	EPA 8000C	06/12/18 13:50	06/12/18 20:12			NA

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 8060642</u>							
A8F0406-06	Soil	EPA 8082A	06/12/18 13:50	06/12/18 18:28	10.96g/5mL	10g/5mL	0.91



Apex Laboratories, LLC

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EPA ID: OR01039

Bridgewater Group

7100 SW Hampton St. Suite 235
Tigard, OR 97223

Project: **Esco**

Project Number: **Esco-021**

Project Manager: **Jeff Dresser**

Report ID:

A8F0406 - 06 13 18 1519

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

C-07 Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis. The Result Basis is listed following the units as "dry", "wet", or "" (blank) designation.
 - "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
 - "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
 - "" Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the blank results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

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LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Cert?
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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APEX LABS COOLER RECEIPT FORM

Client: Hahn Element WO#: A8 F0406
 Project/Project #: ESCO 021

Delivery info:
 Date/Time Received: 6/12/18 @ 1544 By: CFH
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Inspected by: CFH : 6/12/18 @ 1626
 Chain of Custody Included? Yes No Custody Seals? Yes No
 Signed/Dated by Client? Yes No
 Signed/Dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)	<u>4.4</u>						
Received on Ice? (Y/N)	<input checked="" type="checkbox"/>						
Temp. Blanks? (Y/N)	<input checked="" type="checkbox"/>						
Ice Type: (Gel/Real/Other)							
Condition:	<u>Good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 If some coolers are in temp and some out were green dot applied to out of temperature samples? Yes/No/NA

Samples Inspection: Inspected by: CFH : 6/12/18 @ 1645
 All Samples Intact? Yes No Comments: _____
 Bottle Labels/COCs agree? Yes No Comments: _____
 Containers/Volumes Received Appropriate for Analysis? Yes No Comments: _____
 Do VOA Vials have Visible Headspace? Yes No NA
 Comments: _____
 Water Samples: pH Checked and Appropriate (except VOAs): Yes No NA
 Comments: _____

Additional Information: _____

Labeled by: (Signature) Witness: (Signature) Cooler Inspected by: (Signature) See Project Contact Form: Y

Lisa Domenighini