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# Phase II Environmental Site Assessment

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Proposed Apartments

1505 Newport Way Northwest  
Issaquah, Washington

EBI Project No. 1217000450

January 8, 2018

Prepared for:

King County Housing Authority (KCHA)  
C/O Spectrum Development Solutions  
1809 Seventh Avenue, Suite 501  
Seattle, Washington 98101

Prepared by:



January 8, 2018

Mr. Hal Ferris  
King County Housing Authority (KCHA)  
C/O Spectrum Development Solutions  
1809 Seventh Avenue, Suite 501  
Seattle, Washington 98101

**Subject: Phase II Environmental Site Assessment**  
Proposed Apartments  
1505 Newport Way Northwest  
Issaquah, Washington  
EBI Project No. 1217000450

Dear Mr. Ferris:

In accordance with the Proposal and Standard Conditions for Engagement approved on December 8, 2017, Envirobusiness, Inc. (dba EBI Consulting, hereinafter "EBI") is pleased to submit this Phase II Environmental Site Assessment (ESA) for the above-referenced property (herein referred to as the Subject Property).

This report is addressed to *King County Housing Authority (KCHA) and Spectrum Development Solutions* and such other persons as may be designated by *KCHA and Spectrum Development Solutions* and their respective successors and assigns, as well as the United States Department of Housing and Urban Development (HUD).

Reliance on the report and the information contained herein shall mean (i) the report may be relied upon by *KCHA and Spectrum Development Solutions* and Qwest Corporation dba CenturyLink QC, in determining whether to make a loan evidenced by a note secured by the Subject Property ("the Mortgage Loan"); (ii) the report may be relied upon by any loan purchaser in determining whether to purchase the Mortgage Loan from *KCHA and Spectrum Development Solutions*, or an interest in the Mortgage Loan or securities backed or secured by the Mortgage Loan, and any rating agency rating securities representing an interest in the Mortgage Loan or backed or secured by the Mortgage Loan; (iii) the report may be referred to in and included, in whole or in part, with materials offering for sale the Mortgage Loan or an interest in the Mortgage Loan or securities backed or secured by the Mortgage Loan; (iv) the report speaks only as of its date in the absence of a specific written update of the report signed and delivered by EBI Consulting.

The information contained in this report has received appropriate technical review and approval. The conclusions represent professional judgments and are founded upon the findings of the investigations identified in the report and the interpretation of such data based on our experience and expertise according to the existing standard of care. No other warranty or limitation exists, either express or implied.

The conclusions of this Report are based on soil, groundwater and soil vapor analytical data prepared by Accutest Laboratories and field observations recorded by EBI personnel.

There are no intended or unintended third party beneficiaries to this Report, except as expressly stated herein.

EBI is an independent contractor, not an employee of either the issuer or the borrower, and its compensation was not based on the findings or recommendations made in the Report or on the closing of any business transaction.

Thank you for the opportunity to prepare this Report, and assist you with this project. Please call us if you have any questions or if we may be of further assistance.

Respectfully submitted,  
**EBI CONSULTING**

Chad Bechtel  
Author/Project Scientist

Ryan Deutsch  
Reviewer/Program Manager

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The Environmental Professionals listed above performed this Phase II ESA in general conformance with the ASTM E1903-11 Standard Practice for Phase II ESAs. The listed individuals meet the qualifications for individuals completing or overseeing all appropriate inquiries, and possess sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding the existence of environmental conditions on the property. Any work completed on this Phase II ESA by an individual who is not considered an environmental professional was completed under the supervision or responsible charge of the environmental professional.

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## I.0 INTRODUCTION

In accordance with our Proposal and Standard Conditions for Engagement, Envirobusiness, Inc. (dba EBI Consulting, hereinafter "EBI") is pleased to submit our Phase II Environmental Site Assessment (ESA) Report (*Report*) on the property located at 1505 Newport Way Northwest, Issaquah, Washington (the Subject Property). Mr. Chad Bechtel of EBI conducted the investigation at the Subject Property on December 20, 2017.

### I.1 BACKGROUND

EBI was requested to conduct a limited subsurface investigation to evaluate the potential impact to the Subject Property from the following recognized environmental concern(s) identified in EBI's (July 5, 2017) Phase I ESA report:

- One former occupant of the Subject Property, QWEST Corporation, was listed as a RCRA-CESQG of hazardous waste. According to the EDR Database Report, the former QWEST Corporation formerly utilized tetrachloroethylene (PCE) and trichloroethylene (TCE) in the process of vehicle maintenance from at least 1996 through 2011. Two violations were reported for QWEST in 2011, which were corrected in January of 2012. Based on the documented use of PCE and TCE and documented history of violations at the Subject Property, the inclusion of the Subject Property on the RCRA-CESQG is considered a *recognized environmental condition (REC)* and has the potential to be a *Vapor Encroachment Condition (VEC)*.
- The vehicle maintenance shop is currently equipped with one pair of in-ground hydraulic lifts. The hydraulic oil reservoir for the in-ground lift is located below grade and could not be observed. According to Mr. Trevor McHenry, Facility Supervisor, this lift is currently functioning properly and was installed during the construction of the existing building in 1981. EBI additionally observed the in-ground hydraulic lift to be functional at the time of reconnaissance. Based upon the date of installation, the in-ground hydraulic lift is not likely to contain PCBs. Since the in-ground hydraulic lift currently appears to be functional, it is unlikely that the underground hydraulic oil reservoir is currently leaking, however service records regarding the maintenance of the lifts were not available. Based upon the absence of maintenance documentation, the potential exists that the current underground hydraulic lift system had impacted subsurface conditions at the Subject Property. This is currently considered a recognized environmental condition (REC) and has the potential to be a VEC.

### I.2 STATEMENT OF OBJECTIVES

The primary objective of this Phase II ESA was to evaluate potential impact to the Subject Property from the recognized environmental conditions (RECs) identified in the Phase I ESA prepared by EBI (July 5, 2017) for the purpose of providing sufficient information regarding the nature and extent of contamination to assist in making informed business decisions about the property; and where applicable, providing the level of knowledge necessary to satisfy the innocent purchaser defense under CERCLA. The investigation focused on: 1) the vicinity of on-site automotive maintenance areas; 2) the former on-site UST; and 3) on-site stormwater retention areas.

In order to achieve the objectives of this investigation, EBI performed the following tasks:

- Contacted the local utility locating service Washington Utility Notification Center (Ticket #17482030) prior to undertaking subsurface explorations on-site.
- Retained a private utility locating service (Ground Penetrating Radar Services, Inc. [GPRS]) to further screen for underground utilities in the vicinity of the proposed sampling locations.
- Advanced eight soil borings (B-1 through B-8) using a direct push Geoprobe to depths of 15 feet below ground surface (bgs). Groundwater was encountered in each of the borings at depths ranging from 3 to 6 feet bgs.
- Advanced an additional 10 soil borings (HA-1 through HA-10) using a manual stainless steel hand auger to depths of 6 inches bgs. Groundwater was not encountered in the borings.
- Collected continuous soil samples from the borings, field screened the vapor headspace of the soil samples for total ionizable volatile organic compounds (VOCs) using a photoionization detector (PID), and described the physical characteristics of the soil samples on boring logs.
- Selected one soil sample from each of the borings, prepared, and submitted the samples under chain-of-custody documentation to a Washington-certified independent laboratory (Accutest Laboratories). The soil sample collected from the direct push boring adjacent to the in-ground hydraulic lift was analyzed for total petroleum hydrocarbons (TPH) – diesel range organics (DRO) and oil range organics (ORO) via United States Environmental Protection Agency (EPA) Method 8015, polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8270, and PCBs by EPA Method 8082. The other direct push soil samples were analyzed for VOCs via EPA Method 8260 and PAHs via EPA Method 8270. The soil samples collected from the hand auger borings were analyzed for TPH–DRO and ORO by EPA Method 8015, PAHs by EPA Method 8270, and RCRA 8 Metals by EPA Method 6010.
- Collected grab groundwater samples from temporary wells inserted into the completed direct push soil borings, prepared, and submitted the samples under chain-of-custody documentation to a Washington-certified independent laboratory (Accutest Laboratories). The groundwater sample collected from the boring adjacent to the in-ground hydraulic lift was analyzed for TPH–DRO and ORO via EPA Method 8015, PAHs via EPA Method 8270, and PCBs by EPA Method 8082. The other groundwater samples were analyzed VOCs via EPA Method 8260 and PAHs via EPA Method 8270.
- Collected one soil vapor sample from a separate dedicated soil boring adjacent to the soil/groundwater borings at depths ranging from 2 to 5 feet bgs. The samples were submitted under chain-of-custody documentation to a Washington-certified independent laboratory (Accutest Laboratories), for analysis of VOCs including the liquid tracer isopropyl alcohol (IPA) via EPA Method TO-15.
- Prepared this summary of pertinent information obtained during this investigation including accompanying illustrations and appendices, along with EBI’s findings and preliminary conclusions regarding the presence or absence of contamination in soils beneath the Subject Property in the areas investigated.



A detailed description of investigation methods is provided in Section 3.0 of this report.

### **I.3 LIMITATIONS AND ASSUMPTIONS**

This Report was prepared for the use of *KCHA and Spectrum Development Solutions and Qwest Corporation dba CentryLink QC*. It was performed in accordance with ASTM E1903-11, accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information obtained during the subsurface investigation. EBI renders no opinion as to the presence of potential contamination in the areas not investigated. The observations in this Report are valid on the date of the investigation. Any additional information that becomes available concerning the Subject Property should be provided to EBI so that our conclusions may be revised and modified, if necessary. This Report has been prepared in accordance with the proposal approved by *KCHA and Spectrum Development Solutions* and with the limitations and assumptions described below, all of which are integral parts of this Report. No other warranty, express or implied, is made.

#### **Limitations**

1. The observations described in this Report were made under the conditions stated herein. The conclusions presented are based solely upon the services described, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by Client. The work described in this Report was carried out in accordance with terms and conditions in our Authorization Letter and Agreement for Environmental Services regarding the Site, which are incorporated herein by references.
2. In preparing this Report, EBI has relied on certain information provided by state and other referenced parties, and on information contained in the files of federal, state and/or local agencies available to EBI at the time of the assessment. Although there may have been some degree of overlap in the information provided by these various sources, EBI did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of these Environmental Services.
3. Observations were made of the Site and of structures on the Site as indicated within the Report. Where access to portions of the Site or to structures on the Site was unavailable or limited, EBI renders no opinion as to the presence of oil or hazardous materials (OHM) in that portion of the Site or structure. In addition, EBI renders no opinion as to the presence of OHM or the presence of indirect evidence relating to OHM where direct observation of the interior walls, floor, or ceiling of a structure on a Site was obstructed by objects or coverings on or over these surfaces. No representations concerning insulating material is express or implied.
4. EBI did not perform testing or analyses to determine the presence or concentration of asbestos, radon, or lead at the Site unless specifically stated otherwise in the Report. Similarly, no investigation of dust or air quality was conducted unless specifically stated otherwise in the Report.
5. The purpose of this Report is to assess the physical characteristics of the Site with respect to the presence of OHM in the environment. No specific attempt was made to determine the compliance of present or past owners or operators of the Site with federal, state, or local laws or regulations (environmental or otherwise).



6. Except as noted in the Report, no quantitative laboratory testing was performed as part of the assessment. Where such analyses have been conducted by an outside laboratory, EBI has relied upon the data provided, and has not conducted an independent evaluation of the reliability of this data.
7. Any qualitative or quantitative information regarding the Site, which was not available to EBI at the time of this assessment may result in a modification of the representations made herein.
8. It is acknowledged that EBI judgments shall not be based on scientific or technical test or procedures beyond the scope of the Services or beyond the time and budgetary constraints imposed by Client. It is acknowledged further that EBI conclusions shall not rest on pure science but on such considerations as economic feasibility and available alternatives. Client also acknowledges that, because geologic and soil formations are inherently random, variable, and indeterminate in nature, the Services and opinions provided under this Agreement with respect to such Services, are not guaranteed to be a representation of actual conditions on the Site, which are also subject to change with time as a result of natural or man-made processes, including water permeation. In performing the Services, EBI shall use that degree of care and skill ordinarily exercised by environmental consultants or engineers performing similar services in the same or similar locality. The standard of care shall be determined solely at the time the Services are rendered and not according to standards utilized at a later date. The Services shall be rendered without any other warranty, express or implied, including, without limitation, the warranty of merchant ability and the warranty of fitness for a particular purpose.
9. Client and EBI agree that to the fullest extent permitted by law, EBI shall not be liable to Client for any special, indirect or consequential damages whatsoever, whether caused by EBI's negligence, errors, omissions, strict liability, breach of contract, breach of warranty or other cause of causes whatsoever.

### Assumptions

1. This Phase II ESA does not address the evaluation of business environmental risks in light of data collected through the Phase II ESA process. Such evaluation is a function of site and transaction-specific variables, and of the user's objectives and risk tolerance. This practice contemplates that the Phase II ESA process was planned and conducted with such variables in mind, and that the user will evaluate legal, business and environmental risks in light of known data relating to the particular site and transaction, and in consultation with legal and business advisors as well as the Phase II Assessor.
2. The ASTM E1903-II does not define the threshold levels at which target analytes pose a concern of significance to the user. Users may apply this practice not only in light of applicable regulatory criteria and relevant liability principles, but also to meet self-defined objectives.
3. The scope of work for this Phase II ESA is site-specific and context-specific. The assessment process defined by ASTM E1903-II is intended to generate sound, objective, and defensible information sufficient to satisfy diverse user objectives.
4. No Phase II ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical testing may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process, and even when exercised in accordance with objective scientific principles, uncertainty is inevitable. Additional assessment beyond that which was reasonably undertaken may reduce the uncertainty.

5. Even when Phase II ESA work is executed competently and in accordance with ASTM E1903-11, it must be recognized that certain conditions present especially difficult target analyte detection problems. Such conditions may include, but are not limited to, complex geological settings, unusual or generally poorly understood behavior and fate characteristics of certain substances, complex, discontinuous, random, or spotty distributions of existing target analytes, physical impediments to investigation imposed by the location of utilities and other man-made objects, and the inherent limitations of assessment technologies.
6. The Phase II ESA is intended to develop and present sound, scientifically valid data concerning actual site conditions. It shall not be the role of the Phase II Assessor to provide legal or business advice.

#### **I.4 SPECIAL TERMS AND CONDITIONS**

This Phase II ESA (the report) has been prepared to assist *KCHA and Spectrum Development Solutions* in its underwriting of a proposed mortgage loan on the Subject Property. This report can be relied upon by only the parties stated in the transmittal letter at the front of this report. EBI's liability to a purchaser wishing to use this report is limited to the cost of the report. Amendments to EBI's limitations as stated herein that may occur after issuance of the report are considered to be included in this report. Payment for the report is made by, and EBI's contract and report extends to *KCHA and Spectrum Development Solutions* only, in accordance with our Standard Conditions for Engagement and, Authorization Letter and Agreement for Environmental Services.

## 2.0 SUBJECT PROPERTY BACKGROUND

### 2.1 SUBJECT PROPERTY DESCRIPTION AND FEATURES

Information regarding the Subject Property description, improvements, and operations is summarized below:

PROPERTY DESCRIPTION, IMPROVEMENTS, AND OPERATIONS	
<b>Address</b>	1505 Newport Way Northwest, Issaquah, Washington
<b>Location</b>	Approximately 400 feet east of the intersection of Newport Way Northwest and Renton Issaquah Southeast
<b>Property Owner</b>	According to the King County Assessor's Office, the Subject Property is currently owned by Centurylink Real Estate
<b>Number of Parcels</b>	One – 292406-9002
<b>Total Land Area</b>	4.0 acres
<b>Number/Type of Buildings</b>	One/warehouse
<b>Number of Stories</b>	One
<b>Date of Construction</b>	1981 and 1984
<b>Area (SF)</b>	33,680±
<b>Basement</b>	None
<b>Operations</b>	Industrial warehouse
<b>Site Characteristics</b>	At the time of inspection, the Subject Property was occupied by a CenturyLink vehicle maintenance and storage facility. The majority of the building interior consists of vehicle parking and office spaces. A small vehicle maintenance shop is located in the northern end of the building. There are currently no manufacturing or industrial operations conducted at the Subject Property.

### 2.2 PHYSICAL SETTING

Information regarding the physical settings at the Subject Property and immediate vicinity are summarized below:

PHYSICAL SETTING DESCRIPTIONS	
<b>Regional Geology</b>	Information concerning the geology of the Subject Property was obtained from the United States Geological Survey (USGS) Map of the Physical Divisions of the United States (1946). The Subject Property is located within the Puget Trough section of the Pacific Border physiographic province, which consists of partially submerged lowlands with diverse character.
<b>Depth to Bedrock</b>	No bedrock outcroppings were noted at the Subject Property. Depth to bedrock is expected to be greater than 15 feet.
<b>Surficial Features</b>	Surface drainage on the Subject Property occurs over land toward an artificial retention basin on the north portion of the Subject property. No indication of cross-lot runoff, swales, drainage flows, or active rills or gullies were observed on the Subject Property.
<b>Surficial Soils</b>	According to the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) website ( <a href="http://websoilsurvey.nrcs.usda.gov/app/">http://websoilsurvey.nrcs.usda.gov/app/</a> ), the dominant soil composition in the vicinity of the Subject Property is classified as Sammamish silt loam (Sh).

<b>PHYSICAL SETTING DESCRIPTIONS</b>	
<b>Soil Stratigraphy Encountered during the Investigation</b>	Soil stratigraphy encountered during the completion of soil borings consisted of grayish-brown gravelly, silty sand and grayish-brown gravelly, sandy clay.
<b>Estimated Direction of Groundwater Flow</b>	Local groundwater gradient is expected to follow surface topography; therefore, groundwater flow near the Subject Property is expected to flow to the west. Groundwater depths and flow gradients are best evaluated by a subsurface investigation involving the installation of at least three groundwater-monitoring wells, survey of well elevations, and precise measurements of hydraulic head. Calculation of groundwater flow directions based on relative differences of hydraulic head on the Subject Property was not included in this scope of work.
<b>Depth to Groundwater (encountered during the investigation)</b>	Shallow groundwater was encountered in the borings at approximate depths ranging from 3 to 6 feet bgs

### 2.3 SITE HISTORY AND LAND USE

According to the Phase I ESA prepared by EBI (July 5, 2017), the site history and land use is summarized in the following table:

<b>Period</b>	<b>Site History And Land Use</b>
<b>At least 1895-1981</b>	Undeveloped, wooded land.
<b>1981 to Present</b>	Existing warehouse building.

### 2.4 ADJACENT PROPERTY LAND USE

Property use in the vicinity of the Subject Property is primarily characterized by commercial development, as well as a park.

<b>ADJOINING PROPERTIES</b>	
<b>North</b>	The Subject Property is bound to the north by NW Maple Street, beyond which is a vacant building (1400 Northwest Maple), Eastside Baby Corner (1510 NW Maple), and a self-storage facility (1592 Northwest Maple).
<b>South</b>	The Subject Property is bound to the south by Newport Way NW, beyond which is Tibbets Valley Park.
<b>East</b>	The Subject Property is bound to the east by Cascade Business Park (1045 to 1145 Southeast 12 <sup>th</sup> ).
<b>West</b>	The Subject Property is bound to the west by an access road, beyond which is Eastside Fire and Rescue Station #12 (1575 Northwest Maple) and a parking structure (1050 17 <sup>th</sup> Northwest).

### 2.5 SUMMARY OF PREVIOUS ENVIRONMENTAL ASSESSMENTS

EBI was requested to conduct a limited subsurface investigation to evaluate the potential impact to the Subject Property from the following recognized environmental concern(s) identified in EBI's (July 5, 2017) Phase I ESA report:

- One former occupant of the Subject Property, QWEST Corporation, was listed as a RCRA-CESQG of hazardous waste. According to the EDR Database Report, the former QWEST Corporation formerly utilized tetrachloroethylene (PCE) and trichloroethylene (TCE) in the process of vehicle maintenance from at least 1996 through 2011. Two violations were reported for QWEST in 2011, which were corrected in January of 2012. Based on the documented use of PCE and TCE and documented history of violations at the Subject Property, the inclusion of the Subject Property on the RCRA-CESQG is considered a *recognized environmental condition* (REC) and has the potential to be a *Vapor Encroachment Condition* (VEC).
- The vehicle maintenance shop is currently equipped with one pair of in-ground hydraulic lifts. The hydraulic oil reservoir for the in-ground lift is located below grade and could not be observed. According to Mr. Trevor McHenry, Facility Supervisor, this lift is currently functioning properly and was installed during the construction of the existing building in 1981. EBI additionally observed the in-ground hydraulic lift to be functional at the time of reconnaissance. Based upon the date of installation, the in-ground hydraulic lift is not likely to contain PCBs. Since the in-ground hydraulic lift currently appears to be functional, it is unlikely that the underground hydraulic oil reservoir is currently leaking, however service records regarding the maintenance of the lifts were not available. Based upon the absence of maintenance documentation, the potential exists that the current underground hydraulic lift system had impacted subsurface conditions at the Subject Property. This is currently considered a recognized environmental condition (REC) and has the potential to be a VEC.

### 3.0 RATIONALE AND WORK PERFORMED

#### 3.1 RATIONALE

##### 3.1.1 Conceptual Model

The Conceptual Model is a representation of hypothesized current site conditions, which describes the physical setting characteristics of a site and the likely distribution of target contaminants (in soil, air, ground water, surface water and/or sediments) that might have resulted from a known or likely release and the risk they pose to human and/or ecological receptors. This Conceptual Model takes into consideration the potential distributions of contaminants with respect to the properties, behaviors and fate and transport characteristics of the contaminant in a setting such as that being assessed. The sampling plan was designed to provide for the collection of potentially contaminated environmental media, if they occur, at locations and depths where the highest concentrations are likely to occur.

Site Environmental Concerns		Site Physical Characteristics		Onsite Environmental Receptors	
RECs	COC's	Primary Release Media	Fate & Transport	Potential Exposure Route(s)	Potential Human Exposure
Auto Maintenance  UST	VOCs PAHs TPH PCBs Metals	Soil  Groundwater  Indoor Air	Soil  Soil Vapor  Groundwater  Indoor Air	Ingestion  Inhalation  Dermal (direct Contact)	Residents  Tenants  Site workers  Construction workers

COC = contaminants of concern

Assumptions:

1. Assumes the Subject Property retains existing use (Commercial)
2. Construction Worker exposure is limited due to short exposure duration

##### 3.1.2 Rationale for Soil Boring Placement

The rationale for the placement of the borings was based on the 1) the *Likely Release Area(s)* that target analytes were first introduced into environmental media as a result of a release; and 2) the likely vertical and horizontal migration of the release.

##### 3.1.3 Chemical Testing Plan

The chemical testing plan was designed to detect the target analytes that are present in, or have been released or potentially have been released to, environmental media at the site, and which are of interest in the context of the particular Phase II ESA and its objectives, the presence of which will be sought and concentrations of which will be quantified through chemical testing.



### 3.1.4 Deviations from the Proposed Scope of Work

There were no deviations to the proposed scope of work.

## 3.2 EXPLORATION, SAMPLING, AND TEST SCREENING METHODS

### 3.2.1 Pre-Drilling Activities

EBI requested Washington Utility Notification Center to mark-out the location of Subject Property utilities on December 11, 2017. Clearance for drilling at the Subject Property was granted for after 12:00 am on December 14, 2017. EBI additionally retained a private utility locating service (GPRS) to further identify underground utilities in the area of the borings.

Personal health and safety precautions were followed in accordance with applicable federal and state law or local equivalents and any requirements imposed by the owner, occupant, or field personnel. EBI prepared a site-specific health and safety plan (HASP) and conducted a health and safety meeting with the onsite personnel prior to the drilling activities. No additional pre-drilling activities were performed as part of this investigation.

### 3.2.2 Soil Borings

A total of 18 soil borings were advanced at the Subject Property. All of the borings were advanced using a direct push Geoprobe rig operated by ESN Northwest of Olympia, Washington or a manual stainless steel hand auger. Soil samples were collected continuously during the advancement of the borings. EBI recorded soil sampling information and the physical characteristics of each soil sample onto boring logs presented in Appendix B.

**TABLE 3.2.2  
 SUMMARY OF SOIL BORING DETAILS**

Boring ID#	Location	Termination Depth/Reason (feet bgs)	Approximate Depth to Groundwater (feet)	Sample ID #/ Depths	Target Analytes/ EPA Method
B-1	Interior location adjacent to the in-ground hydraulic lifts	15 (Termination per SOW)	6	B-1 (2.5-5) B-1 GW (6) B-1 SV (5)	VOCs – TO-15 PAHs – 8270 TPH – 8015 PCBs - 8082
B-2	Interior location adjacent to the waste automotive fluids storage area	15 (Termination per SOW)	6	B-2 (2.5-5) B-2 GW (6) B-2 SV (5)	VOCs – 8260 & TO-15 PAHs – 8270
B-3	Interior location adjacent to the automotive fluids storage area	15 (Termination per SOW)	6	B-3 (2.5-5) B-3 GW (6) B-3 SV (5)	VOCs – 8260 & TO-15 PAHs – 8270
B-4	Exterior location adjacent to the parts washer area	15 (Termination per SOW)	6	B-4 (2.5-5) B-4 GW (6) B-4 SV (5)	VOCs – 8260 & TO-15 PAHs – 8270
B-5	Exterior location adjacent to a waste oil above ground storage tank	15 (Termination per SOW)	6	B-5 (2.5-5) B-5 GW (6) B-5 SV (5)	VOCs – 8260 & TO-15 PAHs – 8270



Boring ID#	Location	Termination Depth/Reason (feet bgs)	Approximate Depth to Groundwater (feet)	Sample ID #/ Depths	Target Analytes/ EPA Method
B-6	Exterior location adjacent to the former UST location	15 (Termination per SOW)	5	B-6 (2.5-5) B-6 GW (5) B-6 SV (2)	VOCs – 8260 & TO-15 PAHs – 8270
B-7	Exterior location in the northeast portion of the Subject Property	15 (Termination per SOW)	6	B-7 (2.5-5) B-7 GW (6) B-7 SV (5)	VOCs – 8260 & TO-15 PAHs – 8270
B-8	Exterior location in the southwest portion of the Subject Property	15 (Termination per SOW)	3	B-8 (2.5-5) B-8 GW (3) B-8 SV (2)	VOCs – 8260 & TO-15 PAHs – 8270
HA-1	Exterior location in the east portion of the stormwater detention pond	0.5 (Termination per SOW)	Not Encountered	HA-1	TPH – 8015 PAHs – 8270 Metals – 6010
HA-2	Exterior location in the west portion of the stormwater detention pond	0.5 (Termination per SOW)	Not Encountered	HA-2	TPH – 8015 PAHs – 8270 Metals – 6010
HA-3	Exterior location in the north portion of the planter area	0.5 (Termination per SOW)	Not Encountered	HA-3	TPH – 8015 PAHs – 8270 Metals – 6010
HA-4	Exterior location in the south portion of the planter area	0.5 (Termination per SOW)	Not Encountered	HA-4	TPH – 8015 PAHs – 8270 Metals – 6010
HA-5	Exterior location in the south portion of the stormwater ditch	0.5 (Termination per SOW)	Not Encountered	HA-5	TPH – 8015 PAHs – 8270 Metals – 6010
HA-6	Exterior location in the south portion of the stormwater ditch, north of HA-5	0.5 (Termination per SOW)	Not Encountered	HA-6	TPH – 8015 PAHs – 8270 Metals – 6010
HA-7	Exterior location in the central portion of the stormwater ditch, north of HA-6	0.5 (Termination per SOW)	Not Encountered	HA-7	TPH – 8015 PAHs – 8270 Metals – 6010
HA-8	Exterior location in the central portion of the stormwater ditch, north of HA-7	0.5 (Termination per SOW)	Not Encountered	HA-8	TPH – 8015 PAHs – 8270 Metals – 6010
HA-9	Exterior location in the north portion of the stormwater ditch, north of HA-8	0.5 (Termination per SOW)	Not Encountered	HA-9	TPH – 8015 PAHs – 8270 Metals – 6010
HA-10	Exterior location in the north portion of the stormwater ditch, north of HA-9	0.5 (Termination per SOW)	Not Encountered	HA-10	TPH – 8015 PAHs – 8270 Metals – 6010
Notes: VOCs – Volatile organic compounds (VOCs) via EPA Method 8260 for soil and groundwater and EPA Method TO-15 for soil vapor PAHs – Polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8270 TPH – Total petroleum hydrocarbons (TPH) – Diesel range organics (DRO) and Oil range organics (ORO) via EPA Method 8015 Metals – RCRA 8 Metals by EPA Method 6010 (#) – Depth below grade sample collected.					

Boring locations are illustrated on Figure 3, Boring Location Map.

### 3.2.3 Field Screening

The vapor headspace of each soil sample was field-screened using a photoionization detector (PID). The PID provides a reading of total ionizable VOCs. The PID was calibrated with an isobutylene standard, to measure total VOCs as isobutylene equivalents. The PID has a practical sensitivity of approximately one part per million by volume (ppmV). PID readings should not be considered as exact measurements, but as relative readings of VOCs between locations. The soil samples were placed in a zip-lock bag approximately three-quarters full with the soil to be analyzed, which was sealed for approximately 10 minutes in a warm (>60° F) location for equilibration. The headspace analysis was conducted by inserting the probe of the PID through an opening in the zip-lock bag and into the space above the soil sample.

No visual or olfactory evidence of contamination or elevated PID readings above background was observed in any of the soil samples collected. The PID results are noted in the Boring Logs provided in Appendix B.

### 3.2.4 Soil Sampling and Analysis

Selected “grab” soil samples (of approximate 6” intervals) were collected in laboratory-provided sample containers. Each sample was labeled/logged onto a chain-of-custody form, and placed in a cooler with ice for preservation in accordance with current Federal EPA SW-846 (3rd ed.). The samples were submitted to an independent qualified laboratory (Accutest Laboratories) for analyses. The samples were analyzed for the target analytes noted in Table 3.2.2.

Samples submitted for VOC analyses were collected into 40-ml vials containing methanol using Terracore samplers in accordance with EPA Method 5035.

In order to ensure that no cross-contamination between samples occurred, all non-dedicated sampling equipment was decontaminated after the collection of each sample. Sampling equipment was scrubbed with a brush to remove loose material and then washed thoroughly with a laboratory grade detergent and water to remove all particulate matter and surface film. After washing, each piece and brush was rinsed with clean distilled water. Dedicated sampling equipment such as sampling liners and latex gloves were properly disposed of after the handling of each sample was complete. Samples were then collected using clean disposable gloves and laboratory-provided glassware appropriate for the specified analysis.

### 3.2.5 Groundwater Sampling and Analysis

Grab groundwater samples were collected from temporary small-diameter PVC well screens installed within the soil borings using new tubing and a peristaltic pump. The groundwater samples were collected in clean laboratory-provided containers. Samples collected for VOC analysis were preserved with hydrochloric acid to a pH less than 2. Samples collected for soluble metals analysis were filtered by the laboratory within 24 hours of sample collection using a 0.45-micron filter and then preserved with nitric acid. Each sample was labeled/logged onto a chain-of-custody form, and placed in a cooler with ice for preservation in accordance with current Federal EPA SW-846 (3rd ed.). After collection, the samples were submitted to an independent qualified laboratory (Accutest Laboratories) for analyses. The samples were analyzed for the target analytes noted in Table 3.2.2.

### 3.2.6 Soil Vapor Sampling and Analysis

Following the advancement of each of the borings, an additional boring was advanced adjacent to each of the borings to a depth of 5 feet bgs and temporary soil vapor wells were constructed in each of these borings at the 2 or 5-foot depth interval, depending on the depth to groundwater. The vapor points were constructed by placing a few inches of sand in the bottom of the boring, followed by placement of the vapor probe, which consisted of a two-inch plastic vapor probe attached to Nylaflow tubing that extended to approximately two feet above the ground level. Additional sand was placed into the boring to cover the vapor probe with approximately one foot of sand. Bentonite granules were then added to the boring and hydrated with a small volume of water to create a seal in the borehole and the remaining void space to the surface was filled with neat cement.

The soil vapor samples were collected in laboratory certified clean 1.0-liter summa canisters. The canisters were delivered with a 30" Hg vacuum. The sampling train was attached and a shut in test was performed to verify that no leaks were present. The purge canister was connected and allowed to collect soil vapor until the vacuum pressure on the sampling train gauge had raised by approximately 5" Hg in order to purge the sampling train and tubing prior to the collection of the soil vapor samples. The soil vapor sampling canisters were then connected and allowed to collect soil vapor until the vacuum pressure gauge on the sampling train showed a remaining vacuum pressure of approximately 5" Hg, which took approximately 10 minutes. In addition, a sponge with 3 drops of the liquid tracer IPA was placed on the ground immediately underneath the sampling train in order to assess the potential leakage of ambient air into the soil vapor sample. The samples were labeled/logged onto a chain-of-custody form. After collection, the samples were submitted to an independent qualified laboratory, Accutest Laboratories, for analysis. The samples were analyzed for the target analytes noted in Table 3.2.2.

### 3.2.8 Abandonment of Borings

Upon completion of the soil sampling activities, each soil boring was filled with bentonite chips. The top two to four inches were patched with asphalt or concrete to match existing conditions.

## 4.0 PRESENTATION OF EVALUATION AND RESULTS

### 4.1 SOIL ANALYSIS RESULTS

The soil samples were analyzed for the target analytes noted in Table 3.2.2. The following tables present only the contaminants identified above the laboratory method detection limits.

**Table 4.1.1 – Direct Push Soil Analytical Results**

Table 4.1.1		Direct Push Soil Results							
Project:		Proposed Apartments							
Project Number:		1217000450							
Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).							Legend:	Hit	Exceed
Client Sample ID:		B-1 (2.5-5)	B-2 (2.5-5)	B-3 (2.5-5)	B-4 (2.5-5)	WA DOE CLARC Method A (ULU/ILU)	WA DOE CLARC Method B	WA DOE CLARC Method C	
Lab Sample ID:		FA50422-1	FA50422-2	FA50422-3	FA50422-4				
Date Sampled:		12/20/17	12/20/17	12/20/17	12/20/17				
Matrix:		Soil	Soil	Soil	Soil				
<b>Total Petroleum Hydrocarbons (TPH)</b>									
TPH-DRO (C10-C28)	mg/kg	38.5	NA	NA	NA	2,000 / 2,000	NS	NS	
TPH-ORO (>C28-C40)	mg/kg	24.3	NA	NA	NA	2,000 / 2,000	NS	NS	
<b>Volatile Organic Compounds (VOCs)</b>									
Acetone	mg/kg	NA	0.0132 J <sup>a</sup>	0.0426 J <sup>a</sup>	0.0663 <sup>a</sup>	NS	72,000	3,150,000	
p-Isopropyltoluene	mg/kg	NA	ND (0.0010)	ND (0.00095)	ND (0.00086)	NS	NS	NS	
Methylene Chloride	mg/kg	NA	ND (0.0041)	ND (0.0038)	ND (0.0034)	0.020 / 0.020	480	21,000	
Tetrachloroethylene	mg/kg	NA	ND (0.0013)	ND (0.0012)	0.0033 J	0.050 / 0.050	476	21,000	
Toluene	mg/kg	NA	ND (0.0010)	ND (0.00095)	ND (0.00086)	7.0 / 7.0	6,400	280,000	

Client Sample ID:		B-5 (2.5-5)	B-6 (2.5-5)	B-7 (2.5-5)	B-8 (2.5-5)	WA DOE CLARC Method A (ULU/ILU)	WA DOE CLARC Method B	WA DOE CLARC Method C	
Lab Sample ID:		FA50422-5	FA50422-6	FA50422-7	FA50422-8				
Date Sampled:		12/20/17	12/20/17	12/20/17	12/20/17				
Matrix:		Soil	Soil	Soil	Soil				
<b>Total Petroleum Hydrocarbons (TPH)</b>									
TPH-DRO (C10-C28)	mg/kg	NA	NA	NA	NA	2,000 / 2,000	NS	NS	
TPH-ORO (>C28-C40)	mg/kg	NA	NA	NA	NA	2,000 / 2,000	NS	NS	
<b>Volatile Organic Compounds (VOCs)</b>									
Acetone	mg/kg	0.0091 J <sup>a</sup>	0.0388 J <sup>a</sup>	0.491 J <sup>a</sup>	1.22 J <sup>a</sup>	NS	72,000	3,150,000	
p-Isopropyltoluene	mg/kg	ND (0.00087)	0.0021 J	ND (0.045)	ND (0.046)	NS	NS	NS	
Methylene Chloride	mg/kg	ND (0.0035)	ND (0.0034)	0.194 J <sup>a</sup>	0.213 J <sup>a</sup>	0.020 / 0.020	480	21,000	
Tetrachloroethylene	mg/kg	ND (0.0011)	ND (0.0011)	ND (0.057)	ND (0.058)	0.050 / 0.050	476	21,000	
Toluene	mg/kg	ND (0.00087)	ND (0.00086)	0.374 B	ND (0.046)	7.0 / 7.0	6,400	280,000	

Notes: All results are shown in milligrams per kilogram (mg/kg)

NA = Not analyzed

ND = Non-detected above laboratory detection limits

NS = No standard listed

B = Indicates analyte found in associated method blank

a = Suspected laboratory contaminant

J = Estimated concentration

WA DOE CLARC= Washington Department of Ecology (DOE) Cleanup Levels and Risk Calculations (CLARC), dated August 2015

- Method A = Soil Screening Levels, Unrestricted Land Use (ULU) / Industrial Land Use (ILU)

\*Standard if benzene present

\*\*Standard if no detectable benzene

- Method B = Soil Screening Levels, All Properties

- Method C = Soil Screening Levels, Industrial Properties

The direct push soil sample analytical results revealed the following:

- 1) No PAHs or PCBs were detected at concentrations exceeding the above laboratory detection limits in the soil samples submitted for those analyses.
- 2) TPH-DRO and TPH-ORO were detected in the soil sample submitted for those analyses. For comparison purposes, the detected concentrations of TPH were compared to the Washington Department of Ecology (DOE) Cleanup Levels and Risk Calculations (CLARC) for soil, Method A. The detected concentrations of TPH are below the most stringent applicable Method A soil screening levels.
- 3) Various VOCs were detected in each of the soil samples submitted for those analyses. For comparison purposes, the detected concentrations of VOCs were compared to the Washington DOE CLARC for soil, Method A, B and/or C. It should be noted that the concentrations of the VOCs acetone and methylene chloride are notated as suspected laboratory contaminants. The detected concentrations of methylene chloride in the samples from borings B-7 and B-8 exceed the Method A soil screening levels, but are below the Method B and C soil screening levels. All other detected concentrations of VOCs are below the most stringent applicable soil screening levels.

**Table 4.1.2 – Hand Auger Soil Analytical Results**

Table 4.1.2		Hand Auger Soil Results							
Project:		Proposed Apartments							
Project Number:		1217000450							
Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).							Legend:	Hit	Exceed
Client Sample ID:		HA-1	HA-2	HA-3	HA-4	HA-5	WA DOE CLARC Method A (ULU/ILU)	WA DOE CLARC Method B	WA DOE CLARC Method C
Lab Sample ID:		FA50419-1	FA50419-2	FA50419-3	FA50419-4	FA50419-5			
Date Sampled:		12/20/17	12/20/17	12/20/17	12/20/17	12/20/17			
Matrix:		Soil	Soil	Soil	Soil	Soil			
<b>Total Petroleum Hydrocarbons (TPH)</b>									
TPH-DRO (C10-C28)	mg/kg	171	6.75	13.1	7.66	13.3	2,000 / 2,000	NS	NS
TPH-ORO (>C28-C40)	mg/kg	458	18.2	21.0	18.1	36.9	2,000 / 2,000	NS	NS
<b>Polycyclic Aromatic Hydrocarbons (PAHs)</b>									
Anthracene	mg/kg	ND (0.018)	ND (0.018)	ND (0.019)	ND (0.018)	ND (0.018)	NS	24,000	1,050,000
Benzo(a)anthracene	mg/kg	0.0243 J	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	NS	1.37	180
Benzo(a)pyrene	mg/kg	0.0296 J	ND (0.019)	ND (0.020)	ND (0.019)	ND (0.019)	0.10	0.137	18
Benzo(b)fluoranthene	mg/kg	0.0391 J	ND (0.018)	ND (0.018)	ND (0.018)	ND (0.018)	NS	1.37	180
Benzo(g,h,i)perylene	mg/kg	0.0307 J	ND (0.017)	ND (0.017)	ND (0.017)	ND (0.017)	NS	NS	NS
Benzo(k)fluoranthene	mg/kg	0.0444 J	ND (0.022)	ND (0.022)	ND (0.022)	ND (0.022)	NS	13.7	1,800
Chrysene	mg/kg	0.0644 J	ND (0.017)	ND (0.017)	0.0174 J	ND (0.017)	NS	137	18,000
Fluoranthene	mg/kg	0.133 J	ND (0.016)	0.0174 J	0.0280 J	0.0175 J	NS	3,200	140,000
Indeno(1,2,3-cd)pyrene	mg/kg	0.0307 J	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.020)	NS	1.37	180
Naphthalene	mg/kg	ND (0.016)	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	5.0 / 5.0	1,600	70,000
Phenanthrene	mg/kg	0.0480 J	ND (0.016)	ND (0.017)	ND (0.016)	ND (0.017)	NS	NS	NS
Pyrene	mg/kg	0.117 J	ND (0.019)	ND (0.019)	0.0224 J	ND (0.019)	NS	2,400	3,500

Table 4.1.2		Hand Auger Soil Results							
Project:		Proposed Apartments							
Project Number:		1217000450							
Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).							Legend:	Hit	Exceed
<b>Metals</b>									
Arsenic	mg/kg	4.0 <sup>a</sup>	2.0 <sup>a</sup>	4.0 <sup>a</sup>	4.4 <sup>a</sup>	4.6 <sup>a</sup>	20	0.667	87.5
Barium	mg/kg	48.5 <sup>a</sup>	49.1 <sup>a</sup>	82.8 <sup>a</sup>	79.0 <sup>a</sup>	83.5 <sup>a</sup>	NS	16,000	700,000
Chromium	mg/kg	21.2 <sup>a</sup>	20.3 <sup>a</sup>	15.4 <sup>a</sup>	14.2 <sup>a</sup>	14.3 <sup>a</sup>	NS	NS	NS
Lead	mg/kg	16.8 <sup>a</sup>	ND (3.6) <sup>a</sup>	7.7 <sup>a</sup>	6.0 <sup>a</sup>	6.4 <sup>a</sup>	250	NS	NS
Mercury	mg/kg	0.045	ND (0.038)	ND (0.040)	ND (0.042)	ND (0.036)	2.0	NS	NS

Client Sample ID:		HA-6	HA-7	HA-8	HA-9	HA-10	WA DOE CLARC Method A (ULU/ILU)	WA DOE CLARC Method B	WA DOE CLARC Method C
Lab Sample ID:		FA50419-6	FA50419-7	FA50419-8	FA50419-9	FA50419-10			
Date Sampled:		12/20/17	12/20/17	12/20/17	12/20/17	12/20/17			
Matrix:		Soil	Soil	Soil	Soil	Soil			
<b>Total Petroleum Hydrocarbons (TPH)</b>									
TPH-DRO (C10-C28)	mg/kg	5.58	309	8.21	6.23	18.4 J	2,000 / 2,000	NS	NS
TPH-ORO (>C28-C40)	mg/kg	13.4	1,120	22.3	11.6	69.3	2,000 / 2,000	NS	NS
<b>Polycyclic Aromatic Hydrocarbons (PAHs)</b>									
Anthracene	mg/kg	ND (0.019)	0.0197 J	ND (0.018)	ND (0.018)	ND (0.019)	NS	24,000	1,050,000
Benzo(a)anthracene	mg/kg	ND (0.017)	0.0855 J	ND (0.016)	ND (0.016)	ND (0.017)	NS	1.37	180
Benzo(a)pyrene	mg/kg	ND (0.020)	0.123 J	ND (0.019)	ND (0.019)	ND (0.020)	0.10 / 2.0	0.137	18
Benzo(b)fluoranthene	mg/kg	ND (0.018)	0.118 J	ND (0.018)	ND (0.018)	ND (0.018)	NS	1.37	180
Benzo(g,h,i)perylene	mg/kg	ND (0.017)	0.110 J	ND (0.017)	ND (0.017)	ND (0.017)	NS	NS	NS
Benzo(k)fluoranthene	mg/kg	ND (0.022)	0.114 J	ND (0.022)	ND (0.022)	ND (0.022)	NS	13.7	1,800
Chrysene	mg/kg	ND (0.017)	0.137 J	ND (0.017)	ND (0.017)	ND (0.017)	NS	137	18,000
Fluoranthene	mg/kg	ND (0.017)	0.182	ND (0.016)	ND (0.016)	ND (0.017)	NS	3,200	140,000
Indeno(1,2,3-cd)pyrene	mg/kg	ND (0.020)	0.107 J	ND (0.020)	ND (0.020)	ND (0.020)	NS	1.37	180
Naphthalene	mg/kg	0.0180 J	ND (0.017)	ND (0.016)	ND (0.016)	ND (0.017)	5.0 / 5.0	1,600	70,000
Phenanthrene	mg/kg	ND (0.017)	0.0778 J	ND (0.016)	ND (0.016)	ND (0.017)	NS	NS	NS
Pyrene	mg/kg	ND (0.019)	0.182	ND (0.019)	ND (0.019)	ND (0.019)	NS	2,400	10,500
<b>Metals</b>									
Arsenic	mg/kg	3.6 <sup>a</sup>	3.4 <sup>a</sup>	5.1	2.8	3.0	20	0.667	87.5
Barium	mg/kg	94.5 <sup>a</sup>	62.6 <sup>a</sup>	105	59.9	53.4	NS	16,000	700,000
Chromium	mg/kg	17.2 <sup>a</sup>	31.0 <sup>a</sup>	17.9	28.0	29.9	NS	NS	NS
Lead	mg/kg	5.2 <sup>a</sup>	4.0 <sup>a</sup>	11.7	3.8	4.5	250 / 1,000	NS	NS
Mercury	mg/kg	ND (0.036)	ND (0.040)	0.040	ND (0.038)	ND (0.042)	2.0	NS	NS

Notes: All results are shown in milligrams per kilogram (mg/kg)  
 ND = Non-detected above laboratory detection limits  
 NS = No standard listed  
 a = Sample dilution required due to difficult matrix  
 J = Estimated concentration  
 WA DOE CLARC= Washington Department of Ecology (DOE) Cleanup Levels and Risk Calculations (CLARC), dated August 2015  
 - Method A = Soil Screening Levels, Unrestricted Land Use (ULU) / Industrial Land Use (ILU)  
 - Method B = Soil Screening Levels, All Properties  
 - Method C = Soil Screening Levels, Industrial Properties

The hand auger soil sample analytical results revealed concentrations the following:

- 1) TPH-DRO and TPH-ORO were detected in each of the soil samples submitted for those analyses. For comparison purposes, the detected concentrations of TPH were compared to the



Washington DOE CLARC for soil, Method A. The detected concentrations of TPH are below the most stringent applicable Method A soil screening levels.

- 2) Various PAHs were detected in several of the soil samples submitted for those analyses. For comparison purposes, the detected concentrations of PAHs were compared to the Washington DOE CLARC for soil, Method A, B and/or C. The detected concentration of benzo(a)pyrene in the sample from borings HA-7 exceeds the Method A soil screening levels, but is below the Method B and C soil screening levels. All other detected concentrations of PAHs are below the most stringent applicable soil screening levels.
- 3) Various metals were detected in each of the soil samples submitted for those analyses. For comparison purposes, the detected concentrations of metals were compared to the Washington DOE CLARC for soil, Method A, B and/or C. The detected concentrations of arsenic exceed the Method B soil screening levels, but are below the Method A and C soil screening levels. All other detected concentrations of metals are below the most stringent applicable soil screening levels.

Laboratory soil analytical results and complete laboratory data sheets and chain-of-custody documentation are presented in Appendix C.

#### 4.2 GROUNDWATER ANALYSIS RESULTS

The groundwater samples were analyzed for the target analytes noted in Table 3.2.2. The following table presents only the contaminants identified above the laboratory method detection limits.

**Table 4.2 – Groundwater Analytical Results**

Table 4.2		Groundwater Results							
Project:		Proposed Apartments							
Project Number:		1217000450							
Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).							Legend:	Hit	Exceed
Client Sample ID:		B-1 GW (6)	B-2 GW (6)	B-3 GW (6)	B-4 GW (6)	WA DOE CLARC Method A	WA DOE CLARC Method B	WA DOE CLARC Method C	
Lab Sample ID:		FA50421-1	FA50421-2	FA50421-3	FA50421-4				
Date Sampled:		12/20/17	12/20/17	12/20/17	12/20/17				
Matrix:		Groundwater	Groundwater	Groundwater	Groundwater				
<b>Total Petroleum Hydrocarbons (TPH)</b>									
TPH-DRO (C10-C28)	µg/l	179	NA	NA	NA	500	NS	NS	
TPH-ORO (>C28-C40)	µg/l	142	NA	NA	NA	500	NS	NS	
<b>Volatile Organic Compounds (VOCs)</b>									
cis-1,2-Dichloroethylene	µg/l	NA	ND (0.28)	ND (0.28)	1.3	NS	16	35	
Tetrachloroethylene	µg/l	NA	0.54 J	ND (0.22)	ND (0.22)	5.0	20.8	105	



Table 4.2		Groundwater Results							
Project:		Proposed Apartments							
Project Number:		1217000450							
Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).							Legend:	Hit	Exceed
Client Sample ID:		B-5 GW (6)	B-6 GW (5)	B-7 GW (6)	B-8 GW (3)	WA DOE CLARC Method A (ULU/ILU)	WA DOE CLARC Method B	WA DOE CLARC Method C	
Lab Sample ID:		FA50421-5	FA50421-6	FA50421-7	FA50421-8				
Date Sampled:		12/20/17	12/20/17	12/20/17	12/20/17				
Matrix:		Groundwater	Groundwater	Groundwater	Groundwater				
Total Petroleum Hydrocarbons (TPH)									
TPH-DRO (C10-C28)	µg/l	NA	NA	NA	NA	500	NS	NS	
TPH-ORO (>C28-C40)	µg/l	NA	NA	NA	NA	500	NS	NS	
Volatile Organic Compounds (VOCs)									
cis-1,2-Dichloroethylene	µg/l	ND (0.28)	ND (0.28)	ND (0.28)	ND (0.28)	NS	16	35	
Tetrachloroethylene	µg/l	ND (0.22)	ND (0.22)	ND (0.22)	ND (0.22)	5.0	20.8	105	

Notes: All results are shown in micrograms per liter (µg/l)  
 NA = Not analyzed  
 ND = Non-detected above laboratory detection limits  
 NS = No standard listed  
 J = Estimated concentration  
 WA DOE CLARC= Washington Department of Ecology (DOE) Cleanup Levels and Risk Calculations (CLARC), dated August 2015  
 - Method A = Groundwater Screening Levels  
 - Method B = Groundwater Screening Levels, All Properties  
 - Method C = Groundwater Screening Levels, Industrial Properties

The groundwater sample analytical results revealed the following:

- 1) No concentrations of PAHs or PCBs were detected above laboratory detection limits in the groundwater samples submitted for those analyses.
- 2) TPH-DRO and TPH-ORO were detected in the sample submitted for those analyses. For comparison purposes, the detected concentrations of TPH were compared to the Washington DOE CLARC for groundwater, Method A. The detected concentrations of TPH are below the most stringent applicable Method A groundwater screening levels.
- 3) VOCs cis-1,2-DCE was detected in the sample collected from B-4 and PCE in the sample collected from B-2. For comparison purposes, the detected concentrations of VOCs were compared to the Washington DOE CLARC for groundwater, Method A, B and/or C. The detected concentrations of VOCs are below the most stringent applicable groundwater screening levels.

Laboratory groundwater analytical results and complete laboratory data sheets and chain-of-custody documentation are presented in Appendix C.

#### 4.3 SOIL VAPOR ANALYSIS RESULTS

The soil vapor samples were analyzed for the target analytes noted in Table 3.2.2. The table on the next page presents only the contaminants identified above the laboratory method detection limits.

**Table 4.3 – Soil Vapor Analytical Results**

Table 4.3		Soil Vapor Results						
Project:		Proposed Apartments						
Project Number:		1217000450						
Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).						Legend:	Hit	Exceed
Client Sample ID:		B-1 SV (5)	B-2 SV (5)	B-3 SV (5)	B-4 SV (5)	WA DOE CLARC Method B	WA DOE CLARC Method C	
Lab Sample ID:		TDI4094-1	TDI4094-2	TDI4094-3	TDI4094-4			
Date Sampled:		12/20/17	12/20/17	12/20/17	12/20/17			
Matrix:		Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor			
<b>Volatile Organic Compounds (VOCs)</b>								
Acetone	µg/m <sup>3</sup>	32.1	21	ND (380)	31.4	NS	NS	
1,3-Butadiene	µg/m <sup>3</sup>	ND (2.2)	ND (2.2)	ND (350)	135	2.78	27.8	
Benzene	µg/m <sup>3</sup>	ND (1.6)	ND (1.6)	ND (260)	37.1	10.7	107	
2-Butanone (MEK)	µg/m <sup>3</sup>	ND (1.5)	1.6	ND (240)	7.7	76,190	166,667	
Carbon disulfide	µg/m <sup>3</sup>	ND (1.6)	ND (1.6)	ND (250)	28	10,667	23,333	
Chloroform	µg/m <sup>3</sup>	ND (2.4)	ND (2.4)	ND (390)	44	3.62	36.2	
Cyclohexane	µg/m <sup>3</sup>	ND (1.7)	ND (1.7)	ND (280)	27	NS	NS	
Dichlorodifluoromethane	µg/m <sup>3</sup>	13	18	ND (400)	ND (9.9)	1,524	3,333	
cis-1,2-Dichloroethene	µg/m <sup>3</sup>	ND (2.0)	ND (2.0)	ND (320)	15	NS	NS	
Ethanol	µg/m <sup>3</sup>	4.3	31.6	ND (300)	ND (7.5)	NS	NS	
Ethylbenzene	µg/m <sup>3</sup>	6.1	2.7	921	ND (8.7)	15,238	33,333	
Heptane	µg/m <sup>3</sup>	4.5	6.1	ND (330)	27	NS	NS	
Hexane	µg/m <sup>3</sup>	6.3	10	ND (280)	91.6	10,667	23,333	
Isopropanol	µg/m <sup>3</sup>	ND (2.5)	2.9	ND (390)	ND (9.8)	NS	NS	
Pentane	µg/m <sup>3</sup>	6.5	17	ND (240)	209	NS	NS	
Propene	µg/m <sup>3</sup>	1.9	3.4	467	1,370	NS	NS	
Styrene	µg/m <sup>3</sup>	11	ND (2.1)	ND (340)	ND (8.5)	15,238	33,333	
1,1,1-Trichloroethane	µg/m <sup>3</sup>	39	27	ND (440)	24	76,190	166,667	
2,2,4-Trimethylpentane	µg/m <sup>3</sup>	ND (2.3)	ND (2.3)	ND (370)	117	NS	NS	
Tetrachloroethene (PCE)	µg/m <sup>3</sup>	439	386	ND (540)	240	321	3,210	
Toluene	µg/m <sup>3</sup>	2.6	2.8	ND (300)	31	76,190	166,667	
m,p-Xylene	µg/m <sup>3</sup>	13	12	3,650	16	1,524	3,333	
o-Xylene	µg/m <sup>3</sup>	3.7	3.1	1,860	ND (8.7)	1,524	3,333	
Xylenes (total)	µg/m <sup>3</sup>	16	16	5,520	21	1,524	3,333	

Client Sample ID:		B-5 SV (5)	B-6 SV (2)	B-7 SV (5)	B-8 SV (2)	WA DOE CLARC Method B	WA DOE CLARC Method C
Lab Sample ID:		TDI4094-5	TDI4094-6	TDI4094-7	TDI4094-8		
Date Sampled:		12/20/17	12/20/17	12/20/17	12/20/17		
Matrix:		Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor		
<b>Volatile Organic Compounds (VOCs)</b>							
Acetone	µg/m <sup>3</sup>	21	144	ND (38)	44.7	NS	NS
1,3-Butadiene	µg/m <sup>3</sup>	63.5	58.2	185	71.0	2.78	27.8
Benzene	µg/m <sup>3</sup>	28	27	66.1	25	10.7	107
2-Butanone (MEK)	µg/m <sup>3</sup>	6.2	29	ND (24)	10	76,190	166,667
Carbon disulfide	µg/m <sup>3</sup>	6.9	18	ND (25)	11	10,667	23,333
Chloroform	µg/m <sup>3</sup>	35	ND (12)	73.7	ND (9.8)	3.62	36.2
Cyclohexane	µg/m <sup>3</sup>	18	23	33	ND (6.9)	NS	NS
Dichlorodifluoromethane	µg/m <sup>3</sup>	ND (9.9)	ND (12)	ND (40)	ND (9.9)	1,524	3,333
cis-1,2-Dichloroethene	µg/m <sup>3</sup>	ND (7.9)	ND (9.9)	ND (32)	ND (7.9)	NS	NS
Ethanol	µg/m <sup>3</sup>	ND (7.5)	ND (9.4)	ND (30)	ND (7.5)	NS	NS

Table 4.3		Soil Vapor Results							
Project:		Proposed Apartments							
Project Number:		1217000450							
Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).							Legend:	Hit	Exceed
Ethylbenzene	µg/m <sup>3</sup>	ND (8.7)	ND (11)	ND (35)	ND (8.7)	15,238	33,333		
Heptane	µg/m <sup>3</sup>	26	26	ND (33)	9.0	NS	NS		
Hexane	µg/m <sup>3</sup>	36.3	65.2	73.3	20	10,667	23,333		
Isopropanol	µg/m <sup>3</sup>	ND (9.8)	ND (12)	ND (39)	ND (9.8)	NS	NS		
Pentane	µg/m <sup>3</sup>	75.1	117	224	57.7	NS	NS		
Propene	µg/m <sup>3</sup>	660	603	3,350	630	NS	NS		
Styrene	µg/m <sup>3</sup>	ND (8.5)	ND (11)	ND (34)	ND (8.5)	15,238	33,333		
1,1,1-Trichloroethane	µg/m <sup>3</sup>	ND (11)	ND (14)	ND (44)	ND (11)	76,190	166,667		
2,2,4-Trimethylpentane	µg/m <sup>3</sup>	ND (9.3)	780	ND (37)	ND (9.3)	NS	NS		
Tetrachloroethene (PCE)	µg/m <sup>3</sup>	435	ND (17)	ND (54)	ND (14)	321	3,210		
Toluene	µg/m <sup>3</sup>	25	18	105	16	76,190	166,667		
m,p-Xylene	µg/m <sup>3</sup>	11	ND (11)	35	ND (8.7)	1,524	3,333		
o-Xylene	µg/m <sup>3</sup>	ND (8.7)	ND (11)	ND (35)	ND (8.7)	1,524	3,333		
Xylenes (total)	µg/m <sup>3</sup>	15	ND (11)	47.3	ND (8.7)	1,524	3,333		

Notes: All results are shown in micrograms per cubic meter (µg/m<sup>3</sup>)  
 ND = Non-detected above laboratory detection limits  
 NS = No standard listed  
 J = Estimated concentration  
 WA DOE CLARC= Washington Department of Ecology (DOE) Cleanup Levels and Risk Calculations (CLARC), dated August 2015  
 - Method B = Sub-Slab Soil Gas Screening Levels, All Properties  
 - Method C = Sub-Slab Soil Gas Screening Levels, Industrial Properties

The soil vapor analytical results revealed concentrations of various VOCs in each of the samples submitted. For comparison purposes, the detected concentrations of VOCs were compared to the Washington DOE CLARC for sub-slab soil gas, Method B and C Vapor Intrusion screening levels. Each of the soil vapor samples contained multiple VOCs with concentrations exceeding the applicable Method B and/or C screening levels.

Laboratory soil vapor analytical results and complete laboratory data sheets and chain-of-custody documentation are presented in Appendix C.

## 5.0 FINDINGS

We have performed a Phase II ESA at the property at 1505 Newport Way Northwest, Issaquah, Washington in general conformance with the scope and limitations of ASTM E1903-11 and for the following objectives:

- The primary objective of this Phase II ESA was to evaluate potential impact to the Subject Property from the recognized environmental conditions (RECs) identified in the Phase I ESA prepared by EBI (July 5, 2017) for the purpose of providing sufficient information regarding the nature and extent of contamination to assist in making informed business decisions about the property; and where applicable, providing the level of knowledge necessary to satisfy the innocent purchaser defense under CERCLA. The investigation focused on: 1) the vicinity of on-site automotive maintenance areas; 2) the former on-site UST; and 3) on-site stormwater retention areas.

### **Validation of the Conceptual Model**

It is EBI's opinion that the findings and results of this Phase II ESA investigation are consistent with and support the assumptions of the Conceptual Model presented in Section 3.1.1. Sufficient investigation has been demonstrated to support sound conclusions regarding the presence of the target analytes.

The scope of work performed by EBI on December 20, 2017, included the following:

- 1) Advancing a total of 18 soil borings were advanced at the Subject Property. Eight of the soil borings (B-1 through B-8) were advanced using a Geoprobe direct push rig to depths of about 15 feet bgs. Groundwater was encountered in the borings at approximate depths ranging from about 3 to 6 feet bgs. The other 10 soil borings (HA-1 through HA-10) were advanced using a manual stainless steel hand auger to depths of 6 inches bgs.
- 2) Collecting one soil sample and one groundwater sample from each of the direct push soil borings and one soil sample was collected from each of the hand auger borings. The samples were submitted to a Washington-certified laboratory, Accutest Laboratories, for analyses. The soil and groundwater collected from the direct push boring adjacent to the in-ground hydraulic lift was submitted for analysis of TPH-DRO and ORO via EPA Method 8015, PAHs via EPA Method 8270, and PCBs by EPA Method 8082. The other direct push soil and groundwater samples were submitted for analysis of VOCs via EPA Method 8260 and PAHs via EPA Method 8270. The soil samples collected from the hand auger borings were submitted for analysis of TPH-DRO and ORO by EPA Method 8015, PAHs by EPA Method 8270, and RCRA 8 Metals by EPA Method 6010.
- 3) Collecting one soil vapor sample from a separate dedicated soil boring adjacent to the soil/groundwater borings at depths ranging from 2 to 5 feet bgs. The samples were submitted to a Washington-certified independent laboratory, Accutest Laboratories, for analyses. The soil vapor samples were analyzed for VOCs including the liquid tracer IPA via EPA Method TO-15.

## Findings

The results of EBI's Phase II ESA revealed:

- 1) Soil stratigraphy encountered during the completion of soil borings consisted of grayish-brown gravelly, silty sand and grayish-brown gravelly, sandy clay to about 15 feet bgs, the total depth explored.
- 2) Groundwater was encountered in the borings at depths ranging from about 3 to 6 feet bgs.
- 3) The direct push soil sample analytical results revealed the following:
  - a) No PAHs or PCBs were detected at concentrations exceeding the above laboratory detection limits in the soil samples submitted for those analyses.
  - b) TPH-DRO and TPH-ORO were detected in the soil sample submitted for those analyses. For comparison purposes, the detected concentrations of TPH were compared to the Washington Department of Ecology (DOE) Cleanup Levels and Risk Calculations (CLARC) for soil, Method A. The detected concentrations of TPH are below the most stringent applicable Method A soil screening levels.
  - c) Various VOCs were detected in each of the soil samples submitted for those analyses. For comparison purposes, the detected concentrations of VOCs were compared to the Washington DOE CLARC for soil, Method A, B and/or C. It should be noted that the concentrations of the VOCs acetone and methylene chloride are notated as suspected laboratory contaminants. The detected concentrations of methylene chloride in the samples from borings B-7 and B-8 exceed the Method A soil screening levels, but are below the Method B and C soil screening levels. All other detected concentrations of VOCs are below the most stringent applicable soil screening levels.
- 4) The hand auger soil sample analytical results revealed concentrations the following:
  - a) TPH-DRO and TPH-ORO were detected in each of the soil samples submitted for those analyses. For comparison purposes, the detected concentrations of TPH were compared to the Washington DOE CLARC for soil, Method A. The detected concentrations of TPH are below the most stringent applicable Method A soil screening levels.
  - b) Various PAHs were detected in several of the soil samples submitted for those analyses. For comparison purposes, the detected concentrations of PAHs were compared to the Washington DOE CLARC for soil, Method A, B and/or C. The detected concentration of benzo(a)pyrene in the sample from borings HA-7 exceeds the Method A soil screening levels, but is below the Method B and C soil screening levels. All other detected concentrations of PAHs are below the most stringent applicable soil screening levels.
  - c) Various metals were detected in each of the soil samples submitted for those analyses. For comparison purposes, the detected concentrations of metals were compared to the Washington DOE CLARC for soil, Method A, B and/or C. The detected concentrations of

arsenic exceed the Method B soil screening levels, but are below the Method A and C soil screening levels. All other detected concentrations of metals are below the most stringent applicable soil screening levels.

- 5) The groundwater sample analytical results revealed the following:
- a) No concentrations of PAHs or PCBs were detected above laboratory detection limits in the groundwater samples submitted for those analyses.
  - b) TPH-DRO and TPH-ORO were detected in the sample submitted for those analyses. For comparison purposes, the detected concentrations of TPH were compared to the Washington DOE CLARC for groundwater, Method A. The detected concentrations of TPH are below the most stringent applicable Method A groundwater screening levels.
  - c) VOCs cis-1,2-DCE was detected in the sample collected from B-4 and PCE in the sample collected from B-2. For comparison purposes, the detected concentrations of VOCs were compared to the Washington DOE CLARC for groundwater, Method A, B and/or C. The detected concentrations of VOCs are below the most stringent applicable groundwater screening levels.
  - d) The soil vapor analytical results revealed concentrations of various VOCs in each of the samples submitted. For comparison purposes, the detected concentrations of VOCs were compared to the Washington DOE CLARC for sub-slab soil gas, Method B and C Vapor Intrusion screening levels. Each of the soil vapor samples contained multiple VOCs with concentrations exceeding the applicable Method B and/or C screening levels.

## Conclusions

EBI understands that the King County Housing Authority (KCHA) plans to demolish and remove the existing building, to excavate most of the Subject Property to a depth of about 10 feet bgs, and to construct a mixed use commercial/residential building with an associated underground parking garage with a venting system. Based on this information and the results of the subsurface investigation, EBI concludes the following:

- 1) VOCs were not detected in the soil and groundwater samples above the applicable MTCA screening levels at the depths and/or locations sampled except:
  - a) Methylene chloride in the soil samples collected from borings B-2 and B-3. Methylene chloride was noted as a suspected laboratory contaminant. Based on this information, methylene chloride does not appear to represent a concern at the Subject Property.

- b) Benzo(a)pyrene was detected in the near surface sample from HA-7. Benzo(a)pyrene appears localized based on the benzo(a)pyrene concentrations detected in the other samples, which were generally non-detect. Based on this information and the proposed redevelopment plans, which includes excavation of most of the Subject Property to a depth of about 10 feet bgs, the benzo(a)pyrene does not appear to pose an unacceptable risk to future users of the Subject Property.
- c) Naturally occurring arsenic in Washington soils commonly exceed applicable regulatory screening values. Based on this information and because the arsenic concentrations were comparable and widespread, it appears that the arsenic in soil is within expected background concentrations. Similar to the benzo(a)pyrene impacted soil, the arsenic impacted soil will also be removed to a depth of about 10 feet bgs.
- 2) Concentrations of several VOCs were detected in soil vapor beneath the Subject Property at concentrations exceeding applicable MTCA screening levels. Vapor intrusion to indoor air does not appear to pose an unacceptable risk to future users of the Subject Property based on the proposed redevelopment plans, which includes potentially removing most, if not all, of the impacted vadose zone soil, if present, and construction of an underground parking garage with a venting system.



## 6.0 RECOMMENDATIONS

Based on the findings and conclusions of this Phase II ESA and the proposed redevelopment plans, EBI has no recommendations for further investigations at this time. However, in the event that any impacted soil and/or groundwater is identified during the proposed excavation/construction activities for the redevelopment of the Subject Property, EBI recommends the oversight of the subsurface activities be conducted by an environmental professional and any impacted soil and groundwater be handled/disposed in accordance with the applicable regulatory regulations. In addition, any de-watered groundwater encountered during the construction activities should be managed/disposed in accordance with applicable state and federal regulations.

Further, as noted in Section 5.0, vapor intrusion to indoor air does not appear to pose an unacceptable risk to future users of the Subject Property based on the proposed redevelopment plans, which includes potentially removing most, if not all, of the impacted vadose zone soil, if present, and construction of an underground parking garage with a venting system. However, in the event that the proposed redevelopment plans do not include the underground parking garage with a venting system, EBI recommends that the building design include a vapor barrier/mitigation system.

**APPENDIX A**  
**FIGURES**

---

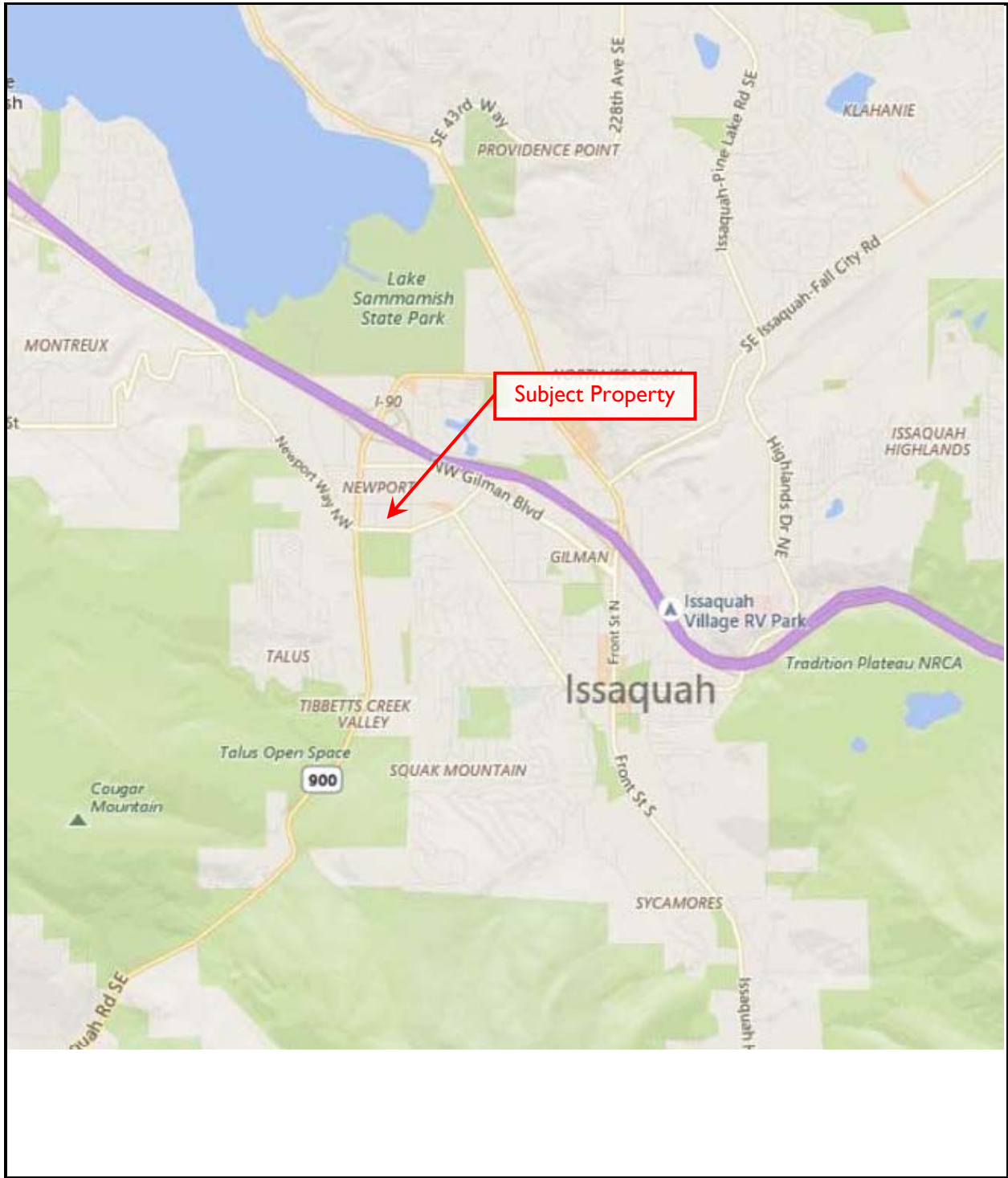


FIGURE I – SITE LOCATION MAP



Not to scale

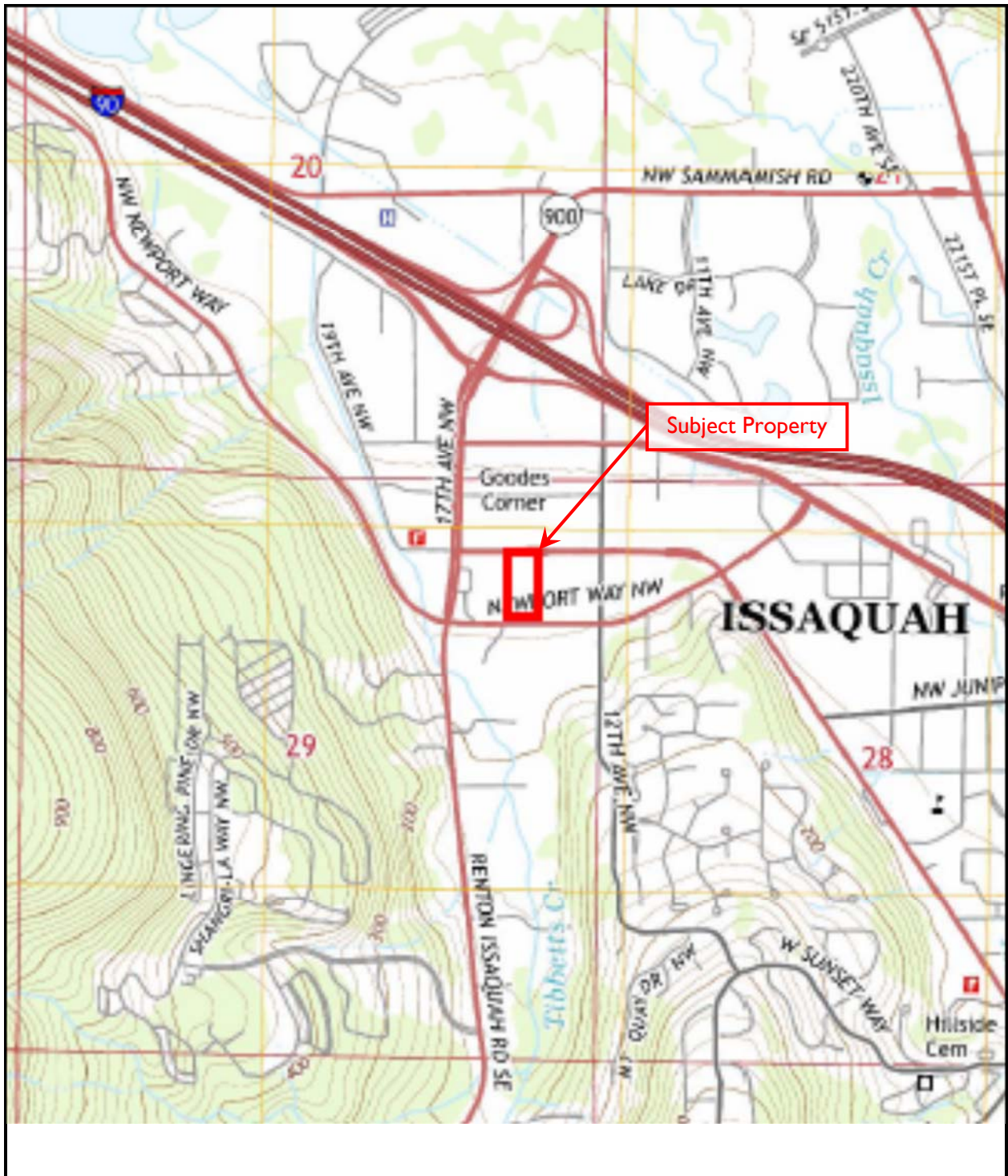


FIGURE 2 – TOPOGRAPHIC MAP



Not to scale





FIGURE 3 – BORING LOCATION MAP



Not to scale

**APPENDIX B**  
**BORING LOGS**

---

**SOIL BORING LOG - FIELD READINGS****EBI Project #1217000450****Project Name: Proposed Apartments  
Issaquah, Washington****BORING METHOD: Direct Push - Geoprobe DATE: 12/20/17**

Sample #	Depth (Ft)	Moisture (Saturated High - Medium - Low)	PID Reading	Soil Description/Notes
B-1	0 - 5	H	0.3	Grayish-brown gravelly, silty sand
B-1	5 - 10	S	0.3	Grayish-brown gravelly, sandy clay
B-1	10 - 12.5	S	0.0	Grayish-brown gravelly, silty sand
B-1	12.5 - 15	S	0.1	Grayish-brown sandy clay
Bottom of Boring at 15' (Termination depth), groundwater encountered at 6'				
B-2	0 - 5	H	0.1	Grayish-brown gravelly, silty sand
B-2	5 - 10	S	0.1	Grayish-brown gravelly, sandy clay
B-2	10 - 12.5	S	0.1	Grayish-brown gravelly, silty sand
B-2	12.5 - 15	S	0.1	Grayish-brown sandy clay
Bottom of Boring at 15' (Termination depth), groundwater encountered at 6'				
B-3	0 - 5	H	0.2	Grayish-brown gravelly, silty sand
B-3	5 - 10	S	0.1	Grayish-brown gravelly, sandy clay
B-3	10 - 12.5	S	0.0	Grayish-brown gravelly, silty sand
B-3	12.5 - 15	S	0.0	Grayish-brown sandy clay
Bottom of Boring at 15' (Termination depth), groundwater encountered at 6'				
B-4	0 - 5	H	0.2	Grayish-brown gravelly, silty sand
B-4	5 - 10	S	0.1	Grayish-brown gravelly, sandy clay
B-4	10 - 12.5	S	0.2	Grayish-brown gravelly, silty sand
B-4	12.5 - 15	S	0.1	Grayish-brown sandy clay
Bottom of Boring at 15' (Termination depth), groundwater encountered at 6'				
B-5	0 - 5	H	0.2	Grayish-brown gravelly, silty sand
B-5	5 - 10	S	0.1	Grayish-brown gravelly, sandy clay
B-5	10 - 12.5	S	0.2	Grayish-brown gravelly, silty sand
B-5	12.5 - 15	S	0.2	Grayish-brown sandy clay
Bottom of Boring at 15' (Termination depth), groundwater encountered at 6'				
B-6	0 - 5	H	0.5	Grayish-brown gravelly, silty sand
B-6	5 - 10	S	0.1	Grayish-brown gravelly, sandy clay
B-6	10 - 12.5	S	0.1	Grayish-brown gravelly, silty sand
B-6	12.5 - 15	S	0.2	Grayish-brown sandy clay
Bottom of Boring at 15' (Termination depth), groundwater encountered at 5'				
B-7	0 - 5	H	0.5	Grayish-brown gravelly, silty sand
B-7	5 - 10	S	0.3	Grayish-brown gravelly, sandy clay



**SOIL BORING LOG - FIELD READINGS**

**EBI Project #1217000450**

**Project Name: Proposed Apartments  
Issaquah, Washington**

**BORING METHOD: Direct Push - Geoprobe DATE: 12/20/17**

<b>Sample #</b>	<b>Depth (Ft)</b>	<b>Moisture (Saturated High - Medium - Low)</b>	<b>PID Reading</b>	<b>Soil Description/Notes</b>
B-7	10 - 12.5	S	0.1	Grayish-brown gravelly, silty sand
B-7	12.5 - 15	S	0.1	Grayish-brown sandy clay
Bottom of Boring at 15' (Termination depth), groundwater encountered at 6'				
B-8	0 - 5	H	0.2	Grayish-brown gravelly, silty sand
B-8	5 - 10	S	0.1	Grayish-brown gravelly, sandy clay
B-8	10 - 12.5	S	0.1	Grayish-brown gravelly, silty sand
B-8	12.5 - 15	S	0.1	Grayish-brown sandy clay
Bottom of Boring at 15' (Termination depth), groundwater encountered at 3'				

---

**APPENDIX C**  
**LABORATORY ANALYTICAL RESULTS**

---

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

### EBI Consulting

1217000450 Issaquah, WA

SGS Job Number: FA50422

Sampling Date: 12/20/17

### Report to:

EBI Consulting  
21 B St  
Burlington, MA 01803  
rdeutsch@ebiconsulting.com; cbechtel@ebiconsulting.com  
ATTN: Ryan Deutsch

Total number of pages in report: 69



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Caitlin Brice".

**Caitlin Brice, M.S.**  
**General Manager**

**Client Service contact: Elvin Kumar 407-425-6700**

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)  
DoD ELAP(L-A-B L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),  
AK, AR, GA, IA, KY, MA, NV, OK, OR, UT, WA

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Test results relate only to samples analyzed.

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## Sample Summary

EBI Consulting

**Job No:** FA50422

1217000450 Issaquah, WA

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA50422-1	12/20/17	12:35 CB	12/21/17	SO	Soil	B-1 (2.5-5)
FA50422-2	12/20/17	12:10 CB	12/21/17	SO	Soil	B-2 (2.5-5)
FA50422-3	12/20/17	13:00 CB	12/21/17	SO	Soil	B-3 (2.5-5)
FA50422-4	12/20/17	11:35 CB	12/21/17	SO	Soil	B-4 (2.5-5)
FA50422-5	12/20/17	11:05 CB	12/21/17	SO	Soil	B-5 (2.5-5)
FA50422-6	12/20/17	09:20 CB	12/21/17	SO	Soil	B-6 (2.5-5)
FA50422-7	12/20/17	10:00 CB	12/21/17	SO	Soil	B-7 (2.5-5)
FA50422-8	12/20/17	10:40 CB	12/21/17	SO	Soil	B-8 (2.5-5)

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## Summary of Hits

**Job Number:** FA50422  
**Account:** EBI Consulting  
**Project:** 1217000450 Issaquah, WA  
**Collected:** 12/20/17

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>FA50422-1</b>	<b>B-1 (2.5-5)</b>					
TPH (C10-C28)		38.5	4.9	2.5	mg/kg	SW846 8015C
TPH (> C28-C40)		24.3	4.9	2.5	mg/kg	SW846 8015C
<b>FA50422-2</b>	<b>B-2 (2.5-5)</b>					
Acetone <sup>a</sup>		0.0132 J	0.051	0.010	mg/kg	SW846 8260B
<b>FA50422-3</b>	<b>B-3 (2.5-5)</b>					
Acetone <sup>a</sup>		0.0426 J	0.047	0.0095	mg/kg	SW846 8260B
<b>FA50422-4</b>	<b>B-4 (2.5-5)</b>					
Acetone <sup>a</sup>		0.0663	0.043	0.0086	mg/kg	SW846 8260B
Tetrachloroethylene		0.0033 J	0.0043	0.0011	mg/kg	SW846 8260B
<b>FA50422-5</b>	<b>B-5 (2.5-5)</b>					
Acetone <sup>a</sup>		0.0091 J	0.043	0.0087	mg/kg	SW846 8260B
<b>FA50422-6</b>	<b>B-6 (2.5-5)</b>					
Acetone <sup>a</sup>		0.0388 J	0.043	0.0086	mg/kg	SW846 8260B
p-Isopropyltoluene		0.0021 J	0.0043	0.00086	mg/kg	SW846 8260B
<b>FA50422-7</b>	<b>B-7 (2.5-5)</b>					
Acetone <sup>b</sup>		0.491 J	2.2	0.45	mg/kg	SW846 8260B
Methylene Chloride <sup>b</sup>		0.194 J	0.45	0.18	mg/kg	SW846 8260B
Toluene <sup>c</sup>		0.374 B	0.22	0.045	mg/kg	SW846 8260B
<b>FA50422-8</b>	<b>B-8 (2.5-5)</b>					
Acetone <sup>d</sup>		1.22 J	2.3	0.46	mg/kg	SW846 8260B
Methylene Chloride <sup>d</sup>		0.213 J	0.46	0.18	mg/kg	SW846 8260B

- (a) Suspected laboratory contaminant.
- (b) Dilution required due to matrix interference (internal standard failure). Suspected laboratory contaminant.
- (c) Dilution required due to matrix interference (internal standard failure).
- (d) Dilution required due to matrix interference (surrogate standard failure). Suspected laboratory contaminant.

Sample Results

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Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b> B-1 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-1	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693181.D	1	12/26/17 21:17	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.019	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.17	0.017	mg/kg	
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		40-105%
321-60-8	2-Fluorobiphenyl	66%		43-107%
1718-51-0	Terphenyl-d14	78%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-1 (2.5-5)	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50422-1	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8082A SW846 3546	
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM48192.D	1	12/27/17 17:29	NJ	12/27/17 08:15	OP68216	GMM919
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	15.1 g	5.0 ml
Run #2		

### PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.017	0.0066	mg/kg	
11104-28-2	Aroclor 1221	ND	0.017	0.0083	mg/kg	
11141-16-5	Aroclor 1232	ND	0.017	0.0083	mg/kg	
53469-21-9	Aroclor 1242	ND	0.017	0.0066	mg/kg	
12672-29-6	Aroclor 1248	ND	0.017	0.0066	mg/kg	
11097-69-1	Aroclor 1254 <sup>b</sup>	ND	0.017	0.0066	mg/kg	
11096-82-5	Aroclor 1260	ND	0.017	0.0066	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	96%		44-126%
2051-24-3	Decachlorobiphenyl	113%		41-145%

- (a) All results reported on a wet weight basis.  
 (b) Associated CCV outside of control limits high, sample was ND.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> B-1 (2.5-5)	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50422-1	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015C SW846 3546	
<b>Project:</b> 1217000450 Issaquah, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018125.D	1	12/27/17 00:09	SJL	12/22/17 08:30	OP68179	GJJ753
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	38.5	4.9	2.5	mg/kg	
	TPH (> C28-C40)	24.3	4.9	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	B-2 (2.5-5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	FA50422-2	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	1217000450 Issaquah, WA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	0.0051	0.0010	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0051	0.0010	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0051	0.0010	mg/kg	
100-41-4	Ethylbenzene	ND	0.0051	0.0010	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0051	0.0013	mg/kg	
591-78-6	2-Hexanone	ND	0.026	0.0077	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0051	0.0010	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0051	0.0010	mg/kg	
74-83-9	Methyl Bromide	ND	0.0051	0.0020	mg/kg	
74-87-3	Methyl Chloride	ND	0.0051	0.0020	mg/kg	
74-95-3	Methylene Bromide	ND	0.0051	0.0010	mg/kg	
75-09-2	Methylene Chloride	ND	0.010	0.0041	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.026	0.0077	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0051	0.0010	mg/kg	
91-20-3	Naphthalene	ND	0.0051	0.0020	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0051	0.0010	mg/kg	
100-42-5	Styrene	ND	0.0051	0.0010	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0051	0.0011	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0051	0.0010	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0051	0.0013	mg/kg	
108-88-3	Toluene	ND	0.0051	0.0010	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0051	0.0014	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0051	0.0010	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0051	0.0010	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0051	0.0010	mg/kg	
79-01-6	Trichloroethylene	ND	0.0051	0.0010	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0051	0.0020	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0051	0.0013	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0051	0.0010	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0051	0.0010	mg/kg	
108-05-4	Vinyl Acetate	ND	0.026	0.017	mg/kg	
75-01-4	Vinyl Chloride	ND	0.0051	0.0010	mg/kg	
	m,p-Xylene	ND	0.010	0.0011	mg/kg	
95-47-6	o-Xylene	ND	0.0051	0.0010	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		75-124%
17060-07-0	1,2-Dichloroethane-D4	105%		72-135%
2037-26-5	Toluene-D8	103%		75-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-2	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%		71-133%

- (a) All results reported on a wet weight basis.
- (b) Suspected laboratory contaminant.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-2 (2.5-5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50422-2		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693182.D	1	12/26/17 21:44	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.019	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.17	0.017	mg/kg	
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		40-105%
321-60-8	2-Fluorobiphenyl	74%		43-107%
1718-51-0	Terphenyl-d14	79%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-3 (2.5-5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50422-3		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B6700.D	1	12/22/17 14:03	SP	n/a	n/a	V2B255
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	5.28 g	5.0 ml
Run #2		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone <sup>b</sup>	0.0426	0.047	0.0095	mg/kg	J
71-43-2	Benzene	ND	0.0047	0.0012	mg/kg	
108-86-1	Bromobenzene	ND	0.0047	0.00095	mg/kg	
74-97-5	Bromochloromethane	ND	0.0047	0.0014	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0047	0.00095	mg/kg	
75-25-2	Bromoform	ND	0.0047	0.00095	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.024	0.0069	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0047	0.00095	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0047	0.00095	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0047	0.00095	mg/kg	
75-15-0	Carbon Disulfide	ND	0.0047	0.00095	mg/kg	
56-23-5	Carbon Tetrachloride	ND	0.0047	0.00097	mg/kg	
108-90-7	Chlorobenzene	ND	0.0047	0.00095	mg/kg	
75-00-3	Chloroethane	ND	0.0047	0.0019	mg/kg	
67-66-3	Chloroform	ND	0.0047	0.0013	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0047	0.00095	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0047	0.00095	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0047	0.00095	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0047	0.0018	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0047	0.00095	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0047	0.0019	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0047	0.00095	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0047	0.00095	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0047	0.0011	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0047	0.0017	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0047	0.00095	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0047	0.00095	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0047	0.0013	mg/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0047	0.00095	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0047	0.00095	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0047	0.00095	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0047	0.00095	mg/kg	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-3 (2.5-5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	FA50422-3	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	1217000450 Issaquah, WA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	0.0047	0.00097	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0047	0.00095	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0047	0.00095	mg/kg	
100-41-4	Ethylbenzene	ND	0.0047	0.00095	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0047	0.0012	mg/kg	
591-78-6	2-Hexanone	ND	0.024	0.0071	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0047	0.00095	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0047	0.00095	mg/kg	
74-83-9	Methyl Bromide	ND	0.0047	0.0019	mg/kg	
74-87-3	Methyl Chloride	ND	0.0047	0.0019	mg/kg	
74-95-3	Methylene Bromide	ND	0.0047	0.00095	mg/kg	
75-09-2	Methylene Chloride	ND	0.0095	0.0038	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.024	0.0071	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0047	0.00095	mg/kg	
91-20-3	Naphthalene	ND	0.0047	0.0019	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0047	0.00095	mg/kg	
100-42-5	Styrene	ND	0.0047	0.00095	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0047	0.00098	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0047	0.00095	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0047	0.0012	mg/kg	
108-88-3	Toluene	ND	0.0047	0.00095	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0047	0.0013	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0047	0.00095	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0047	0.00095	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0047	0.00095	mg/kg	
79-01-6	Trichloroethylene	ND	0.0047	0.00095	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0047	0.0019	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0047	0.0012	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0047	0.00095	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0047	0.00095	mg/kg	
108-05-4	Vinyl Acetate	ND	0.024	0.016	mg/kg	
75-01-4	Vinyl Chloride	ND	0.0047	0.00095	mg/kg	
	m,p-Xylene	ND	0.0095	0.0010	mg/kg	
95-47-6	o-Xylene	ND	0.0047	0.00095	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		75-124%
17060-07-0	1,2-Dichloroethane-D4	103%		72-135%
2037-26-5	Toluene-D8	102%		75-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-3 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-3	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		71-133%

- (a) All results reported on a wet weight basis.
- (b) Suspected laboratory contaminant.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-3 (2.5-5)	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50422-3	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270D SW846 3550C	
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693183.D	1	12/26/17 22:12	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.019	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.17	0.017	mg/kg	
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		40-105%
321-60-8	2-Fluorobiphenyl	69%		43-107%
1718-51-0	Terphenyl-d14	79%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound





## Report of Analysis

<b>Client Sample ID:</b> B-4 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-4	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		71-133%

- (a) All results reported on a wet weight basis.
- (b) Suspected laboratory contaminant.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-4 (2.5-5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50422-4		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693184.D	1	12/26/17 22:39	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.019	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.17	0.017	mg/kg	
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	77%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

MDL = Method Detection Limit  
 J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	B-5 (2.5-5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	FA50422-5	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	1217000450 Issaquah, WA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	0.0043	0.00088	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0043	0.00087	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0043	0.00087	mg/kg	
100-41-4	Ethylbenzene	ND	0.0043	0.00087	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0043	0.0011	mg/kg	
591-78-6	2-Hexanone	ND	0.022	0.0065	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0043	0.00087	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0043	0.00087	mg/kg	
74-83-9	Methyl Bromide	ND	0.0043	0.0017	mg/kg	
74-87-3	Methyl Chloride	ND	0.0043	0.0017	mg/kg	
74-95-3	Methylene Bromide	ND	0.0043	0.00087	mg/kg	
75-09-2	Methylene Chloride	ND	0.0087	0.0035	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.022	0.0065	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0043	0.00087	mg/kg	
91-20-3	Naphthalene	ND	0.0043	0.0017	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0043	0.00087	mg/kg	
100-42-5	Styrene	ND	0.0043	0.00087	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0043	0.00089	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0043	0.00087	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0043	0.0011	mg/kg	
108-88-3	Toluene	ND	0.0043	0.00087	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0043	0.0012	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0043	0.00087	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0043	0.00087	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0043	0.00087	mg/kg	
79-01-6	Trichloroethylene	ND	0.0043	0.00087	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0043	0.0017	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0043	0.0011	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0043	0.00087	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0043	0.00087	mg/kg	
108-05-4	Vinyl Acetate	ND	0.022	0.014	mg/kg	
75-01-4	Vinyl Chloride	ND	0.0043	0.00087	mg/kg	
	m,p-Xylene	ND	0.0087	0.00095	mg/kg	
95-47-6	o-Xylene	ND	0.0043	0.00087	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		75-124%
17060-07-0	1,2-Dichloroethane-D4	104%		72-135%
2037-26-5	Toluene-D8	100%		75-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-5 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-5	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		71-133%

- (a) All results reported on a wet weight basis.
- (b) Suspected laboratory contaminant.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-5 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-5	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693185.D	1	12/26/17 23:06	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.019	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.17	0.017	mg/kg	
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		40-105%
321-60-8	2-Fluorobiphenyl	65%		43-107%
1718-51-0	Terphenyl-d14	78%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	B-6 (2.5-5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	FA50422-6	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	1217000450 Issaquah, WA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	0.0043	0.00087	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0043	0.00086	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0043	0.00086	mg/kg	
100-41-4	Ethylbenzene	ND	0.0043	0.00086	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0043	0.0011	mg/kg	
591-78-6	2-Hexanone	ND	0.021	0.0064	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0043	0.00086	mg/kg	
99-87-6	p-Isopropyltoluene	0.0021	0.0043	0.00086	mg/kg	J
74-83-9	Methyl Bromide	ND	0.0043	0.0017	mg/kg	
74-87-3	Methyl Chloride	ND	0.0043	0.0017	mg/kg	
74-95-3	Methylene Bromide	ND	0.0043	0.00086	mg/kg	
75-09-2	Methylene Chloride	ND	0.0086	0.0034	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.021	0.0064	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0043	0.00086	mg/kg	
91-20-3	Naphthalene	ND	0.0043	0.0017	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0043	0.00086	mg/kg	
100-42-5	Styrene	ND	0.0043	0.00086	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0043	0.00088	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0043	0.00086	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0043	0.0011	mg/kg	
108-88-3	Toluene	ND	0.0043	0.00086	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0043	0.0012	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0043	0.00086	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0043	0.00086	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0043	0.00086	mg/kg	
79-01-6	Trichloroethylene	ND	0.0043	0.00086	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0043	0.0017	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0043	0.0011	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0043	0.00086	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0043	0.00086	mg/kg	
108-05-4	Vinyl Acetate	ND	0.021	0.014	mg/kg	
75-01-4	Vinyl Chloride	ND	0.0043	0.00086	mg/kg	
	m,p-Xylene	ND	0.0086	0.00094	mg/kg	
95-47-6	o-Xylene	ND	0.0043	0.00086	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		75-124%
17060-07-0	1,2-Dichloroethane-D4	104%		72-135%
2037-26-5	Toluene-D8	102%		75-126%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-6 (2.5-5)	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50422-6	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B	
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		71-133%

- (a) All results reported on a wet weight basis.
- (b) Suspected laboratory contaminant.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



# Report of Analysis

<b>Client Sample ID:</b> B-6 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-6	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693186.D	1	12/26/17 23:33	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.019	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.17	0.017	mg/kg	
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	74%		40-105%
321-60-8	2-Fluorobiphenyl	77%		43-107%
1718-51-0	Terphenyl-d14	83%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-7 (2.5-5)		
<b>Lab Sample ID:</b> FA50422-7		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>b</sup>	2B6724.D	1	12/27/17 15:19	SP	n/a	n/a	V2B256
Run #2 <sup>c</sup>	2B6704.D	1	12/22/17 15:40	SP	n/a	n/a	V2B255

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.59 g	5.0 ml	100 ul
Run #2	4.85 g	5.0 ml	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone <sup>d</sup>	0.491	2.2	0.45	mg/kg	J
71-43-2	Benzene	ND	0.22	0.055	mg/kg	
108-86-1	Bromobenzene	ND	0.22	0.045	mg/kg	
74-97-5	Bromochloromethane	ND	0.22	0.066	mg/kg	
75-27-4	Bromodichloromethane	ND	0.22	0.045	mg/kg	
75-25-2	Bromoform	ND	0.22	0.045	mg/kg	
78-93-3	2-Butanone (MEK)	ND	1.1	0.33	mg/kg	
104-51-8	n-Butylbenzene	ND	0.22	0.045	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.22	0.045	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.22	0.045	mg/kg	
75-15-0	Carbon Disulfide	ND	0.22	0.045	mg/kg	
56-23-5	Carbon Tetrachloride	ND	0.22	0.046	mg/kg	
108-90-7	Chlorobenzene	ND	0.22	0.045	mg/kg	
75-00-3	Chloroethane	ND	0.22	0.089	mg/kg	
67-66-3	Chloroform	ND	0.22	0.059	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.22	0.045	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.22	0.045	mg/kg	
124-48-1	Dibromochloromethane	ND	0.22	0.045	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.22	0.086	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.22	0.045	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.22	0.089	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.22	0.045	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.22	0.045	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.22	0.051	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.22	0.079	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.22	0.045	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.22	0.045	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.22	0.062	mg/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	0.22	0.045	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.22	0.045	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.22	0.045	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.22	0.045	mg/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-7 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-7	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%	132%	71-133%

- (a) All results reported on a wet weight basis.
- (b) Dilution required due to matrix interference (internal standard failure).
- (c) Confirmation run for internal standard areas. Associated internal standard response outside control limits.  
Confirmed by MS/MSD.
- (d) Suspected laboratory contaminant.

---

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-7 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-7	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3550C	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693187.D	1	12/27/17 00:00	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.017	mg/kg	
208-96-8	Acenaphthylene	ND	0.16	0.016	mg/kg	
120-12-7	Anthracene	ND	0.16	0.018	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.16	0.016	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.16	0.019	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.16	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.16	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.16	0.022	mg/kg	
218-01-9	Chrysene	ND	0.16	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.16	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.16	0.016	mg/kg	
86-73-7	Fluorene	ND	0.16	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.16	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-20-3	Naphthalene	ND	0.16	0.016	mg/kg	
85-01-8	Phenanthrene	ND	0.16	0.016	mg/kg	
129-00-0	Pyrene	ND	0.16	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		40-105%
321-60-8	2-Fluorobiphenyl	76%		43-107%
1718-51-0	Terphenyl-d14	77%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-8 (2.5-5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	FA50422-8	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	1217000450 Issaquah, WA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>b</sup>	2B6726.D	1	12/27/17 16:08	SP	n/a	n/a	V2B256
Run #2 <sup>c</sup>	2B6705.D	1	12/22/17 16:04	SP	n/a	n/a	V2B255
Run #3 <sup>c</sup>	2B6725.D	1	12/27/17 15:43	SP	n/a	n/a	V2B256

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.49 g	5.0 ml	100 ul
Run #2	5.69 g	5.0 ml	
Run #3	5.79 g	5.0 ml	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone <sup>d</sup>	1.22	2.3	0.46	mg/kg	J
71-43-2	Benzene	ND	0.23	0.056	mg/kg	
108-86-1	Bromobenzene	ND	0.23	0.046	mg/kg	
74-97-5	Bromochloromethane	ND	0.23	0.067	mg/kg	
75-27-4	Bromodichloromethane	ND	0.23	0.046	mg/kg	
75-25-2	Bromoform	ND	0.23	0.046	mg/kg	
78-93-3	2-Butanone (MEK)	ND	1.1	0.33	mg/kg	
104-51-8	n-Butylbenzene	ND	0.23	0.046	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.23	0.046	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.23	0.046	mg/kg	
75-15-0	Carbon Disulfide	ND	0.23	0.046	mg/kg	
56-23-5	Carbon Tetrachloride	ND	0.23	0.046	mg/kg	
108-90-7	Chlorobenzene	ND	0.23	0.046	mg/kg	
75-00-3	Chloroethane	ND	0.23	0.091	mg/kg	
67-66-3	Chloroform	ND	0.23	0.061	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.23	0.046	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.23	0.046	mg/kg	
124-48-1	Dibromochloromethane	ND	0.23	0.046	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.23	0.087	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.23	0.046	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.23	0.091	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.23	0.046	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.23	0.046	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.23	0.052	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.23	0.081	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.23	0.046	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.23	0.046	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.23	0.063	mg/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	0.23	0.046	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.23	0.046	mg/kg	

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-8 (2.5-5)	
<b>Lab Sample ID:</b> FA50422-8	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
17060-07-0	1,2-Dichloroethane-D4	109%	107%	111%	72-135%
2037-26-5	Toluene-D8	99%	127% <sup>e</sup>	127% <sup>e</sup>	75-126%
460-00-4	4-Bromofluorobenzene	98%	133%	133%	71-133%

- (a) All results reported on a wet weight basis.
- (b) Dilution required due to matrix interference (surrogate standard failure).
- (c) Confirmation run for surrogate recoveries.
- (d) Suspected laboratory contaminant.
- (e) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound





# Report of Analysis

<b>Client Sample ID:</b> B-8 (2.5-5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50422-8		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693188.D	1	12/27/17 00:28	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.017	mg/kg	
208-96-8	Acenaphthylene	ND	0.16	0.016	mg/kg	
120-12-7	Anthracene	ND	0.16	0.018	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.16	0.016	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.16	0.019	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.16	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.16	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.16	0.022	mg/kg	
218-01-9	Chrysene	ND	0.16	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.16	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.16	0.016	mg/kg	
86-73-7	Fluorene	ND	0.16	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.16	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-20-3	Naphthalene	ND	0.16	0.016	mg/kg	
85-01-8	Phenanthrene	ND	0.16	0.016	mg/kg	
129-00-0	Pyrene	ND	0.16	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		40-105%
321-60-8	2-Fluorobiphenyl	72%		43-107%
1718-51-0	Terphenyl-d14	74%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

Misc. Forms

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Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



ACCUTEST

# CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131  
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #	101
SGS Accutest Quote #	SGS Accutest NC Job #: <b>FA50422</b>

Client / Reporting Information		Project Information										Requested Analysis										Matrix Codes															
Company Name <b>EBI</b>		Project Name: <b>1217000450 / Issaquah, WA</b>										<b>VOCs (8260)</b> <b>PAHs (8270)</b> <b>TPH-DRO/ORO (8015)</b> <b>PCBs (8082)</b> <b>RCRA 8 Metals (6010)</b>										WW- Wastewater															
Address <b>21 B Street</b>		Street																				GW- Ground Water															
City <b>Burlington</b>	State <b>MA</b>	Zip <b>01803</b>	City <b>Issaquah</b>							State <b>Washington</b>												SW- Surface Water															
Project Contact: <b>Chad Bechtel / Ryan Deutsch</b>		Project # <b>1217000450</b>																				SO- Soil															
Phone #		EMAIL:										OI-Oil																									
Sampler's Name <b>Chad Bechtel</b>		Client Purchase Order #										WP-Wipe																									
SGS Accutest Sample ID		Collection										LAB USE ONLY																									
Sample ID / Field Point / Point of Collection		Date	Time	Sampled by	Matrix	# of bottles	PC	TC	VOH	PHO	PCSPA	PCSE	PCSCA	PCSCB	PCSCC	PCSCD	PCSCF	PCSCG	PCSCH	PCSCI	PCSCJ	PCSCK	PCSCM	PCSCN	PCSCO	PCSCP	PCSCQ	PCSCR	PCSCS	PCSCV	PCSCW	PCSCX	PCSCY	PCSCZ			
1	B-1 (25-5)	12/20/17	1235	CB	SO	2																															
2	B-2 (25-5)		1210			4																															
3	B-3 (25-5)		1300																																		
4	B-4 (25-5)		1135																																		
5	B-5 (25-5)		1105																																		
6	B-6 (25-5)		0920																																		
7	B-7 (25-5)		1000																																		
8	B-8 (25-5)		1040																																		
Turnaround Time ( Business days)		Data Deliverable Information										Comments / Remarks																									
<input type="checkbox"/> 10 Day <input checked="" type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 1 Day <input type="checkbox"/> Same Day		Approved By/ Date: _____ <input type="checkbox"/> Commercial "A" - Results only <input checked="" type="checkbox"/> Commercial "B" - Results with QC summaries <input type="checkbox"/> Commercial "B+" - Results, QC, and chromatograms <input type="checkbox"/> FULT1 - Level 4 data package <input type="checkbox"/> EDF for Geotracker <input type="checkbox"/> EDD Format _____ Provide EDF Global ID: _____ Provide EDF Logcode: _____																																			
Emergency T/A data available VIA Lablink		Sample Custody must be documented below each time samples change possession, including courier delivery.																																			
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:
1	12/20/17 1530	1 FedEx	2 FX	12-21-17	2 J. CORRE	11:15																															
3		3	4		4																																
5		5																																			
Custody Seal #		Appropriate Bottle / Pres. Y / N		Headspace Y / N		On ice Y / N		Cooler Temp.		Labels match Coc? Y / N		Separate Receiving Check List used: Y / N																									
								4.4 °C																													

FA50422: Chain of Custody

Page 1 of 2



# SGS Accutest Sample Receipt Summary

Job Number: FA50422

Client: EBI

Project: ISSAQUAH,WA

Date / Time Received: 12/21/2017 11:15:00 AM

Delivery Method: FX

Airbill #'s: 8121 8849 8268

Therm ID: IR 1;

Therm CF: 0.4;

# of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.0);

Cooler Temps (Corrected) °C: Cooler 1: (4.4);

**Cooler Information**

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

**Trip Blank Information**

Y or N N/A

- 1. Trip Blank present / cooler
  - 2. Trip Blank listed on COC
- W or S N/A
- 3. Type Of TB Received

**Sample Information**

Y or N N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

**Misc. Information**

Number of Encores: 25-Gram \_\_\_\_\_ 5-Gram \_\_\_\_\_  
 Test Strip Lot #: pH 0-3 230315  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Number of 5035 Field Kits: 7  
 pH 10-12 219813A

Number of Lab Filtered Metals: \_\_\_\_\_  
 Other: (Specify) \_\_\_\_\_

Comments 1 DIH2O VIAL FOR SAMPLE #4 RECEIVED BROKEN

SM001  
Rev. Date 05/24/17

Technician: JORGE C

Date: 12/21/2017 11:15:00

Reviewer: BR

Date: 12/21/2017

**FA50422: Chain of Custody**

**Page 2 of 2**

4.1  
4

## MS Volatiles

### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B255-MB	2B6698.D	1	12/22/17	SP	n/a	n/a	V2B255

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.2	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.0	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	25	7.3	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
75-15-0	Carbon Disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon Tetrachloride	ND	5.0	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.3	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.0	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.9	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.0	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.8	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.4	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	

## Method Blank Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B255-MB	2B6698.D	1	12/22/17	SP	n/a	n/a	V2B255

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/kg	
591-78-6	2-Hexanone	ND	25	7.5	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl Chloride	ND	5.0	2.0	ug/kg	
74-95-3	Methylene Bromide	ND	5.0	1.0	ug/kg	
75-09-2	Methylene Chloride	ND	10	4.0	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.0	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.4	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.3	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	16	ug/kg	
75-01-4	Vinyl Chloride	ND	5.0	1.0	ug/kg	
	m,p-Xylene	ND	10	1.1	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	96%	75-124%
17060-07-0	1,2-Dichloroethane-D4	98%	72-135%

## Method Blank Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B255-MB	2B6698.D	1	12/22/17	SP	n/a	n/a	V2B255

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	102% 75-126%
460-00-4	4-Bromofluorobenzene	99% 71-133%

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## Method Blank Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B256-MB	2B6723.D	1	12/27/17	SP	n/a	n/a	V2B256

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-7, FA50422-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	10	ug/kg	
71-43-2	Benzene	ND	5.0	1.2	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.0	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	25	7.3	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
75-15-0	Carbon Disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon Tetrachloride	ND	5.0	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.3	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.0	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.9	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.0	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.8	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.4	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	

## Method Blank Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B256-MB	2B6723.D	1	12/27/17	SP	n/a	n/a	V2B256

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-7, FA50422-8

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/kg	
591-78-6	2-Hexanone	ND	25	7.5	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl Chloride	ND	5.0	2.0	ug/kg	
74-95-3	Methylene Bromide	ND	5.0	1.0	ug/kg	
75-09-2	Methylene Chloride	ND	10	4.0	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.0	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	1.1	5.0	1.0	ug/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.4	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.3	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	16	ug/kg	
75-01-4	Vinyl Chloride	ND	5.0	1.0	ug/kg	
	m,p-Xylene	ND	10	1.1	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	99%	75-124%
17060-07-0	1,2-Dichloroethane-D4	103%	72-135%

## Method Blank Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B256-MB	2B6723.D	1	12/27/17	SP	n/a	n/a	V2B256

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-7, FA50422-8

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	100% 75-126%
460-00-4	4-Bromofluorobenzene	98% 71-133%

# Blank Spike Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B255-BS	2B6697.D	1	12/22/17	SP	n/a	n/a	V2B255

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	268	107	61-152
71-43-2	Benzene	50	51.2	102	76-126
108-86-1	Bromobenzene	50	51.8	104	76-122
74-97-5	Bromochloromethane	50	49.4	99	77-120
75-27-4	Bromodichloromethane	50	53.5	107	74-130
75-25-2	Bromoform	50	53.9	108	76-127
78-93-3	2-Butanone (MEK)	250	259	104	75-137
104-51-8	n-Butylbenzene	50	53.1	106	71-128
135-98-8	sec-Butylbenzene	50	53.9	108	79-135
98-06-6	tert-Butylbenzene	50	52.3	105	77-133
75-15-0	Carbon Disulfide	50	47.7	95	72-122
56-23-5	Carbon Tetrachloride	50	52.4	105	78-133
108-90-7	Chlorobenzene	50	51.6	103	81-129
75-00-3	Chloroethane	50	54.8	110	68-133
67-66-3	Chloroform	50	52.3	105	72-123
95-49-8	o-Chlorotoluene	50	51.8	104	77-129
106-43-4	p-Chlorotoluene	50	51.8	104	80-134
124-48-1	Dibromochloromethane	50	54.2	108	76-127
96-12-8	1,2-Dibromo-3-chloropropane	50	48.1	96	70-137
106-93-4	1,2-Dibromoethane	50	51.6	103	77-126
75-71-8	Dichlorodifluoromethane	50	53.6	107	68-168
95-50-1	1,2-Dichlorobenzene	50	50.5	101	80-129
541-73-1	1,3-Dichlorobenzene	50	52.1	104	81-129
106-46-7	1,4-Dichlorobenzene	50	50.6	101	76-130
75-34-3	1,1-Dichloroethane	50	53.4	107	73-125
107-06-2	1,2-Dichloroethane	50	51.0	102	74-128
75-35-4	1,1-Dichloroethylene	50	51.6	103	81-136
156-59-2	cis-1,2-Dichloroethylene	50	52.4	105	74-126
156-60-5	trans-1,2-Dichloroethylene	50	52.8	106	70-127
78-87-5	1,2-Dichloropropane	50	51.8	104	74-125
142-28-9	1,3-Dichloropropane	50	49.5	99	76-122
594-20-7	2,2-Dichloropropane	50	54.5	109	77-133
563-58-6	1,1-Dichloropropene	50	50.2	100	75-130
10061-01-5	cis-1,3-Dichloropropene	50	49.8	100	80-123
10061-02-6	trans-1,3-Dichloropropene	50	53.4	107	75-131
100-41-4	Ethylbenzene	50	52.0	104	77-123

\* = Outside of Control Limits.

5.2.1  
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# Blank Spike Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B255-BS	2B6697.D	1	12/22/17	SP	n/a	n/a	V2B255

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	50	47.7	95	74-136
591-78-6	2-Hexanone	250	260	104	72-133
98-82-8	Isopropylbenzene	50	54.9	110	80-136
99-87-6	p-Isopropyltoluene	50	54.3	109	77-131
74-83-9	Methyl Bromide	50	53.3	107	65-139
74-87-3	Methyl Chloride	50	51.9	104	71-144
74-95-3	Methylene Bromide	50	51.1	102	74-124
75-09-2	Methylene Chloride	50	63.4	127	74-137
108-10-1	4-Methyl-2-pentanone (MIBK)	250	260	104	76-132
1634-04-4	Methyl Tert Butyl Ether	50	49.0	98	77-120
91-20-3	Naphthalene	50	48.7	97	79-129
103-65-1	n-Propylbenzene	50	51.8	104	80-135
100-42-5	Styrene	50	53.2	106	78-125
630-20-6	1,1,1,2-Tetrachloroethane	50	53.6	107	78-126
79-34-5	1,1,2,2-Tetrachloroethane	50	51.6	103	71-126
127-18-4	Tetrachloroethylene	50	53.8	108	79-130
108-88-3	Toluene	50	53.1	106	76-124
87-61-6	1,2,3-Trichlorobenzene	50	48.9	98	77-128
120-82-1	1,2,4-Trichlorobenzene	50	49.7	99	78-130
71-55-6	1,1,1-Trichloroethane	50	50.0	100	70-129
79-00-5	1,1,2-Trichloroethane	50	51.9	104	74-124
79-01-6	Trichloroethylene	50	52.1	104	75-128
75-69-4	Trichlorofluoromethane	50	54.5	109	73-145
96-18-4	1,2,3-Trichloropropane	50	49.9	100	74-127
95-63-6	1,2,4-Trimethylbenzene	50	51.2	102	74-123
108-67-8	1,3,5-Trimethylbenzene	50	53.4	107	73-122
108-05-4	Vinyl Acetate	250	278	111	48-164
75-01-4	Vinyl Chloride	50	53.4	107	76-141
	m,p-Xylene	100	106	106	80-128
95-47-6	o-Xylene	50	51.5	103	80-132

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	75-124%
17060-07-0	1,2-Dichloroethane-D4	96%	72-135%

\* = Outside of Control Limits.

5.2.1  
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## Blank Spike Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B255-BS	2B6697.D	1	12/22/17	SP	n/a	n/a	V2B255

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	100%	75-126%
460-00-4	4-Bromofluorobenzene	100%	71-133%

\* = Outside of Control Limits.

# Blank Spike Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B256-BS	2B6722.D	1	12/27/17	SP	n/a	n/a	V2B256

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-7, FA50422-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	241	96	61-152
71-43-2	Benzene	50	52.2	104	76-126
108-86-1	Bromobenzene	50	53.0	106	76-122
74-97-5	Bromochloromethane	50	50.2	100	77-120
75-27-4	Bromodichloromethane	50	54.4	109	74-130
75-25-2	Bromoform	50	52.1	104	76-127
78-93-3	2-Butanone (MEK)	250	241	96	75-137
104-51-8	n-Butylbenzene	50	55.1	110	71-128
135-98-8	sec-Butylbenzene	50	55.9	112	79-135
98-06-6	tert-Butylbenzene	50	54.4	109	77-133
75-15-0	Carbon Disulfide	50	48.4	97	72-122
56-23-5	Carbon Tetrachloride	50	54.8	110	78-133
108-90-7	Chlorobenzene	50	52.5	105	81-129
75-00-3	Chloroethane	50	54.3	109	68-133
67-66-3	Chloroform	50	53.6	107	72-123
95-49-8	o-Chlorotoluene	50	54.0	108	77-129
106-43-4	p-Chlorotoluene	50	53.6	107	80-134
124-48-1	Dibromochloromethane	50	53.4	107	76-127
96-12-8	1,2-Dibromo-3-chloropropane	50	48.1	96	70-137
106-93-4	1,2-Dibromoethane	50	52.1	104	77-126
75-71-8	Dichlorodifluoromethane	50	58.0	116	68-168
95-50-1	1,2-Dichlorobenzene	50	52.9	106	80-129
541-73-1	1,3-Dichlorobenzene	50	54.7	109	81-129
106-46-7	1,4-Dichlorobenzene	50	53.1	106	76-130
75-34-3	1,1-Dichloroethane	50	54.4	109	73-125
107-06-2	1,2-Dichloroethane	50	52.1	104	74-128
75-35-4	1,1-Dichloroethylene	50	53.0	106	81-136
156-59-2	cis-1,2-Dichloroethylene	50	53.7	107	74-126
156-60-5	trans-1,2-Dichloroethylene	50	53.9	108	70-127
78-87-5	1,2-Dichloropropane	50	51.5	103	74-125
142-28-9	1,3-Dichloropropane	50	48.1	96	76-122
594-20-7	2,2-Dichloropropane	50	56.1	112	77-133
563-58-6	1,1-Dichloropropene	50	52.8	106	75-130
10061-01-5	cis-1,3-Dichloropropene	50	49.7	99	80-123
10061-02-6	trans-1,3-Dichloropropene	50	52.4	105	75-131
100-41-4	Ethylbenzene	50	52.7	105	77-123

\* = Outside of Control Limits.

# Blank Spike Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B256-BS	2B6722.D	1	12/27/17	SP	n/a	n/a	V2B256

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-7, FA50422-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	50	48.0	96	74-136
591-78-6	2-Hexanone	250	240	96	72-133
98-82-8	Isopropylbenzene	50	55.9	112	80-136
99-87-6	p-Isopropyltoluene	50	56.2	112	77-131
74-83-9	Methyl Bromide	50	54.1	108	65-139
74-87-3	Methyl Chloride	50	53.3	107	71-144
74-95-3	Methylene Bromide	50	51.7	103	74-124
75-09-2	Methylene Chloride	50	52.7	105	74-137
108-10-1	4-Methyl-2-pentanone (MIBK)	250	244	98	76-132
1634-04-4	Methyl Tert Butyl Ether	50	49.1	98	77-120
91-20-3	Naphthalene	50	50.8	102	79-129
103-65-1	n-Propylbenzene	50	54.0	108	80-135
100-42-5	Styrene	50	53.7	107	78-125
630-20-6	1,1,1,2-Tetrachloroethane	50	54.4	109	78-126
79-34-5	1,1,2,2-Tetrachloroethane	50	51.0	102	71-126
127-18-4	Tetrachloroethylene	50	54.9	110	79-130
108-88-3	Toluene	50	52.7	105	76-124
87-61-6	1,2,3-Trichlorobenzene	50	53.0	106	77-128
120-82-1	1,2,4-Trichlorobenzene	50	54.7	109	78-130
71-55-6	1,1,1-Trichloroethane	50	51.3	103	70-129
79-00-5	1,1,2-Trichloroethane	50	50.8	102	74-124
79-01-6	Trichloroethylene	50	54.4	109	75-128
75-69-4	Trichlorofluoromethane	50	57.3	115	73-145
96-18-4	1,2,3-Trichloropropane	50	49.1	98	74-127
95-63-6	1,2,4-Trimethylbenzene	50	53.4	107	74-123
108-67-8	1,3,5-Trimethylbenzene	50	56.0	112	73-122
108-05-4	Vinyl Acetate	250	269	108	48-164
75-01-4	Vinyl Chloride	50	54.3	109	76-141
	m,p-Xylene	100	108	108	80-128
95-47-6	o-Xylene	50	52.3	105	80-132

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	75-124%
17060-07-0	1,2-Dichloroethane-D4	98%	72-135%

\* = Outside of Control Limits.

5.2.2  
5



## Blank Spike Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B256-BS	2B6722.D	1	12/27/17	SP	n/a	n/a	V2B256

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-7, FA50422-8

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	100%	75-126%
460-00-4	4-Bromofluorobenzene	101%	71-133%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50422-7MS	2B6706.D	1	12/22/17	SP	n/a	n/a	V2B255
FA50422-7MSD	2B6707.D	1	12/22/17	SP	n/a	n/a	V2B255
FA50422-7 <sup>a</sup>	2B6704.D	1	12/22/17	SP	n/a	n/a	V2B255

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6

CAS No.	Compound	FA50422-7 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD	
67-64-1	Acetone	329		303	637	102	300	602	91	6	61-152/27
71-43-2	Benzene	4.9	J	60.7	58.5	88	60	58.0	89	1	76-126/26
108-86-1	Bromobenzene	ND		60.7	60.3	99	60	60.0	100	0	76-122/32
74-97-5	Bromochloromethane	ND		60.7	60.9	100	60	59.9	100	2	77-120/24
75-27-4	Bromodichloromethane	ND		60.7	56.0	92	60	55.7	93	1	74-130/25
75-25-2	Bromoform	ND		60.7	52.8	87	60	51.0	85	3	76-127/26
78-93-3	2-Butanone (MEK)	66.4		303	353	94	300	346	93	2	75-137/25
104-51-8	n-Butylbenzene	ND		60.7	59.7	98	60	57.7	96	3	71-128/35
135-98-8	sec-Butylbenzene	ND		60.7	66.7	110	60	66.0	110	1	79-135/34
98-06-6	tert-Butylbenzene	ND		60.7	72.3	119	60	73.5	123	2	77-133/34
75-15-0	Carbon Disulfide	1.9	J	60.7	54.3	86	60	54.3	87	0	72-122/29
56-23-5	Carbon Tetrachloride	ND		60.7	48.5	80	60	49.6	83	2	78-133/29
108-90-7	Chlorobenzene	ND		60.7	51.7	85	60	50.4	84	3	81-129/29
75-00-3	Chloroethane	ND		60.7	57.3	94	60	60.4	101	5	68-133/29
67-66-3	Chloroform	ND		60.7	60.8	100	60	60.6	101	0	72-123/26
95-49-8	o-Chlorotoluene	ND		60.7	67.1	111	60	66.8	111	0	77-129/33
106-43-4	p-Chlorotoluene	ND		60.7	61.1	101	60	60.4	101	1	80-134/33
124-48-1	Dibromochloromethane	ND		60.7	60.9	100	60	60.0	100	1	76-127/27
96-12-8	1,2-Dibromo-3-chloropropane	ND		60.7	60.3	99	60	60.3	101	0	70-137/29
106-93-4	1,2-Dibromothane	ND		60.7	60.3	99	60	60.0	100	0	77-126/26
75-71-8	Dichlorodifluoromethane	ND		60.7	57.1	94	60	55.8	93	2	68-168/29
95-50-1	1,2-Dichlorobenzene	ND		60.7	46.8	77*	60	44.6	74*	5	80-129/32
541-73-1	1,3-Dichlorobenzene	ND		60.7	49.2	81	60	48.4	81	2	81-129/33
106-46-7	1,4-Dichlorobenzene	ND		60.7	47.9	79	60	46.2	77	4	76-130/32
75-34-3	1,1-Dichloroethane	ND		60.7	60.4	100	60	60.0	100	1	73-125/27
107-06-2	1,2-Dichloroethane	ND		60.7	60.8	100	60	59.7	100	2	74-128/23
75-35-4	1,1-Dichloroethylene	ND		60.7	56.9	94	60	56.3	94	1	81-136/28
156-59-2	cis-1,2-Dichloroethylene	ND		60.7	60.0	99	60	59.5	99	1	74-126/26
156-60-5	trans-1,2-Dichloroethylene	ND		60.7	58.9	97	60	58.5	98	1	70-127/27
78-87-5	1,2-Dichloropropane	ND		60.7	57.0	94	60	57.1	95	0	74-125/25
142-28-9	1,3-Dichloropropane	ND		60.7	63.1	104	60	62.5	104	1	76-122/26
594-20-7	2,2-Dichloropropane	ND		60.7	59.0	97	60	59.9	100	2	77-133/28
563-58-6	1,1-Dichloropropene	ND		60.7	54.0	89	60	53.3	89	1	75-130/28
10061-01-5	cis-1,3-Dichloropropene	ND		60.7	49.4	81	60	49.8	83	1	80-123/26
10061-02-6	trans-1,3-Dichloropropene	ND		60.7	58.0	96	60	57.0	95	2	75-131/28
100-41-4	Ethylbenzene	6.3		60.7	66.4	99	60	64.4	97	3	77-123/31

\* = Outside of Control Limits.

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50422-7MS	2B6706.D	1	12/22/17	SP	n/a	n/a	V2B255
FA50422-7MSD	2B6707.D	1	12/22/17	SP	n/a	n/a	V2B255
FA50422-7 <sup>a</sup>	2B6704.D	1	12/22/17	SP	n/a	n/a	V2B255

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6

CAS No.	Compound	FA50422-7 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD	
87-68-3	Hexachlorobutadiene	ND		60.7	29.3	48*	60	28.1	47*	4	74-136/38
591-78-6	2-Hexanone	ND		303	302	100	300	292	97	3	72-133/26
98-82-8	Isopropylbenzene	ND		60.7	59.3	98	60	56.8	95	4	80-136/32
99-87-6	p-Isopropyltoluene	27.3		60.7	75.8	80	60	75.9	81	0	77-131/34
74-83-9	Methyl Bromide	ND		60.7	58.6	97	60	58.7	98	0	65-139/31
74-87-3	Methyl Chloride	ND		60.7	56.4	93	60	56.0	93	1	71-144/27
74-95-3	Methylene Bromide	ND		60.7	57.2	94	60	57.2	95	0	74-124/24
75-09-2	Methylene Chloride	ND		60.7	62.7	103	60	61.9	103	1	74-137/28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		303	357	118	300	341	114	5	76-132/26
1634-04-4	Methyl Tert Butyl Ether	ND		60.7	63.1	104	60	62.4	104	1	77-120/24
91-20-3	Naphthalene	ND		60.7	19.8	33*	60	18.1	30*	9	79-129/33
103-65-1	n-Propylbenzene	ND		60.7	75.2	124	60	75.2	125	0	80-135/33
100-42-5	Styrene	ND		60.7	42.4	70*	60	40.0	67*	6	78-125/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		60.7	65.9	109	60	63.5	106	4	78-126/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		60.7	83.1	137*	60	82.6	138*	1	71-126/30
127-18-4	Tetrachloroethylene	ND		60.7	62.2	103	60	61.1	102	2	79-130/31
108-88-3	Toluene	218	E	60.7	298	132* b	60	273	92	9	76-124/30
87-61-6	1,2,3-Trichlorobenzene	ND		60.7	22.2	37*	60	20.3	34*	9	77-128/35
120-82-1	1,2,4-Trichlorobenzene	ND		60.7	26.5	44*	60	24.4	41*	8	78-130/34
71-55-6	1,1,1-Trichloroethane	ND		60.7	56.8	94	60	57.3	96	1	70-129/27
79-00-5	1,1,2-Trichloroethane	ND		60.7	65.4	108	60	64.3	107	2	74-124/28
79-01-6	Trichloroethylene	ND		60.7	55.9	92	60	54.7	91	2	75-128/27
75-69-4	Trichlorofluoromethane	ND		60.7	59.6	98	60	57.8	96	3	73-145/31
96-18-4	1,2,3-Trichloropropane	ND		60.7	83.8	138*	60	83.7	140*	0	74-127/27
95-63-6	1,2,4-Trimethylbenzene	ND		60.7	68.5	113	60	67.8	113	1	74-123/34
108-67-8	1,3,5-Trimethylbenzene	ND		60.7	73.8	122	60	73.1	122	1	73-122/33
108-05-4	Vinyl Acetate	ND		303	ND	0*	300	ND	0*	nc	48-164/37
75-01-4	Vinyl Chloride	ND		60.7	57.5	95	60	56.8	95	1	76-141/27
	m,p-Xylene	ND		121	115	95	120	112	93	3	80-128/30
95-47-6	o-Xylene	ND		60.7	57.8	95	60	55.4	92	4	80-132/30

CAS No.	Surrogate Recoveries	MS	MSD	FA50422-7	Limits
1868-53-7	Dibromofluoromethane	104%	103%	104%	75-124%
17060-07-0	1,2-Dichloroethane-D4	102%	102%	108%	72-135%

\* = Outside of Control Limits.

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50422-7MS	2B6706.D	1	12/22/17	SP	n/a	n/a	V2B255
FA50422-7MSD	2B6707.D	1	12/22/17	SP	n/a	n/a	V2B255
FA50422-7 <sup>a</sup>	2B6704.D	1	12/22/17	SP	n/a	n/a	V2B255

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6

CAS No.	Surrogate Recoveries	MS	MSD	FA50422-7	Limits
2037-26-5	Toluene-D8	115%	114%	120%	75-126%
460-00-4	4-Bromofluorobenzene	122%	125%	132%	71-133%

- (a) Confirmation run for internal standard areas. Associated internal standard response outside control limits. Confirmed by MS/MSD.
- (b) Outside control limits due to high level in sample relative to spike amount.

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50527-3MS	2B6732.D	1	12/27/17	SP	n/a	n/a	V2B256
FA50527-3MSD	2B6733.D	1	12/27/17	SP	n/a	n/a	V2B256
FA50527-3 <sup>a</sup>	2B6729.D	1	12/27/17	SP	n/a	n/a	V2B256

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-7, FA50422-8

CAS No.	Compound	FA50527-3 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	336	315	327	-3*	312	405	22*	21	61-152/27
71-43-2	Benzene	ND	63.1	57.7	92	62.4	53.8	86	7	76-126/26
108-86-1	Bromobenzene	ND	63.1	62.6	99	62.4	57.5	92	8	76-122/32
74-97-5	Bromochloromethane	ND	63.1	61.6	98	62.4	60.1	96	2	77-120/24
75-27-4	Bromodichloromethane	ND	63.1	64.1	102	62.4	63.0	101	2	74-130/25
75-25-2	Bromoform	ND	63.1	61.8	98	62.4	63.5	102	3	76-127/26
78-93-3	2-Butanone (MEK)	34.2	315	293	82	312	324	93	10	75-137/25
104-51-8	n-Butylbenzene	ND	63.1	47.8	76	62.4	34.1	55*	33	71-128/35
135-98-8	sec-Butylbenzene	ND	63.1	50.1	79	62.4	41.8	67*	18	79-135/34
98-06-6	tert-Butylbenzene	ND	63.1	55.7	88	62.4	53.1	85	5	77-133/34
75-15-0	Carbon Disulfide	ND	63.1	42.4	67*	62.4	43.1	69*	2	72-122/29
56-23-5	Carbon Tetrachloride	ND	63.1	47.2	75*	62.4	45.8	73*	3	78-133/29
108-90-7	Chlorobenzene	ND	63.1	62.0	98	62.4	59.6	96	4	81-129/29
75-00-3	Chloroethane	ND	63.1	46.9	74	62.4	49.6	79	6	68-133/29
67-66-3	Chloroform	ND	63.1	62.8	100	62.4	59.5	95	5	72-123/26
95-49-8	o-Chlorotoluene	ND	63.1	60.8	96	62.4	52.7	84	14	77-129/33
106-43-4	p-Chlorotoluene	ND	63.1	61.2	97	62.4	52.0	83	16	80-134/33
124-48-1	Dibromochloromethane	ND	63.1	63.5	101	62.4	63.7	102	0	76-127/27
96-12-8	1,2-Dibromo-3-chloropropane	ND	63.1	57.9	92	62.4	61.7	99	6	70-137/29
106-93-4	1,2-Dibromothane	ND	63.1	61.2	97	62.4	62.9	101	3	77-126/26
75-71-8	Dichlorodifluoromethane	ND	63.1	38.1	60*	62.4	36.1	58*	5	68-168/29
95-50-1	1,2-Dichlorobenzene	ND	63.1	64.5	102	62.4	56.4	90	13	80-129/32
541-73-1	1,3-Dichlorobenzene	ND	63.1	68.2	108	62.4	66.7	107	2	81-129/33
106-46-7	1,4-Dichlorobenzene	ND	63.1	67.3	107	62.4	65.8	105	2	76-130/32
75-34-3	1,1-Dichloroethane	ND	63.1	62.0	98	62.4	58.7	94	5	73-125/27
107-06-2	1,2-Dichloroethane	ND	63.1	64.3	102	62.4	63.0	101	2	74-128/23
75-35-4	1,1-Dichloroethylene	ND	63.1	43.7	69*	62.4	44.9	72*	3	81-136/28
156-59-2	cis-1,2-Dichloroethylene	ND	63.1	63.4	101	62.4	59.9	96	6	74-126/26
156-60-5	trans-1,2-Dichloroethylene	ND	63.1	59.1	94	62.4	56.2	90	5	70-127/27
78-87-5	1,2-Dichloropropane	ND	63.1	60.9	97	62.4	59.8	96	2	74-125/25
142-28-9	1,3-Dichloropropane	ND	63.1	58.2	92	62.4	59.1	95	2	76-122/26
594-20-7	2,2-Dichloropropane	ND	63.1	54.6	87	62.4	49.4	79	10	77-133/28
563-58-6	1,1-Dichloropropene	ND	63.1	49.1	78	62.4	47.2	76	4	75-130/28
10061-01-5	cis-1,3-Dichloropropene	ND	63.1	58.2	92	62.4	57.9	93	1	80-123/26
10061-02-6	trans-1,3-Dichloropropene	ND	63.1	61.7	98	62.4	62.1	100	1	75-131/28
100-41-4	Ethylbenzene	ND	63.1	57.3	91	62.4	48.8	78	16	77-123/31

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50527-3MS	2B6732.D	1	12/27/17	SP	n/a	n/a	V2B256
FA50527-3MSD	2B6733.D	1	12/27/17	SP	n/a	n/a	V2B256
FA50527-3 <sup>a</sup>	2B6729.D	1	12/27/17	SP	n/a	n/a	V2B256

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-7, FA50422-8

CAS No.	Compound	FA50527-3 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD	
87-68-3	Hexachlorobutadiene	ND		63.1	55.9	89	62.4	53.9	86	4	74-136/38
591-78-6	2-Hexanone	ND		315	269	85	312	229	73	16	72-133/26
98-82-8	Isopropylbenzene	ND		63.1	56.8	90	62.4	45.8	73*	21	80-136/32
99-87-6	p-Isopropyltoluene	ND		63.1	60.0	95	62.4	53.5	86	11	77-131/34
74-83-9	Methyl Bromide	ND		63.1	53.9	85	62.4	52.2	84	3	65-139/31
74-87-3	Methyl Chloride	ND		63.1	52.8	84	62.4	49.3	79	7	71-144/27
74-95-3	Methylene Bromide	ND		63.1	62.7	99	62.4	62.9	101	0	74-124/24
75-09-2	Methylene Chloride	ND		63.1	67.0	106	62.4	64.8	104	3	74-137/28
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		315	300	95	312	297	95	1	76-132/26
1634-04-4	Methyl Tert Butyl Ether	ND		63.1	62.1	98	62.4	61.3	98	1	77-120/24
91-20-3	Naphthalene	4.5	J	63.1	51.5	75*	62.4	14.9	17*	110*	79-129/33
103-65-1	n-Propylbenzene	ND		63.1	50.2	80	62.4	38.6	62*	26	80-135/33
100-42-5	Styrene	ND		63.1	62.6	99	62.4	53.3	85	16	78-125/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		63.1	65.5	104	62.4	63.0	101	4	78-126/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		63.1	60.7	96	62.4	62.9	101	4	71-126/30
127-18-4	Tetrachloroethylene	ND		63.1	56.2	89	62.4	55.5	89	1	79-130/31
108-88-3	Toluene	ND		63.1	57.5	91	62.4	53.6	86	7	76-124/30
87-61-6	1,2,3-Trichlorobenzene	ND		63.1	69.7	111	62.4	66.9	107	4	77-128/35
120-82-1	1,2,4-Trichlorobenzene	ND		63.1	75.6	120	62.4	73.3	117	3	78-130/34
71-55-6	1,1,1-Trichloroethane	ND		63.1	49.4	78	62.4	47.2	76	5	70-129/27
79-00-5	1,1,2-Trichloroethane	ND		63.1	61.4	97	62.4	62.1	100	1	74-124/28
79-01-6	Trichloroethylene	ND		63.1	58.5	93	62.4	57.0	91	3	75-128/27
75-69-4	Trichlorofluoromethane	ND		63.1	41.5	66*	62.4	39.2	63*	6	73-145/31
96-18-4	1,2,3-Trichloropropane	ND		63.1	58.6	93	62.4	61.2	98	4	74-127/27
95-63-6	1,2,4-Trimethylbenzene	2.1	J	63.1	37.1	56*	62.4	21.0	30*	55*	74-123/34
108-67-8	1,3,5-Trimethylbenzene	ND		63.1	61.3	97	62.4	49.4	79	21	73-122/33
108-05-4	Vinyl Acetate	ND		315	ND	0*	312	ND	0*	nc	48-164/37
75-01-4	Vinyl Chloride	ND		63.1	46.3	73*	62.4	43.9	70*	5	76-141/27
	m,p-Xylene	ND		126	97.2	77*	125	73.3	59*	28	80-128/30
95-47-6	o-Xylene	ND		63.1	59.6	95	62.4	50.3	81	17	80-132/30

CAS No.	Surrogate Recoveries	MS	MSD	FA50527-3	Limits
1868-53-7	Dibromofluoromethane	101%	100%	103%	75-124%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	112%	72-135%

\* = Outside of Control Limits.

5.3.2  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50527-3MS	2B6732.D	1	12/27/17	SP	n/a	n/a	V2B256
FA50527-3MSD	2B6733.D	1	12/27/17	SP	n/a	n/a	V2B256
FA50527-3 <sup>a</sup>	2B6729.D	1	12/27/17	SP	n/a	n/a	V2B256

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50422-7, FA50422-8

CAS No.	Surrogate Recoveries	MS	MSD	FA50527-3	Limits
2037-26-5	Toluene-D8	99%	100%	98%	75-126%
460-00-4	4-Bromofluorobenzene	99%	100%	97%	71-133%

(a) Confirmation run.

\* = Outside of Control Limits.

5.3.2  
5

## MS Semi-volatiles

---

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



## Method Blank Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68202-MB	L0693170.D	1	12/26/17	MV	12/26/17	OP68202	SL4076

The QC reported here applies to the following samples:

Method: SW846 8270D

FA50422-1, FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6, FA50422-7, FA50422-8

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	170	18	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
120-12-7	Anthracene	ND	170	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	22	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	21	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	20	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	19	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	60%	40-102%
4165-62-2	Phenol-d5	64%	41-100%
118-79-6	2,4,6-Tribromophenol	79%	42-108%
4165-60-0	Nitrobenzene-d5	76%	40-105%
321-60-8	2-Fluorobiphenyl	74%	43-107%
1718-51-0	Terphenyl-d14	75%	45-119%

# Blank Spike Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68202-BS	L0693169.D	1	12/26/17	MV	12/26/17	OP68202	SL4076

The QC reported here applies to the following samples:

Method: SW846 8270D

FA50422-1, FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6, FA50422-7, FA50422-8

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1670	1480	89	56-109
208-96-8	Acenaphthylene	1670	1480	89	56-106
120-12-7	Anthracene	1670	1450	87	61-110
56-55-3	Benzo(a)anthracene	1670	1570	94	66-111
50-32-8	Benzo(a)pyrene	1670	1540	92	59-104
205-99-2	Benzo(b)fluoranthene	1670	1570	94	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1700	102	67-113
207-08-9	Benzo(k)fluoranthene	1670	1530	92	67-114
218-01-9	Chrysene	1670	1580	95	65-112
53-70-3	Dibenzo(a,h)anthracene	1670	1650	99	68-115
206-44-0	Fluoranthene	1670	1520	91	60-108
86-73-7	Fluorene	1670	1490	89	58-109
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1560	94	66-116
90-12-0	1-Methylnaphthalene	1670	1290	77	49-106
91-57-6	2-Methylnaphthalene	1670	1270	76	47-106
91-20-3	Naphthalene	1670	1250	75	44-104
85-01-8	Phenanthrene	1670	1530	92	63-111
129-00-0	Pyrene	1670	1560	94	65-115

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	74%	40-102%
4165-62-2	Phenol-d5	72%	41-100%
118-79-6	2,4,6-Tribromophenol	88%	42-108%
4165-60-0	Nitrobenzene-d5	80%	40-105%
321-60-8	2-Fluorobiphenyl	80%	43-107%
1718-51-0	Terphenyl-d14	93%	45-119%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68202-MS <sup>a</sup>	L0693224.D	2	12/28/17	MV	12/26/17	OP68202	SL4078
OP68202-MSD <sup>a</sup>	L0693225.D	2	12/28/17	MV	12/26/17	OP68202	SL4078
FA50476-1 <sup>a</sup>	L0693223.D	4	12/28/17	MV	12/26/17	OP68202	SL4078

The QC reported here applies to the following samples:

Method: SW846 8270D

FA50422-1, FA50422-2, FA50422-3, FA50422-4, FA50422-5, FA50422-6, FA50422-7, FA50422-8

CAS No.	Compound	FA50476-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD	
83-32-9	Acenaphthene	770 U		1920	1520	79	1910	1660	87	9	56-109/23
208-96-8	Acenaphthylene	770 U		1920	1600	83	1910	1720	90	7	56-106/23
120-12-7	Anthracene	770 U		1920	1580	82	1910	1640	86	4	61-110/21
56-55-3	Benzo(a)anthracene	770 U		1920	1580	82	1910	1620	85	3	66-111/23
50-32-8	Benzo(a)pyrene	770 U		1920	1590	83	1910	1660	87	4	59-104/23
205-99-2	Benzo(b)fluoranthene	770 U		1920	1650	86	1910	1700	89	3	67-113/24
191-24-2	Benzo(g,h,i)perylene	770 U		1920	1650	86	1910	1750	92	6	67-113/21
207-08-9	Benzo(k)fluoranthene	770 U		1920	1630	85	1910	1680	88	3	67-114/22
218-01-9	Chrysene	770 U		1920	1540	80	1910	1620	85	5	65-112/25
53-70-3	Dibenzo(a,h)anthracene	770 U		1920	1640	85	1910	1690	88	3	68-115/23
206-44-0	Fluoranthene	770 U		1920	1680	87	1910	1700	89	1	60-108/25
86-73-7	Fluorene	91.2	I	1920	1610	79	1910	1690	84	5	58-109/21
193-39-5	Indeno(1,2,3-cd)pyrene	770 U		1920	1550	81	1910	1570	82	1	66-116/22
90-12-0	1-Methylnaphthalene	7870		1920	4350	-183* <sup>b</sup>	1910	6570	-68* <sup>b</sup>	41*	49-106/26
91-57-6	2-Methylnaphthalene	14600		1920	7050	-393* <sup>b</sup>	1910	11000	-188* <sup>b</sup>	44*	47-106/27
91-20-3	Naphthalene	13400		1920	5880	-391* <sup>b</sup>	1910	9400	-209* <sup>b</sup>	46*	44-104/27
85-01-8	Phenanthrene	178	I	1920	1670	78	1910	1780	84	6	63-111/22
129-00-0	Pyrene	770 U		1920	1610	84	1910	1680	88	4	65-115/25

CAS No.	Surrogate Recoveries	MS	MSD	FA50476-1	Limits
367-12-4	2-Fluorophenol	64%	67%	66%	40-102%
4165-62-2	Phenol-d5	67%	71%	74%	41-100%
118-79-6	2,4,6-Tribromophenol	79%	82%	84%	42-108%
4165-60-0	Nitrobenzene-d5	66%	72%	78%	40-105%
321-60-8	2-Fluorobiphenyl	68%	72%	79%	43-107%
1718-51-0	Terphenyl-d14	78%	78%	88%	45-119%

(a) Dilution required due to matrix interference.

(b) Outside control limits due to high level in sample relative to spike amount.

\* = Outside of Control Limits.

## GC/LC Semi-volatiles

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### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68216-MB	MM48191.D	1	12/27/17	NJ	12/27/17	OP68216	GMM919

The QC reported here applies to the following samples:

Method: SW846 8082A

FA50422-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	17	8.3	ug/kg	
11141-16-5	Aroclor 1232	ND	17	8.3	ug/kg	
53469-21-9	Aroclor 1242	ND	17	6.7	ug/kg	
12672-29-6	Aroclor 1248	ND	17	6.7	ug/kg	
11097-69-1	Aroclor 1254	ND	17	6.7	ug/kg	
11096-82-5	Aroclor 1260	ND	17	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	94%	44-126%
2051-24-3	Decachlorobiphenyl	119%	41-145%

7.1.1  
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## Method Blank Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68179-MB	JJ018109.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753

The QC reported here applies to the following samples:

Method: SW846 8015C

FA50422-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	5.0	2.5	mg/kg	
	TPH (> C28-C40)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	96% 56-122%

# Blank Spike Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68216-BS	MM48190.D	1	12/27/17	NJ	12/27/17	OP68216	GMM919

The QC reported here applies to the following samples:

Method: SW846 8082A

FA50422-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	138	104	58-126
11096-82-5	Aroclor 1260	133	154	116	59-133

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	88%	44-126%
2051-24-3	Decachlorobiphenyl	112%	41-145%

\* = Outside of Control Limits.

# Blank Spike Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68179-BS	JJ018108.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753

The QC reported here applies to the following samples:

Method: SW846 8015C

FA50422-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C28)	50	56.2	112	62-116
	TPH (> C28-C40)	50	52.2	104	47-138

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	92%	56-122%

\* = Outside of Control Limits.



# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68216-MS	MM48194.D	1	12/27/17	NJ	12/27/17	OP68216	GMM919
OP68216-MSD	MM48195.D	1	12/27/17	NJ	12/27/17	OP68216	GMM919
FA50423-1	MM48193.D	1	12/27/17	NJ	12/27/17	OP68216	GMM919

The QC reported here applies to the following samples:

Method: SW846 8082A

FA50422-1

CAS No.	Compound	FA50423-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	20 U	159	171	107	157	162	103	5	58-126/25
11096-82-5	Aroclor 1260	20 U	159	174	109	157	154	98	12	59-133/31

CAS No.	Surrogate Recoveries	MS	MSD	FA50423-1	Limits
877-09-8	Tetrachloro-m-xylene	94%	95%	93%	44-126%
2051-24-3	Decachlorobiphenyl	107%	106%	100%	41-145%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50422  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68179-MS	JJ018122.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753
OP68179-MSD	JJ018123.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753
FA50419-9	JJ018121.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753

The QC reported here applies to the following samples:

Method: SW846 8015C

FA50422-1

CAS No.	Compound	FA50419-9 mg/kg	Spike Q mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	6.23	48.8	60.5	111	49.3	57.7	104	5	62-116/35
	TPH (> C28-C40)	11.6	48.8	60.2	100	49.3	55.0	88	9	47-138/29

CAS No.	Surrogate Recoveries	MS	MSD	FA50419-9	Limits
84-15-1	o-Terphenyl	89%	89%	91%	56-122%

\* = Outside of Control Limits.

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

EBI Consulting

1217000450 Issaquah, WA

SGS Job Number: FA50419

Sampling Date: 12/20/17

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Total number of pages in report: **66**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Caitlin Brice".

Caitlin Brice, M.S.  
General Manager

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Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)  
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## Sample Summary

EBI Consulting

**Job No:** FA50419

1217000450 Issaquah, WA

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA50419-1	12/20/17	13:55 CB	12/21/17	SO	Soil	HA-1
FA50419-2	12/20/17	14:00 CB	12/21/17	SO	Soil	HA-2
FA50419-3	12/20/17	15:15 CB	12/21/17	SO	Soil	HA-3
FA50419-4	12/20/17	15:10 CB	12/21/17	SO	Soil	HA-4
FA50419-5	12/20/17	15:04 CB	12/21/17	SO	Soil	HA-5
FA50419-6	12/20/17	14:50 CB	12/21/17	SO	Soil	HA-6
FA50419-7	12/20/17	14:43 CB	12/21/17	SO	Soil	HA-7
FA50419-8	12/20/17	14:38 CB	12/21/17	SO	Soil	HA-8
FA50419-9	12/20/17	14:20 CB	12/21/17	SO	Soil	HA-9
FA50419-10	12/20/17	14:10 CB	12/21/17	SO	Soil	HA-10

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## Summary of Hits

**Job Number:** FA50419  
**Account:** EBI Consulting  
**Project:** 1217000450 Issaquah, WA  
**Collected:** 12/20/17

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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**FA50419-1 HA-1**

Benzo(a)anthracene	0.0243 J	0.16	0.016	mg/kg	SW846 8270D
Benzo(a)pyrene	0.0296 J	0.16	0.019	mg/kg	SW846 8270D
Benzo(b)fluoranthene	0.0391 J	0.16	0.018	mg/kg	SW846 8270D
Benzo(g,h,i)perylene	0.0307 J	0.16	0.017	mg/kg	SW846 8270D
Benzo(k)fluoranthene	0.0444 J	0.16	0.022	mg/kg	SW846 8270D
Chrysene	0.0644 J	0.16	0.017	mg/kg	SW846 8270D
Fluoranthene	0.133 J	0.16	0.016	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	0.0307 J	0.16	0.020	mg/kg	SW846 8270D
Phenanthrene	0.0480 J	0.16	0.016	mg/kg	SW846 8270D
Pyrene	0.117 J	0.16	0.019	mg/kg	SW846 8270D
TPH (C10-C28)	171	49	24	mg/kg	SW846 8015C
TPH (> C28-C40)	458	49	24	mg/kg	SW846 8015C
Arsenic <sup>a</sup>	4.0	1.6		mg/kg	SW846 6010C
Barium <sup>a</sup>	48.5	32		mg/kg	SW846 6010C
Chromium <sup>a</sup>	21.2	1.6		mg/kg	SW846 6010C
Lead <sup>a</sup>	16.8	3.2		mg/kg	SW846 6010C
Mercury	0.045	0.042		mg/kg	SW846 7471B

**FA50419-2 HA-2**

TPH (C10-C28)	6.75	4.9	2.5	mg/kg	SW846 8015C
TPH (> C28-C40)	18.2	4.9	2.5	mg/kg	SW846 8015C
Arsenic <sup>a</sup>	2.0	1.8		mg/kg	SW846 6010C
Barium <sup>a</sup>	49.1	36		mg/kg	SW846 6010C
Chromium <sup>a</sup>	20.3	1.8		mg/kg	SW846 6010C

**FA50419-3 HA-3**

Fluoranthene	0.0174 J	0.17	0.017	mg/kg	SW846 8270D
TPH (C10-C28)	13.1	5.0	2.5	mg/kg	SW846 8015C
TPH (> C28-C40)	21.0	5.0	2.5	mg/kg	SW846 8015C
Arsenic <sup>a</sup>	4.0	2.1		mg/kg	SW846 6010C
Barium <sup>a</sup>	82.8	43		mg/kg	SW846 6010C
Chromium <sup>a</sup>	15.4	2.1		mg/kg	SW846 6010C
Lead <sup>a</sup>	7.7	4.3		mg/kg	SW846 6010C

**FA50419-4 HA-4**

Chrysene	0.0174 J	0.16	0.017	mg/kg	SW846 8270D
Fluoranthene	0.0280 J	0.16	0.016	mg/kg	SW846 8270D
Pyrene	0.0224 J	0.16	0.019	mg/kg	SW846 8270D
TPH (C10-C28)	7.66	5.0	2.5	mg/kg	SW846 8015C
TPH (> C28-C40)	18.1	5.0	2.5	mg/kg	SW846 8015C

## Summary of Hits

**Job Number:** FA50419  
**Account:** EBI Consulting  
**Project:** 1217000450 Issaquah, WA  
**Collected:** 12/20/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Arsenic <sup>a</sup>		4.4	1.7		mg/kg	SW846 6010C
Barium <sup>a</sup>		79.0	33		mg/kg	SW846 6010C
Chromium <sup>a</sup>		14.2	1.7		mg/kg	SW846 6010C
Lead <sup>a</sup>		6.0	3.3		mg/kg	SW846 6010C

**FA50419-5      HA-5**

Fluoranthene		0.0175 J	0.17	0.017	mg/kg	SW846 8270D
TPH (C10-C28)		13.3	4.9	2.5	mg/kg	SW846 8015C
TPH (> C28-C40)		36.9	4.9	2.5	mg/kg	SW846 8015C
Arsenic <sup>a</sup>		4.6	2.0		mg/kg	SW846 6010C
Barium <sup>a</sup>		83.5	41		mg/kg	SW846 6010C
Chromium <sup>a</sup>		14.3	2.0		mg/kg	SW846 6010C
Lead <sup>a</sup>		6.4	4.1		mg/kg	SW846 6010C

**FA50419-6      HA-6**

Naphthalene		0.0180 J	0.17	0.017	mg/kg	SW846 8270D
TPH (C10-C28)		5.58	5.0	2.5	mg/kg	SW846 8015C
TPH (> C28-C40)		13.4	5.0	2.5	mg/kg	SW846 8015C
Arsenic <sup>a</sup>		3.6	1.8		mg/kg	SW846 6010C
Barium <sup>a</sup>		94.5	36		mg/kg	SW846 6010C
Chromium <sup>a</sup>		17.2	1.8		mg/kg	SW846 6010C
Lead <sup>a</sup>		5.2	3.6		mg/kg	SW846 6010C

**FA50419-7      HA-7**

Anthracene		0.0197 J	0.17	0.018	mg/kg	SW846 8270D
Benzo(a)anthracene		0.0855 J	0.17	0.017	mg/kg	SW846 8270D
Benzo(a)pyrene		0.123 J	0.17	0.019	mg/kg	SW846 8270D
Benzo(b)fluoranthene		0.118 J	0.17	0.018	mg/kg	SW846 8270D
Benzo(g,h,i)perylene		0.110 J	0.17	0.017	mg/kg	SW846 8270D
Benzo(k)fluoranthene		0.114 J	0.17	0.022	mg/kg	SW846 8270D
Chrysene		0.137 J	0.17	0.017	mg/kg	SW846 8270D
Fluoranthene		0.182	0.17	0.017	mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene		0.107 J	0.17	0.020	mg/kg	SW846 8270D
Phenanthrene		0.0778 J	0.17	0.017	mg/kg	SW846 8270D
Pyrene		0.182	0.17	0.019	mg/kg	SW846 8270D
TPH (C10-C28)		309	99	50	mg/kg	SW846 8015C
TPH (> C28-C40)		1120	99	50	mg/kg	SW846 8015C
Arsenic <sup>a</sup>		3.4	2.0		mg/kg	SW846 6010C
Barium <sup>a</sup>		62.6	39		mg/kg	SW846 6010C
Chromium <sup>a</sup>		31.0	2.0		mg/kg	SW846 6010C
Lead <sup>a</sup>		4.0	3.9		mg/kg	SW846 6010C

## Summary of Hits

**Job Number:** FA50419  
**Account:** EBI Consulting  
**Project:** 1217000450 Issaquah, WA  
**Collected:** 12/20/17

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>FA50419-8</b>		<b>HA-8</b>				
TPH (C10-C28)		8.21	4.9	2.5	mg/kg	SW846 8015C
TPH (> C28-C40)		22.3	4.9	2.5	mg/kg	SW846 8015C
Arsenic		5.1	2.4		mg/kg	SW846 6010C
Barium		105	47		mg/kg	SW846 6010C
Chromium		17.9	2.4		mg/kg	SW846 6010C
Lead		11.7	4.7		mg/kg	SW846 6010C
Mercury		0.040	0.038		mg/kg	SW846 7471B
<b>FA50419-9</b>		<b>HA-9</b>				
TPH (C10-C28)		6.23	4.9	2.4	mg/kg	SW846 8015C
TPH (> C28-C40)		11.6	4.9	2.4	mg/kg	SW846 8015C
Arsenic		2.8	1.8		mg/kg	SW846 6010C
Barium		59.9	36		mg/kg	SW846 6010C
Chromium		28.0	1.8		mg/kg	SW846 6010C
Lead		3.8	3.6		mg/kg	SW846 6010C
<b>FA50419-10</b>		<b>HA-10</b>				
TPH (C10-C28)		18.4 J	20	10	mg/kg	SW846 8015C
TPH (> C28-C40)		69.3	20	10	mg/kg	SW846 8015C
Arsenic		3.0	2.0		mg/kg	SW846 6010C
Barium		53.4	40		mg/kg	SW846 6010C
Chromium		29.9	2.0		mg/kg	SW846 6010C
Lead		4.5	4.0		mg/kg	SW846 6010C

(a) Sample dilution required due to difficult matrix.



Sample Results

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Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b> HA-1		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-1		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693171.D	1	12/26/17 16:44	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.017	mg/kg	
208-96-8	Acenaphthylene	ND	0.16	0.016	mg/kg	
120-12-7	Anthracene	ND	0.16	0.018	mg/kg	
56-55-3	Benzo(a)anthracene	0.0243	0.16	0.016	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0296	0.16	0.019	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.0391	0.16	0.018	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	0.0307	0.16	0.017	mg/kg	J
207-08-9	Benzo(k)fluoranthene	0.0444	0.16	0.022	mg/kg	J
218-01-9	Chrysene	0.0644	0.16	0.017	mg/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.16	0.021	mg/kg	
206-44-0	Fluoranthene	0.133	0.16	0.016	mg/kg	J
86-73-7	Fluorene	ND	0.16	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0307	0.16	0.020	mg/kg	J
90-12-0	1-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-20-3	Naphthalene	ND	0.16	0.016	mg/kg	
85-01-8	Phenanthrene	0.0480	0.16	0.016	mg/kg	J
129-00-0	Pyrene	0.117	0.16	0.019	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	74%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-1	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-1	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015C SW846 3546	
<b>Project:</b> 1217000450 Issaquah, WA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018110.D	10	12/26/17 16:53	SJL	12/22/17 08:30	OP68179	GJJ753
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	171	49	24	mg/kg	
	TPH (> C28-C40)	458	49	24	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-1 <b>Lab Sample ID:</b> FA50419-1 <b>Matrix:</b> SO - Soil <b>Project:</b> 1217000450 Issaquah, WA	<b>Date Sampled:</b> 12/20/17 <b>Date Received:</b> 12/21/17 <b>Percent Solids:</b> n/a <sup>a</sup>
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### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic <sup>b</sup>	4.0	1.6	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium <sup>b</sup>	48.5	32	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium <sup>b</sup>	< 0.65	0.65	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium <sup>b</sup>	21.2	1.6	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead <sup>b</sup>	16.8	3.2	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	0.045	0.042	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium <sup>b</sup>	< 3.2	3.2	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver <sup>b</sup>	< 1.6	1.6	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14582
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33160

- (a) All results reported on a wet weight basis.
- (b) Sample dilution required due to difficult matrix.

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RL = Reporting Limit

# Report of Analysis

<b>Client Sample ID:</b> HA-2		
<b>Lab Sample ID:</b> FA50419-2		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693172.D	1	12/26/17 17:11	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.017	mg/kg	
208-96-8	Acenaphthylene	ND	0.16	0.016	mg/kg	
120-12-7	Anthracene	ND	0.16	0.018	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.16	0.016	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.16	0.019	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.16	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.16	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.16	0.022	mg/kg	
218-01-9	Chrysene	ND	0.16	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.16	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.16	0.016	mg/kg	
86-73-7	Fluorene	ND	0.16	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.16	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-20-3	Naphthalene	ND	0.16	0.016	mg/kg	
85-01-8	Phenanthrene	ND	0.16	0.016	mg/kg	
129-00-0	Pyrene	ND	0.16	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		40-105%
321-60-8	2-Fluorobiphenyl	61%		43-107%
1718-51-0	Terphenyl-d14	80%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

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3

<b>Client Sample ID:</b> HA-2	
<b>Lab Sample ID:</b> FA50419-2	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8015C SW846 3546	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018111.D	1	12/26/17 17:22	SJL	12/22/17 08:30	OP68179	GJJ753
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	6.75	4.9	2.5	mg/kg	
	TPH (> C28-C40)	18.2	4.9	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-2	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-2	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic <sup>b</sup>	2.0	1.8	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium <sup>b</sup>	49.1	36	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium <sup>b</sup>	< 0.72	0.72	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium <sup>b</sup>	20.3	1.8	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead <sup>b</sup>	< 3.6	3.6	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	< 0.038	0.038	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium <sup>b</sup>	< 3.6	3.6	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver <sup>b</sup>	< 1.8	1.8	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14582
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33160

- (a) All results reported on a wet weight basis.
- (b) Sample dilution required due to difficult matrix.

RL = Reporting Limit

# Report of Analysis

<b>Client Sample ID:</b> HA-3		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-3		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693173.D	1	12/26/17 17:39	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

**BN PAH List**

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.019	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	0.0174	0.17	0.017	mg/kg	J
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		40-105%
321-60-8	2-Fluorobiphenyl	74%		43-107%
1718-51-0	Terphenyl-d14	74%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> HA-3	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-3	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015C SW846 3546	
<b>Project:</b> 1217000450 Issaquah, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018112.D	1	12/26/17 17:51	SJL	12/22/17 08:30	OP68179	GJJ753
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	13.1	5.0	2.5	mg/kg	
	TPH (> C28-C40)	21.0	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-3	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-3	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic <sup>b</sup>	4.0	2.1	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium <sup>b</sup>	82.8	43	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium <sup>b</sup>	< 0.85	0.85	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium <sup>b</sup>	15.4	2.1	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead <sup>b</sup>	7.7	4.3	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	< 0.040	0.040	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium <sup>b</sup>	< 4.3	4.3	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver <sup>b</sup>	< 2.1	2.1	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14582
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33160

- (a) All results reported on a wet weight basis.
- (b) Sample dilution required due to difficult matrix.

RL = Reporting Limit



## Report of Analysis

<b>Client Sample ID:</b> HA-4	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-4	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015C SW846 3546	
<b>Project:</b> 1217000450 Issaquah, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018113.D	1	12/26/17 18:20	SJL	12/22/17 08:30	OP68179	GJJ753
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	7.66	5.0	2.5	mg/kg	
	TPH (> C28-C40)	18.1	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-4	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-4	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic <sup>b</sup>	4.4	1.7	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium <sup>b</sup>	79.0	33	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium <sup>b</sup>	< 0.66	0.66	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium <sup>b</sup>	14.2	1.7	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead <sup>b</sup>	6.0	3.3	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	< 0.042	0.042	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium <sup>b</sup>	< 3.3	3.3	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver <sup>b</sup>	< 1.7	1.7	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14582
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33160

- (a) All results reported on a wet weight basis.
- (b) Sample dilution required due to difficult matrix.

RL = Reporting Limit

# Report of Analysis

<b>Client Sample ID:</b> HA-5		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-5		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693175.D	1	12/26/17 18:33	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.018	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.019	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	0.0175	0.17	0.017	mg/kg	J
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		40-105%
321-60-8	2-Fluorobiphenyl	76%		43-107%
1718-51-0	Terphenyl-d14	76%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-5	
<b>Lab Sample ID:</b> FA50419-5	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8015C SW846 3546	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018114.D	1	12/26/17 18:49	SJL	12/22/17 08:30	OP68179	GJJ753
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	13.3	4.9	2.5	mg/kg	
	TPH (> C28-C40)	36.9	4.9	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	84%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-5	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-5	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic <sup>b</sup>	4.6	2.0	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium <sup>b</sup>	83.5	41	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium <sup>b</sup>	< 0.81	0.81	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium <sup>b</sup>	14.3	2.0	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead <sup>b</sup>	6.4	4.1	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	< 0.036	0.036	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium <sup>b</sup>	< 4.1	4.1	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver <sup>b</sup>	< 2.0	2.0	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14582
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33160

- (a) All results reported on a wet weight basis.
- (b) Sample dilution required due to difficult matrix.

RL = Reporting Limit



# Report of Analysis

<b>Client Sample ID:</b> HA-6		
<b>Lab Sample ID:</b> FA50419-6		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693176.D	1	12/26/17 19:01	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.019	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.17	0.017	mg/kg	
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	0.0180	0.17	0.017	mg/kg	J
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		40-105%
321-60-8	2-Fluorobiphenyl	71%		43-107%
1718-51-0	Terphenyl-d14	73%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

3.6  
3

<b>Client Sample ID:</b> HA-6	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-6	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015C SW846 3546	
<b>Project:</b> 1217000450 Issaquah, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018115.D	1	12/26/17 19:18	SJL	12/22/17 08:30	OP68179	GJJ753
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	5.58	5.0	2.5	mg/kg	
	TPH (> C28-C40)	13.4	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-6 <b>Lab Sample ID:</b> FA50419-6 <b>Matrix:</b> SO - Soil <b>Project:</b> 1217000450 Issaquah, WA	<b>Date Sampled:</b> 12/20/17 <b>Date Received:</b> 12/21/17 <b>Percent Solids:</b> n/a <sup>a</sup>
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### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic <sup>b</sup>	3.6	1.8	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium <sup>b</sup>	94.5	36	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium <sup>b</sup>	< 0.72	0.72	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium <sup>b</sup>	17.2	1.8	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead <sup>b</sup>	5.2	3.6	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	< 0.036	0.036	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium <sup>b</sup>	< 3.6	3.6	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver <sup>b</sup>	< 1.8	1.8	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14582
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33160

- (a) All results reported on a wet weight basis.
- (b) Sample dilution required due to difficult matrix.

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RL = Reporting Limit

# Report of Analysis

<b>Client Sample ID:</b> HA-7		
<b>Lab Sample ID:</b> FA50419-7		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693177.D	1	12/26/17 19:28	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	0.0197	0.17	0.018	mg/kg	J
56-55-3	Benzo(a)anthracene	0.0855	0.17	0.017	mg/kg	J
50-32-8	Benzo(a)pyrene	0.123	0.17	0.019	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.118	0.17	0.018	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	0.110	0.17	0.017	mg/kg	J
207-08-9	Benzo(k)fluoranthene	0.114	0.17	0.022	mg/kg	J
218-01-9	Chrysene	0.137	0.17	0.017	mg/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	0.182	0.17	0.017	mg/kg	
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.107	0.17	0.020	mg/kg	J
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	0.0778	0.17	0.017	mg/kg	J
129-00-0	Pyrene	0.182	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		40-105%
321-60-8	2-Fluorobiphenyl	82%		43-107%
1718-51-0	Terphenyl-d14	91%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-7	
<b>Lab Sample ID:</b> FA50419-7	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8015C SW846 3546	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018134.D	20	12/27/17 16:50	SJL	12/22/17 08:30	OP68179	GJJ754
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	309	99	50	mg/kg	
	TPH (> C28-C40)	1120	99	50	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% <sup>b</sup>		56-122%

- (a) All results reported on a wet weight basis.  
 (b) Outside control limits due to dilution.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-7	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-7	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic <sup>b</sup>	3.4	2.0	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium <sup>b</sup>	62.6	39	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium <sup>b</sup>	< 0.79	0.79	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium <sup>b</sup>	31.0	2.0	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead <sup>b</sup>	4.0	3.9	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	< 0.040	0.040	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium <sup>b</sup>	< 3.9	3.9	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver <sup>b</sup>	< 2.0	2.0	mg/kg	5	12/26/17	12/26/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14582
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33160

- (a) All results reported on a wet weight basis.
- (b) Sample dilution required due to difficult matrix.

RL = Reporting Limit

# Report of Analysis

<b>Client Sample ID:</b> HA-8		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-8		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8270D SW846 3550C		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693178.D	1	12/26/17 19:55	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.017	mg/kg	
208-96-8	Acenaphthylene	ND	0.16	0.016	mg/kg	
120-12-7	Anthracene	ND	0.16	0.018	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.16	0.016	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.16	0.019	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.16	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.16	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.16	0.022	mg/kg	
218-01-9	Chrysene	ND	0.16	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.16	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.16	0.016	mg/kg	
86-73-7	Fluorene	ND	0.16	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.16	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-20-3	Naphthalene	ND	0.16	0.016	mg/kg	
85-01-8	Phenanthrene	ND	0.16	0.016	mg/kg	
129-00-0	Pyrene	ND	0.16	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		40-105%
321-60-8	2-Fluorobiphenyl	71%		43-107%
1718-51-0	Terphenyl-d14	82%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-8	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-8	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015C SW846 3546	
<b>Project:</b> 1217000450 Issaquah, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018135.D	1	12/27/17 17:19	SJL	12/22/17 08:30	OP68179	GJJ754
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	8.21	4.9	2.5	mg/kg	
	TPH (> C28-C40)	22.3	4.9	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> HA-8	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-8	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	5.1	2.4	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium	105	47	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium	< 0.94	0.94	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium	17.9	2.4	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead	11.7	4.7	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	0.040	0.038	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium	< 4.7	4.7	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver	< 2.4	2.4	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14587
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33164

(a) All results reported on a wet weight basis.

RL = Reporting Limit

# Report of Analysis

<b>Client Sample ID:</b> HA-9		
<b>Lab Sample ID:</b> FA50419-9		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693179.D	1	12/26/17 20:23	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.017	mg/kg	
208-96-8	Acenaphthylene	ND	0.16	0.016	mg/kg	
120-12-7	Anthracene	ND	0.16	0.018	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.16	0.016	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.16	0.019	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.16	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.16	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.16	0.022	mg/kg	
218-01-9	Chrysene	ND	0.16	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.16	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.16	0.016	mg/kg	
86-73-7	Fluorene	ND	0.16	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.16	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.16	0.016	mg/kg	
91-20-3	Naphthalene	ND	0.16	0.016	mg/kg	
85-01-8	Phenanthrene	ND	0.16	0.016	mg/kg	
129-00-0	Pyrene	ND	0.16	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	75%		40-105%
321-60-8	2-Fluorobiphenyl	75%		43-107%
1718-51-0	Terphenyl-d14	84%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-9	
<b>Lab Sample ID:</b> FA50419-9	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8015C SW846 3546	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018121.D	1	12/26/17 22:12	SJL	12/22/17 08:30	OP68179	GJJ753
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	6.23	4.9	2.4	mg/kg	
	TPH (> C28-C40)	11.6	4.9	2.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	91%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-9	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-9	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.8	1.8	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium	59.9	36	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium	< 0.72	0.72	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium	28.0	1.8	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead	3.8	3.6	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	< 0.038	0.038	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium	< 3.6	3.6	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver	< 1.8	1.8	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14587
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33164

(a) All results reported on a wet weight basis.

RL = Reporting Limit

# Report of Analysis

<b>Client Sample ID:</b> HA-10		
<b>Lab Sample ID:</b> FA50419-10		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3550C		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0693180.D	1	12/26/17 20:50	MV	12/26/17 08:19	OP68202	SL4076
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.018	mg/kg	
208-96-8	Acenaphthylene	ND	0.17	0.017	mg/kg	
120-12-7	Anthracene	ND	0.17	0.019	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.17	0.017	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.17	0.020	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.17	0.018	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.17	0.017	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.17	0.022	mg/kg	
218-01-9	Chrysene	ND	0.17	0.017	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.17	0.021	mg/kg	
206-44-0	Fluoranthene	ND	0.17	0.017	mg/kg	
86-73-7	Fluorene	ND	0.17	0.018	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.17	0.020	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.17	0.017	mg/kg	
91-20-3	Naphthalene	ND	0.17	0.017	mg/kg	
85-01-8	Phenanthrene	ND	0.17	0.017	mg/kg	
129-00-0	Pyrene	ND	0.17	0.019	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		40-105%
321-60-8	2-Fluorobiphenyl	76%		43-107%
1718-51-0	Terphenyl-d14	83%		45-119%

(a) All results reported on a wet weight basis.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-10	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-10	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8015C SW846 3546	
<b>Project:</b> 1217000450 Issaquah, WA	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018124.D	4	12/26/17 23:40	SJL	12/22/17 08:30	OP68179	GJJ753
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	18.4	20	10	mg/kg	J
	TPH (> C28-C40)	69.3	20	10	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		56-122%

(a) All results reported on a wet weight basis.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> HA-10	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50419-10	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> 1217000450 Issaquah, WA	

### Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	3.0	2.0	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Barium	53.4	40	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium	< 0.80	0.80	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Chromium	29.9	2.0	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead	4.5	4.0	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Mercury	< 0.042	0.042	mg/kg	1	12/23/17	12/23/17 LM	SW846 7471B <sup>1</sup>	SW846 7471B <sup>3</sup>
Selenium	< 4.0	4.0	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Silver	< 2.0	2.0	mg/kg	5	12/27/17	12/27/17 LM	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA14580
- (2) Instrument QC Batch: MA14587
- (3) Prep QC Batch: MP33153
- (4) Prep QC Batch: MP33164

(a) All results reported on a wet weight basis.

RL = Reporting Limit

Misc. Forms

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Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody





ACCUTEST

# CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131  
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest NC Job #: <b>FA50419</b>

Client / Reporting Information		Project Information										Requested Analysis					Matrix Codes									
Company Name <b>EBI</b>		Project Name: <b>1217000450 / Issaquah, WA</b>										<b>VOCs (8260)</b> <b>PAHs (8270)</b> <b>TPH-DRO/ORO (8015)</b> <b>PCBs (8082)</b> <b>RCRA &amp; Metals (6010)</b>					WW- Wastewater									
Address <b>21 B Street</b>		Street															GW- Ground Water									
City <b>Burlington</b>	State <b>MA</b>	Zip <b>01803</b>	City <b>Issaquah</b>							State <b>Washington</b>							SW- Surface Water									
Project Contact: <b>Chad Bechtel / Ryan Deutsch</b>		Project # <b>1217000450</b>															SO- Soil									
Phone #		EMAIL:															OI-Oil WP-Wipe									
Sampler's Name <b>Chad Bechtel</b>		Client Purchase Order #															LIQ - Non-aqueous Liquid									
SGS Accutest Sample ID		Collection															AIR DW- Drinking Water (Perchlorate Only)									
Sample ID / Field Point / Point of Collection		Date	Time	Sampled by	Matrix	# of bottles	TEL	TOCH	PHOS	PERDA	PERDA						PERDA	PERDA	PERDA	PERDA	PERDA	PERDA	PERDA	PERDA	PERDA	LAB USE ONLY
1	HA-1	12/20/17	1355	CB	SO	2																				
2	HA-2		1400																							
3	HA-3		1515																							
4	HA-4		1510																							
5	HA-5		1504																							
6	HA-6		1450																							
7	HA-7		1443																							
8	HA-8		1438																							
9	HA-9		1420																							
10	HA-10		1418																							
Turnaround Time ( Business days)		Date Deliverable Information										Comments / Remarks														
<input type="checkbox"/> 10 Day <input checked="" type="checkbox"/> 5 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 1 Day <input type="checkbox"/> Same Day		Approved By/ Date:		<input type="checkbox"/> Commercial "A" - Results only <input checked="" type="checkbox"/> Commercial "B" - Results with QC summaries <input type="checkbox"/> Commercial "B+" - Results, QC, and chromatograms <input type="checkbox"/> FULL1 - Level 4 data package <input type="checkbox"/> EDF for Geotracker <input type="checkbox"/> EDD Format Provide EDF Global ID: _____ Provide EDF Logcode: _____																						
Emergency T/A data available VIA Lablink		Sample Custody must be documented below each time samples change possession, including courier delivery.																								
Relinquished By: <b>Chad Bechtel</b>	Date Time: <b>12/20/17 1530</b>	Received By: <b>FedEx</b>	Date Time: <b>12-21-17</b>	Relinquished By: <b>FX</b>	Date Time: <b>12-21-17</b>	Received By: <b>J. Corpe</b>	Date Time: <b>11:15</b>																			
Relinquished By:	Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:	Received By:	Date Time:																			
Relinquished By:	Date Time:	Received By:	Date Time:	Custody Seal #	Appropriate Bottle / Pres. Y / N	Headspace Y / N	On Ice Y / N	Cooler Temp.																		
5		5			Labels match Coc? Y / N	Separate Receiving Check List used: Y / N		<b>3.8</b> °C																		

4.1  
4

FA50419: Chain of Custody

Page 1 of 2



## SGS Accutest Sample Receipt Summary

Job Number: FA50419

Client: EBI

Project: ISSAQUAH, WA

Date / Time Received: 12/21/2017 11:15:00 AM

Delivery Method: FX

Airbill #'s: 8121 8849 8268

Therm ID: IR 1;

Therm CF: 0.4;

# of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.4);

Cooler Temps (Corrected) °C: Cooler 1: (3.8);

**Cooler Information**

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification IR Gun
- 5. Cooler media Ice (Bag)

**Trip Blank Information**

Y or N N/A

- 1. Trip Blank present / cooler
  - 2. Trip Blank listed on COC
- W or S N/A
- 3. Type Of TB Received

**Sample Information**

Y or N N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

**Misc. Information**

Number of Encores: 25-Gram \_\_\_\_\_ 5-Gram \_\_\_\_\_  
 Test Strip Lot #: pH 0-3 230315  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Number of 5035 Field Kits: \_\_\_\_\_  
 pH 10-12 219813A

Number of Lab Filtered Metals: \_\_\_\_\_  
 Other: (Specify) \_\_\_\_\_

Comments

SM001  
Rev. Date 05/24/17

Technician: JORGE C

Date: 12/21/2017 11:15:00

Reviewer: BR

Date: 12/21/2017

**FA50419: Chain of Custody**

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4.1  
4

MS Semi-volatiles

QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

**Job Number:** FA50419  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68202-MB	L0693170.D	1	12/26/17	MV	12/26/17	OP68202	SL4076

The QC reported here applies to the following samples:

Method: SW846 8270D

FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	170	18	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
120-12-7	Anthracene	ND	170	19	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	22	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	21	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	20	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	19	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	60%	40-102%
4165-62-2	Phenol-d5	64%	41-100%
118-79-6	2,4,6-Tribromophenol	79%	42-108%
4165-60-0	Nitrobenzene-d5	76%	40-105%
321-60-8	2-Fluorobiphenyl	74%	43-107%
1718-51-0	Terphenyl-d14	75%	45-119%

5.1.1  
5

# Blank Spike Summary

**Job Number:** FA50419  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68202-BS	L0693169.D	1	12/26/17	MV	12/26/17	OP68202	SL4076

The QC reported here applies to the following samples:

Method: SW846 8270D

FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1670	1480	89	56-109
208-96-8	Acenaphthylene	1670	1480	89	56-106
120-12-7	Anthracene	1670	1450	87	61-110
56-55-3	Benzo(a)anthracene	1670	1570	94	66-111
50-32-8	Benzo(a)pyrene	1670	1540	92	59-104
205-99-2	Benzo(b)fluoranthene	1670	1570	94	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1700	102	67-113
207-08-9	Benzo(k)fluoranthene	1670	1530	92	67-114
218-01-9	Chrysene	1670	1580	95	65-112
53-70-3	Dibenzo(a,h)anthracene	1670	1650	99	68-115
206-44-0	Fluoranthene	1670	1520	91	60-108
86-73-7	Fluorene	1670	1490	89	58-109
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1560	94	66-116
90-12-0	1-Methylnaphthalene	1670	1290	77	49-106
91-57-6	2-Methylnaphthalene	1670	1270	76	47-106
91-20-3	Naphthalene	1670	1250	75	44-104
85-01-8	Phenanthrene	1670	1530	92	63-111
129-00-0	Pyrene	1670	1560	94	65-115

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	74%	40-102%
4165-62-2	Phenol-d5	72%	41-100%
118-79-6	2,4,6-Tribromophenol	88%	42-108%
4165-60-0	Nitrobenzene-d5	80%	40-105%
321-60-8	2-Fluorobiphenyl	80%	43-107%
1718-51-0	Terphenyl-d14	93%	45-119%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50419  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68202-MS <sup>a</sup>	L0693224.D	2	12/28/17	MV	12/26/17	OP68202	SL4078
OP68202-MSD <sup>a</sup>	L0693225.D	2	12/28/17	MV	12/26/17	OP68202	SL4078
FA50476-1 <sup>a</sup>	L0693223.D	4	12/28/17	MV	12/26/17	OP68202	SL4078

The QC reported here applies to the following samples:

Method: SW846 8270D

FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

CAS No.	Compound	FA50476-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD	
83-32-9	Acenaphthene	770 U		1920	1520	79	1910	1660	87	9	56-109/23
208-96-8	Acenaphthylene	770 U		1920	1600	83	1910	1720	90	7	56-106/23
120-12-7	Anthracene	770 U		1920	1580	82	1910	1640	86	4	61-110/21
56-55-3	Benzo(a)anthracene	770 U		1920	1580	82	1910	1620	85	3	66-111/23
50-32-8	Benzo(a)pyrene	770 U		1920	1590	83	1910	1660	87	4	59-104/23
205-99-2	Benzo(b)fluoranthene	770 U		1920	1650	86	1910	1700	89	3	67-113/24
191-24-2	Benzo(g,h,i)perylene	770 U		1920	1650	86	1910	1750	92	6	67-113/21
207-08-9	Benzo(k)fluoranthene	770 U		1920	1630	85	1910	1680	88	3	67-114/22
218-01-9	Chrysene	770 U		1920	1540	80	1910	1620	85	5	65-112/25
53-70-3	Dibenzo(a,h)anthracene	770 U		1920	1640	85	1910	1690	88	3	68-115/23
206-44-0	Fluoranthene	770 U		1920	1680	87	1910	1700	89	1	60-108/25
86-73-7	Fluorene	91.2	I	1920	1610	79	1910	1690	84	5	58-109/21
193-39-5	Indeno(1,2,3-cd)pyrene	770 U		1920	1550	81	1910	1570	82	1	66-116/22
90-12-0	1-Methylnaphthalene	7870		1920	4350	-183* <sup>b</sup>	1910	6570	-68* <sup>b</sup>	41*	49-106/26
91-57-6	2-Methylnaphthalene	14600		1920	7050	-393* <sup>b</sup>	1910	11000	-188* <sup>b</sup>	44*	47-106/27
91-20-3	Naphthalene	13400		1920	5880	-391* <sup>b</sup>	1910	9400	-209* <sup>b</sup>	46*	44-104/27
85-01-8	Phenanthrene	178	I	1920	1670	78	1910	1780	84	6	63-111/22
129-00-0	Pyrene	770 U		1920	1610	84	1910	1680	88	4	65-115/25

CAS No.	Surrogate Recoveries	MS	MSD	FA50476-1	Limits
367-12-4	2-Fluorophenol	64%	67%	66%	40-102%
4165-62-2	Phenol-d5	67%	71%	74%	41-100%
118-79-6	2,4,6-Tribromophenol	79%	82%	84%	42-108%
4165-60-0	Nitrobenzene-d5	66%	72%	78%	40-105%
321-60-8	2-Fluorobiphenyl	68%	72%	79%	43-107%
1718-51-0	Terphenyl-d14	78%	78%	88%	45-119%

(a) Dilution required due to matrix interference.

(b) Outside control limits due to high level in sample relative to spike amount.

\* = Outside of Control Limits.

5.3.1  
5

## GC/LC Semi-volatiles

### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** FA50419  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68179-MB	JJ018109.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753

The QC reported here applies to the following samples:

Method: SW846 8015C

FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	5.0	2.5	mg/kg	
	TPH (> C28-C40)	ND	5.0	2.5	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	96% 56-122%



# Blank Spike Summary

**Job Number:** FA50419  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68179-BS	JJ018108.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753

The QC reported here applies to the following samples:

Method: SW846 8015C

FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C10-C28)	50	56.2	112	62-116
	TPH (> C28-C40)	50	52.2	104	47-138

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	92%	56-122%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50419  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68179-MS	JJ018122.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753
OP68179-MSD	JJ018123.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753
FA50419-9	JJ018121.D	1	12/26/17	SJL	12/22/17	OP68179	GJJ753

The QC reported here applies to the following samples:

Method: SW846 8015C

FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

CAS No.	Compound	FA50419-9 mg/kg	Spike Q	mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	6.23	48.8	60.5	111	49.3	57.7	104	5	62-116/35	
	TPH (> C28-C40)	11.6	48.8	60.2	100	49.3	55.0	88	9	47-138/29	

CAS No.	Surrogate Recoveries	MS	MSD	FA50419-9	Limits
84-15-1	o-Terphenyl	89%	89%	91%	56-122%

\* = Outside of Control Limits.

## Metals Analysis

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: FA50419  
Account: EBIMAB - EBI Consulting  
Project: 1217000450 Issaquah, WA

QC Batch ID: MP33153  
Matrix Type: SOLID

Methods: SW846 7471B  
Units: mg/kg

Prep Date: 12/23/17

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.042	.0025	.0042	0.00020	<0.042

Associated samples MP33153: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

7.1.1  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33153  
 Matrix Type: SOLID

Methods: SW846 7471B  
 Units: mg/kg

Prep Date: 12/23/17 12/23/17

Metal	FA50419-1 Original	DUP	RPD	QC Limits	FA50419-1 Original MS	Spikelot HGFLWS1	% Rec	QC Limits	
Mercury	0.045	0.029	43.2 (a)	0-20	0.045	0.26	0.234	91.7	80-120

Associated samples MP33153: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

7.12  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33153  
 Matrix Type: SOLID

Methods: SW846 7471B  
 Units: mg/kg

Prep Date: 12/23/17

Metal	FA50419-1 Original MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.045	0.27	0.234	96.0	3.8 20

Associated samples MP33153: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

7.12  
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33153  
 Matrix Type: SOLID

Methods: SW846 7471B  
 Units: mg/kg

Prep Date: 12/23/17

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.25	0.25	100.0	80-120

Associated samples MP33153: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits  
 (anr) Analyte not requested

7.1.3  
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA50419  
Account: EBIMAB - EBI Consulting  
Project: 1217000450 Issaquah, WA

QC Batch ID: MP33153  
Matrix Type: SOLID

Methods: SW846 7471B  
Units: ug/l

Prep Date: 12/23/17

Metal	FA50419-1	Original	SDL 1:5	%DIF	QC Limits
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Mercury 0.544 0.00 100.0(a) 0-10

Associated samples MP33153: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7, FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).



BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: FA50419  
Account: EBIMAB - EBI Consulting  
Project: 1217000450 Issaquah, WA

QC Batch ID: MP33160  
Matrix Type: SOLID

Methods: SW846 6010C  
Units: mg/kg

Prep Date: 12/26/17

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	1.8		
Antimony	1.0	.05	.065		
Arsenic	0.50	.065	.1	-0.060	<0.50
Barium	10	.05	.05	-0.010	<10
Beryllium	0.25	.01	.025		
Cadmium	0.20	.01	.025	0.0	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.035	<0.50
Cobalt	2.5	.01	.025		
Copper	1.3	.05	.05		
Iron	15	.85	.85		
Lead	1.0	.05	.05	0.015	<1.0
Magnesium	250	1.8	1.8		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.015	.025		
Nickel	2.0	.02	.025		
Potassium	500	10	10		
Selenium	1.0	.12	.12	0.0050	<1.0
Silver	0.50	.035	.041	0.0050	<0.50
Sodium	500	25	25		
Strontium	0.50	.025	.025		
Thallium	0.50	.055	.055		
Tin	2.5	.045	.045		
Titanium	0.50	.025	.025		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15		

Associated samples MP33160: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

7.2.1  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33160  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 12/26/17 12/26/17

Metal	FA50414-1 Original	DUP	RPD	QC Limits	FA50414-1 Original MS	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum								
Antimony	anr							
Arsenic	1.7	1.6 (a)	6.1	0-20	1.7	67.8 (a) 80.5	82.1	80-120
Barium	62.3	62.0 (a)	0.5	0-20	62.3	137 (a) 80.5	92.8	80-120
Beryllium	anr							
Cadmium	0.0	0.0 (a)	NC	0-20	0.0	1.8 (a) 2.01	89.4	80-120
Calcium								
Chromium	20.4	20.2 (a)	1.0	0-20	20.4	29.0 (a) 8.05	106.8	80-120
Cobalt								
Copper	anr							
Iron								
Lead	356	356 (a)	0.0	0-20	356	336 (a) 20.1	-99.4 (b)	80-120
Magnesium								
Manganese								
Molybdenum								
Nickel	anr							
Potassium								
Selenium	0.0	0.0 (a)	NC	0-20	0.0	68.4 (a) 80.5	85.0	80-120
Silver	0.0	0.0 (a)	NC	0-20	0.0	1.7 (a) 2.01	84.5	80-120
Sodium								
Strontium								
Thallium	anr							
Tin								
Titanium								
Vanadium								
Zinc	anr							

Associated samples MP33160: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Sample dilution required due to difficult matrix.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

7.2.2  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33160  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 12/26/17

Metal	FA50414-1 Original MSD	Spike/lot MPFLICP2 % Rec	MSD RPD	QC Limit
Aluminum				
Antimony	anr			
Arsenic	1.7	96.3 (a) 113	83.8	34.7 (b) 20
Barium	62.3	167 (a) 113	92.8	19.7 20
Beryllium	anr			
Cadmium	0.0	2.5 (a) 2.82	88.6	32.6 (b) 20
Calcium				
Chromium	20.4	31.9 (a) 11.3	101.9	9.5 20
Cobalt				
Copper	anr			
Iron				
Lead	356	329 (a) 28.2	-95.7(c)	2.1 20
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	0.0	95.8 (a) 113	84.9	33.4 (d) 20
Silver	0.0	2.4 (a) 2.82	85.1	34.1 (d) 20
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP33160: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7

Results < IDL are shown as zero for calculation purposes

- (\*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Sample dilution required due to difficult matrix.
- (b) High RPD due to possible sample non-homogeneity.
- (c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (d) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

7.2.2  
7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33160  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 12/26/17

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	94.9	100	94.9	80-120
Barium	102	100	102.0	80-120
Beryllium	anr			
Cadmium	2.4	2.5	96.0	80-120
Calcium				
Chromium	10.3	10	103.0	80-120
Cobalt				
Copper	anr			
Iron				
Lead	23.9	25	95.6	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	92.9	100	92.9	80-120
Silver	2.4	2.5	96.0	80-120
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP33160: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

7.2.3  
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33160  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 12/26/17

Metal	FA50414-1 Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	35.5	46.9	32.1 (a)	0-10
Barium	1300	1620	24.8*(b)	0-10
Beryllium	anr			
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	425	512	20.6*(b)	0-10
Cobalt				
Copper	anr			
Iron				
Lead	7420	8900	19.8*(c)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP33160: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

(b) High RPD due to possible sample non-homogeneity.

(c) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33160  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: ug/l

Prep Date:

12/26/17

Metal	Sample ml	Final ml	FA50414-1 Raw	PS Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	9.8	10	35.5	34.79	135.2	0.2	5	100	100.4	80-120
Barium	9.8	10	1300	1274	1529	0.2	12.5	250	102.0	80-120
Beryllium										
Cadmium	9.8	10			48.8	0.2	2.5	50	97.6	80-120
Calcium										
Chromium	9.8	10	424.7	416.206	459.3	0.2	2.5	50	86.2	80-120
Cobalt										
Copper										
Iron										
Lead	9.8	10	7423	7274.54	7281	0.2	2.5	50	12.9*(a)	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium	9.8	10			95.4	0.2	5	100	95.4	80-120
Silver	9.8	10			47.6	0.2	2.5	50	95.2	80-120
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP33160: FA50419-1, FA50419-2, FA50419-3, FA50419-4, FA50419-5, FA50419-6, FA50419-7

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(\*\*) Corr. sample result = Raw \* (sample volume / final volume)

(anr) Analyte not requested

(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: FA50419  
Account: EBIMAB - EBI Consulting  
Project: 1217000450 Issaquah, WA

QC Batch ID: MP33164  
Matrix Type: SOLID

Methods: SW846 6010C  
Units: mg/kg

Prep Date: 12/27/17

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	1.8		
Antimony	1.0	.05	.065		
Arsenic	0.50	.065	.1	-0.055	<0.50
Barium	10	.05	.05	-0.0050	<10
Beryllium	0.25	.01	.025		
Cadmium	0.20	.01	.025	0.0050	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.065	<0.50
Cobalt	2.5	.01	.025		
Copper	1.3	.05	.05		
Iron	15	.85	.85		
Lead	1.0	.05	.05	-0.045	<1.0
Magnesium	250	1.8	1.8		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.015	.025		
Nickel	2.0	.02	.025		
Potassium	500	10	10		
Selenium	1.0	.12	.12	0.090	<1.0
Silver	0.50	.035	.041	0.010	<0.50
Sodium	500	25	25		
Strontium	0.50	.025	.025		
Thallium	0.50	.055	.055		
Tin	2.5	.045	.045		
Titanium	0.50	.025	.025		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15		

Associated samples MP33164: FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

7.3.1  
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33164  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 12/27/17 12/27/17

Metal	FA50398-207		QC Limits	FA50398-207		Spikelot MPFLICP2	% Rec	QC Limits	
	Original	DUP		RPD	Original				MS
Aluminum									
Antimony									
Arsenic	10.6	8.4 (a)	23.2 (b)	0-20	10.6	169 (a)	144	109.7	80-120
Barium	98.4	85.6 (a)	13.9	0-20	98.4	279 (a)	144	125.1N(c)	80-120
Beryllium									
Cadmium	0.0	0.34 (a)	200.0(b)	0-20	0.0	4.3 (a)	3.61	119.1	80-120
Calcium									
Chromium	15600	15800	1.3	0-20	15600	14100	14.4	-10390.4d	80-120
Cobalt									
Copper	anr								
Iron									
Lead	36.0	31.5 (a)	13.3	0-20	36.0	72.6 (a)	36.1	101.4	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	anr								
Potassium									
Selenium	17.4	3.5 (a)	133.0(b)	0-20	17.4	162 (a)	144	100.2	80-120
Silver	0.0	0.0 (a)	NC	0-20	0.0	4.0 (a)	3.61	110.8	80-120
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP33164: FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes

- (\*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Elevated reporting limit(s) due to matrix interference.
- (b) RPD acceptable due to low duplicate and sample concentrations.
- (c) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.
- (d) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

7.3.2  
7



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33164  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 12/27/17

Metal	FA50398-207 Original MSD	SpikeLot MPFLICP2 % Rec	MSD RPD	QC Limit		
Aluminum						
Antimony						
Arsenic	10.6	151 (a)	118	118.8	11.3	20
Barium	98.4	261 (a)	118	137.5N(b)	6.7	20
Beryllium						
Cadmium	0.0	3.9 (a)	2.96	132.0N(b)	9.8	20
Calcium						
Chromium	15600	15700	11.8	845.9(c)	10.7	20
Cobalt						
Copper	anr					
Iron						
Lead	36.0	69.8 (a)	29.6	114.4	3.9	20
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Potassium						
Selenium	17.4	147 (a)	118	109.6	9.7	20
Silver	0.0	3.3 (a)	2.96	111.7	19.2	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP33164: FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Elevated reporting limit(s) due to matrix interference.

(b) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33164  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 12/27/17

Metal	BSP Result	Spikelot MPFLICP2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	92.7	100	92.7	80-120
Barium	98.2	100	98.2	80-120
Beryllium				
Cadmium	2.4	2.5	96.0	80-120
Calcium				
Chromium	9.9	10	99.0	80-120
Cobalt				
Copper	anr			
Iron				
Lead	23.5	25	94.0	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	91.4	100	91.4	80-120
Silver	2.3	2.5	92.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP33164: FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

7.3.3  
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33164  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 12/27/17

Metal	FA50398-207 Original SDL 50:50%DIF		QC Limits	
Aluminum				
Antimony				
Arsenic	159	155	2.8	0-10
Barium	1470	1470	0.1	0-10
Beryllium				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	233000	239000	2.2	0-10
Cobalt				
Copper	anr			
Iron				
Lead	538	480	10.8 (a)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	260	135	48.0 (a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP33164: FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

7.3.4  
7

POST DIGESTATE SPIKE SUMMARY

Login Number: FA50419  
 Account: EBIMAB - EBI Consulting  
 Project: 1217000450 Issaquah, WA

QC Batch ID: MP33164  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: ug/l

Prep Date:

12/27/17

Metal	Sample ml	Final ml	FA50398-207 Raw	PS Corr.** ug/l	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	9.8	10	159.2	156.016	275.3	0.2	5	100	119.3	80-120
Barium	9.8	10	1472	1442.56	1806	0.2	12.5	250	145.4*(a)	80-120
Beryllium										
Cadmium	9.8	10			66.4	0.2	2.5	50	132.8*(a)	80-120
Calcium										
Chromium	9.8	10	233400	228732	267200	0.2	2.5	50	76936.0*(a)	80-120
Cobalt										
Copper										
Iron										
Lead	9.8	10	537.8	527.044	560.1	0.2	2.5	50	66.1*(a)	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium	9.8	10	260.3	255.094	195.4	0.2	5	100	-59.7*(a)	80-120
Silver	9.8	10			59.7	0.2	2.5	50	119.4	80-120
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP33164: FA50419-8, FA50419-9, FA50419-10

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(\*\*) Corr. sample result = Raw \* (sample volume / final volume)

(anr) Analyte not requested

(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

EBI Consulting

1217000450 Issaquah, WA

SGS Job Number: FA50421

Sampling Date: 12/20/17

Report to:

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ATTN: Ryan Deutsch

Total number of pages in report: **60**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Caitlin Brice".

Caitlin Brice, M.S.  
General Manager

Client Service contact: Elvin Kumar 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)  
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## Sample Summary

EBI Consulting

Job No: FA50421

1217000450 Issaquah, WA

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
FA50421-1	12/20/17	12:45 CB	12/21/17	AQ	Ground Water	B-1 GW (6)
FA50421-2	12/20/17	12:20 CB	12/21/17	AQ	Ground Water	B-2 GW (6)
FA50421-3	12/20/17	13:10 CB	12/21/17	AQ	Ground Water	B-3 GW (6)
FA50421-4	12/20/17	11:45 CB	12/21/17	AQ	Ground Water	B-4 GW (6)
FA50421-5	12/20/17	11:15 CB	12/21/17	AQ	Ground Water	B-5 GW (6)
FA50421-6	12/20/17	09:30 CB	12/21/17	AQ	Ground Water	B-6 GW (5)
FA50421-7	12/20/17	10:10 CB	12/21/17	AQ	Ground Water	B-7 GW (6)
FA50421-8	12/20/17	10:50 CB	12/21/17	AQ	Ground Water	B-8 GW (3)

## Summary of Hits

**Job Number:** FA50421  
**Account:** EBI Consulting  
**Project:** 1217000450 Issaquah, WA  
**Collected:** 12/20/17

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

**FA50421-1 B-1 GW (6)**

TPH (C10-C28)	0.179	0.048	0.019	mg/l	SW846 8015C
TPH (> C28-C40)	0.142	0.048	0.019	mg/l	SW846 8015C

**FA50421-2 B-2 GW (6)**

Tetrachloroethylene	0.54 J	1.0	0.22	ug/l	SW846 8260B
---------------------	--------	-----	------	------	-------------

**FA50421-3 B-3 GW (6)**

No hits reported in this sample.

**FA50421-4 B-4 GW (6)**

cis-1,2-Dichloroethylene	1.3	1.0	0.28	ug/l	SW846 8260B
--------------------------	-----	-----	------	------	-------------

**FA50421-5 B-5 GW (6)**

No hits reported in this sample.

**FA50421-6 B-6 GW (5)**

No hits reported in this sample.

**FA50421-7 B-7 GW (6)**

No hits reported in this sample.

**FA50421-8 B-8 GW (3)**

No hits reported in this sample.



Sample Results

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Report of Analysis

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# Report of Analysis

<b>Client Sample ID:</b> B-1 GW (6)	
<b>Lab Sample ID:</b> FA50421-1	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057941.D	1	12/27/17 15:51	MV	12/26/17 13:00	OP68206	SX2431
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.7	0.59	ug/l	
208-96-8	Acenaphthylene <sup>a</sup>	ND	4.7	0.60	ug/l	
120-12-7	Anthracene	ND	4.7	0.75	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.7	0.72	ug/l	
50-32-8	Benzo(a)pyrene <sup>a</sup>	ND	4.7	0.74	ug/l	
205-99-2	Benzo(b)fluoranthene <sup>a</sup>	ND	4.7	0.73	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.7	0.78	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.7	0.81	ug/l	
218-01-9	Chrysene	ND	4.7	0.80	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.7	0.76	ug/l	
206-44-0	Fluoranthene <sup>a</sup>	ND	4.7	0.52	ug/l	
86-73-7	Fluorene	ND	4.7	0.66	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene <sup>a</sup>	ND	4.7	0.67	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.7	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.7	0.57	ug/l	
91-20-3	Naphthalene	ND	4.7	0.47	ug/l	
85-01-8	Phenanthrene	ND	4.7	0.82	ug/l	
129-00-0	Pyrene	ND	4.7	0.65	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		42-108%
321-60-8	2-Fluorobiphenyl	86%		40-106%
1718-51-0	Terphenyl-d14	75%		39-121%

(a) Associated BS recovery outside control limits.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> B-1 GW (6)	
<b>Lab Sample ID:</b> FA50421-1	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8082A SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM48180.D	1	12/27/17 15:10	NJ	12/27/17 10:20	OP68223	GMM919
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1040 ml	5.0 ml
Run #2		

### PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.096	0.038	ug/l	
11104-28-2	Aroclor 1221	ND	0.096	0.048	ug/l	
11141-16-5	Aroclor 1232	ND	0.096	0.048	ug/l	
53469-21-9	Aroclor 1242	ND	0.096	0.038	ug/l	
12672-29-6	Aroclor 1248	ND	0.096	0.038	ug/l	
11097-69-1	Aroclor 1254 <sup>a</sup>	ND	0.096	0.038	ug/l	
11096-82-5	Aroclor 1260	ND	0.096	0.038	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	94%		38-127%
2051-24-3	Decachlorobiphenyl	42%		25-137%

(a) Associated CCV outside of control limits high, sample was ND.

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

3.1  
3

<b>Client Sample ID:</b> B-1 GW (6)	
<b>Lab Sample ID:</b> FA50421-1	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8015C SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ018146.D	1	12/27/17 22:39	SJL	12/26/17 12:30	OP68207	GJJ754
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.179	0.048	0.019	mg/l	
	TPH (> C28-C40)	0.142	0.048	0.019	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		50-131%

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ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

# Report of Analysis

32  
3

<b>Client Sample ID:</b> B-2 GW (6)	
<b>Lab Sample ID:</b> FA50421-2	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988538.D	1	12/29/17 12:12	MM	n/a	n/a	VJ5789
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

### VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-2 GW (6) <b>Lab Sample ID:</b> FA50421-2 <b>Matrix:</b> AQ - Ground Water <b>Method:</b> SW846 8260B <b>Project:</b> 1217000450 Issaquah, WA	<b>Date Sampled:</b> 12/20/17 <b>Date Received:</b> 12/21/17 <b>Percent Solids:</b> n/a
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**VOA 8260 List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		83-118%

(a) Associated CCV outside of control limits low.

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ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2 GW (6)		
<b>Lab Sample ID:</b> FA50421-2		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057944.D	1	12/27/17 17:06	MV	12/26/17 13:00	OP68206	SX2431
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.7	0.59	ug/l	
208-96-8	Acenaphthylene <sup>a</sup>	ND	4.7	0.60	ug/l	
120-12-7	Anthracene	ND	4.7	0.75	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.7	0.72	ug/l	
50-32-8	Benzo(a)pyrene <sup>a</sup>	ND	4.7	0.74	ug/l	
205-99-2	Benzo(b)fluoranthene <sup>a</sup>	ND	4.7	0.73	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.7	0.78	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.7	0.81	ug/l	
218-01-9	Chrysene	ND	4.7	0.80	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.7	0.76	ug/l	
206-44-0	Fluoranthene <sup>a</sup>	ND	4.7	0.52	ug/l	
86-73-7	Fluorene	ND	4.7	0.66	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene <sup>a</sup>	ND	4.7	0.67	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.7	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.7	0.57	ug/l	
91-20-3	Naphthalene	ND	4.7	0.47	ug/l	
85-01-8	Phenanthrene	ND	4.7	0.82	ug/l	
129-00-0	Pyrene	ND	4.7	0.65	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		42-108%
321-60-8	2-Fluorobiphenyl	84%		40-106%
1718-51-0	Terphenyl-d14	68%		39-121%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



# Report of Analysis

<b>Client Sample ID:</b> B-3 GW (6)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50421-3		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988539.D	1	12/29/17 12:35	MM	n/a	n/a	VJ5789
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-3 GW (6)	
<b>Lab Sample ID:</b> FA50421-3	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated CCV outside of control limits low.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-3 GW (6)		
<b>Lab Sample ID:</b> FA50421-3		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057945.D	1	12/27/17 17:31	MV	12/26/17 13:00	OP68206	SX2431
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.7	0.59	ug/l	
208-96-8	Acenaphthylene <sup>a</sup>	ND	4.7	0.60	ug/l	
120-12-7	Anthracene	ND	4.7	0.75	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.7	0.72	ug/l	
50-32-8	Benzo(a)pyrene <sup>a</sup>	ND	4.7	0.74	ug/l	
205-99-2	Benzo(b)fluoranthene <sup>a</sup>	ND	4.7	0.73	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.7	0.78	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.7	0.81	ug/l	
218-01-9	Chrysene	ND	4.7	0.80	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.7	0.76	ug/l	
206-44-0	Fluoranthene <sup>a</sup>	ND	4.7	0.52	ug/l	
86-73-7	Fluorene	ND	4.7	0.66	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene <sup>a</sup>	ND	4.7	0.67	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.7	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.7	0.57	ug/l	
91-20-3	Naphthalene	ND	4.7	0.47	ug/l	
85-01-8	Phenanthrene	ND	4.7	0.82	ug/l	
129-00-0	Pyrene	ND	4.7	0.65	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		42-108%
321-60-8	2-Fluorobiphenyl	91%		40-106%
1718-51-0	Terphenyl-d14	79%		39-121%

(a) Associated BS recovery outside control limits.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-4 GW (6)	
<b>Lab Sample ID:</b> FA50421-4	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988540.D	1	12/29/17 12:59	MM	n/a	n/a	VJ5789
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.3	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-4 GW (6)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50421-4		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> 1217000450 Issaquah, WA		

**VOA 8260 List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		83-118%

(a) Associated CCV outside of control limits low.

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ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-4 GW (6)		
<b>Lab Sample ID:</b> FA50421-4		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057946.D	1	12/27/17 17:57	MV	12/26/17 13:00	OP68206	SX2431
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.7	0.59	ug/l	
208-96-8	Acenaphthylene <sup>a</sup>	ND	4.7	0.60	ug/l	
120-12-7	Anthracene	ND	4.7	0.75	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.7	0.72	ug/l	
50-32-8	Benzo(a)pyrene <sup>a</sup>	ND	4.7	0.74	ug/l	
205-99-2	Benzo(b)fluoranthene <sup>a</sup>	ND	4.7	0.73	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.7	0.78	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.7	0.81	ug/l	
218-01-9	Chrysene	ND	4.7	0.80	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.7	0.76	ug/l	
206-44-0	Fluoranthene <sup>a</sup>	ND	4.7	0.52	ug/l	
86-73-7	Fluorene	ND	4.7	0.66	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene <sup>a</sup>	ND	4.7	0.67	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.7	0.50	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.7	0.57	ug/l	
91-20-3	Naphthalene	ND	4.7	0.47	ug/l	
85-01-8	Phenanthrene	ND	4.7	0.82	ug/l	
129-00-0	Pyrene	ND	4.7	0.65	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		42-108%
321-60-8	2-Fluorobiphenyl	93%		40-106%
1718-51-0	Terphenyl-d14	74%		39-121%

(a) Associated BS recovery outside control limits.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





## Report of Analysis

<b>Client Sample ID:</b>	B-5 GW (6)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	FA50421-5	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	1217000450 Issaquah, WA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.30	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide <sup>a</sup>	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%
17060-07-0	1,2-Dichloroethane-D4	108%		79-125%
2037-26-5	Toluene-D8	97%		85-112%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-5 GW (6)	
<b>Lab Sample ID:</b> FA50421-5	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		83-118%

(a) Associated CCV outside of control limits low.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-5 GW (6)		
<b>Lab Sample ID:</b> FA50421-5		<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3510C		<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057947.D	1	12/27/17 18:22	MV	12/26/17 13:00	OP68206	SX2431
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.9	0.61	ug/l	
208-96-8	Acenaphthylene <sup>a</sup>	ND	4.9	0.62	ug/l	
120-12-7	Anthracene	ND	4.9	0.77	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.74	ug/l	
50-32-8	Benzo(a)pyrene <sup>a</sup>	ND	4.9	0.76	ug/l	
205-99-2	Benzo(b)fluoranthene <sup>a</sup>	ND	4.9	0.75	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.80	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.9	0.83	ug/l	
218-01-9	Chrysene	ND	4.9	0.83	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.78	ug/l	
206-44-0	Fluoranthene <sup>a</sup>	ND	4.9	0.54	ug/l	
86-73-7	Fluorene	ND	4.9	0.68	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene <sup>a</sup>	ND	4.9	0.69	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	0.51	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.58	ug/l	
91-20-3	Naphthalene	ND	4.9	0.49	ug/l	
85-01-8	Phenanthrene	ND	4.9	0.84	ug/l	
129-00-0	Pyrene	ND	4.9	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	95%		42-108%
321-60-8	2-Fluorobiphenyl	107% <sup>b</sup>		40-106%
1718-51-0	Terphenyl-d14	97%		39-121%

(a) Associated BS recovery outside control limits.

(b) Outside control limits. However, sample was ND for referenced target analytes.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-6 GW (5)	
<b>Lab Sample ID:</b> FA50421-6	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988542.D	1	12/29/17 13:46	MM	n/a	n/a	VJ5789
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-6 GW (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	FA50421-6	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	1217000450 Issaquah, WA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.30	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide <sup>a</sup>	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%
17060-07-0	1,2-Dichloroethane-D4	108%		79-125%
2037-26-5	Toluene-D8	97%		85-112%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-6 GW (5)	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50421-6	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B	
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		83-118%

(a) Associated CCV outside of control limits low.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-6 GW (5)	
<b>Lab Sample ID:</b> FA50421-6	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057948.D	1	12/27/17 18:47	MV	12/26/17 13:00	OP68206	SX2431
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.9	0.61	ug/l	
208-96-8	Acenaphthylene <sup>a</sup>	ND	4.9	0.63	ug/l	
120-12-7	Anthracene	ND	4.9	0.78	ug/l	
56-55-3	Benzo(a)anthracene	ND	4.9	0.75	ug/l	
50-32-8	Benzo(a)pyrene <sup>a</sup>	ND	4.9	0.77	ug/l	
205-99-2	Benzo(b)fluoranthene <sup>a</sup>	ND	4.9	0.76	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.81	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.9	0.84	ug/l	
218-01-9	Chrysene	ND	4.9	0.83	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.79	ug/l	
206-44-0	Fluoranthene <sup>a</sup>	ND	4.9	0.54	ug/l	
86-73-7	Fluorene	ND	4.9	0.69	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene <sup>a</sup>	ND	4.9	0.70	ug/l	
90-12-0	1-Methylnaphthalene	ND	4.9	0.51	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.9	0.59	ug/l	
91-20-3	Naphthalene	ND	4.9	0.49	ug/l	
85-01-8	Phenanthrene	ND	4.9	0.85	ug/l	
129-00-0	Pyrene	ND	4.9	0.67	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		42-108%
321-60-8	2-Fluorobiphenyl	87%		40-106%
1718-51-0	Terphenyl-d14	83%		39-121%

(a) Associated BS recovery outside control limits.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-7 GW (6)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50421-7		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> 1217000450 Issaquah, WA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J0988543.D	1	12/29/17 14:10	MM	n/a	n/a	VJ5789
Run #2							

Run #1	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-7 GW (6)	
<b>Lab Sample ID:</b> FA50421-7	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated CCV outside of control limits low.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-7 GW (6)	
<b>Lab Sample ID:</b> FA50421-7	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057949.D	1	12/27/17 19:12	MV	12/26/17 13:00	OP68206	SX2431
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1010 ml	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	0.62	ug/l	
208-96-8	Acenaphthylene <sup>a</sup>	ND	5.0	0.63	ug/l	
120-12-7	Anthracene	ND	5.0	0.79	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.75	ug/l	
50-32-8	Benzo(a)pyrene <sup>a</sup>	ND	5.0	0.78	ug/l	
205-99-2	Benzo(b)fluoranthene <sup>a</sup>	ND	5.0	0.77	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.81	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.85	ug/l	
218-01-9	Chrysene	ND	5.0	0.84	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.80	ug/l	
206-44-0	Fluoranthene <sup>a</sup>	ND	5.0	0.55	ug/l	
86-73-7	Fluorene	ND	5.0	0.69	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene <sup>a</sup>	ND	5.0	0.71	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.52	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.59	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.86	ug/l	
129-00-0	Pyrene	ND	5.0	0.68	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	90%		42-108%
321-60-8	2-Fluorobiphenyl	103%		40-106%
1718-51-0	Terphenyl-d14	105%		39-121%

(a) Associated BS recovery outside control limits.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound





## Report of Analysis

<b>Client Sample ID:</b> B-8 GW (3)	<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> FA50421-8	<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B	
<b>Project:</b> 1217000450 Issaquah, WA	

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%		83-118%

(a) Associated CCV outside of control limits low.

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> B-8 GW (3)	
<b>Lab Sample ID:</b> FA50421-8	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 12/21/17
<b>Method:</b> SW846 8270D SW846 3510C	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450 Issaquah, WA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057950.D	1	12/27/17 19:37	MV	12/26/17 13:00	OP68206	SX2431
Run #2							

Run #1	Initial Volume	Final Volume
Run #1	1010 ml	1.0 ml
Run #2		

### BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	0.62	ug/l	
208-96-8	Acenaphthylene <sup>a</sup>	ND	5.0	0.63	ug/l	
120-12-7	Anthracene	ND	5.0	0.79	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.75	ug/l	
50-32-8	Benzo(a)pyrene <sup>a</sup>	ND	5.0	0.78	ug/l	
205-99-2	Benzo(b)fluoranthene <sup>a</sup>	ND	5.0	0.77	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.81	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.85	ug/l	
218-01-9	Chrysene	ND	5.0	0.84	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.80	ug/l	
206-44-0	Fluoranthene <sup>a</sup>	ND	5.0	0.55	ug/l	
86-73-7	Fluorene	ND	5.0	0.69	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene <sup>a</sup>	ND	5.0	0.71	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.52	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.59	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.86	ug/l	
129-00-0	Pyrene	ND	5.0	0.68	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		42-108%
321-60-8	2-Fluorobiphenyl	90%		40-106%
1718-51-0	Terphenyl-d14	97%		39-121%

(a) Associated BS recovery outside control limits.

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound



Misc. Forms

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Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



ACCUTEST

# CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131  
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest NC Job # <b>FA50421</b>

Client / Reporting Information				Project Information										Requested Analysis					Matrix Codes														
Company Name <b>EBI</b>				Project Name: <b>1217000450 / Issaquah, WA</b>										<b>VOCs (8260)</b> <b>PAHs (8270)</b> <b>TPH-DRO/ORO (8015)</b> <b>PCBs (8082)</b> <b>RCRA 8 Metals (6010)</b>					WW- Wastewater GW- Ground Water SW- Surface Water SO- Soil OI-OI WP-Wipe LIQ - Non-aqueous Liquid AIR DW- Drinking Water (Perchlorate Only)														
Address <b>21 B Street</b>				Street <b>Issaquah Washington</b>																													
City <b>Burlington</b>		State <b>MA</b>		Zip <b>01803</b>		City <b>Issaquah</b>		State <b>Washington</b>																									
Project Contact: <b>Chad Bechtel / Ryan Deutsch</b>				Project # <b>1217000450</b>																													
Phone #				EMAIL:																													
Sampler's Name <b>Chad Bechtel</b>				Client Purchase Order #																													
SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	PC	MUCH	MUCB	MUCG	MUCD	MUCF	MUCG	MUCH	MUCI	MUCJ	MUCK	MUCM	MUCN	MUCO	MUCP	MUCQ	MUCR	MUCS	MUCU	MUCV	MUCW	MUCX	MUCY	MUCZ	LAB USE ONLY		
1	R-1 GW (6)	12/20/17	1245	CB	GW	6																											
2	R-2 GW (6)		1220			5																											
3	R-3 GW (6)		1310																														
4	R-4 GW (6)		1145																														
5	R-5 GW (6)		1115																														
6	R-6 GW (5)		6930																														
7	R-7 GW (6)		1610																														
8	R-8 GW (3)		1650																														

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FA50421: Chain of Custody

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# SGS Accutest Sample Receipt Summary

Job Number: FA50421

Client: EBI

Project: ISSAQUAH,WA

Date / Time Received: 12/21/2017 11:15:00 AM

Delivery Method: FX

Airbill #'s: 8121 8849 8268

Therm ID: IR 1;                      Therm CF: 0.4;                      # of Coolers: 2  
 Cooler Temps (Raw Measured) °C: Cooler 1: (3.6); Cooler 2: (3.8);  
 Cooler Temps (Corrected) °C: Cooler 1: (4.0); Cooler 2: (4.2);

**Cooler Information**

Y or N

- 1. Custody Seals Present
- 2. Custody Seals Intact
- 3. Temp criteria achieved
- 4. Cooler temp verification   IR Gun
- 5. Cooler media                Ice (Bag)

**Trip Blank Information**

Y or N    N/A

- 1. Trip Blank present / cooler
  - 2. Trip Blank listed on COC
- W or S    N/A
- 3. Type Of TB Received

**Sample Information**

Y or N    N/A

- 1. Sample labels present on bottles
- 2. Samples preserved properly
- 3. Sufficient volume/containers recvd for analysis:
- 4. Condition of sample                    Intact
- 5. Sample recvd within HT
- 6. Dates/Times/IDs on COC match Sample Label
- 7. VOCs have headspace
- 8. Bottles received for unspecified tests
- 9. Compositing instructions clear
- 10. Voa Soil Kits/Jars received past 48hrs?
- 11. % Solids Jar received?
- 12. Residual Chlorine Present?

**Misc. Information**

Number of Encores: 25-Gram \_\_\_\_\_ 5-Gram \_\_\_\_\_      Number of 5035 Field Kits: \_\_\_\_\_      Number of Lab Filtered Metals: \_\_\_\_\_  
 Test Strip Lot #:            pH 0-3      230315                      pH 10-12      219813A                      Other: (Specify) \_\_\_\_\_  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Comments

SM001  
Rev. Date 05/24/17

Technician: JORGE C

Date: 12/21/2017 11:15:00

Reviewer: BR

Date: 12/21/2017

**FA50421: Chain of Custody**

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## MS Volatiles

### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5789-MB	J0988534.D	1	12/29/17	MM	n/a	n/a	VJ5789

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.31	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.37	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.45	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.41	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.0	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.23	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.24	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.31	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.36	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.67	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.22	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.31	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.28	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.28	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.32	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.22	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.34	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.32	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.22	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.43	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.31	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.24	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.29	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.36	ug/l	

## Method Blank Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5789-MB	J0988534.D	1	12/29/17	MM	n/a	n/a	VJ5789

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	2.0	0.30	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.22	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.21	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.59	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
74-95-3	Methylene Bromide	ND	2.0	0.37	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.23	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.29	ug/l	
100-42-5	Styrene	ND	1.0	0.22	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.28	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.22	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.61	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.47	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.35	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.63	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.32	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.27	ug/l	
108-05-4	Vinyl Acetate	ND	10	2.0	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.41	ug/l	
	m,p-Xylene	ND	2.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	99%	83-118%
17060-07-0	1,2-Dichloroethane-D4	107%	79-125%

## Method Blank Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5789-MB	J0988534.D	1	12/29/17	MM	n/a	n/a	VJ5789

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	96% 85-112%
460-00-4	4-Bromofluorobenzene	95% 83-118%

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# Blank Spike Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5789-BS	J0988533.D	1	12/29/17	MM	n/a	n/a	VJ5789

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	132	106	50-147
71-43-2	Benzene	25	27.1	108	81-122
108-86-1	Bromobenzene	25	26.9	108	80-121
74-97-5	Bromochloromethane	25	27.6	110	76-123
75-27-4	Bromodichloromethane	25	27.8	111	79-123
75-25-2	Bromoform	25	22.7	91	66-123
78-93-3	2-Butanone (MEK)	125	136	109	56-143
104-51-8	n-Butylbenzene	25	29.2	117	79-126
135-98-8	sec-Butylbenzene	25	28.3	113	83-133
98-06-6	tert-Butylbenzene	25	27.6	110	80-133
75-15-0	Carbon Disulfide	25	29.1	116	66-148
56-23-5	Carbon Tetrachloride	25	28.4	114	76-136
108-90-7	Chlorobenzene	25	26.8	107	82-124
75-00-3	Chloroethane	25	27.4	110	62-144
67-66-3	Chloroform	25	27.2	109	80-124
95-49-8	o-Chlorotoluene	25	27.3	109	81-127
106-43-4	p-Chlorotoluene	25	27.5	110	83-130
124-48-1	Dibromochloromethane	25	24.7	99	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	24.1	96	64-123
106-93-4	1,2-Dibromoethane	25	27.9	112	75-120
75-71-8	Dichlorodifluoromethane	25	30.9	124	42-167
95-50-1	1,2-Dichlorobenzene	25	27.0	108	82-124
541-73-1	1,3-Dichlorobenzene	25	27.8	111	84-125
106-46-7	1,4-Dichlorobenzene	25	26.7	107	78-120
75-34-3	1,1-Dichloroethane	25	28.3	113	81-122
107-06-2	1,2-Dichloroethane	25	26.4	106	75-125
75-35-4	1,1-Dichloroethylene	25	28.7	115	78-137
156-59-2	cis-1,2-Dichloroethylene	25	28.6	114	78-120
156-60-5	trans-1,2-Dichloroethylene	25	29.0	116	76-127
78-87-5	1,2-Dichloropropane	25	26.8	107	76-124
142-28-9	1,3-Dichloropropane	25	25.2	101	80-118
594-20-7	2,2-Dichloropropane	25	27.9	112	74-139
563-58-6	1,1-Dichloropropene	25	28.5	114	79-131
10061-01-5	cis-1,3-Dichloropropene	25	25.7	103	75-118
10061-02-6	trans-1,3-Dichloropropene	25	25.6	102	80-120
100-41-4	Ethylbenzene	25	26.4	106	81-121

\* = Outside of Control Limits.



# Blank Spike Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5789-BS	J0988533.D	1	12/29/17	MM	n/a	n/a	VJ5789

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	28.6	114	75-142
591-78-6	2-Hexanone	125	129	103	61-129
98-82-8	Isopropylbenzene	25	28.9	116	83-132
99-87-6	p-Isopropyltoluene	25	29.5	118	79-130
74-83-9	Methyl Bromide	25	22.9	92	59-143
74-87-3	Methyl Chloride	25	26.7	107	50-159
74-95-3	Methylene Bromide	25	28.0	112	78-119
75-09-2	Methylene Chloride	25	29.1	116	69-135
108-10-1	4-Methyl-2-pentanone (MIBK)	125	128	102	66-122
1634-04-4	Methyl Tert Butyl Ether	25	26.6	106	72-117
91-20-3	Naphthalene	25	27.4	110	63-132
103-65-1	n-Propylbenzene	25	28.0	112	82-133
100-42-5	Styrene	25	28.2	113	78-119
630-20-6	1,1,1,2-Tetrachloroethane	25	29.0	116	77-122
79-34-5	1,1,2,2-Tetrachloroethane	25	27.3	109	72-120
127-18-4	Tetrachloroethylene	25	27.7	111	76-135
108-88-3	Toluene	25	27.2	109	80-120
87-61-6	1,2,3-Trichlorobenzene	25	27.5	110	68-131
120-82-1	1,2,4-Trichlorobenzene	25	27.0	108	73-129
71-55-6	1,1,1-Trichloroethane	25	27.7	111	75-130
79-00-5	1,1,2-Trichloroethane	25	26.8	107	76-119
79-01-6	Trichloroethylene	25	27.8	111	81-126
75-69-4	Trichlorofluoromethane	25	30.5	122	71-156
96-18-4	1,2,3-Trichloropropane	25	25.3	101	77-120
95-63-6	1,2,4-Trimethylbenzene	25	27.3	109	79-120
108-67-8	1,3,5-Trimethylbenzene	25	28.3	113	79-120
108-05-4	Vinyl Acetate	125	135	108	43-154
75-01-4	Vinyl Chloride	25	27.3	109	69-159
	m,p-Xylene	50	54.3	109	79-126
95-47-6	o-Xylene	25	26.7	107	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%

\* = Outside of Control Limits.

# Blank Spike Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ5789-BS	J0988533.D	1	12/29/17	MM	n/a	n/a	VJ5789

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50382-3MS	J0988555.D	5	12/29/17	MM	n/a	n/a	VJ5789
FA50382-3MSD	J0988556.D	5	12/29/17	MM	n/a	n/a	VJ5789
FA50382-3	J0988537.D	1	12/29/17	MM	n/a	n/a	VJ5789

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Compound	FA50382-3 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	25 U	625	654	105	625	637	102	3	50-147/21
71-43-2	Benzene	1.0 U	125	137	110	125	135	108	1	81-122/14
108-86-1	Bromobenzene	1.0 U	125	126	101	125	130	104	3	80-121/14
74-97-5	Bromochloromethane	1.0 U	125	128	102	125	128	102	0	76-123/14
75-27-4	Bromodichloromethane	1.0 U	125	134	107	125	129	103	4	79-123/19
75-25-2	Bromoform	1.0 U	125	93.6	75	125	93.1	74	1	66-123/21
78-93-3	2-Butanone (MEK)	5.0 U	625	650	104	625	646	103	1	56-143/18
104-51-8	n-Butylbenzene	1.0 U	125	134	107	125	131	105	2	79-126/16
135-98-8	sec-Butylbenzene	1.0 U	125	138	110	125	137	110	1	83-133/16
98-06-6	tert-Butylbenzene	1.0 U	125	133	106	125	133	106	0	80-133/16
75-15-0	Carbon Disulfide	2.0 U	125	127	102	125	113	90	12	66-148/23
56-23-5	Carbon Tetrachloride	1.0 U	125	137	110	125	134	107	2	76-136/23
108-90-7	Chlorobenzene	1.0 U	125	129	103	125	130	104	1	82-124/14
75-00-3	Chloroethane	2.0 U	125	136	109	125	153	122	12	62-144/20
67-66-3	Chloroform	1.0 U	125	134	107	125	139	111	4	80-124/15
95-49-8	o-Chlorotoluene	1.0 U	125	133	106	125	131	105	2	81-127/15
106-43-4	p-Chlorotoluene	1.0 U	125	133	106	125	131	105	2	83-130/15
124-48-1	Dibromochloromethane	1.0 U	125	112	90	125	113	90	1	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U	125	109	87	125	113	90	4	64-123/18
106-93-4	1,2-Dibromoethane	2.0 U	125	130	104	125	132	106	2	75-120/13
75-71-8	Dichlorodifluoromethane	2.0 U	125	132	106	125	140	112	6	42-167/19
95-50-1	1,2-Dichlorobenzene	1.0 U	125	132	106	125	131	105	1	82-124/14
541-73-1	1,3-Dichlorobenzene	1.0 U	125	135	108	125	133	106	1	84-125/14
106-46-7	1,4-Dichlorobenzene	1.0 U	125	127	102	125	129	103	2	78-120/15
75-34-3	1,1-Dichloroethane	1.0 U	125	140	112	125	142	114	1	81-122/15
107-06-2	1,2-Dichloroethane	1.0 U	125	136	109	125	132	106	3	75-125/14
75-35-4	1,1-Dichloroethylene	1.0 U	125	141	113	125	141	113	0	78-137/18
156-59-2	cis-1,2-Dichloroethylene	1.0 U	125	133	106	125	136	109	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	1.0 U	125	145	116	125	140	112	4	76-127/17
78-87-5	1,2-Dichloropropane	1.0 U	125	135	108	125	130	104	4	76-124/14
142-28-9	1,3-Dichloropropane	1.0 U	125	119	95	125	123	98	3	80-118/13
594-20-7	2,2-Dichloropropane	1.0 U	125	118	94	125	118	94	0	74-139/17
563-58-6	1,1-Dichloropropene	1.0 U	125	133	106	125	135	108	1	79-131/16
10061-01-5	cis-1,3-Dichloropropene	1.0 U	125	118	94	125	120	96	2	75-118/23
10061-02-6	trans-1,3-Dichloropropene	1.0 U	125	118	94	125	114	91	3	80-120/22
100-41-4	Ethylbenzene	1.0 U	125	130	104	125	130	104	0	81-121/14

\* = Outside of Control Limits.

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50382-3MS	J0988555.D	5	12/29/17	MM	n/a	n/a	VJ5789
FA50382-3MSD	J0988556.D	5	12/29/17	MM	n/a	n/a	VJ5789
FA50382-3	J0988537.D	1	12/29/17	MM	n/a	n/a	VJ5789

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Compound	FA50382-3 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	2.0 U	125	128	102	125	131	105	2	75-142/19
591-78-6	2-Hexanone	10 U	625	610	98	625	594	95	3	61-129/18
98-82-8	Isopropylbenzene	1.0 U	125	141	113	125	140	112	1	83-132/15
99-87-6	p-Isopropyltoluene	1.0 U	125	142	114	125	141	113	1	79-130/16
74-83-9	Methyl Bromide	2.0 U	125	104	83	125	115	92	10	59-143/19
74-87-3	Methyl Chloride	2.0 U	125	124	99	125	135	108	8	50-159/19
74-95-3	Methylene Bromide	2.0 U	125	137	110	125	143	114	4	78-119/14
75-09-2	Methylene Chloride	5.0 U	125	145	116	125	142	114	2	69-135/16
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0 U	625	617	99	625	607	97	2	66-122/16
1634-04-4	Methyl Tert Butyl Ether	1.0 U	125	121	97	125	122	98	1	72-117/14
91-20-3	Naphthalene	5.0 U	125	126	101	125	126	101	0	63-132/25
103-65-1	n-Propylbenzene	1.0 U	125	135	108	125	134	107	1	82-133/15
100-42-5	Styrene	1.0 U	125	134	107	125	136	109	1	78-119/23
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U	125	135	108	125	134	107	1	77-122/19
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	125	133	106	125	131	105	2	72-120/14
127-18-4	Tetrachloroethylene	1.0 U	125	124	99	125	130	104	5	76-135/16
108-88-3	Toluene	1.0 U	125	131	105	125	131	105	0	80-120/14
87-61-6	1,2,3-Trichlorobenzene	2.0 U	125	125	100	125	127	102	2	68-131/25
120-82-1	1,2,4-Trichlorobenzene	2.0 U	125	125	100	125	125	100	0	73-129/20
71-55-6	1,1,1-Trichloroethane	1.0 U	125	134	107	125	132	106	2	75-130/16
79-00-5	1,1,2-Trichloroethane	1.0 U	125	128	102	125	131	105	2	76-119/14
79-01-6	Trichloroethylene	1.0 U	125	141	113	125	139	111	1	81-126/15
75-69-4	Trichlorofluoromethane	2.0 U	125	147	118	125	150	120	2	71-156/21
96-18-4	1,2,3-Trichloropropane	2.0 U	125	126	101	125	119	95	6	77-120/16
95-63-6	1,2,4-Trimethylbenzene	1.0 U	125	133	106	125	132	106	1	79-120/18
108-67-8	1,3,5-Trimethylbenzene	1.0 U	125	138	110	125	135	108	2	79-120/19
108-05-4	Vinyl Acetate	10 U	625	633	101	625	626	100	1	43-154/14
75-01-4	Vinyl Chloride	1.0 U	125	127	102	125	135	108	6	69-159/18
	m,p-Xylene	2.0 U	250	268	107	250	267	107	0	79-126/15
95-47-6	o-Xylene	1.0 U	125	128	102	125	129	103	1	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA50382-3	Limits
1868-53-7	Dibromofluoromethane	102%	101%	100%	83-118%
17060-07-0	1,2-Dichloroethane-D4	108%	105%	103%	79-125%

\* = Outside of Control Limits.

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA50382-3MS	J0988555.D	5	12/29/17	MM	n/a	n/a	VJ5789
FA50382-3MSD	J0988556.D	5	12/29/17	MM	n/a	n/a	VJ5789
FA50382-3	J0988537.D	1	12/29/17	MM	n/a	n/a	VJ5789

The QC reported here applies to the following samples:

Method: SW846 8260B

FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Surrogate Recoveries	MS	MSD	FA50382-3	Limits
2037-26-5	Toluene-D8	95%	97%	97%	85-112%
460-00-4	4-Bromofluorobenzene	94%	97%	93%	83-118%

\* = Outside of Control Limits.

5.3.1  
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## MS Semi-volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68206-MB	X057940.D	1	12/27/17	MV	12/26/17	OP68206	SX2431

The QC reported here applies to the following samples:

Method: SW846 8270D

FA50421-1, FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	0.63	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.64	ug/l	
120-12-7	Anthracene	ND	5.0	0.80	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.76	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.78	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.78	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.82	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.86	ug/l	
218-01-9	Chrysene	ND	5.0	0.85	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.80	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.55	ug/l	
86-73-7	Fluorene	ND	5.0	0.70	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.71	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	0.53	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.60	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.86	ug/l	
129-00-0	Pyrene	ND	5.0	0.68	ug/l	

CAS No.	Surrogate Recoveries	Limits	
367-12-4	2-Fluorophenol	50%	14-67%
4165-62-2	Phenol-d5	33%	10-50%
118-79-6	2,4,6-Tribromophenol	115%	33-118%
4165-60-0	Nitrobenzene-d5	96%	42-108%
321-60-8	2-Fluorobiphenyl	105%	40-106%
1718-51-0	Terphenyl-d14	111%	39-121%

# Blank Spike Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68206-BS	X057939.D	1	12/27/17	MV	12/26/17	OP68206	SX2431

The QC reported here applies to the following samples:

Method: SW846 8270D

FA50421-1, FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	52.5	105	61-107
208-96-8	Acenaphthylene	50	54.3	109*	60-104
120-12-7	Anthracene	50	49.1	98	65-108
56-55-3	Benzo(a)anthracene	50	54.1	108	66-111
50-32-8	Benzo(a)pyrene	50	54.0	108*	62-107
205-99-2	Benzo(b)fluoranthene	50	57.8	116*	65-114
191-24-2	Benzo(g,h,i)perylene	50	57.5	115	66-116
207-08-9	Benzo(k)fluoranthene	50	55.7	111	65-114
218-01-9	Chrysene	50	53.8	108	66-111
53-70-3	Dibenzo(a,h)anthracene	50	59.1	118	66-119
206-44-0	Fluoranthene	50	53.3	107*	63-106
86-73-7	Fluorene	50	53.5	107	62-108
193-39-5	Indeno(1,2,3-cd)pyrene	50	61.7	123*	64-119
90-12-0	1-Methylnaphthalene	50	45.9	92	53-102
91-57-6	2-Methylnaphthalene	50	45.3	91	51-102
91-20-3	Naphthalene	50	41.1	82	47-100
85-01-8	Phenanthrene	50	52.1	104	66-110
129-00-0	Pyrene	50	53.4	107	64-113

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	44%	14-67%
4165-62-2	Phenol-d5	29%	10-50%
118-79-6	2,4,6-Tribromophenol	108%	33-118%
4165-60-0	Nitrobenzene-d5	90%	42-108%
321-60-8	2-Fluorobiphenyl	98%	40-106%
1718-51-0	Terphenyl-d14	102%	39-121%

\* = Outside of Control Limits.



# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68206-MS	X057942.D	1	12/27/17	MV	12/26/17	OP68206	SX2431
OP68206-MSD	X057943.D	1	12/27/17	MV	12/26/17	OP68206	SX2431
FA50421-1	X057941.D	1	12/27/17	MV	12/26/17	OP68206	SX2431

The QC reported here applies to the following samples:

Method: SW846 8270D

FA50421-1, FA50421-2, FA50421-3, FA50421-4, FA50421-5, FA50421-6, FA50421-7, FA50421-8

CAS No.	Compound	FA50421-1 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	94.3	95.0	101	94.3	109	116*	14	61-107/22
208-96-8	Acenaphthylene	ND	94.3	98.7	105*	94.3	115	122*	15	60-104/22
120-12-7	Anthracene	ND	94.3	97.0	103	94.3	111	118*	13	65-108/20
56-55-3	Benzo(a)anthracene	ND	94.3	111	118*	94.3	127	135*	13	66-111/22
50-32-8	Benzo(a)pyrene	ND	94.3	112	119*	94.3	125	133*	11	62-107/23
205-99-2	Benzo(b)fluoranthene	ND	94.3	118	125*	94.3	141	149*	18	65-114/23
191-24-2	Benzo(g,h,i)perylene	ND	94.3	116	123*	94.3	129	137*	11	66-116/23
207-08-9	Benzo(k)fluoranthene	ND	94.3	118	125*	94.3	126	134*	7	65-114/24
218-01-9	Chrysene	ND	94.3	111	118*	94.3	126	134*	13	66-111/22
53-70-3	Dibenzo(a,h)anthracene	ND	94.3	120	127*	94.3	131	139*	9	66-119/24
206-44-0	Fluoranthene	ND	94.3	111	118*	94.3	125	133*	12	63-106/21
86-73-7	Fluorene	ND	94.3	103	109*	94.3	117	124*	13	62-108/20
193-39-5	Indeno(1,2,3-cd)pyrene	ND	94.3	124	131*	94.3	141	149*	13	64-119/24
90-12-0	1-Methylnaphthalene	ND	94.3	84.0	89	94.3	99.3	105*	17	53-102/27
91-57-6	2-Methylnaphthalene	ND	94.3	82.7	88	94.3	97.8	104*	17	51-102/26
91-20-3	Naphthalene	ND	94.3	77.3	82	94.3	94.6	100	20	47-100/29
85-01-8	Phenanthrene	ND	94.3	104	110	94.3	119	126*	13	66-110/21
129-00-0	Pyrene	ND	94.3	113	120*	94.3	125	133*	10	64-113/23

CAS No.	Surrogate Recoveries	MS	MSD	FA50421-1	Limits
367-12-4	2-Fluorophenol	44%	51%		14-67%
4165-62-2	Phenol-d5	34%	35%		10-50%
118-79-6	2,4,6-Tribromophenol	109%	123% *		33-118%
4165-60-0	Nitrobenzene-d5	78%	99%	83%	42-108%
321-60-8	2-Fluorobiphenyl	92%	104%	86%	40-106%
1718-51-0	Terphenyl-d14	112%	128% *	75%	39-121%

\* = Outside of Control Limits.

## GC/LC Semi-volatiles

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68223-MB	MM48179.D	1	12/27/17	NJ	12/27/17	OP68223	GMM919

The QC reported here applies to the following samples:

Method: SW846 8082A

FA50421-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.10	0.040	ug/l	
11104-28-2	Aroclor 1221	ND	0.10	0.050	ug/l	
11141-16-5	Aroclor 1232	ND	0.10	0.050	ug/l	
53469-21-9	Aroclor 1242	ND	0.10	0.040	ug/l	
12672-29-6	Aroclor 1248	ND	0.10	0.040	ug/l	
11097-69-1	Aroclor 1254	ND	0.10	0.040	ug/l	
11096-82-5	Aroclor 1260	ND	0.10	0.040	ug/l	

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	103%	38-127%
2051-24-3	Decachlorobiphenyl	112%	25-137%

7.1.1  
7

# Method Blank Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68207-MB	JJ018137.D	1	12/27/17	SJL	12/26/17	OP68207	GJJ754

The QC reported here applies to the following samples:

Method: SW846 8015C

FA50421-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.050	0.020	mg/l	
	TPH (> C28-C40)	ND	0.050	0.020	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	114% 50-131%

# Blank Spike Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68223-BS	MM48178.D	1	12/27/17	NJ	12/27/17	OP68223	GMM919

The QC reported here applies to the following samples:

Method: SW846 8082A

FA50421-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	2.4	120	57-122
11096-82-5	Aroclor 1260	2	2.5	125	45-130

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	101%	38-127%
2051-24-3	Decachlorobiphenyl	119%	25-137%

\* = Outside of Control Limits.

# Blank Spike Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68207-BS	JJ018136.D	1	12/27/17	SJL	12/26/17	OP68207	GJJ754

The QC reported here applies to the following samples:

Method: SW846 8015C

FA50421-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH (C10-C28)	1	1.24	124	60-128
	TPH (> C28-C40)	1	1.05	105	51-138

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	100%	50-131%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68223-MS	MM48181.D	1	12/27/17	NJ	12/27/17	OP68223	GMM919
OP68223-MSD	MM48182.D	1	12/27/17	NJ	12/27/17	OP68223	GMM919
FA50421-1	MM48180.D	1	12/27/17	NJ	12/27/17	OP68223	GMM919

The QC reported here applies to the following samples:

Method: SW846 8082A

FA50421-1

CAS No.	Compound	FA50421-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	3.7	3.9	105	3.7	4.0	108	3	57-122/18
11096-82-5	Aroclor 1260	ND	3.7	4.0	108	3.7	4.0	108	0	45-130/24

CAS No.	Surrogate Recoveries	MS	MSD	FA50421-1	Limits
877-09-8	Tetrachloro-m-xylene	91%	92%	94%	38-127%
2051-24-3	Decachlorobiphenyl	66%	69%	42%	25-137%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** FA50421  
**Account:** EBIMAB EBI Consulting  
**Project:** 1217000450 Issaquah, WA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP68207-MS	JJ018140.D	1	12/27/17	SJL	12/26/17	OP68207	GJJ754
OP68207-MSD	JJ018141.D	1	12/27/17	SJL	12/26/17	OP68207	GJJ754
FA50503-2	JJ018139.D	1	12/27/17	SJL	12/26/17	OP68207	GJJ754

The QC reported here applies to the following samples:

Method: SW846 8015C

FA50421-1

CAS No.	Compound	FA50503-2 mg/l	Spike Q	mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	0.0424	J	2	2.71	133*	2	2.64	130*	3	60-128/33
	TPH (> C28-C40)	0.0366	J	2	2.26	111	2	2.18	107	4	51-138/18

CAS No.	Surrogate Recoveries	MS	MSD	FA50503-2	Limits
84-15-1	o-Terphenyl	104%	101%	103%	50-131%

\* = Outside of Control Limits.

7.3.2  
7



The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

EBI Consulting

1217000450/ Issaquah, WA (AIR)

SGS Job Number: TD14094

Sampling Date: 12/20/17

Report to:

EBI Consulting

cbechtel@ebiconsulting.com  
rdeutsch@ebiconsulting.com; neaundra.wyatt@sgs.com  
ATTN: Chad Bechtel

Total number of pages in report: **107**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez  
Laboratory Director

Client Service contact: Neaundra Wyatt 713-271-4700

Certifications: TX (T104704220-17-27) AR (14-016-0) AZ (AZ0769) FL (E87628)  
KS (E-10366) LA (85695/04004) NJ (TX010) OK (2017-002) VA (8999)

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Test results relate only to samples analyzed.



January 3, 2018

EBI Consulting  
21 B Street  
Burlington, MA 01803

ATTN: Chad Bechtel

RE: SGS job TD14094 Reissue

Dear Mr. Bechtel

The final report has been revised to correct the sample ids per your request via email.

Please feel free to contact me if I can be of further assistance.

Sincerely,

*Neaundra Wyatt*

Neaundra Wyatt  
Project Manager

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## Sample Summary

EBI Consulting

Job No: TD14094

1217000450/ Issaquah, WA (AIR)

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
TD14094-1	12/20/17	10:54	CB	12/21/17	AIR Air	B-1 SV (5)
TD14094-2	12/20/17	10:54	CB	12/21/17	AIR Air	B-2 SV (5)
TD14094-3	12/20/17	10:54	CB	12/21/17	AIR Air	B-3 SV (5)
TD14094-4	12/20/17	11:03	CB	12/21/17	AIR Air	B-4 SV (5)
TD14094-5	12/20/17	11:10	CB	12/21/17	AIR Air	B-5 SV (5)
TD14094-6	12/20/17	12:42	CB	12/21/17	AIR Air	B-6 SV (2)
TD14094-7	12/20/17	11:02	CB	12/21/17	AIR Air	B-7 SV (5)
TD14094-8	12/20/17	12:05	CB	12/21/17	AIR Air	B-8 SV (2)

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** EBI Consulting

**Job No** TD14094

**Site:** 1217000450/ Issaquah, WA (AIR)

**Report Date** 1/2/2018 12:49:10 PM

8 Samples were collected on 12/20/2017 and received intact at Accutest on 12/21/2017 and properly preserved in 1 cooler at 20.1 Deg C. The samples received an Accutest job number of TD14094. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

The canisters used to collect samples for TO-15 analysis were either individually or batch certified as clean to a level of 0.2 ppbv, with the exception of Acetone, Ethanol and Isopropanol which are certified to 1.0 ppbv. Methylene Chloride is certified to 0.4 ppbv. Any sample analyte value below certified ppbv value and above the MDL may be from a canister artifact, but there is currently no B-flag type mechanism to indicate this possibility or that a hit above the MDL and below 0.2 ppbv had been found.

The following compounds are not NELAC certified: Allyl chloride, Acetone, 2-Hexanone, Tetrahydrofuran, Methyl methacrylate, p-Isopropyltoluene, Carbon disulfide, and 1,1 Dibromoethane.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### MS Volatiles By Method TO-15

**Matrix:** AIR **Batch ID:** V1A1066

- All samples were analyzed within the recommended method holding time.
- Sample(s) TD14063-1DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for Duplicate for Carbon disulfide, Dichlorodifluoromethane are outside control limits for sample TD14063-1DUP. High RPD due to sample level below Reporting Limits.

**Matrix:** AIR **Batch ID:** V1A1068

- All samples were analyzed within the recommended method holding time.
- Sample(s) TD14063-1DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

**Matrix:** AIR **Batch ID:** V1A1069

- All samples were analyzed within the recommended method holding time.
- Sample(s) TD14247-4DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for Duplicate for Chloromethane, Propene are outside control limits for sample TD14247-4DUP. High RPD due to sample level below Reporting Limits.

SGS Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used.

## Summary of Hits

**Job Number:** TD14094  
**Account:** EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)  
**Collected:** 12/20/17



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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**TD14094-1      B-1 SV (5)**

Acetone <sup>a</sup>	13.5	1.0	ppbv	TO-15
Dichlorodifluoromethane	2.6	0.50	ppbv	TO-15
Ethanol	2.3	1.0	ppbv	TO-15
Ethylbenzene	1.4	0.50	ppbv	TO-15
Heptane	1.1	0.50	ppbv	TO-15
Hexane	1.8	0.50	ppbv	TO-15
Pentane	2.2	0.50	ppbv	TO-15
Propene	1.1	0.50	ppbv	TO-15
Styrene	2.6	0.50	ppbv	TO-15
1,1,1-Trichloroethane	7.1	0.50	ppbv	TO-15
Tetrachloroethene	64.7	4.0	ppbv	TO-15
Toluene	0.68	0.50	ppbv	TO-15
m,p-Xylene	2.9	0.50	ppbv	TO-15
o-Xylene	0.86	0.50	ppbv	TO-15
Xylenes, Total	3.7	0.50	ppbv	TO-15
Acetone <sup>a</sup>	32.1	2.4	ug/m3	TO-15
Dichlorodifluoromethane	13	2.5	ug/m3	TO-15
Ethanol	4.3	1.9	ug/m3	TO-15
Ethylbenzene	6.1	2.2	ug/m3	TO-15
Heptane	4.5	2.0	ug/m3	TO-15
Hexane	6.3	1.8	ug/m3	TO-15
Pentane	6.5	1.5	ug/m3	TO-15
Propene	1.9	0.86	ug/m3	TO-15
Styrene	11	2.1	ug/m3	TO-15
1,1,1-Trichloroethane	39	2.7	ug/m3	TO-15
Tetrachloroethene	439	27	ug/m3	TO-15
Toluene	2.6	1.9	ug/m3	TO-15
m,p-Xylene	13	2.2	ug/m3	TO-15
o-Xylene	3.7	2.2	ug/m3	TO-15
Xylenes, Total	16	2.2	ug/m3	TO-15

**TD14094-2      B-2 SV (5)**

Acetone <sup>a</sup>	8.7	1.0	ppbv	TO-15
2-Butanone	0.55	0.50	ppbv	TO-15
Dichlorodifluoromethane	3.6	0.50	ppbv	TO-15
Ethanol	16.8	1.0	ppbv	TO-15
Ethylbenzene	0.62	0.50	ppbv	TO-15
Heptane	1.5	0.50	ppbv	TO-15
Hexane	2.9	0.50	ppbv	TO-15
Isopropanol	1.2	1.0	ppbv	TO-15
Pentane	5.7	0.50	ppbv	TO-15
Propene	2.0	0.50	ppbv	TO-15

## Summary of Hits

**Job Number:** TD14094  
**Account:** EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)  
**Collected:** 12/20/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
1,1,1-Trichloroethane		5.0	0.50		ppbv	TO-15
Tetrachloroethene		56.9	4.0		ppbv	TO-15
Toluene		0.73	0.50		ppbv	TO-15
m,p-Xylene		2.8	0.50		ppbv	TO-15
o-Xylene		0.71	0.50		ppbv	TO-15
Xylenes, Total		3.6	0.50		ppbv	TO-15
Acetone <sup>a</sup>		21	2.4		ug/m3	TO-15
2-Butanone		1.6	1.5		ug/m3	TO-15
Dichlorodifluoromethane		18	2.5		ug/m3	TO-15
Ethanol		31.6	1.9		ug/m3	TO-15
Ethylbenzene		2.7	2.2		ug/m3	TO-15
Heptane		6.1	2.0		ug/m3	TO-15
Hexane		10	1.8		ug/m3	TO-15
Isopropanol		2.9	2.5		ug/m3	TO-15
Pentane		17	1.5		ug/m3	TO-15
Propene		3.4	0.86		ug/m3	TO-15
1,1,1-Trichloroethane		27	2.7		ug/m3	TO-15
Tetrachloroethene		386	27		ug/m3	TO-15
Toluene		2.8	1.9		ug/m3	TO-15
m,p-Xylene		12	2.2		ug/m3	TO-15
o-Xylene		3.1	2.2		ug/m3	TO-15
Xylenes, Total		16	2.2		ug/m3	TO-15

**TD14094-3 B-3 SV (5)**

Ethylbenzene		212	80		ppbv	TO-15
Propene		272	80		ppbv	TO-15
m,p-Xylene		840	80		ppbv	TO-15
o-Xylene		429	80		ppbv	TO-15
Xylenes, Total		1270	80		ppbv	TO-15
Ethylbenzene		921	350		ug/m3	TO-15
Propene		467	140		ug/m3	TO-15
m,p-Xylene		3650	350		ug/m3	TO-15
o-Xylene		1860	350		ug/m3	TO-15
Xylenes, Total		5520	350		ug/m3	TO-15

**TD14094-4 B-4 SV (5)**

Acetone <sup>a</sup>		13.2	4.0		ppbv	TO-15
1,3-Butadiene		61.2	4.0		ppbv	TO-15
Benzene		11.6	2.0		ppbv	TO-15
2-Butanone		2.6	2.0		ppbv	TO-15
Carbon disulfide <sup>a</sup>		8.9	2.0		ppbv	TO-15
Chloroform		9.0	2.0		ppbv	TO-15
Cyclohexane		7.7	2.0		ppbv	TO-15

## Summary of Hits

**Job Number:** TD14094  
**Account:** EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)  
**Collected:** 12/20/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
cis-1,2-Dichloroethene		3.7	2.0		ppbv	TO-15
Heptane		6.7	2.0		ppbv	TO-15
Hexane		26.0	2.0		ppbv	TO-15
Pentane		70.9	2.0		ppbv	TO-15
Propene		800	40		ppbv	TO-15
1,1,1-Trichloroethane		4.4	2.0		ppbv	TO-15
2,2,4-Trimethylpentane		25.1	2.0		ppbv	TO-15
Tetrachloroethene		35.4	2.0		ppbv	TO-15
Toluene		8.3	2.0		ppbv	TO-15
m,p-Xylene		3.6	2.0		ppbv	TO-15
Xylenes, Total		4.8	2.0		ppbv	TO-15
Acetone <sup>a</sup>		31.4	9.5		ug/m3	TO-15
1,3-Butadiene		135	8.8		ug/m3	TO-15
Benzene		37.1	6.4		ug/m3	TO-15
2-Butanone		7.7	5.9		ug/m3	TO-15
Carbon disulfide <sup>a</sup>		28	6.2		ug/m3	TO-15
Chloroform		44	9.8		ug/m3	TO-15
Cyclohexane		27	6.9		ug/m3	TO-15
cis-1,2-Dichloroethene		15	7.9		ug/m3	TO-15
Heptane		27	8.2		ug/m3	TO-15
Hexane		91.6	7.0		ug/m3	TO-15
Pentane		209	5.9		ug/m3	TO-15
Propene		1370	69		ug/m3	TO-15
1,1,1-Trichloroethane		24	11		ug/m3	TO-15
2,2,4-Trimethylpentane		117	9.3		ug/m3	TO-15
Tetrachloroethene		240	14		ug/m3	TO-15
Toluene		31	7.5		ug/m3	TO-15
m,p-Xylene		16	8.7		ug/m3	TO-15
Xylenes, Total		21	8.7		ug/m3	TO-15

**TD14094-5      B-5 SV (5)**

Acetone <sup>a</sup>		8.8	4.0		ppbv	TO-15
1,3-Butadiene		28.7	4.0		ppbv	TO-15
Benzene		8.9	2.0		ppbv	TO-15
2-Butanone		2.1	2.0		ppbv	TO-15
Carbon disulfide <sup>a</sup>		2.2	2.0		ppbv	TO-15
Chloroform		7.2	2.0		ppbv	TO-15
Cyclohexane		5.1	2.0		ppbv	TO-15
Heptane		6.3	2.0		ppbv	TO-15
Hexane		10.3	2.0		ppbv	TO-15
Pentane		25.5	2.0		ppbv	TO-15
Propene		384	16		ppbv	TO-15
Tetrachloroethene		64.2	2.0		ppbv	TO-15
Toluene		6.6	2.0		ppbv	TO-15



## Summary of Hits

**Job Number:** TD14094  
**Account:** EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)  
**Collected:** 12/20/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
m,p-Xylene		2.5	2.0		ppbv	TO-15
Xylenes, Total		3.4	2.0		ppbv	TO-15
Acetone <sup>a</sup>		21	9.5		ug/m3	TO-15
1,3-Butadiene		63.5	8.8		ug/m3	TO-15
Benzene		28	6.4		ug/m3	TO-15
2-Butanone		6.2	5.9		ug/m3	TO-15
Carbon disulfide <sup>a</sup>		6.9	6.2		ug/m3	TO-15
Chloroform		35	9.8		ug/m3	TO-15
Cyclohexane		18	6.9		ug/m3	TO-15
Heptane		26	8.2		ug/m3	TO-15
Hexane		36.3	7.0		ug/m3	TO-15
Pentane		75.1	5.9		ug/m3	TO-15
Propene		660	27		ug/m3	TO-15
Tetrachloroethene		435	14		ug/m3	TO-15
Toluene		25	7.5		ug/m3	TO-15
m,p-Xylene		11	8.7		ug/m3	TO-15
Xylenes, Total		15	8.7		ug/m3	TO-15

**TD14094-6      B-6 SV (2)**

Acetone <sup>a</sup>		60.6	5.0		ppbv	TO-15
1,3-Butadiene		26.3	5.0		ppbv	TO-15
Benzene		8.5	2.5		ppbv	TO-15
2-Butanone		9.7	2.5		ppbv	TO-15
Carbon disulfide <sup>a</sup>		5.8	2.5		ppbv	TO-15
Cyclohexane		6.6	2.5		ppbv	TO-15
Heptane		6.4	2.5		ppbv	TO-15
Hexane		18.5	2.5		ppbv	TO-15
Pentane		39.8	2.5		ppbv	TO-15
Propene		351	13		ppbv	TO-15
2,2,4-Trimethylpentane		167	5.0		ppbv	TO-15
Toluene		4.9	2.5		ppbv	TO-15
Acetone <sup>a</sup>		144	12		ug/m3	TO-15
1,3-Butadiene		58.2	11		ug/m3	TO-15
Benzene		27	8.0		ug/m3	TO-15
2-Butanone		29	7.4		ug/m3	TO-15
Carbon disulfide <sup>a</sup>		18	7.8		ug/m3	TO-15
Cyclohexane		23	8.6		ug/m3	TO-15
Heptane		26	10		ug/m3	TO-15
Hexane		65.2	8.8		ug/m3	TO-15
Pentane		117	7.4		ug/m3	TO-15
Propene		603	22		ug/m3	TO-15
2,2,4-Trimethylpentane		780	23		ug/m3	TO-15
Toluene		18	9.4		ug/m3	TO-15

## Summary of Hits

**Job Number:** TD14094  
**Account:** EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)  
**Collected:** 12/20/17



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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**TD14094-7      B-7 SV (5)**

1,3-Butadiene	83.4	16			ppbv	TO-15
Benzene	20.7	8.0			ppbv	TO-15
Chloroform	15.1	8.0			ppbv	TO-15
Cyclohexane	9.5	8.0			ppbv	TO-15
Hexane	20.8	8.0			ppbv	TO-15
Pentane	75.9	8.0			ppbv	TO-15
Propene	1950	80			ppbv	TO-15
Toluene	27.8	8.0			ppbv	TO-15
m,p-Xylene	8.1	8.0			ppbv	TO-15
Xylenes, Total	10.9	8.0			ppbv	TO-15
1,3-Butadiene	185	35			ug/m3	TO-15
Benzene	66.1	26			ug/m3	TO-15
Chloroform	73.7	39			ug/m3	TO-15
Cyclohexane	33	28			ug/m3	TO-15
Hexane	73.3	28			ug/m3	TO-15
Pentane	224	24			ug/m3	TO-15
Propene	3350	140			ug/m3	TO-15
Toluene	105	30			ug/m3	TO-15
m,p-Xylene	35	35			ug/m3	TO-15
Xylenes, Total	47.3	35			ug/m3	TO-15

**TD14094-8      B-8 SV (2)**

Acetone <sup>a</sup>	18.8	4.0			ppbv	TO-15
1,3-Butadiene	32.1	4.0			ppbv	TO-15
Benzene	7.8	2.0			ppbv	TO-15
2-Butanone	3.5	2.0			ppbv	TO-15
Carbon disulfide <sup>a</sup>	3.5	2.0			ppbv	TO-15
Heptane	2.2	2.0			ppbv	TO-15
Hexane	5.8	2.0			ppbv	TO-15
Pentane	19.6	2.0			ppbv	TO-15
Propene	367	13			ppbv	TO-15
Toluene	4.2	2.0			ppbv	TO-15
Acetone <sup>a</sup>	44.7	9.5			ug/m3	TO-15
1,3-Butadiene	71.0	8.8			ug/m3	TO-15
Benzene	25	6.4			ug/m3	TO-15
2-Butanone	10	5.9			ug/m3	TO-15
Carbon disulfide <sup>a</sup>	11	6.2			ug/m3	TO-15
Heptane	9.0	8.2			ug/m3	TO-15
Hexane	20	7.0			ug/m3	TO-15
Pentane	57.7	5.9			ug/m3	TO-15
Propene	630	22			ug/m3	TO-15
Toluene	16	7.5			ug/m3	TO-15

## Summary of Hits

**Job Number:** TD14094  
**Account:** EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)  
**Collected:** 12/20/17



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Analyte						

(a) Not NELAC certified.

Sample Results

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Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b>	B-1 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-1	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0176	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A1712387.D	1	12/24/17 03:44	KS	n/a	n/a	V1A1066
Run #2	1A1712403.D	8	12/24/17 14:09	KS	n/a	n/a	V1A1066

Run #	Initial Volume
Run #1	400 ml
Run #2	400 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone <sup>a</sup>	13.5	1.0	ppbv		32.1	2.4	ug/m3
107-02-8	56	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	53	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	76.53	Allyl chloride <sup>a</sup>	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	78.11	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	72.11	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	76.14	Carbon disulfide <sup>a</sup>	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	119.4	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	50.49	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	96.94	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	187.9	1,1-Dibromoethane <sup>a</sup>	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	88	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	2.6	0.50	ppbv		13	2.5	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-1 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-1	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0176	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
95-50-1	147	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	147	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	147	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
76-14-2	170.9	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	46	Ethanol	2.3	1.0	ppbv		4.3	1.9	ug/m3
100-41-4	106.2	Ethylbenzene	1.4	0.50	ppbv		6.1	2.2	ug/m3
141-78-6	88	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	102	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	100.2	Heptane	1.1	0.50	ppbv		4.5	2.0	ug/m3
87-68-3	260.8	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	86.17	Hexane	1.8	0.50	ppbv		6.3	1.8	ug/m3
591-78-6	100	2-Hexanone <sup>a</sup>	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	60	Isopropanol	ND	1.0	ppbv		ND	2.5	ug/m3
99-87-6	134	p-Isopropyltoluene <sup>a</sup>	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
108-10-1	100.2	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	88.15	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	100	Methyl methacrylate <sup>a</sup>	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	128.17	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	72	Pentane	2.2	0.50	ppbv		6.5	1.5	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	42	Propene	1.1	0.50	ppbv		1.9	0.86	ug/m3
100-42-5	104.1	Styrene	2.6	0.50	ppbv		11	2.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	7.1	0.50	ppbv		39	2.7	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	187.4	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	74.12	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	102	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	165.8	Tetrachloroethene	64.7 <sup>b</sup>	4.0	ppbv		439 <sup>b</sup>	27	ug/m3
109-99-9	72	Tetrahydrofuran <sup>a</sup>	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	92.14	Toluene	0.68	0.50	ppbv		2.6	1.9	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-1 SV (5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> TD14094-1		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AIR - Air Summa ID: 0176		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> 1217000450/ Issaquah, WA (AIR)		

**VOA TO15 List**

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	131.4	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	86	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	106.9	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	106.2	m,p-Xylene	2.9	0.50	ppbv		13	2.2	ug/m3
95-47-6	106.2	o-Xylene	0.86	0.50	ppbv		3.7	2.2	ug/m3
1330-20-7	106.2	Xylenes, Total	3.7	0.50	ppbv		16	2.2	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%	96%	65-128%

- (a) Not NELAC certified.
- (b) Result is from Run# 2

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

<b>Client Sample ID:</b>	B-2 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-2	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0179	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A1712388.D	1	12/24/17 04:34	KS	n/a	n/a	V1A1066
Run #2	1A1712404.D	8	12/24/17 14:49	KS	n/a	n/a	V1A1066

Run #	Initial Volume
Run #1	400 ml
Run #2	400 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone <sup>a</sup>	8.7	1.0	ppbv		21	2.4	ug/m3
107-02-8	56	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	53	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	76.53	Allyl chloride <sup>a</sup>	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	78.11	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	72.11	2-Butanone	0.55	0.50	ppbv		1.6	1.5	ug/m3
104-51-8	134	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	134	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	76.14	Carbon disulfide <sup>a</sup>	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	119.4	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	50.49	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	96.94	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	187.9	1,1-Dibromoethane <sup>a</sup>	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	88	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	3.6	0.50	ppbv		18	2.5	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	B-2 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-2	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0179	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
95-50-1	147	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	147	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	147	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
76-14-2	170.9	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	46	Ethanol	16.8	1.0	ppbv		31.6	1.9	ug/m3
100-41-4	106.2	Ethylbenzene	0.62	0.50	ppbv		2.7	2.2	ug/m3
141-78-6	88	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	102	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	100.2	Heptane	1.5	0.50	ppbv		6.1	2.0	ug/m3
87-68-3	260.8	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	86.17	Hexane	2.9	0.50	ppbv		10	1.8	ug/m3
591-78-6	100	2-Hexanone <sup>a</sup>	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	120	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	60	Isopropanol	1.2	1.0	ppbv		2.9	2.5	ug/m3
99-87-6	134	p-Isopropyltoluene <sup>a</sup>	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.50	ppbv		ND	1.7	ug/m3
108-10-1	100.2	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	88.15	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	100	Methyl methacrylate <sup>a</sup>	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	128.17	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	72	Pentane	5.7	0.50	ppbv		17	1.5	ug/m3
103-65-1	120	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	42	Propene	2.0	0.50	ppbv		3.4	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	5.0	0.50	ppbv		27	2.7	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	187.4	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	74.12	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	102	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	165.8	Tetrachloroethene	56.9 <sup>b</sup>	4.0	ppbv		386 <sup>b</sup>	27	ug/m3
109-99-9	72	Tetrahydrofuran <sup>a</sup>	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	92.14	Toluene	0.73	0.50	ppbv		2.8	1.9	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-2 SV (5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> TD14094-2		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AIR - Air Summa ID: 0179		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> 1217000450/ Issaquah, WA (AIR)		

**VOA TO15 List**

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	131.4	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	86	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	106.9	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	106.2	m,p-Xylene	2.8	0.50	ppbv		12	2.2	ug/m3
95-47-6	106.2	o-Xylene	0.71	0.50	ppbv		3.1	2.2	ug/m3
1330-20-7	106.2	Xylenes, Total	3.6	0.50	ppbv		16	2.2	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%	95%	65-128%

- (a) Not NELAC certified.
- (b) Result is from Run# 2

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.2  
4

## Report of Analysis

<b>Client Sample ID:</b>	B-3 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-3	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0043	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A1712458.D	160	12/27/17 15:56	KS	n/a	n/a	V1A1069
Run #2							

Run #1	Initial Volume
Run #1	400 ml
Run #2	

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone <sup>a</sup>	ND	160	ppbv		ND	380	ug/m3
107-02-8	56	Acrolein	ND	80	ppbv		ND	180	ug/m3
107-13-1	53	Acrylonitrile	ND	80	ppbv		ND	170	ug/m3
107-05-1	76.53	Allyl chloride <sup>a</sup>	ND	160	ppbv		ND	500	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	160	ppbv		ND	350	ug/m3
71-43-2	78.11	Benzene	ND	80	ppbv		ND	260	ug/m3
100-44-7	126	Benzyl Chloride	ND	80	ppbv		ND	410	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	80	ppbv		ND	540	ug/m3
75-25-2	252.8	Bromoform	ND	80	ppbv		ND	830	ug/m3
74-83-9	94.94	Bromomethane	ND	80	ppbv		ND	310	ug/m3
78-93-3	72.11	2-Butanone	ND	80	ppbv		ND	240	ug/m3
104-51-8	134	n-Butylbenzene	ND	80	ppbv		ND	440	ug/m3
135-98-8	134	sec-Butylbenzene	ND	80	ppbv		ND	440	ug/m3
75-15-0	76.14	Carbon disulfide <sup>a</sup>	ND	80	ppbv		ND	250	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	80	ppbv		ND	500	ug/m3
108-90-7	112.6	Chlorobenzene	ND	80	ppbv		ND	370	ug/m3
75-00-3	64.52	Chloroethane	ND	80	ppbv		ND	210	ug/m3
67-66-3	119.4	Chloroform	ND	80	ppbv		ND	390	ug/m3
74-87-3	50.49	Chloromethane	ND	80	ppbv		ND	170	ug/m3
110-82-7	84.16	Cyclohexane	ND	80	ppbv		ND	280	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	80	ppbv		ND	680	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	80	ppbv		ND	320	ug/m3
75-35-4	96.94	1,1-Dichloroethene	ND	80	ppbv		ND	320	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	80	ppbv		ND	610	ug/m3
557-91-5	187.9	1,1-Dibromoethane <sup>a</sup>	ND	80	ppbv		ND	610	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	80	ppbv		ND	320	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	80	ppbv		ND	370	ug/m3
123-91-1	88	1,4-Dioxane	ND	80	ppbv		ND	290	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	80	ppbv		ND	400	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethene	ND	80	ppbv		ND	320	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethene	ND	80	ppbv		ND	320	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	80	ppbv		ND	360	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-3 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-3	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0043	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
95-50-1	147	1,2-Dichlorobenzene	ND	80	ppbv		ND	480	ug/m3
541-73-1	147	1,3-Dichlorobenzene	ND	80	ppbv		ND	480	ug/m3
106-46-7	147	1,4-Dichlorobenzene	ND	80	ppbv		ND	480	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	80	ppbv		ND	360	ug/m3
76-14-2	170.9	1,2-Dichlorotetrafluoroethane	ND	80	ppbv		ND	560	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	160	ppbv		ND	670	ug/m3
64-17-5	46	Ethanol	ND	160	ppbv		ND	300	ug/m3
100-41-4	106.2	Ethylbenzene	212	80	ppbv		921	350	ug/m3
141-78-6	88	Ethyl Acetate	ND	80	ppbv		ND	290	ug/m3
637-92-3	102	Ethyl tert-Butyl Ether	ND	160	ppbv		ND	670	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	160	ppbv		ND	790	ug/m3
142-82-5	100.2	Heptane	ND	80	ppbv		ND	330	ug/m3
87-68-3	260.8	Hexachloro-1,3-butadiene	ND	80	ppbv		ND	850	ug/m3
110-54-3	86.17	Hexane	ND	80	ppbv		ND	280	ug/m3
591-78-6	100	2-Hexanone <sup>a</sup>	ND	80	ppbv		ND	330	ug/m3
98-82-8	120	Isopropylbenzene	ND	80	ppbv		ND	390	ug/m3
67-63-0	60	Isopropanol	ND	160	ppbv		ND	390	ug/m3
99-87-6	134	p-Isopropyltoluene <sup>a</sup>	ND	80	ppbv		ND	440	ug/m3
75-09-2	84.94	Methylene chloride	ND	80	ppbv		ND	280	ug/m3
108-10-1	100.2	4-Methyl-2-pentanone	ND	80	ppbv		ND	330	ug/m3
1634-04-4	88.15	Methyl Tert-Butyl Ether	ND	80	ppbv		ND	290	ug/m3
80-62-6	100	Methyl methacrylate <sup>a</sup>	ND	80	ppbv		ND	330	ug/m3
91-20-3	128.17	Naphthalene	ND	80	ppbv		ND	420	ug/m3
109-66-0	72	Pentane	ND	80	ppbv		ND	240	ug/m3
103-65-1	120	n-Propylbenzene	ND	80	ppbv		ND	390	ug/m3
115-07-1	42	Propene	272	80	ppbv		467	140	ug/m3
100-42-5	104.1	Styrene	ND	80	ppbv		ND	340	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	80	ppbv		ND	550	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	80	ppbv		ND	440	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	80	ppbv		ND	440	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	80	ppbv		ND	590	ug/m3
76-13-1	187.4	1,1,2-Trichlorotrifluoroethane	ND	80	ppbv		ND	610	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	80	ppbv		ND	390	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	80	ppbv		ND	390	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	80	ppbv		ND	370	ug/m3
75-65-0	74.12	t-Butyl Alcohol	ND	160	ppbv		ND	490	ug/m3
994-05-8	102	tert Amyl Methyl Ether	ND	160	ppbv		ND	670	ug/m3
127-18-4	165.8	Tetrachloroethene	ND	80	ppbv		ND	540	ug/m3
109-99-9	72	Tetrahydrofuran <sup>a</sup>	ND	80	ppbv		ND	240	ug/m3
108-88-3	92.14	Toluene	ND	80	ppbv		ND	300	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-3 SV (5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> TD14094-3		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AIR - Air Summa ID: 0043		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> 1217000450/ Issaquah, WA (AIR)		

**VOA TO15 List**

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	131.4	Trichloroethene	ND	80	ppbv		ND	430	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	80	ppbv		ND	450	ug/m3
108-05-4	86	Vinyl acetate	ND	80	ppbv		ND	280	ug/m3
593-60-2	106.9	Vinyl Bromide	ND	80	ppbv		ND	350	ug/m3
75-01-4	62.5	Vinyl chloride	ND	80	ppbv		ND	200	ug/m3
	106.2	m,p-Xylene	840	80	ppbv		3650	350	ug/m3
95-47-6	106.2	o-Xylene	429	80	ppbv		1860	350	ug/m3
1330-20-7	106.2	Xylenes, Total	1270	80	ppbv		5520	350	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	112%		65-128%

(a) Not NELAC certified.

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.3  
4

## Report of Analysis

<b>Client Sample ID:</b>	B-4 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-4	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0157	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A1712389.D	4	12/24/17 05:14	KS	n/a	n/a	V1A1066
Run #2	1A1712441.D	80	12/26/17 20:04	KS	n/a	n/a	V1A1068

Run #	Initial Volume
Run #1	400 ml
Run #2	400 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone <sup>a</sup>	13.2	4.0	ppbv		31.4	9.5	ug/m3
107-02-8	56	Acrolein	ND	2.0	ppbv		ND	4.6	ug/m3
107-13-1	53	Acrylonitrile	ND	2.0	ppbv		ND	4.3	ug/m3
107-05-1	76.53	Allyl chloride <sup>a</sup>	ND	4.0	ppbv		ND	13	ug/m3
106-99-0	54.09	1,3-Butadiene	61.2	4.0	ppbv		135	8.8	ug/m3
71-43-2	78.11	Benzene	11.6	2.0	ppbv		37.1	6.4	ug/m3
100-44-7	126	Benzyl Chloride	ND	2.0	ppbv		ND	10	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	2.0	ppbv		ND	13	ug/m3
75-25-2	252.8	Bromoform	ND	2.0	ppbv		ND	21	ug/m3
74-83-9	94.94	Bromomethane	ND	2.0	ppbv		ND	7.8	ug/m3
78-93-3	72.11	2-Butanone	2.6	2.0	ppbv		7.7	5.9	ug/m3
104-51-8	134	n-Butylbenzene	ND	2.0	ppbv		ND	11	ug/m3
135-98-8	134	sec-Butylbenzene	ND	2.0	ppbv		ND	11	ug/m3
75-15-0	76.14	Carbon disulfide <sup>a</sup>	8.9	2.0	ppbv		28	6.2	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	2.0	ppbv		ND	13	ug/m3
108-90-7	112.6	Chlorobenzene	ND	2.0	ppbv		ND	9.2	ug/m3
75-00-3	64.52	Chloroethane	ND	2.0	ppbv		ND	5.3	ug/m3
67-66-3	119.4	Chloroform	9.0	2.0	ppbv		44	9.8	ug/m3
74-87-3	50.49	Chloromethane	ND	2.0	ppbv		ND	4.1	ug/m3
110-82-7	84.16	Cyclohexane	7.7	2.0	ppbv		27	6.9	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	2.0	ppbv		ND	17	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	2.0	ppbv		ND	8.1	ug/m3
75-35-4	96.94	1,1-Dichloroethene	ND	2.0	ppbv		ND	7.9	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	2.0	ppbv		ND	15	ug/m3
557-91-5	187.9	1,1-Dibromoethane <sup>a</sup>	ND	2.0	ppbv		ND	15	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	2.0	ppbv		ND	8.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	2.0	ppbv		ND	9.2	ug/m3
123-91-1	88	1,4-Dioxane	ND	2.0	ppbv		ND	7.2	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	2.0	ppbv		ND	9.9	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethene	ND	2.0	ppbv		ND	7.9	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethene	3.7	2.0	ppbv		15	7.9	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	2.0	ppbv		ND	9.1	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-4 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-4	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0157	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
95-50-1	147	1,2-Dichlorobenzene	ND	2.0	ppbv		ND	12	ug/m3
541-73-1	147	1,3-Dichlorobenzene	ND	2.0	ppbv		ND	12	ug/m3
106-46-7	147	1,4-Dichlorobenzene	ND	2.0	ppbv		ND	12	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	2.0	ppbv		ND	9.1	ug/m3
76-14-2	170.9	1,2-Dichlorotetrafluoroethane	ND	2.0	ppbv		ND	14	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	4.0	ppbv		ND	17	ug/m3
64-17-5	46	Ethanol	ND	4.0	ppbv		ND	7.5	ug/m3
100-41-4	106.2	Ethylbenzene	ND	2.0	ppbv		ND	8.7	ug/m3
141-78-6	88	Ethyl Acetate	ND	2.0	ppbv		ND	7.2	ug/m3
637-92-3	102	Ethyl tert-Butyl Ether	ND	4.0	ppbv		ND	17	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	4.0	ppbv		ND	20	ug/m3
142-82-5	100.2	Heptane	6.7	2.0	ppbv		27	8.2	ug/m3
87-68-3	260.8	Hexachloro-1,3-butadiene	ND	2.0	ppbv		ND	21	ug/m3
110-54-3	86.17	Hexane	26.0	2.0	ppbv		91.6	7.0	ug/m3
591-78-6	100	2-Hexanone <sup>a</sup>	ND	2.0	ppbv		ND	8.2	ug/m3
98-82-8	120	Isopropylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
67-63-0	60	Isopropanol	ND	4.0	ppbv		ND	9.8	ug/m3
99-87-6	134	p-Isopropyltoluene <sup>a</sup>	ND	2.0	ppbv		ND	11	ug/m3
75-09-2	84.94	Methylene chloride	ND	2.0	ppbv		ND	6.9	ug/m3
108-10-1	100.2	4-Methyl-2-pentanone	ND	2.0	ppbv		ND	8.2	ug/m3
1634-04-4	88.15	Methyl Tert-Butyl Ether	ND	2.0	ppbv		ND	7.2	ug/m3
80-62-6	100	Methyl methacrylate <sup>a</sup>	ND	2.0	ppbv		ND	8.2	ug/m3
91-20-3	128.17	Naphthalene	ND	2.0	ppbv		ND	10	ug/m3
109-66-0	72	Pentane	70.9	2.0	ppbv		209	5.9	ug/m3
103-65-1	120	n-Propylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
115-07-1	42	Propene	800 <sup>b</sup>	40	ppbv		1370 <sup>b</sup>	69	ug/m3
100-42-5	104.1	Styrene	ND	2.0	ppbv		ND	8.5	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	2.0	ppbv		ND	14	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	4.4	2.0	ppbv		24	11	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	2.0	ppbv		ND	11	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	2.0	ppbv		ND	15	ug/m3
76-13-1	187.4	1,1,2-Trichlorotrifluoroethane	ND	2.0	ppbv		ND	15	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	25.1	2.0	ppbv		117	9.3	ug/m3
75-65-0	74.12	t-Butyl Alcohol	ND	4.0	ppbv		ND	12	ug/m3
994-05-8	102	tert Amyl Methyl Ether	ND	4.0	ppbv		ND	17	ug/m3
127-18-4	165.8	Tetrachloroethene	35.4	2.0	ppbv		240	14	ug/m3
109-99-9	72	Tetrahydrofuran <sup>a</sup>	ND	2.0	ppbv		ND	5.9	ug/m3
108-88-3	92.14	Toluene	8.3	2.0	ppbv		31	7.5	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-4 SV (5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> TD14094-4		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AIR - Air Summa ID: 0157		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> 1217000450/ Issaquah, WA (AIR)		

**VOA TO15 List**

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	131.4	Trichloroethene	ND	2.0	ppbv		ND	11	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	2.0	ppbv		ND	11	ug/m3
108-05-4	86	Vinyl acetate	ND	2.0	ppbv		ND	7.0	ug/m3
593-60-2	106.9	Vinyl Bromide	ND	2.0	ppbv		ND	8.7	ug/m3
75-01-4	62.5	Vinyl chloride	ND	2.0	ppbv		ND	5.1	ug/m3
	106.2	m,p-Xylene	3.6	2.0	ppbv		16	8.7	ug/m3
95-47-6	106.2	o-Xylene	ND	2.0	ppbv		ND	8.7	ug/m3
1330-20-7	106.2	Xylenes, Total	4.8	2.0	ppbv		21	8.7	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%	94%	65-128%

- (a) Not NELAC certified.
- (b) Result is from Run# 2

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.4  
4



## Report of Analysis

<b>Client Sample ID:</b>	B-5 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-5	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0131	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A1712392.D	4	12/24/17 07:07	KS	n/a	n/a	V1A1066
Run #2	1A1712391.D	32	12/24/17 06:27	KS	n/a	n/a	V1A1066

Run #	Initial Volume
Run #1	400 ml
Run #2	400 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone <sup>a</sup>	8.8	4.0	ppbv		21	9.5	ug/m3
107-02-8	56	Acrolein	ND	2.0	ppbv		ND	4.6	ug/m3
107-13-1	53	Acrylonitrile	ND	2.0	ppbv		ND	4.3	ug/m3
107-05-1	76.53	Allyl chloride <sup>a</sup>	ND	4.0	ppbv		ND	13	ug/m3
106-99-0	54.09	1,3-Butadiene	28.7	4.0	ppbv		63.5	8.8	ug/m3
71-43-2	78.11	Benzene	8.9	2.0	ppbv		28	6.4	ug/m3
100-44-7	126	Benzyl Chloride	ND	2.0	ppbv		ND	10	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	2.0	ppbv		ND	13	ug/m3
75-25-2	252.8	Bromoform	ND	2.0	ppbv		ND	21	ug/m3
74-83-9	94.94	Bromomethane	ND	2.0	ppbv		ND	7.8	ug/m3
78-93-3	72.11	2-Butanone	2.1	2.0	ppbv		6.2	5.9	ug/m3
104-51-8	134	n-Butylbenzene	ND	2.0	ppbv		ND	11	ug/m3
135-98-8	134	sec-Butylbenzene	ND	2.0	ppbv		ND	11	ug/m3
75-15-0	76.14	Carbon disulfide <sup>a</sup>	2.2	2.0	ppbv		6.9	6.2	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	2.0	ppbv		ND	13	ug/m3
108-90-7	112.6	Chlorobenzene	ND	2.0	ppbv		ND	9.2	ug/m3
75-00-3	64.52	Chloroethane	ND	2.0	ppbv		ND	5.3	ug/m3
67-66-3	119.4	Chloroform	7.2	2.0	ppbv		35	9.8	ug/m3
74-87-3	50.49	Chloromethane	ND	2.0	ppbv		ND	4.1	ug/m3
110-82-7	84.16	Cyclohexane	5.1	2.0	ppbv		18	6.9	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	2.0	ppbv		ND	17	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	2.0	ppbv		ND	8.1	ug/m3
75-35-4	96.94	1,1-Dichloroethene	ND	2.0	ppbv		ND	7.9	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	2.0	ppbv		ND	15	ug/m3
557-91-5	187.9	1,1-Dibromoethane <sup>a</sup>	ND	2.0	ppbv		ND	15	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	2.0	ppbv		ND	8.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	2.0	ppbv		ND	9.2	ug/m3
123-91-1	88	1,4-Dioxane	ND	2.0	ppbv		ND	7.2	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	2.0	ppbv		ND	9.9	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethene	ND	2.0	ppbv		ND	7.9	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethene	ND	2.0	ppbv		ND	7.9	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	2.0	ppbv		ND	9.1	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-5 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-5	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0131	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
95-50-1	147	1,2-Dichlorobenzene	ND	2.0	ppbv		ND	12	ug/m3
541-73-1	147	1,3-Dichlorobenzene	ND	2.0	ppbv		ND	12	ug/m3
106-46-7	147	1,4-Dichlorobenzene	ND	2.0	ppbv		ND	12	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	2.0	ppbv		ND	9.1	ug/m3
76-14-2	170.9	1,2-Dichlorotetrafluoroethane	ND	2.0	ppbv		ND	14	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	4.0	ppbv		ND	17	ug/m3
64-17-5	46	Ethanol	ND	4.0	ppbv		ND	7.5	ug/m3
100-41-4	106.2	Ethylbenzene	ND	2.0	ppbv		ND	8.7	ug/m3
141-78-6	88	Ethyl Acetate	ND	2.0	ppbv		ND	7.2	ug/m3
637-92-3	102	Ethyl tert-Butyl Ether	ND	4.0	ppbv		ND	17	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	4.0	ppbv		ND	20	ug/m3
142-82-5	100.2	Heptane	6.3	2.0	ppbv		26	8.2	ug/m3
87-68-3	260.8	Hexachloro-1,3-butadiene	ND	2.0	ppbv		ND	21	ug/m3
110-54-3	86.17	Hexane	10.3	2.0	ppbv		36.3	7.0	ug/m3
591-78-6	100	2-Hexanone <sup>a</sup>	ND	2.0	ppbv		ND	8.2	ug/m3
98-82-8	120	Isopropylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
67-63-0	60	Isopropanol	ND	4.0	ppbv		ND	9.8	ug/m3
99-87-6	134	p-Isopropyltoluene <sup>a</sup>	ND	2.0	ppbv		ND	11	ug/m3
75-09-2	84.94	Methylene chloride	ND	2.0	ppbv		ND	6.9	ug/m3
108-10-1	100.2	4-Methyl-2-pentanone	ND	2.0	ppbv		ND	8.2	ug/m3
1634-04-4	88.15	Methyl Tert-Butyl Ether	ND	2.0	ppbv		ND	7.2	ug/m3
80-62-6	100	Methyl methacrylate <sup>a</sup>	ND	2.0	ppbv		ND	8.2	ug/m3
91-20-3	128.17	Naphthalene	ND	2.0	ppbv		ND	10	ug/m3
109-66-0	72	Pentane	25.5	2.0	ppbv		75.1	5.9	ug/m3
103-65-1	120	n-Propylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
115-07-1	42	Propene	384 <sup>b</sup>	16	ppbv		660 <sup>b</sup>	27	ug/m3
100-42-5	104.1	Styrene	ND	2.0	ppbv		ND	8.5	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	2.0	ppbv		ND	14	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	2.0	ppbv		ND	11	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	2.0	ppbv		ND	11	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	2.0	ppbv		ND	15	ug/m3
76-13-1	187.4	1,1,2-Trichlorotrifluoroethane	ND	2.0	ppbv		ND	15	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	2.0	ppbv		ND	9.3	ug/m3
75-65-0	74.12	t-Butyl Alcohol	ND	4.0	ppbv		ND	12	ug/m3
994-05-8	102	tert Amyl Methyl Ether	ND	4.0	ppbv		ND	17	ug/m3
127-18-4	165.8	Tetrachloroethene	64.2	2.0	ppbv		435	14	ug/m3
109-99-9	72	Tetrahydrofuran <sup>a</sup>	ND	2.0	ppbv		ND	5.9	ug/m3
108-88-3	92.14	Toluene	6.6	2.0	ppbv		25	7.5	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-5 SV (5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> TD14094-5		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AIR - Air Summa ID: 0131		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> 1217000450/ Issaquah, WA (AIR)		

**VOA TO15 List**

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	131.4	Trichloroethene	ND	2.0	ppbv		ND	11	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	2.0	ppbv		ND	11	ug/m3
108-05-4	86	Vinyl acetate	ND	2.0	ppbv		ND	7.0	ug/m3
593-60-2	106.9	Vinyl Bromide	ND	2.0	ppbv		ND	8.7	ug/m3
75-01-4	62.5	Vinyl chloride	ND	2.0	ppbv		ND	5.1	ug/m3
	106.2	m,p-Xylene	2.5	2.0	ppbv		11	8.7	ug/m3
95-47-6	106.2	o-Xylene	ND	2.0	ppbv		ND	8.7	ug/m3
1330-20-7	106.2	Xylenes, Total	3.4	2.0	ppbv		15	8.7	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%	94%	65-128%

- (a) Not NELAC certified.
- (b) Result is from Run# 2

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.5  
4

## Report of Analysis

<b>Client Sample ID:</b>	B-6 SV (2)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-6	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0283	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A1712395.D	5	12/24/17 08:59	KS	n/a	n/a	V1A1066
Run #2	1A1712438.D	10	12/26/17 18:06	KS	n/a	n/a	V1A1068
Run #3	1A1712439.D	25	12/26/17 18:43	KS	n/a	n/a	V1A1068

Run #	Initial Volume
Run #1	400 ml
Run #2	400 ml
Run #3	400 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone <sup>a</sup>	60.6	5.0	ppbv		144	12	ug/m3
107-02-8	56	Acrolein	ND	2.5	ppbv		ND	5.7	ug/m3
107-13-1	53	Acrylonitrile	ND	2.5	ppbv		ND	5.4	ug/m3
107-05-1	76.53	Allyl chloride <sup>a</sup>	ND	5.0	ppbv		ND	16	ug/m3
106-99-0	54.09	1,3-Butadiene	26.3	5.0	ppbv		58.2	11	ug/m3
71-43-2	78.11	Benzene	8.5	2.5	ppbv		27	8.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	2.5	ppbv		ND	13	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	2.5	ppbv		ND	17	ug/m3
75-25-2	252.8	Bromoform	ND	2.5	ppbv		ND	26	ug/m3
74-83-9	94.94	Bromomethane	ND	2.5	ppbv		ND	9.7	ug/m3
78-93-3	72.11	2-Butanone	9.7	2.5	ppbv		29	7.4	ug/m3
104-51-8	134	n-Butylbenzene	ND	2.5	ppbv		ND	14	ug/m3
135-98-8	134	sec-Butylbenzene	ND	2.5	ppbv		ND	14	ug/m3
75-15-0	76.14	Carbon disulfide <sup>a</sup>	5.8	2.5	ppbv		18	7.8	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	2.5	ppbv		ND	16	ug/m3
108-90-7	112.6	Chlorobenzene	ND	2.5	ppbv		ND	12	ug/m3
75-00-3	64.52	Chloroethane	ND	2.5	ppbv		ND	6.6	ug/m3
67-66-3	119.4	Chloroform	ND	2.5	ppbv		ND	12	ug/m3
74-87-3	50.49	Chloromethane	ND	2.5	ppbv		ND	5.2	ug/m3
110-82-7	84.16	Cyclohexane	6.6	2.5	ppbv		23	8.6	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	2.5	ppbv		ND	21	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	2.5	ppbv		ND	10	ug/m3
75-35-4	96.94	1,1-Dichloroethene	ND	2.5	ppbv		ND	9.9	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	2.5	ppbv		ND	19	ug/m3
557-91-5	187.9	1,1-Dibromoethane <sup>a</sup>	ND	2.5	ppbv		ND	19	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	2.5	ppbv		ND	10	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	2.5	ppbv		ND	12	ug/m3
123-91-1	88	1,4-Dioxane	ND	2.5	ppbv		ND	9.0	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	2.5	ppbv		ND	12	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethene	ND	2.5	ppbv		ND	9.9	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-6 SV (2)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-6	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0283	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
156-59-2	96.94	cis-1,2-Dichloroethene	ND	2.5	ppbv		ND	9.9	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	2.5	ppbv		ND	11	ug/m3
95-50-1	147	1,2-Dichlorobenzene	ND	2.5	ppbv		ND	15	ug/m3
541-73-1	147	1,3-Dichlorobenzene	ND	2.5	ppbv		ND	15	ug/m3
106-46-7	147	1,4-Dichlorobenzene	ND	2.5	ppbv		ND	15	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	2.5	ppbv		ND	11	ug/m3
76-14-2	170.9	1,2-Dichlorotetrafluoroethane	ND	2.5	ppbv		ND	17	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	5.0	ppbv		ND	21	ug/m3
64-17-5	46	Ethanol	ND	5.0	ppbv		ND	9.4	ug/m3
100-41-4	106.2	Ethylbenzene	ND	2.5	ppbv		ND	11	ug/m3
141-78-6	88	Ethyl Acetate	ND	2.5	ppbv		ND	9.0	ug/m3
637-92-3	102	Ethyl tert-Butyl Ether	ND	5.0	ppbv		ND	21	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	5.0	ppbv		ND	25	ug/m3
142-82-5	100.2	Heptane	6.4	2.5	ppbv		26	10	ug/m3
87-68-3	260.8	Hexachloro-1,3-butadiene	ND	2.5	ppbv		ND	27	ug/m3
110-54-3	86.17	Hexane	18.5	2.5	ppbv		65.2	8.8	ug/m3
591-78-6	100	2-Hexanone <sup>a</sup>	ND	2.5	ppbv		ND	10	ug/m3
98-82-8	120	Isopropylbenzene	ND	2.5	ppbv		ND	12	ug/m3
67-63-0	60	Isopropanol	ND	5.0	ppbv		ND	12	ug/m3
99-87-6	134	p-Isopropyltoluene <sup>a</sup>	ND	2.5	ppbv		ND	14	ug/m3
75-09-2	84.94	Methylene chloride	ND	2.5	ppbv		ND	8.7	ug/m3
108-10-1	100.2	4-Methyl-2-pentanone	ND	2.5	ppbv		ND	10	ug/m3
1634-04-4	88.15	Methyl Tert-Butyl Ether	ND	2.5	ppbv		ND	9.0	ug/m3
80-62-6	100	Methyl methacrylate <sup>a</sup>	ND	2.5	ppbv		ND	10	ug/m3
91-20-3	128.17	Naphthalene	ND	2.5	ppbv		ND	13	ug/m3
109-66-0	72	Pentane	39.8	2.5	ppbv		117	7.4	ug/m3
103-65-1	120	n-Propylbenzene	ND	2.5	ppbv		ND	12	ug/m3
115-07-1	42	Propene	351 <sup>b</sup>	13	ppbv		603 <sup>b</sup>	22	ug/m3
100-42-5	104.1	Styrene	ND	2.5	ppbv		ND	11	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	2.5	ppbv		ND	17	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	2.5	ppbv		ND	14	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	2.5	ppbv		ND	14	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	2.5	ppbv		ND	19	ug/m3
76-13-1	187.4	1,1,2-Trichlorotrifluoroethane	ND	2.5	ppbv		ND	19	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	2.5	ppbv		ND	12	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	2.5	ppbv		ND	12	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	167 <sup>c</sup>	5.0	ppbv		780 <sup>c</sup>	23	ug/m3
75-65-0	74.12	t-Butyl Alcohol	ND	5.0	ppbv		ND	15	ug/m3
994-05-8	102	tert Amyl Methyl Ether	ND	5.0	ppbv		ND	21	ug/m3
127-18-4	165.8	Tetrachloroethene	ND	2.5	ppbv		ND	17	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-6 SV (2)	
<b>Lab Sample ID:</b> TD14094-6	<b>Date Sampled:</b> 12/20/17
<b>Matrix:</b> AIR - Air Summa ID: 0283	<b>Date Received:</b> 12/21/17
<b>Method:</b> TO-15	<b>Percent Solids:</b> n/a
<b>Project:</b> 1217000450/ Issaquah, WA (AIR)	

### VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
109-99-9	72	Tetrahydrofuran <sup>a</sup>	ND	2.5	ppbv		ND	7.4	ug/m3
108-88-3	92.14	Toluene	4.9	2.5	ppbv		18	9.4	ug/m3
79-01-6	131.4	Trichloroethene	ND	2.5	ppbv		ND	13	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	2.5	ppbv		ND	14	ug/m3
108-05-4	86	Vinyl acetate	ND	2.5	ppbv		ND	8.8	ug/m3
593-60-2	106.9	Vinyl Bromide	ND	2.5	ppbv		ND	11	ug/m3
75-01-4	62.5	Vinyl chloride	ND	2.5	ppbv		ND	6.4	ug/m3
	106.2	m,p-Xylene	ND	2.5	ppbv		ND	11	ug/m3
95-47-6	106.2	o-Xylene	ND	2.5	ppbv		ND	11	ug/m3
1330-20-7	106.2	Xylenes, Total	ND	2.5	ppbv		ND	11	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
460-00-4	4-Bromofluorobenzene	95%	94%	95%	65-128%

- (a) Not NELAC certified.
- (b) Result is from Run# 3
- (c) Result is from Run# 2

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-7 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-7	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0280	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A1712409.D	16	12/24/17 18:21	KS	n/a	n/a	V1A1066
Run #2	1A1712397.D	160	12/24/17 10:13	KS	n/a	n/a	V1A1066

Run #	Initial Volume
Run #1	400 ml
Run #2	400 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone <sup>a</sup>	ND	16	ppbv		ND	38	ug/m3
107-02-8	56	Acrolein	ND	8.0	ppbv		ND	18	ug/m3
107-13-1	53	Acrylonitrile	ND	8.0	ppbv		ND	17	ug/m3
107-05-1	76.53	Allyl chloride <sup>a</sup>	ND	16	ppbv		ND	50	ug/m3
106-99-0	54.09	1,3-Butadiene	83.4	16	ppbv		185	35	ug/m3
71-43-2	78.11	Benzene	20.7	8.0	ppbv		66.1	26	ug/m3
100-44-7	126	Benzyl Chloride	ND	8.0	ppbv		ND	41	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	8.0	ppbv		ND	54	ug/m3
75-25-2	252.8	Bromoform	ND	8.0	ppbv		ND	83	ug/m3
74-83-9	94.94	Bromomethane	ND	8.0	ppbv		ND	31	ug/m3
78-93-3	72.11	2-Butanone	ND	8.0	ppbv		ND	24	ug/m3
104-51-8	134	n-Butylbenzene	ND	8.0	ppbv		ND	44	ug/m3
135-98-8	134	sec-Butylbenzene	ND	8.0	ppbv		ND	44	ug/m3
75-15-0	76.14	Carbon disulfide <sup>a</sup>	ND	8.0	ppbv		ND	25	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	8.0	ppbv		ND	50	ug/m3
108-90-7	112.6	Chlorobenzene	ND	8.0	ppbv		ND	37	ug/m3
75-00-3	64.52	Chloroethane	ND	8.0	ppbv		ND	21	ug/m3
67-66-3	119.4	Chloroform	15.1	8.0	ppbv		73.7	39	ug/m3
74-87-3	50.49	Chloromethane	ND	8.0	ppbv		ND	17	ug/m3
110-82-7	84.16	Cyclohexane	9.5	8.0	ppbv		33	28	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	8.0	ppbv		ND	68	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	8.0	ppbv		ND	32	ug/m3
75-35-4	96.94	1,1-Dichloroethene	ND	8.0	ppbv		ND	32	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	8.0	ppbv		ND	61	ug/m3
557-91-5	187.9	1,1-Dibromoethane <sup>a</sup>	ND	8.0	ppbv		ND	61	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	8.0	ppbv		ND	32	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	8.0	ppbv		ND	37	ug/m3
123-91-1	88	1,4-Dioxane	ND	8.0	ppbv		ND	29	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	8.0	ppbv		ND	40	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethene	ND	8.0	ppbv		ND	32	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethene	ND	8.0	ppbv		ND	32	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	8.0	ppbv		ND	36	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	B-7 SV (5)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-7	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0280	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
95-50-1	147	1,2-Dichlorobenzene	ND	8.0	ppbv		ND	48	ug/m3
541-73-1	147	1,3-Dichlorobenzene	ND	8.0	ppbv		ND	48	ug/m3
106-46-7	147	1,4-Dichlorobenzene	ND	8.0	ppbv		ND	48	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	8.0	ppbv		ND	36	ug/m3
76-14-2	170.9	1,2-Dichlorotetrafluoroethane	ND	8.0	ppbv		ND	56	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	16	ppbv		ND	67	ug/m3
64-17-5	46	Ethanol	ND	16	ppbv		ND	30	ug/m3
100-41-4	106.2	Ethylbenzene	ND	8.0	ppbv		ND	35	ug/m3
141-78-6	88	Ethyl Acetate	ND	8.0	ppbv		ND	29	ug/m3
637-92-3	102	Ethyl tert-Butyl Ether	ND	16	ppbv		ND	67	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	16	ppbv		ND	79	ug/m3
142-82-5	100.2	Heptane	ND	8.0	ppbv		ND	33	ug/m3
87-68-3	260.8	Hexachloro-1,3-butadiene	ND	8.0	ppbv		ND	85	ug/m3
110-54-3	86.17	Hexane	20.8	8.0	ppbv		73.3	28	ug/m3
591-78-6	100	2-Hexanone <sup>a</sup>	ND	8.0	ppbv		ND	33	ug/m3
98-82-8	120	Isopropylbenzene	ND	8.0	ppbv		ND	39	ug/m3
67-63-0	60	Isopropanol	ND	16	ppbv		ND	39	ug/m3
99-87-6	134	p-Isopropyltoluene <sup>a</sup>	ND	8.0	ppbv		ND	44	ug/m3
75-09-2	84.94	Methylene chloride	ND	8.0	ppbv		ND	28	ug/m3
108-10-1	100.2	4-Methyl-2-pentanone	ND	8.0	ppbv		ND	33	ug/m3
1634-04-4	88.15	Methyl Tert-Butyl Ether	ND	8.0	ppbv		ND	29	ug/m3
80-62-6	100	Methyl methacrylate <sup>a</sup>	ND	8.0	ppbv		ND	33	ug/m3
91-20-3	128.17	Naphthalene	ND	8.0	ppbv		ND	42	ug/m3
109-66-0	72	Pentane	75.9	8.0	ppbv		224	24	ug/m3
103-65-1	120	n-Propylbenzene	ND	8.0	ppbv		ND	39	ug/m3
115-07-1	42	Propene	1950 <sup>b</sup>	80	ppbv		3350 <sup>b</sup>	140	ug/m3
100-42-5	104.1	Styrene	ND	8.0	ppbv		ND	34	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	8.0	ppbv		ND	55	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	8.0	ppbv		ND	44	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	8.0	ppbv		ND	44	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	8.0	ppbv		ND	59	ug/m3
76-13-1	187.4	1,1,2-Trichlorotrifluoroethane	ND	8.0	ppbv		ND	61	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	8.0	ppbv		ND	39	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	8.0	ppbv		ND	39	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	8.0	ppbv		ND	37	ug/m3
75-65-0	74.12	t-Butyl Alcohol	ND	16	ppbv		ND	49	ug/m3
994-05-8	102	tert Amyl Methyl Ether	ND	16	ppbv		ND	67	ug/m3
127-18-4	165.8	Tetrachloroethene	ND	8.0	ppbv		ND	54	ug/m3
109-99-9	72	Tetrahydrofuran <sup>a</sup>	ND	8.0	ppbv		ND	24	ug/m3
108-88-3	92.14	Toluene	27.8	8.0	ppbv		105	30	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> B-7 SV (5)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> TD14094-7		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AIR - Air Summa ID: 0280		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> 1217000450/ Issaquah, WA (AIR)		

**VOA TO15 List**

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	131.4	Trichloroethene	ND	8.0	ppbv		ND	43	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	8.0	ppbv		ND	45	ug/m3
108-05-4	86	Vinyl acetate	ND	8.0	ppbv		ND	28	ug/m3
593-60-2	106.9	Vinyl Bromide	ND	8.0	ppbv		ND	35	ug/m3
75-01-4	62.5	Vinyl chloride	ND	8.0	ppbv		ND	20	ug/m3
	106.2	m,p-Xylene	8.1	8.0	ppbv		35	35	ug/m3
95-47-6	106.2	o-Xylene	ND	8.0	ppbv		ND	35	ug/m3
1330-20-7	106.2	Xylenes, Total	10.9	8.0	ppbv		47.3	35	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%	97%	65-128%

- (a) Not NELAC certified.
- (b) Result is from Run# 2

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

<b>Client Sample ID:</b>	B-8 SV (2)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-8	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0288	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A1712401.D	4	12/24/17 12:47	KS	n/a	n/a	V1A1066
Run #2	1A1712400.D	25	12/24/17 12:07	KS	n/a	n/a	V1A1066

Run #	Initial Volume
Run #1	400 ml
Run #2	400 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone <sup>a</sup>	18.8	4.0	ppbv		44.7	9.5	ug/m3
107-02-8	56	Acrolein	ND	2.0	ppbv		ND	4.6	ug/m3
107-13-1	53	Acrylonitrile	ND	2.0	ppbv		ND	4.3	ug/m3
107-05-1	76.53	Allyl chloride <sup>a</sup>	ND	4.0	ppbv		ND	13	ug/m3
106-99-0	54.09	1,3-Butadiene	32.1	4.0	ppbv		71.0	8.8	ug/m3
71-43-2	78.11	Benzene	7.8	2.0	ppbv		25	6.4	ug/m3
100-44-7	126	Benzyl Chloride	ND	2.0	ppbv		ND	10	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	2.0	ppbv		ND	13	ug/m3
75-25-2	252.8	Bromoform	ND	2.0	ppbv		ND	21	ug/m3
74-83-9	94.94	Bromomethane	ND	2.0	ppbv		ND	7.8	ug/m3
78-93-3	72.11	2-Butanone	3.5	2.0	ppbv		10	5.9	ug/m3
104-51-8	134	n-Butylbenzene	ND	2.0	ppbv		ND	11	ug/m3
135-98-8	134	sec-Butylbenzene	ND	2.0	ppbv		ND	11	ug/m3
75-15-0	76.14	Carbon disulfide <sup>a</sup>	3.5	2.0	ppbv		11	6.2	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	2.0	ppbv		ND	13	ug/m3
108-90-7	112.6	Chlorobenzene	ND	2.0	ppbv		ND	9.2	ug/m3
75-00-3	64.52	Chloroethane	ND	2.0	ppbv		ND	5.3	ug/m3
67-66-3	119.4	Chloroform	ND	2.0	ppbv		ND	9.8	ug/m3
74-87-3	50.49	Chloromethane	ND	2.0	ppbv		ND	4.1	ug/m3
110-82-7	84.16	Cyclohexane	ND	2.0	ppbv		ND	6.9	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	2.0	ppbv		ND	17	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	2.0	ppbv		ND	8.1	ug/m3
75-35-4	96.94	1,1-Dichloroethene	ND	2.0	ppbv		ND	7.9	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	2.0	ppbv		ND	15	ug/m3
557-91-5	187.9	1,1-Dibromoethane <sup>a</sup>	ND	2.0	ppbv		ND	15	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	2.0	ppbv		ND	8.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	2.0	ppbv		ND	9.2	ug/m3
123-91-1	88	1,4-Dioxane	ND	2.0	ppbv		ND	7.2	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	ND	2.0	ppbv		ND	9.9	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethene	ND	2.0	ppbv		ND	7.9	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethene	ND	2.0	ppbv		ND	7.9	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	2.0	ppbv		ND	9.1	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	B-8 SV (2)	<b>Date Sampled:</b>	12/20/17
<b>Lab Sample ID:</b>	TD14094-8	<b>Date Received:</b>	12/21/17
<b>Matrix:</b>	AIR - Air Summa ID: 0288	<b>Percent Solids:</b>	n/a
<b>Method:</b>	TO-15		
<b>Project:</b>	1217000450/ Issaquah, WA (AIR)		

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
95-50-1	147	1,2-Dichlorobenzene	ND	2.0	ppbv		ND	12	ug/m3
541-73-1	147	1,3-Dichlorobenzene	ND	2.0	ppbv		ND	12	ug/m3
106-46-7	147	1,4-Dichlorobenzene	ND	2.0	ppbv		ND	12	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	2.0	ppbv		ND	9.1	ug/m3
76-14-2	170.9	1,2-Dichlorotetrafluoroethane	ND	2.0	ppbv		ND	14	ug/m3
108-20-3	102	Di-Isopropyl ether	ND	4.0	ppbv		ND	17	ug/m3
64-17-5	46	Ethanol	ND	4.0	ppbv		ND	7.5	ug/m3
100-41-4	106.2	Ethylbenzene	ND	2.0	ppbv		ND	8.7	ug/m3
141-78-6	88	Ethyl Acetate	ND	2.0	ppbv		ND	7.2	ug/m3
637-92-3	102	Ethyl tert-Butyl Ether	ND	4.0	ppbv		ND	17	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	4.0	ppbv		ND	20	ug/m3
142-82-5	100.2	Heptane	2.2	2.0	ppbv		9.0	8.2	ug/m3
87-68-3	260.8	Hexachloro-1,3-butadiene	ND	2.0	ppbv		ND	21	ug/m3
110-54-3	86.17	Hexane	5.8	2.0	ppbv		20	7.0	ug/m3
591-78-6	100	2-Hexanone <sup>a</sup>	ND	2.0	ppbv		ND	8.2	ug/m3
98-82-8	120	Isopropylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
67-63-0	60	Isopropanol	ND	4.0	ppbv		ND	9.8	ug/m3
99-87-6	134	p-Isopropyltoluene <sup>a</sup>	ND	2.0	ppbv		ND	11	ug/m3
75-09-2	84.94	Methylene chloride	ND	2.0	ppbv		ND	6.9	ug/m3
108-10-1	100.2	4-Methyl-2-pentanone	ND	2.0	ppbv		ND	8.2	ug/m3
1634-04-4	88.15	Methyl Tert-Butyl Ether	ND	2.0	ppbv		ND	7.2	ug/m3
80-62-6	100	Methyl methacrylate <sup>a</sup>	ND	2.0	ppbv		ND	8.2	ug/m3
91-20-3	128.17	Naphthalene	ND	2.0	ppbv		ND	10	ug/m3
109-66-0	72	Pentane	19.6	2.0	ppbv		57.7	5.9	ug/m3
103-65-1	120	n-Propylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
115-07-1	42	Propene	367 <sup>b</sup>	13	ppbv		630 <sup>b</sup>	22	ug/m3
100-42-5	104.1	Styrene	ND	2.0	ppbv		ND	8.5	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	2.0	ppbv		ND	14	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	2.0	ppbv		ND	11	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	2.0	ppbv		ND	11	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	2.0	ppbv		ND	15	ug/m3
76-13-1	187.4	1,1,2-Trichlorotrifluoroethane	ND	2.0	ppbv		ND	15	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	2.0	ppbv		ND	9.8	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	2.0	ppbv		ND	9.3	ug/m3
75-65-0	74.12	t-Butyl Alcohol	ND	4.0	ppbv		ND	12	ug/m3
994-05-8	102	tert Amyl Methyl Ether	ND	4.0	ppbv		ND	17	ug/m3
127-18-4	165.8	Tetrachloroethene	ND	2.0	ppbv		ND	14	ug/m3
109-99-9	72	Tetrahydrofuran <sup>a</sup>	ND	2.0	ppbv		ND	5.9	ug/m3
108-88-3	92.14	Toluene	4.2	2.0	ppbv		16	7.5	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> B-8 SV (2)		<b>Date Sampled:</b> 12/20/17
<b>Lab Sample ID:</b> TD14094-8		<b>Date Received:</b> 12/21/17
<b>Matrix:</b> AIR - Air Summa ID: 0288		<b>Percent Solids:</b> n/a
<b>Method:</b> TO-15		
<b>Project:</b> 1217000450/ Issaquah, WA (AIR)		

**VOA TO15 List**

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	131.4	Trichloroethene	ND	2.0	ppbv		ND	11	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	2.0	ppbv		ND	11	ug/m3
108-05-4	86	Vinyl acetate	ND	2.0	ppbv		ND	7.0	ug/m3
593-60-2	106.9	Vinyl Bromide	ND	2.0	ppbv		ND	8.7	ug/m3
75-01-4	62.5	Vinyl chloride	ND	2.0	ppbv		ND	5.1	ug/m3
	106.2	m,p-Xylene	ND	2.0	ppbv		ND	8.7	ug/m3
95-47-6	106.2	o-Xylene	ND	2.0	ppbv		ND	8.7	ug/m3
1330-20-7	106.2	Xylenes, Total	ND	2.0	ppbv		ND	8.7	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%	94%	65-128%

- (a) Not NELAC certified.
- (b) Result is from Run# 2

ND = Not detected  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

4.8  
4

Misc. Forms

Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log

# CHAIN OF CUSTODY

## Air Sampling Field Data Sheet



ACCUTEST 10165 Harwin Drive Suite 150, Houston, TX 77036  
 V: 713-271-4700 F: 713-271-4770 www.accutest.com

Field Order # TD14094 Bottle Order Control # TD14094 PAGE 1 OF 1  
 Lab Clock # \_\_\_\_\_ Lab Job # \_\_\_\_\_

Client / Reporting Information				Project Information				Weather Parameters				Requested Analysis					
Company Name <b>EBI</b>				Project Name <b>1217000450 / Issaquah, WA</b>				Temperature (Fahrenheit)				Requested Analysis <b>VOCs (TO-15)</b>					
Address <b>21 B Street</b>				Street				Start:		Maximum:							
City <b>Burlington</b> State <b>MA</b> Zip <b>01803</b>				City <b>Issaquah</b> State <b>Washington</b>				Stop:		Minimum:							
Project Contact <b>Chad Bechtel / Ryan Deutsch</b> E-mail _____				Project # <b>1217000450</b>				Atmospheric Pressure (Inches of Hg)									
Phone # _____ Fax # _____				Client Purchase Order #				Start:		Maximum:							
Sampler's Name(s) <b>Chad Bechtel</b>								Stop:		Minimum:							
Other weather comment:																	
Lab Sample #	Field ID / Point of Collection	Air Type			Sampling Equipment Info			Start Sampling Information				Stop Sampling Information					
		Indoor(I) Soil Vap(SV) Ambient(A) Grab (G)	Canister Serial # Tedlar	Size 6L or 1L	Flow Controller Serial #	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.	Date	Time (24hr clock)	Canister Pressure ("Hg)	Interior Temp (F)	Sampler Init.		
	B-1 SV (S)	SV	0176	1L	0514	12/20/17	1054	-30		CB	12/20/17	1103	-5		CB	X	
	B-2 SV (S)		0179		0516		1054	-30				1103	-5			X	
	B-3 SV (S)		0043		0342		1054	-30				1103	-5			X	
	B-4 SV (S)		0157		0362		1103	-30				1112	-5			X	
	B-5 SV (S)		0131		0518		1110	-30				1119	-5			X	
	B-6 SV (S)		0283		0374		1242	-30				1251	-5			X	
	B-7 SV (S)		0280		0354		1102	-30				1111	-5			X	
	B-8 SV (S)		0288		0363		1205	-30				1215	-5			X	
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks									
Standard 10 Day _____ 5 Day <input checked="" type="checkbox"/> 3 Day _____ 2 Day _____ 1 Day _____ Other _____				Approved By: _____  Date: _____				All NJDEP TO-15 is mandatory Full T1 Comm A _____ Comm B <input checked="" type="checkbox"/> Reduced T2 _____ Full T1 _____ Other: _____									
Sample Custody must be documented below each time samples change possession, including courier delivery.												Form: AIR003					
Relinquished by: <b>1</b>	Date Time: <b>12/20/17 1500</b>	Received By: <b>1</b>	Relinquished By: <b>2</b>				Date Time: <b>12/21/17 1030</b>	Received By: <b>2</b>	Relinquished By: <b>3</b>				Date Time: <b>12/21/17</b>	Received By: <b>3</b>			
Relinquished by: <b>3</b>	Date Time:	Received By: <b>3</b>	Relinquished By: <b>4</b>				Date Time:	Received By: <b>4</b>	Relinquished By: <b>5</b>				Date Time:	Received By: <b>5</b>			
Relinquished by: <b>5</b>	Date Time:	Received By: <b>5</b>	Custody Seal #														

White Original: Accutest copy Color Copy: Client copy

TD14094: Chain of Custody

Page 1 of 5



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**Wyatt, Neaundra (Houston)**

**From:** Chad Bechtel <cbechtel@ebiconsulting.com>  
**Sent:** Wednesday, January 03, 2018 2:50 AM  
**To:** Wyatt, Neaundra (Houston); Ryan Deutsch  
**Subject:** RE: SGS e-Hardcopy 2.0 Report TD14094: 1217000450/ Issaquah, WA (AIR), sampled on 12/20/2017

Neaundra,

I just noticed on this report that I mislabeled two of the samples. B-6 SV (5) and B-8 SV (5) should be B-6 SV (2) and B-8 SV (2). Please revise and reissue the final report ASAP.

Thanks,

**Chad Bechtel, R.G., CEM**

Project Scientist  
P: 623.512.7138 | F: 781.425.5192  
Phoenix, Arizona  
cbechtel@ebiconsulting.com

Visit our website: [www.ebiconsulting.com](http://www.ebiconsulting.com)



environmental engineering labor solutions

*Please consider the environment before printing this email*

**From:** SGS LabLink Houston TX [mailto:lablink@accutest.com]  
**Sent:** Tuesday, January 02, 2018 11:44 AM  
**To:** Chad Bechtel <cbechtel@ebiconsulting.com>; Ryan Deutsch <rdeutsch@ebiconsulting.com>; neaundra.wyatt@sgs.com  
**Subject:** SGS e-Hardcopy 2.0 Report TD14094: 1217000450/ Issaquah, WA (AIR), sampled on 12/20/2017

Enclosed is the e-Hardcopy 2.0 report for the following SGS job:

**TD14094: 1217000450/ Issaquah, WA (AIR)**  
**Received: 12/21/2017 7 day TAT**  
**EBI Consulting**

The attached PDF file contains your report: 104 pages.  
Report includes QC summaries.

The scanned chain of custody is also included in this report.

NOTE: This PDF contains complete COMMBN deliverables.  
No paper report will be mailed.

A RESULT SUMMARY TABLE is also attached in HTML format. This file can be opened as a web page -or- it can be saved to disk and opened using Excel.

Address questions/changes to your project manager at the link below:

Neaundra Wyatt  
[neaundra.wyatt@sgs.com](mailto:neaundra.wyatt@sgs.com)

NOTE: This PDF file is an e-Hardcopy 2.0 report. It is a complete, self-contained report with bookmarks, table of contents, and section markers, all with hypertext links for ease of navigation. We believe you will find it to be the most easy to use.

data package in the industry.

SGS LabLink®

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# SGS Accutest Sample Receipt Summary

**Job Number:** TD14094      **Client:** EBI      **Project:** 1217000450  
**Date / Time Received:** \_\_\_\_\_      **Delivery Method:** \_\_\_\_\_      **Airbill #'s:** 719302617364  
**No. Coolers:** 1      **Therm ID:** AIR;      **Temp Adjustment Factor:** 0;  
**Cooler Temps (Initial/Adjusted):** #1: (20.1/20.1);

<b>Cooler Security</b>	<u>Y or N</u>		<u>Y or N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/> <input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>
<b>Cooler Temperature</b>	<u>Y or N</u>		
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>		
2. Cooler temp verification:	_____		
3. Cooler media:	No Ice		
<b>Quality Control Preservation</b>	<u>Y or N</u>	<u>N/A</u>	<u>WTB STB</u>
1. Trip Blank present / cooler:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/> <input type="checkbox"/>		
4. VOCs headspace free:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>	

<b>Sample Integrity - Documentation</b>	<u>Y or N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/> <input type="checkbox"/>
<b>Sample Integrity - Condition</b>	<u>Y or N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Condition of sample:	Intact
<b>Sample Integrity - Instructions</b>	<u>Y or N</u> <u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Bottles received for unspecified tests	<input type="checkbox"/> <input checked="" type="checkbox"/>
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/> <input type="checkbox"/>
4. Compositing instructions clear:	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

Comments

5.1  
5

# Sample Receipt Log

**Job #:** TD14094

**Date / Time Received:** 12/21/2017 10:30:00 AM

**Initials:** DS

**Client:** EBI

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD14094-1	Summa	1	AIR	N/P	Note #2 - Preservative check not applicable.	AIR	20.1	0	20.1
1	TD14094-2	Summa	1	AIR	N/P	Note #2 - Preservative check not applicable.	AIR	20.1	0	20.1
1	TD14094-3	Summa	1	AIR	N/P	Note #2 - Preservative check not applicable.	AIR	20.1	0	20.1
1	TD14094-4	Summa	1	AIR	N/P	Note #2 - Preservative check not applicable.	AIR	20.1	0	20.1
1	TD14094-5	Summa	1	AIR	N/P	Note #2 - Preservative check not applicable.	AIR	20.1	0	20.1
1	TD14094-6	Summa	1	AIR	N/P	Note #2 - Preservative check not applicable.	AIR	20.1	0	20.1
1	TD14094-7	Summa	1	AIR	N/P	Note #2 - Preservative check not applicable.	AIR	20.1	0	20.1
1	TD14094-8	Summa	1	AIR	N/P	Note #2 - Preservative check not applicable.	AIR	20.1	0	20.1

5.1  
5

**TD14094: Chain of Custody**

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# Summa Canister and Flow Controller Log

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)  
**Received:** 12/21/17

SUMMA CANISTERS													
Shipping						Receiving							
Summa ID	Vac L	Date " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
0176	1.4	-30	12/15/17	NS	CP1096	1A1711468.DTD14094-1		12/22/17	EG		-4		1
0179	1.4	-30	12/15/17	NS	CP1096	1A1711468.DTD14094-2		12/22/17	EG		-4		1
0043	1.4	-30	12/15/17	NS	CP1096	1A1711468.DTD14094-3		12/22/17	EG		-4		1
0157	1.4	-30	12/15/17	NS	CP1096	1A1711468.DTD14094-4		12/22/17	EG		-4		1
0131	1.4	-30	12/15/17	NS	CP1096	1A1711468.DTD14094-5		12/22/17	EG		-4		1
0283	1.4	-30	12/15/17	NS	CP1096	1A1711468.DTD14094-6		12/22/17	EG		-4		1
0280	1.4	-30	12/15/17	NS	CP1096	1A1711468.DTD14094-7		12/22/17	EG		-4		1
0288	1.4	-30	12/15/17	NS	CP1096	1A1711468.DTD14094-8		12/22/17	EG		-4		1

FLOW CONTROLLERS / OTHER										
Shipping					Receiving					
Flow Ctrl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Flow RPD	Equipment Type	
0334	12/15/17	NS	3.3	24	12/22/17	EG			Soil Train	
0342	12/15/17	NS	3.3	24	12/22/17	EG			Soil Train	
0362	12/15/17	NS	3.3	24	12/22/17	EG			Soil Train	
0363	12/15/17	NS	3.3	24	12/22/17	EG			Soil Train	
0374	12/15/17	NS	3.3	24	12/22/17	EG			Soil Train	
0514	12/15/17	NS	3.3	24	12/22/17	EG			Soil Train	
0516	12/15/17	NS	3.3	24	12/22/17	EG			Soil Train	
0518	12/15/17	NS	3.3	24	12/22/17	EG			Soil Train	

**SGS Bottle Order(s):**  
 NW\_121217\_137

**Prep Date** 12/15/17    **Room Temp(F)** 70    **Bar Pres "Hg** 29.92

## MS Volatiles

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1066-MB	1A1712380.D	1	12/23/17	KS	n/a	n/a	V1A1066

The QC reported here applies to the following samples:

Method: TO-15

TD14094-1, TD14094-2, TD14094-4, TD14094-5, TD14094-6, TD14094-7, TD14094-8

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.096	1.0	ppbv	J	0.23	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	0.033	0.50	ppbv	J	0.10	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

## Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1066-MB	1A1712380.D	1	12/23/17	KS	n/a	n/a	V1A1066

The QC reported here applies to the following samples:

Method: TO-15

TD14094-1, TD14094-2, TD14094-4, TD14094-5, TD14094-6, TD14094-7, TD14094-8

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	0.18	1.0	ppbv	J	0.34	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	0.036	1.0	ppbv	J	0.088	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.14	0.50	ppbv	J	0.49	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	0.017	1.0	ppbv	J	0.052	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	ND	0.50	ppbv		ND	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

## Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1066-MB	1A1712380.D	1	12/23/17	KS	n/a	n/a	V1A1066

The QC reported here applies to the following samples:

Method: TO-15

TD14094-1, TD14094-2, TD14094-4, TD14094-5, TD14094-6, TD14094-7, TD14094-8

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	0.0027	0.50	ppbv	J	0.012	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	92% 65-128%

## Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1068-MB	1A1712435.D	1	12/26/17	KS	n/a	n/a	V1A1068

The QC reported here applies to the following samples:

Method: TO-15

TD14094-4, TD14094-6

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	91% 65-128%

6.12  
6



# Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1069-MB	1A1712454.D	1	12/27/17	KS	n/a	n/a	V1A1069

The QC reported here applies to the following samples:

Method: TO-15

TD14094-3

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.096	1.0	ppbv	J	0.23	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	0.033	0.50	ppbv	J	0.10	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

# Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1069-MB	1A1712454.D	1	12/27/17	KS	n/a	n/a	V1A1069

The QC reported here applies to the following samples:

Method: TO-15

TD14094-3

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	0.18	1.0	ppbv	J	0.34	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	0.036	1.0	ppbv	J	0.088	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.14	0.50	ppbv	J	0.49	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	0.018	1.0	ppbv	J	0.055	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	ND	0.50	ppbv		ND	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

## Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1069-MB	1A1712454.D	1	12/27/17	KS	n/a	n/a	V1A1069

The QC reported here applies to the following samples:

Method: TO-15

TD14094-3

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	ND	0.50	ppbv		ND	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	93% 65-128%

# Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-MB	1A1711381.D	1	11/26/17	KS	n/a	n/a	V1A1045

The QC reported here applies to the following samples:

Method: TO-15

V1A1045-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.027	1.0	ppbv	J	0.064	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

## Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-MB	1A1711381.D	1	11/26/17	KS	n/a	n/a	V1A1045

The QC reported here applies to the following samples:

Method: TO-15

V1A1045-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	ND	1.0	ppbv		ND	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	ND	1.0	ppbv		ND	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.14	0.50	ppbv	J	0.49	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	0.0091	0.50	ppbv	J	0.037	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	ND	0.50	ppbv		ND	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

## Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-MB	1A1711381.D	1	11/26/17	KS	n/a	n/a	V1A1045

The QC reported here applies to the following samples:

Method: TO-15

V1A1045-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	0.0051	0.50	ppbv	J	0.022	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	95% 65-128%

# Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-MB	1A1711415.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here applies to the following samples:

Method: TO-15

V1A1046-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.022	1.0	ppbv	J	0.052	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

## Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-MB	1A1711415.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here applies to the following samples:

Method: TO-15

V1A1046-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	ND	1.0	ppbv		ND	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	ND	1.0	ppbv		ND	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.14	0.50	ppbv	J	0.49	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	ND	0.50	ppbv		ND	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3



# Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-MB	1A1711415.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here applies to the following samples:

Method: TO-15

V1A1046-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	ND	0.50	ppbv		ND	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	96% 65-128%

6.1.5  
6

# Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-MB	1A1711447.D	1	11/28/17	KS	n/a	n/a	V1A1047

The QC reported here applies to the following samples:

Method: TO-15

V1A1047-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.039	1.0	ppbv	J	0.093	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

## Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-MB	1A1711447.D	1	11/28/17	KS	n/a	n/a	V1A1047

The QC reported here applies to the following samples:

Method: TO-15

V1A1047-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	0.10	1.0	ppbv	J	0.19	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	ND	1.0	ppbv		ND	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.15	0.50	ppbv	J	0.52	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	ND	0.50	ppbv		ND	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

# Method Blank Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-MB	1A1711447.D	1	11/28/17	KS	n/a	n/a	V1A1047

The QC reported here applies to the following samples:

Method: TO-15

V1A1047-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	0.013	0.50	ppbv	J	0.056	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	95% 65-128%

6.1.6  
6

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1066-LCS	1A1712379.D	1	12/23/17	KS	n/a	n/a	V1A1066

The QC reported here applies to the following samples:

Method: TO-15

TD14094-1, TD14094-2, TD14094-4, TD14094-5, TD14094-6, TD14094-7, TD14094-8

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
67-64-1	Acetone	10	11.0	110	52-151
107-02-8	Acrolein	10	10.8	108	47-166
107-13-1	Acrylonitrile	10	10.7	107	38-179
107-05-1	Allyl chloride	20	23.9	120	38-186
106-99-0	1,3-Butadiene	20	21.7	109	55-158
71-43-2	Benzene	10	11.3	113	53-148
100-44-7	Benzyl Chloride	10	11.6	116	73-151
75-27-4	Bromodichloromethane	10	11.1	111	55-151
75-25-2	Bromoform	10	11.7	117	59-165
74-83-9	Bromomethane	10	10	100	62-143
78-93-3	2-Butanone	10	11.3	113	63-146
104-51-8	n-Butylbenzene	10	12.0	120	63-156
135-98-8	sec-Butylbenzene	10	11.9	119	64-149
75-15-0	Carbon disulfide	10	11.9	119	38-184
56-23-5	Carbon tetrachloride	10	11.5	115	51-156
108-90-7	Chlorobenzene	10	11.2	112	62-135
75-00-3	Chloroethane	10	10.5	105	61-145
67-66-3	Chloroform	10	11.1	111	64-132
74-87-3	Chloromethane	10	11.6	116	52-149
110-82-7	Cyclohexane	10	12.0	120	61-148
124-48-1	Dibromochloromethane	10	11.6	116	67-144
75-34-3	1,1-Dichloroethane	10	10.8	108	62-128
75-35-4	1,1-Dichloroethene	10	10.4	104	55-164
106-93-4	1,2-Dibromoethane	10	11.0	110	62-145
557-91-5	1,1-Dibromoethane	10	11.4	114	50-150 <sup>a</sup>
107-06-2	1,2-Dichloroethane	10	10.9	109	58-143
78-87-5	1,2-Dichloropropane	10	11.1	111	45-155
123-91-1	1,4-Dioxane	10	12.3	123	36-169
75-71-8	Dichlorodifluoromethane	10	10.9	109	59-141
156-60-5	trans-1,2-Dichloroethene	10	10.9	109	66-128
156-59-2	cis-1,2-Dichloroethene	10	11.2	112	59-144
10061-01-5	cis-1,3-Dichloropropene	10	12.5	125	57-162
95-50-1	1,2-Dichlorobenzene	10	11.3	113	48-158
541-73-1	1,3-Dichlorobenzene	10	11.1	111	52-158
106-46-7	1,4-Dichlorobenzene	10	11.2	112	50-158
10061-02-6	trans-1,3-Dichloropropene	10	9.9	99	60-160

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1066-LCS	1A1712379.D	1	12/23/17	KS	n/a	n/a	V1A1066

The QC reported here applies to the following samples:

Method: TO-15

TD14094-1, TD14094-2, TD14094-4, TD14094-5, TD14094-6, TD14094-7, TD14094-8

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
76-14-2	1,2-Dichlorotetrafluoroethane	10	10.1	101	60-145
108-20-3	Di-Isopropyl ether	10	11.4	114	58-148
64-17-5	Ethanol	10	9.8	98	42-166
100-41-4	Ethylbenzene	10	11.8	118	61-157
141-78-6	Ethyl Acetate	10	11.4	114	61-140
637-92-3	Ethyl tert-Butyl Ether	10	11.1	111	61-146
622-96-8	4-Ethyltoluene	20	23.3	117	58-159
142-82-5	Heptane	10	11.8	118	62-149
87-68-3	Hexachloro-1,3-butadiene	10	10.7	107	26-191
110-54-3	Hexane	10	11.8	118	61-142
591-78-6	2-Hexanone	10	12.7	127	61-164
98-82-8	Isopropylbenzene	10	11.6	116	66-145
67-63-0	Isopropanol	10	10.6	106	52-153
99-87-6	p-Isopropyltoluene	10	12.2	122	62-157
75-09-2	Methylene chloride	10	9.9	99	47-159
108-10-1	4-Methyl-2-pentanone	10	12.3	123	64-150
1634-04-4	Methyl Tert-Butyl Ether	10	13.7	137	63-141
80-62-6	Methyl methacrylate	10	11.6	116	58-154
91-20-3	Naphthalene	10	12.4	124	42-184
109-66-0	Pentane	10	10.9	109	47-170
103-65-1	n-Propylbenzene	10	12.1	121	66-154
115-07-1	Propene	10	11.7	117	47-159
100-42-5	Styrene	10	12.2	122	80-164
79-34-5	1,1,2,2-Tetrachloroethane	10	11.2	112	60-140
71-55-6	1,1,1-Trichloroethane	10	11.1	111	53-150
79-00-5	1,1,2-Trichloroethane	10	11.2	112	49-151
120-82-1	1,2,4-Trichlorobenzene	10	10.9	109	17-207
76-13-1	1,1,2-Trichlorotrifluoroethane	10	11.1	111	41-181
95-63-6	1,2,4-Trimethylbenzene	10	11.9	119	54-171
108-67-8	1,3,5-Trimethylbenzene	10	11.5	115	59-155
540-84-1	2,2,4-Trimethylpentane	10	11.5	115	61-146
75-65-0	t-Butyl Alcohol	10	11.1	111	50-170
994-05-8	tert Amyl Methyl Ether	10	11.6	116	60-150
127-18-4	Tetrachloroethene	10	11.4	114	58-150
109-99-9	Tetrahydrofuran	10	11.5	115	76-131
108-88-3	Toluene	10	11.8	118	66-146

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1066-LCS	1A1712379.D	1	12/23/17	KS	n/a	n/a	V1A1066

**The QC reported here applies to the following samples:** **Method:** TO-15

TD14094-1, TD14094-2, TD14094-4, TD14094-5, TD14094-6, TD14094-7, TD14094-8

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
79-01-6	Trichloroethene	10	11.3	113	54-150
75-69-4	Trichlorofluoromethane	10	11.0	110	48-173
108-05-4	Vinyl acetate	10	10.8	108	62-147
593-60-2	Vinyl Bromide	10	10.6	106	59-151
75-01-4	Vinyl chloride	10	10.8	108	61-142
	m,p-Xylene	20	23.8	119	45-168
95-47-6	o-Xylene	10	11.7	117	58-157
1330-20-7	Xylenes, Total	30	35.5	118	53-161

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	98%	65-128%

(a) Advisory control limits.

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1068-LCS	1A1712434.D	1	12/26/17	KS	n/a	n/a	V1A1068

The QC reported here applies to the following samples:

Method: TO-15

TD14094-4, TD14094-6

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
115-07-1	Propene	10	10.7	107	47-159
540-84-1	2,2,4-Trimethylpentane	10	10.5	105	61-146

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	101%	65-128%

\* = Outside of Control Limits.



# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1069-LCS	1A1712453.D	1	12/27/17	KS	n/a	n/a	V1A1069

The QC reported here applies to the following samples:

Method: TO-15

TD14094-3

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
67-64-1	Acetone	10	10.2	102	52-151
107-02-8	Acrolein	10	10.3	103	47-166
107-13-1	Acrylonitrile	10	10.0	100	38-179
107-05-1	Allyl chloride	20	22.3	112	38-186
106-99-0	1,3-Butadiene	20	19.2	96	55-158
71-43-2	Benzene	10	10.4	104	53-148
100-44-7	Benzyl Chloride	10	10.9	109	73-151
75-27-4	Bromodichloromethane	10	10.1	101	55-151
75-25-2	Bromoform	10	10.6	106	59-165
74-83-9	Bromomethane	10	9.0	90	62-143
78-93-3	2-Butanone	10	10.5	105	63-146
104-51-8	n-Butylbenzene	10	10.6	106	63-156
135-98-8	sec-Butylbenzene	10	10.3	103	64-149
75-15-0	Carbon disulfide	10	11.2	112	38-184
56-23-5	Carbon tetrachloride	10	10.5	105	51-156
108-90-7	Chlorobenzene	10	10.1	101	62-135
75-00-3	Chloroethane	10	9.7	97	61-145
67-66-3	Chloroform	10	10.2	102	64-132
74-87-3	Chloromethane	10	10.1	101	52-149
110-82-7	Cyclohexane	10	11.1	111	61-148
124-48-1	Dibromochloromethane	10	10.4	104	67-144
75-34-3	1,1-Dichloroethane	10	10	100	62-128
75-35-4	1,1-Dichloroethene	10	9.6	96	55-164
106-93-4	1,2-Dibromoethane	10	9.8	98	62-145
557-91-5	1,1-Dibromoethane	10	10.4	104	50-150 <sup>a</sup>
107-06-2	1,2-Dichloroethane	10	10.2	102	58-143
78-87-5	1,2-Dichloropropane	10	10.3	103	45-155
123-91-1	1,4-Dioxane	10	10.3	103	36-169
75-71-8	Dichlorodifluoromethane	10	10.2	102	59-141
156-60-5	trans-1,2-Dichloroethene	10	10.1	101	66-128
156-59-2	cis-1,2-Dichloroethene	10	10.4	104	59-144
10061-01-5	cis-1,3-Dichloropropene	10	11.5	115	57-162
95-50-1	1,2-Dichlorobenzene	10	10.2	102	48-158
541-73-1	1,3-Dichlorobenzene	10	10.0	100	52-158
106-46-7	1,4-Dichlorobenzene	10	10.1	101	50-158
10061-02-6	trans-1,3-Dichloropropene	10	9.0	90	60-160

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1069-LCS	1A1712453.D	1	12/27/17	KS	n/a	n/a	V1A1069

The QC reported here applies to the following samples:

Method: TO-15

TD14094-3

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
76-14-2	1,2-Dichlorotetrafluoroethane	10	8.7	87	60-145
108-20-3	Di-Isopropyl ether	10	10.4	104	58-148
64-17-5	Ethanol	10	8.6	86	42-166
100-41-4	Ethylbenzene	10	10.7	107	61-157
141-78-6	Ethyl Acetate	10	10.4	104	61-140
637-92-3	Ethyl tert-Butyl Ether	10	10.2	102	61-146
622-96-8	4-Ethyltoluene	20	20.8	104	58-159
142-82-5	Heptane	10	10.7	107	62-149
87-68-3	Hexachloro-1,3-butadiene	10	9.6	96	26-191
110-54-3	Hexane	10	10.9	109	61-142
591-78-6	2-Hexanone	10	10.5	105	61-164
98-82-8	Isopropylbenzene	10	10.3	103	66-145
67-63-0	Isopropanol	10	9.2	92	52-153
99-87-6	p-Isopropyltoluene	10	10.7	107	62-157
75-09-2	Methylene chloride	10	9.3	93	47-159
108-10-1	4-Methyl-2-pentanone	10	10.7	107	64-150
1634-04-4	Methyl Tert-Butyl Ether	10	12.6	126	63-141
80-62-6	Methyl methacrylate	10	10.4	104	58-154
91-20-3	Naphthalene	10	10.4	104	42-184
109-66-0	Pentane	10	10.1	101	47-170
103-65-1	n-Propylbenzene	10	10.7	107	66-154
115-07-1	Propene	10	10.9	109	47-159
100-42-5	Styrene	10	11.0	110	80-164
79-34-5	1,1,2,2-Tetrachloroethane	10	10.1	101	60-140
71-55-6	1,1,1-Trichloroethane	10	10.2	102	53-150
79-00-5	1,1,2-Trichloroethane	10	10.2	102	49-151
120-82-1	1,2,4-Trichlorobenzene	10	9.7	97	17-207
76-13-1	1,1,2-Trichlorotrifluoroethane	10	10.3	103	41-181
95-63-6	1,2,4-Trimethylbenzene	10	10.6	106	54-171
108-67-8	1,3,5-Trimethylbenzene	10	10.2	102	59-155
540-84-1	2,2,4-Trimethylpentane	10	10.6	106	61-146
75-65-0	t-Butyl Alcohol	10	9.9	99	50-170
994-05-8	tert Amyl Methyl Ether	10	10.3	103	60-150
127-18-4	Tetrachloroethene	10	10.3	103	58-150
109-99-9	Tetrahydrofuran	10	10.8	108	76-131
108-88-3	Toluene	10	10.6	106	66-146

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1069-LCS	1A1712453.D	1	12/27/17	KS	n/a	n/a	V1A1069

The QC reported here applies to the following samples:

Method: TO-15

TD14094-3

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
79-01-6	Trichloroethene	10	10.3	103	54-150
75-69-4	Trichlorofluoromethane	10	9.9	99	48-173
108-05-4	Vinyl acetate	10	9.8	98	62-147
593-60-2	Vinyl Bromide	10	9.8	98	59-151
75-01-4	Vinyl chloride	10	9.6	96	61-142
	m,p-Xylene	20	21.6	108	45-168
95-47-6	o-Xylene	10	10.6	106	58-157
1330-20-7	Xylenes, Total	30	32.2	107	53-161

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	101%	65-128%

(a) Advisory control limits.

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-LCS	1A1711379.D	1	11/25/17	KS	n/a	n/a	V1A1045

The QC reported here applies to the following samples:

Method: TO-15

V1A1045-SCC

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
67-64-1	Acetone	10	9.6	96	52-151
107-02-8	Acrolein	10	9.8	98	47-166
107-13-1	Acrylonitrile	10	9.1	91	38-179
107-05-1	Allyl chloride	20	20.2	101	38-186
106-99-0	1,3-Butadiene	20	19.6	98	55-158
71-43-2	Benzene	10	9.7	97	53-148
100-44-7	Benzyl Chloride	10	10.8	108	73-151
75-27-4	Bromodichloromethane	10	10.1	101	55-151
75-25-2	Bromoform	10	11.7	117	59-165
74-83-9	Bromomethane	10	9.3	93	62-143
78-93-3	2-Butanone	10	9.7	97	63-146
104-51-8	n-Butylbenzene	10	10.8	108	63-156
135-98-8	sec-Butylbenzene	10	11.2	112	64-149
75-15-0	Carbon disulfide	10	10.3	103	38-184
56-23-5	Carbon tetrachloride	10	11.0	110	51-156
108-90-7	Chlorobenzene	10	10.1	101	62-135
75-00-3	Chloroethane	10	9.4	94	61-145
67-66-3	Chloroform	10	9.9	99	64-132
74-87-3	Chloromethane	10	10.2	102	52-149
110-82-7	Cyclohexane	10	10.1	101	61-148
124-48-1	Dibromochloromethane	10	11.1	111	67-144
75-34-3	1,1-Dichloroethane	10	9.5	95	62-128
75-35-4	1,1-Dichloroethene	10	9.4	94	55-164
106-93-4	1,2-Dibromoethane	10	9.8	98	62-145
557-91-5	1,1-Dibromoethane	10	10.3	103	50-150 <sup>a</sup>
107-06-2	1,2-Dichloroethane	10	9.6	96	58-143
78-87-5	1,2-Dichloropropane	10	9.6	96	45-155
123-91-1	1,4-Dioxane	10	10.2	102	36-169
75-71-8	Dichlorodifluoromethane	10	9.8	98	59-141
156-60-5	trans-1,2-Dichloroethene	10	9.6	96	66-128
156-59-2	cis-1,2-Dichloroethene	10	9.6	96	59-144
10061-01-5	cis-1,3-Dichloropropene	10	11.1	111	57-162
95-50-1	1,2-Dichlorobenzene	10	10.6	106	48-158
541-73-1	1,3-Dichlorobenzene	10	10.5	105	52-158
106-46-7	1,4-Dichlorobenzene	10	10.6	106	50-158
10061-02-6	trans-1,3-Dichloropropene	10	8.8	88	60-160

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-LCS	1A1711379.D	1	11/25/17	KS	n/a	n/a	V1A1045

The QC reported here applies to the following samples:

Method: TO-15

V1A1045-SCC

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
76-14-2	1,2-Dichlorotetrafluoroethane	10	9.1	91	60-145
108-20-3	Di-Isopropyl ether	10	9.7	97	58-148
64-17-5	Ethanol	10	9.0	90	42-166
100-41-4	Ethylbenzene	10	10.0	100	61-157
141-78-6	Ethyl Acetate	10	9.7	97	61-140
637-92-3	Ethyl tert-Butyl Ether	10	9.6	96	61-146
622-96-8	4-Ethyltoluene	20	20.9	105	58-159
142-82-5	Heptane	10	10.1	101	62-149
87-68-3	Hexachloro-1,3-butadiene	10	10.7	107	26-191
110-54-3	Hexane	10	10.1	101	61-142
591-78-6	2-Hexanone	10	10.0	100	61-164
98-82-8	Isopropylbenzene	10	10.6	106	66-145
67-63-0	Isopropanol	10	8.5	85	52-153
99-87-6	p-Isopropyltoluene	10	11.5	115	62-157
75-09-2	Methylene chloride	10	9.0	90	47-159
108-10-1	4-Methyl-2-pentanone	10	10.2	102	64-150
1634-04-4	Methyl Tert-Butyl Ether	10	11.6	116	63-141
80-62-6	Methyl methacrylate	10	9.8	98	58-154
91-20-3	Naphthalene	10	11.6	116	42-184
109-66-0	Pentane	10	9.2	92	47-170
103-65-1	n-Propylbenzene	10	10.8	108	66-154
115-07-1	Propene	10	9.7	97	47-159
100-42-5	Styrene	10	10.4	104	80-164
79-34-5	1,1,2,2-Tetrachloroethane	10	9.7	97	60-140
71-55-6	1,1,1-Trichloroethane	10	10.2	102	53-150
79-00-5	1,1,2-Trichloroethane	10	10.1	101	49-151
120-82-1	1,2,4-Trichlorobenzene	10	10.0	100	17-207
76-13-1	1,1,2-Trichlorotrifluoroethane	10	9.7	97	41-181
95-63-6	1,2,4-Trimethylbenzene	10	10.2	102	54-171
108-67-8	1,3,5-Trimethylbenzene	10	10.2	102	59-155
540-84-1	2,2,4-Trimethylpentane	10	10	100	61-146
75-65-0	t-Butyl Alcohol	10	9.5	95	50-170
994-05-8	tert Amyl Methyl Ether	10	9.8	98	60-150
127-18-4	Tetrachloroethene	10	10.8	108	58-150
109-99-9	Tetrahydrofuran	10	9.2	92	76-131
108-88-3	Toluene	10	10	100	66-146

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-LCS	1A1711379.D	1	11/25/17	KS	n/a	n/a	V1A1045

The QC reported here applies to the following samples:

Method: TO-15

V1A1045-SCC

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
79-01-6	Trichloroethene	10	10.5	105	54-150
75-69-4	Trichlorofluoromethane	10	9.7	97	48-173
108-05-4	Vinyl acetate	10	9.3	93	62-147
593-60-2	Vinyl Bromide	10	9.8	98	59-151
75-01-4	Vinyl chloride	10	9.6	96	61-142
	m,p-Xylene	20	20.9	105	45-168
95-47-6	o-Xylene	10	10.3	103	58-157
1330-20-7	Xylenes, Total	30	31.2	104	53-161

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	101%	65-128%

(a) Advisory control limits.

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VIA1046-LCS	1A1711413.D	1	11/27/17	KS	n/a	n/a	VIA1046

The QC reported here applies to the following samples:

Method: TO-15

VIA1046-SCC

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
67-64-1	Acetone	10	9.8	98	52-151
107-02-8	Acrolein	10	10.1	101	47-166
107-13-1	Acrylonitrile	10	9.4	94	38-179
107-05-1	Allyl chloride	20	21.1	106	38-186
106-99-0	1,3-Butadiene	20	19.9	100	55-158
71-43-2	Benzene	10	9.6	96	53-148
100-44-7	Benzyl Chloride	10	10.7	107	73-151
75-27-4	Bromodichloromethane	10	10	100	55-151
75-25-2	Bromoform	10	11.4	114	59-165
74-83-9	Bromomethane	10	9.3	93	62-143
78-93-3	2-Butanone	10	9.8	98	63-146
104-51-8	n-Butylbenzene	10	10.7	107	63-156
135-98-8	sec-Butylbenzene	10	11.0	110	64-149
75-15-0	Carbon disulfide	10	10.5	105	38-184
56-23-5	Carbon tetrachloride	10	10.7	107	51-156
108-90-7	Chlorobenzene	10	9.9	99	62-135
75-00-3	Chloroethane	10	9.6	96	61-145
67-66-3	Chloroform	10	10.1	101	64-132
74-87-3	Chloromethane	10	10.4	104	52-149
110-82-7	Cyclohexane	10	10.0	100	61-148
124-48-1	Dibromochloromethane	10	10.8	108	67-144
75-34-3	1,1-Dichloroethane	10	9.6	96	62-128
75-35-4	1,1-Dichloroethene	10	9.6	96	55-164
106-93-4	1,2-Dibromoethane	10	9.7	97	62-145
557-91-5	1,1-Dibromoethane	10	10.1	101	50-150 <sup>a</sup>
107-06-2	1,2-Dichloroethane	10	9.9	99	58-143
78-87-5	1,2-Dichloropropane	10	9.7	97	45-155
123-91-1	1,4-Dioxane	10	10.0	100	36-169
75-71-8	Dichlorodifluoromethane	10	10	100	59-141
156-60-5	trans-1,2-Dichloroethene	10	9.6	96	66-128
156-59-2	cis-1,2-Dichloroethene	10	9.7	97	59-144
10061-01-5	cis-1,3-Dichloropropene	10	10.9	109	57-162
95-50-1	1,2-Dichlorobenzene	10	10.5	105	48-158
541-73-1	1,3-Dichlorobenzene	10	10.3	103	52-158
106-46-7	1,4-Dichlorobenzene	10	10.4	104	50-158
10061-02-6	trans-1,3-Dichloropropene	10	8.7	87	60-160

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-LCS	1A1711413.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here applies to the following samples:

Method: TO-15

V1A1046-SCC

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
76-14-2	1,2-Dichlorotetrafluoroethane	10	9.1	91	60-145
108-20-3	Di-Isopropyl ether	10	9.8	98	58-148
64-17-5	Ethanol	10	9.3	93	42-166
100-41-4	Ethylbenzene	10	10.0	100	61-157
141-78-6	Ethyl Acetate	10	9.8	98	61-140
637-92-3	Ethyl tert-Butyl Ether	10	9.6	96	61-146
622-96-8	4-Ethyltoluene	20	20.7	104	58-159
142-82-5	Heptane	10	10.2	102	62-149
87-68-3	Hexachloro-1,3-butadiene	10	10.6	106	26-191
110-54-3	Hexane	10	10.1	101	61-142
591-78-6	2-Hexanone	10	10.3	103	61-164
98-82-8	Isopropylbenzene	10	10.4	104	66-145
67-63-0	Isopropanol	10	8.8	88	52-153
99-87-6	p-Isopropyltoluene	10	11.2	112	62-157
75-09-2	Methylene chloride	10	9.0	90	47-159
108-10-1	4-Methyl-2-pentanone	10	10.3	103	64-150
1634-04-4	Methyl Tert-Butyl Ether	10	11.5	115	63-141
80-62-6	Methyl methacrylate	10	9.7	97	58-154
91-20-3	Naphthalene	10	11.9	119	42-184
109-66-0	Pentane	10	9.5	95	47-170
103-65-1	n-Propylbenzene	10	10.7	107	66-154
115-07-1	Propene	10	9.9	99	47-159
100-42-5	Styrene	10	10.2	102	80-164
79-34-5	1,1,2,2-Tetrachloroethane	10	9.7	97	60-140
71-55-6	1,1,1-Trichloroethane	10	10.1	101	53-150
79-00-5	1,1,2-Trichloroethane	10	9.9	99	49-151
120-82-1	1,2,4-Trichlorobenzene	10	10	100	17-207
76-13-1	1,1,2-Trichlorotrifluoroethane	10	9.9	99	41-181
95-63-6	1,2,4-Trimethylbenzene	10	10.2	102	54-171
108-67-8	1,3,5-Trimethylbenzene	10	10.2	102	59-155
540-84-1	2,2,4-Trimethylpentane	10	9.9	99	61-146
75-65-0	t-Butyl Alcohol	10	9.7	97	50-170
994-05-8	tert Amyl Methyl Ether	10	9.6	96	60-150
127-18-4	Tetrachloroethene	10	10.6	106	58-150
109-99-9	Tetrahydrofuran	10	9.6	96	76-131
108-88-3	Toluene	10	9.8	98	66-146

\* = Outside of Control Limits.



# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-LCS	1A1711413.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here applies to the following samples:

Method: TO-15

V1A1046-SCC

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
79-01-6	Trichloroethene	10	10.2	102	54-150
75-69-4	Trichlorofluoromethane	10	9.9	99	48-173
108-05-4	Vinyl acetate	10	9.5	95	62-147
593-60-2	Vinyl Bromide	10	9.9	99	59-151
75-01-4	Vinyl chloride	10	9.7	97	61-142
	m,p-Xylene	20	20.7	104	45-168
95-47-6	o-Xylene	10	10.3	103	58-157
1330-20-7	Xylenes, Total	30	31.0	103	53-161

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	102%	65-128%

(a) Advisory control limits.

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-LCS	1A1711444.D	1	11/28/17	KS	n/a	n/a	V1A1047

The QC reported here applies to the following samples:

Method: TO-15

V1A1047-SCC

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
67-64-1	Acetone	10	10.1	101	52-151
107-02-8	Acrolein	10	10.3	103	47-166
107-13-1	Acrylonitrile	10	9.7	97	38-179
107-05-1	Allyl chloride	20	22.3	112	38-186
106-99-0	1,3-Butadiene	20	20.7	104	55-158
71-43-2	Benzene	10	10.1	101	53-148
100-44-7	Benzyl Chloride	10	11.8	118	73-151
75-27-4	Bromodichloromethane	10	10.7	107	55-151
75-25-2	Bromoform	10	12.3	123	59-165
74-83-9	Bromomethane	10	9.4	94	62-143
78-93-3	2-Butanone	10	10.3	103	63-146
104-51-8	n-Butylbenzene	10	11.7	117	63-156
135-98-8	sec-Butylbenzene	10	11.9	119	64-149
75-15-0	Carbon disulfide	10	10.9	109	38-184
56-23-5	Carbon tetrachloride	10	11.4	114	51-156
108-90-7	Chlorobenzene	10	10.7	107	62-135
75-00-3	Chloroethane	10	9.7	97	61-145
67-66-3	Chloroform	10	10.4	104	64-132
74-87-3	Chloromethane	10	10.7	107	52-149
110-82-7	Cyclohexane	10	10.7	107	61-148
124-48-1	Dibromochloromethane	10	11.6	116	67-144
75-34-3	1,1-Dichloroethane	10	9.9	99	62-128
75-35-4	1,1-Dichloroethene	10	9.8	98	55-164
106-93-4	1,2-Dibromoethane	10	10.4	104	62-145
557-91-5	1,1-Dibromoethane	10	10.7	107	50-150 <sup>a</sup>
107-06-2	1,2-Dichloroethane	10	10.3	103	58-143
78-87-5	1,2-Dichloropropane	10	10.4	104	45-155
123-91-1	1,4-Dioxane	10	10.7	107	36-169
75-71-8	Dichlorodifluoromethane	10	10.1	101	59-141
156-60-5	trans-1,2-Dichloroethene	10	9.9	99	66-128
156-59-2	cis-1,2-Dichloroethene	10	10	100	59-144
10061-01-5	cis-1,3-Dichloropropene	10	11.7	117	57-162
95-50-1	1,2-Dichlorobenzene	10	11.3	113	48-158
541-73-1	1,3-Dichlorobenzene	10	11.2	112	52-158
106-46-7	1,4-Dichlorobenzene	10	11.3	113	50-158
10061-02-6	trans-1,3-Dichloropropene	10	9.2	92	60-160

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-LCS	1A1711444.D	1	11/28/17	KS	n/a	n/a	V1A1047

The QC reported here applies to the following samples:

Method: TO-15

V1A1047-SCC

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
76-14-2	1,2-Dichlorotetrafluoroethane	10	9.4	94	60-145
108-20-3	Di-Isopropyl ether	10	10.4	104	58-148
64-17-5	Ethanol	10	9.6	96	42-166
100-41-4	Ethylbenzene	10	10.7	107	61-157
141-78-6	Ethyl Acetate	10	10.3	103	61-140
637-92-3	Ethyl tert-Butyl Ether	10	10.1	101	61-146
622-96-8	4-Ethyltoluene	20	22.3	112	58-159
142-82-5	Heptane	10	11.1	111	62-149
87-68-3	Hexachloro-1,3-butadiene	10	11.4	114	26-191
110-54-3	Hexane	10	10.5	105	61-142
591-78-6	2-Hexanone	10	11.0	110	61-164
98-82-8	Isopropylbenzene	10	11.2	112	66-145
67-63-0	Isopropanol	10	9.1	91	52-153
99-87-6	p-Isopropyltoluene	10	12.3	123	62-157
75-09-2	Methylene chloride	10	9.3	93	47-159
108-10-1	4-Methyl-2-pentanone	10	11.1	111	64-150
1634-04-4	Methyl Tert-Butyl Ether	10	11.9	119	63-141
80-62-6	Methyl methacrylate	10	10.4	104	58-154
91-20-3	Naphthalene	10	12.8	128	42-184
109-66-0	Pentane	10	10.1	101	47-170
103-65-1	n-Propylbenzene	10	11.5	115	66-154
115-07-1	Propene	10	10.1	101	47-159
100-42-5	Styrene	10	11.0	110	80-164
79-34-5	1,1,2,2-Tetrachloroethane	10	10.5	105	60-140
71-55-6	1,1,1-Trichloroethane	10	10.7	107	53-150
79-00-5	1,1,2-Trichloroethane	10	10.6	106	49-151
120-82-1	1,2,4-Trichlorobenzene	10	10.6	106	17-207
76-13-1	1,1,2-Trichlorotrifluoroethane	10	10.1	101	41-181
95-63-6	1,2,4-Trimethylbenzene	10	11.1	111	54-171
108-67-8	1,3,5-Trimethylbenzene	10	11.0	110	59-155
540-84-1	2,2,4-Trimethylpentane	10	10.6	106	61-146
75-65-0	t-Butyl Alcohol	10	10.0	100	50-170
994-05-8	tert Amyl Methyl Ether	10	10.3	103	60-150
127-18-4	Tetrachloroethene	10	11.1	111	58-150
109-99-9	Tetrahydrofuran	10	10.0	100	76-131
108-88-3	Toluene	10	10.6	106	66-146

\* = Outside of Control Limits.

# Laboratory Control Sample Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-LCS	1A1711444.D	1	11/28/17	KS	n/a	n/a	V1A1047

The QC reported here applies to the following samples:

Method: TO-15

V1A1047-SCC

CAS No.	Compound	Spike ppbv	LCS ppbv	LCS %	Limits
79-01-6	Trichloroethene	10	10.9	109	54-150
75-69-4	Trichlorofluoromethane	10	10.2	102	48-173
108-05-4	Vinyl acetate	10	9.9	99	62-147
593-60-2	Vinyl Bromide	10	10.0	100	59-151
75-01-4	Vinyl chloride	10	10	100	61-142
	m,p-Xylene	20	22.4	112	45-168
95-47-6	o-Xylene	10	11.1	111	58-157
1330-20-7	Xylenes, Total	30	33.5	112	53-161

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	105%	65-128%

(a) Advisory control limits.

\* = Outside of Control Limits.

# Duplicate Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD14063-1DUP	1A1712385.D	40	12/24/17	KS	n/a	n/a	V1A1066
TD14063-1	1A1712384.D	40	12/24/17	KS	n/a	n/a	V1A1066

**The QC reported here applies to the following samples:** **Method:** TO-15

TD14094-1, TD14094-2, TD14094-4, TD14094-5, TD14094-6, TD14094-7, TD14094-8

CAS No.	Compound	TD14063-1 ppbv	DUP Q	ppbv	Q	RPD	Limits
67-64-1	Acetone	11.4		13.3	J	15	25
107-02-8	Acrolein	ND		ND		nc	25
107-13-1	Acrylonitrile	ND		ND		nc	25
107-05-1	Allyl chloride	ND		ND		nc	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
78-93-3	2-Butanone	0.97		1.1	J	13	25
104-51-8	n-Butylbenzene	ND		ND		nc	25
135-98-8	sec-Butylbenzene	ND		ND		nc	25
75-15-0	Carbon disulfide	0.64		0.47	J	31* a	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	ND		ND		nc	25
74-87-3	Chloromethane	0.99		0.95	J	4	25
110-82-7	Cyclohexane	ND		ND		nc	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane	ND		ND		nc	25
557-91-5	1,1-Dibromoethane	ND		ND		nc	30 <sup>b</sup>
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	ND		0.54	J	200* a	25
156-60-5	trans-1,2-Dichloroethene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	25
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	25
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25

\* = Outside of Control Limits.

# Duplicate Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD14063-1DUP	1A1712385.D	40	12/24/17	KS	n/a	n/a	V1A1066
TD14063-1	1A1712384.D	40	12/24/17	KS	n/a	n/a	V1A1066

**The QC reported here applies to the following samples:** **Method:** TO-15

TD14094-1, TD14094-2, TD14094-4, TD14094-5, TD14094-6, TD14094-7, TD14094-8

CAS No.	Compound	TD14063-1 ppbv	DUP Q	ppbv	Q	RPD	Limits
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ND		nc	25
108-20-3	Di-Isopropyl ether	ND		ND		nc	25
64-17-5	Ethanol	3.4		3.4	J	0	25
100-41-4	Ethylbenzene	ND		ND		nc	25
141-78-6	Ethyl Acetate	ND		ND		nc	25
637-92-3	Ethyl tert-Butyl Ether	ND		ND		nc	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25
142-82-5	Heptane	ND		ND		nc	25
87-68-3	Hexachloro-1,3-butadiene	ND		ND		nc	25
110-54-3	Hexane	ND		ND		nc	25
591-78-6	2-Hexanone	ND		ND		nc	25
98-82-8	Isopropylbenzene	ND		ND		nc	25
67-63-0	Isopropanol	1.3		1.1	J	17	25
99-87-6	p-Isopropyltoluene	ND		ND		nc	25
75-09-2	Methylene chloride	5.9		5.8	J	2	25
108-10-1	4-Methyl-2-pentanone	ND		ND		nc	25
1634-04-4	Methyl Tert-Butyl Ether	ND		ND		nc	25
80-62-6	Methyl methacrylate	ND		ND		nc	25
91-20-3	Naphthalene	ND		ND		nc	25
109-66-0	Pentane	ND		ND		nc	25
103-65-1	n-Propylbenzene	ND		ND		nc	25
115-07-1	Propene	190		188		1	25
100-42-5	Styrene	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	25
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		ND		nc	25
95-63-6	1,2,4-Trimethylbenzene	ND		ND		nc	25
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	25
540-84-1	2,2,4-Trimethylpentane	ND		ND		nc	25
75-65-0	t-Butyl Alcohol	ND		ND		nc	25
994-05-8	tert Amyl Methyl Ether	ND		ND		nc	25
127-18-4	Tetrachloroethene	ND		ND		nc	25
109-99-9	Tetrahydrofuran	ND		ND		nc	25
108-88-3	Toluene	ND		ND		nc	25

\* = Outside of Control Limits.

## Duplicate Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD14063-1DUP	1A1712385.D	40	12/24/17	KS	n/a	n/a	V1A1066
TD14063-1	1A1712384.D	40	12/24/17	KS	n/a	n/a	V1A1066

The QC reported here applies to the following samples:

Method: TO-15

TD14094-1, TD14094-2, TD14094-4, TD14094-5, TD14094-6, TD14094-7, TD14094-8

CAS No.	Compound	TD14063-1		Q	RPD	Limits
		ppbv	DUP			
79-01-6	Trichloroethene	ND	ND		nc	25
75-69-4	Trichlorofluoromethane	ND	ND		nc	25
108-05-4	Vinyl acetate	ND	ND		nc	25
593-60-2	Vinyl Bromide	ND	ND		nc	25
75-01-4	Vinyl chloride	ND	ND		nc	25
	m,p-Xylene	ND	ND		nc	25
95-47-6	o-Xylene	ND	ND		nc	25
1330-20-7	Xylenes, Total	ND	ND		nc	25

CAS No.	Surrogate Recoveries	DUP	TD14063-1	Limits
460-00-4	4-Bromofluorobenzene	93%	93%	65-128%

- (a) High RPD due to sample level below Reporting Limits.
- (b) Advisory control limits.

\* = Outside of Control Limits.

# Duplicate Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD14063-1DUP	1A1712437.D	1	12/26/17	KS	n/a	n/a	V1A1068
TD14063-1	1A1712436.D	1	12/26/17	KS	n/a	n/a	V1A1068

The QC reported here applies to the following samples:

Method: TO-15

TD14094-4, TD14094-6

CAS No.	Compound	TD14063-1		DUP		RPD	Limits
		ppbv	Q	ppbv	Q		
115-07-1	Propene	243	E	248	E	2	25
540-84-1	2,2,4-Trimethylpentane	0.012		0.013	J	8	25

CAS No.	Surrogate Recoveries	DUP	TD14063-1	Limits
460-00-4	4-Bromofluorobenzene	91%	92%	65-128%

\* = Outside of Control Limits.



# Duplicate Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD14247-4DUP	1A1712456.D	10	12/27/17	KS	n/a	n/a	V1A1069
TD14247-4	1A1712455.D	10	12/27/17	KS	n/a	n/a	V1A1069
TD14247-4	1A1712468.D	64	12/27/17	KS	n/a	n/a	V1A1069

The QC reported here applies to the following samples:

Method: TO-15

TD14094-3

CAS No.	Compound	TD14247-4 ppbv	DUP Q	DUP ppbv	Q	RPD	Limits
67-64-1	Acetone	4.6	J	4.8	J	4	25
107-02-8	Acrolein	ND		ND		nc	25
107-13-1	Acrylonitrile	ND		ND		nc	25
107-05-1	Allyl chloride	ND		ND		nc	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	0.15	J	0.14	J	7	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
78-93-3	2-Butanone	0.50	J	0.53	J	6	25
104-51-8	n-Butylbenzene	ND		ND		nc	25
135-98-8	sec-Butylbenzene	ND		ND		nc	25
75-15-0	Carbon disulfide	1.4	J	1.4	J	0	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	0.18	J	0.17	J	6	25
74-87-3	Chloromethane	ND		0.20	J	200* a	25
110-82-7	Cyclohexane	ND		ND		nc	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
75-34-3	1,1-Dichloroethane	0.23	J	0.23	J	0	25
75-35-4	1,1-Dichloroethene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane	ND		ND		nc	25
557-91-5	1,1-Dibromoethane	ND		ND		nc	30 <sup>b</sup>
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	7.6		8.0		5	25
156-60-5	trans-1,2-Dichloroethene	0.78	J	0.81	J	4	25
156-59-2	cis-1,2-Dichloroethene	30.8		31.8		3	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
95-50-1	1,2-Dichlorobenzene	ND		ND		nc	25
541-73-1	1,3-Dichlorobenzene	ND		ND		nc	25
106-46-7	1,4-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25

\* = Outside of Control Limits.

# Duplicate Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD14247-4DUP	1A1712456.D	10	12/27/17	KS	n/a	n/a	V1A1069
TD14247-4	1A1712455.D	10	12/27/17	KS	n/a	n/a	V1A1069
TD14247-4	1A1712468.D	64	12/27/17	KS	n/a	n/a	V1A1069

The QC reported here applies to the following samples:

Method: TO-15

TD14094-3

CAS No.	Compound	TD14247-4 ppbv	DUP Q	ppbv	Q	RPD	Limits
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ND		nc	25
108-20-3	Di-Isopropyl ether	ND		ND		nc	25
64-17-5	Ethanol	7.6	J	7.9	J	4	25
100-41-4	Ethylbenzene	ND		ND		nc	25
141-78-6	Ethyl Acetate	ND		ND		nc	25
637-92-3	Ethyl tert-Butyl Ether	0.81	J	0.91	J	12	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25
142-82-5	Heptane	0.13	J	0.14	J	7	25
87-68-3	Hexachloro-1,3-butadiene	ND		ND		nc	25
110-54-3	Hexane	0.59	J	0.69	J	16	25
591-78-6	2-Hexanone	ND		ND		nc	25
98-82-8	Isopropylbenzene	ND		ND		nc	25
67-63-0	Isopropanol	0.53	J	0.62	J	16	25
99-87-6	p-Isopropyltoluene	ND		ND		nc	25
75-09-2	Methylene chloride	1.8	J	2.1	J	15	25
108-10-1	4-Methyl-2-pentanone	ND		ND		nc	25
1634-04-4	Methyl Tert-Butyl Ether	0.38	J	0.37	J	3	25
80-62-6	Methyl methacrylate	ND		ND		nc	25
91-20-3	Naphthalene	ND		ND		nc	25
109-66-0	Pentane	13.4		14.1		5	25
103-65-1	n-Propylbenzene	ND		ND		nc	25
115-07-1	Propene	0.29	J	0.18	J	47* a	25
100-42-5	Styrene	0.18	J	0.19	J	5	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	25
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		ND		nc	25
95-63-6	1,2,4-Trimethylbenzene	ND		ND		nc	25
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	25
540-84-1	2,2,4-Trimethylpentane	ND		ND		nc	25
75-65-0	t-Butyl Alcohol	10		10.8		8	25
994-05-8	tert Amyl Methyl Ether	ND		ND		nc	25
127-18-4	Tetrachloroethene	638 <sup>c</sup>		1180	E	3	25
109-99-9	Tetrahydrofuran	ND		ND		nc	25
108-88-3	Toluene	0.24	J	0.25	J	4	25

\* = Outside of Control Limits.

# Duplicate Summary

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD14247-4DUP	1A1712456.D	10	12/27/17	KS	n/a	n/a	V1A1069
TD14247-4	1A1712455.D	10	12/27/17	KS	n/a	n/a	V1A1069
TD14247-4	1A1712468.D	64	12/27/17	KS	n/a	n/a	V1A1069

The QC reported here applies to the following samples:

Method: TO-15

TD14094-3

CAS No.	Compound	TD14247-4		Q	RPD	Limits
		ppbv	DUP			
79-01-6	Trichloroethene	11.8	11.9		1	25
75-69-4	Trichlorofluoromethane	0.21	J 0.22	J	5	25
108-05-4	Vinyl acetate	ND	ND		nc	25
593-60-2	Vinyl Bromide	ND	ND		nc	25
75-01-4	Vinyl chloride	0.86	J 0.83	J	4	25
	m,p-Xylene	ND	ND		nc	25
95-47-6	o-Xylene	ND	ND		nc	25
1330-20-7	Xylenes, Total	0.12	J 0.097	J	21	25

CAS No.	Surrogate Recoveries	DUP	TD14247-4	TD14247-4	Limits
460-00-4	4-Bromofluorobenzene	92%	92%	89%	65-128%

- (a) High RPD due to sample level below Reporting Limits.
- (b) Advisory control limits.
- (c) Result is from Run #2.

\* = Outside of Control Limits.

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-SCC	1A1711393.D	1	11/26/17	KS	n/a	n/a	V1A1045

The QC reported here (Summa 0043) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-3(0043)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.041	1.0	ppbv	J	0.097	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-SCC	1A1711393.D	1	11/26/17	KS	n/a	n/a	V1A1045

The QC reported here (Summa 0043) applies to the following samples: Method: TO-15

Batch CP1096 cleaned 11/17/17: TD14094-3(0043)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	ND	1.0	ppbv		ND	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	ND	1.0	ppbv		ND	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.14	0.50	ppbv	J	0.49	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	0.014	0.50	ppbv	J	0.095	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-SCC	1A1711393.D	1	11/26/17	KS	n/a	n/a	V1A1045

The QC reported here (Summa 0043) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-3(0043)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	ND	0.50	ppbv		ND	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	96% 65-128%

6.4.1

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# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-SCC	1A1711402.D	1	11/26/17	KS	n/a	n/a	V1A1045

The QC reported here (Summa 0131) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-5(0131)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.086	1.0	ppbv	J	0.20	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-SCC	1A1711402.D	1	11/26/17	KS	n/a	n/a	V1A1045

The QC reported here (Summa 0131) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-5(0131)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	ND	1.0	ppbv		ND	1.9	ug/m3
100-41-4	Ethylbenzene	0.025	0.50	ppbv	J	0.11	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	0.039	1.0	ppbv	J	0.096	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.13	0.50	ppbv	J	0.45	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	ND	0.50	ppbv		ND	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	0.012	0.50	ppbv	J	0.045	1.9	ug/m3



# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1045-SCC	1A1711402.D	1	11/26/17	KS	n/a	n/a	V1A1045

The QC reported here (Summa 0131) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-5(0131)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	0.011	0.50	ppbv	J	0.048	2.2	ug/m3
1330-20-7	Xylenes, Total	0.017	0.50	ppbv	J	0.074	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

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# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711423.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0157) applies to the following samples: Method: TO-15

Batch CP1096 cleaned 11/17/17: TD14094-4(0157)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.26	1.0	ppbv	J	0.62	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	0.042	0.50	ppbv	J	0.12	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	0.013	0.50	ppbv	J	0.040	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	0.030	0.50	ppbv	J	0.062	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711423.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0157) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-4(0157)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	0.064	1.0	ppbv	J	0.12	1.9	ug/m3
100-41-4	Ethylbenzene	0.0098	0.50	ppbv	J	0.043	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	0.062	1.0	ppbv	J	0.15	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.14	0.50	ppbv	J	0.49	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	0.014	0.50	ppbv	J	0.024	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	0.026	0.50	ppbv	J	0.18	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711423.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0157) applies to the following samples: Method: TO-15

Batch CP1096 cleaned 11/17/17: TD14094-4(0157)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	0.044	0.50	ppbv	J	0.15	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	0.017	0.50	ppbv	J	0.074	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	96% 65-128%

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711425.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0176) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-1(0176)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.083	1.0	ppbv	J	0.20	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711425.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0176) applies to the following samples: Method: TO-15

Batch CP1096 cleaned 11/17/17: TD14094-1(0176)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	0.10	1.0	ppbv	J	0.19	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	0.024	1.0	ppbv	J	0.059	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.14	0.50	ppbv	J	0.49	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	ND	0.50	ppbv		ND	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711425.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0176) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-1(0176)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	ND	0.50	ppbv		ND	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	93% 65-128%

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711426.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0179) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-2(0179)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.079	1.0	ppbv	J	0.19	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	0.011	0.50	ppbv	J	0.038	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3



# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711426.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0179) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-2(0179)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	ND	1.0	ppbv		ND	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	0.016	0.50	ppbv	J	0.056	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	0.029	1.0	ppbv	J	0.071	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.14	0.50	ppbv	J	0.49	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	0.028	0.50	ppbv	J	0.082	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	ND	0.50	ppbv		ND	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711426.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0179) applies to the following samples: Method: TO-15

Batch CP1096 cleaned 11/17/17: TD14094-2(0179)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	ND	0.50	ppbv		ND	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	96% 65-128%

6.4.5  
6

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711430.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0280) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-7(0280)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.061	1.0	ppbv	J	0.14	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	0.013	0.50	ppbv	J	0.040	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	0.032	0.50	ppbv	J	0.16	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711430.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0280) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-7(0280)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	ND	1.0	ppbv		ND	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	ND	1.0	ppbv		ND	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.14	0.50	ppbv	J	0.49	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	0.048	0.50	ppbv	J	0.33	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1046-SCC	1A1711430.D	1	11/27/17	KS	n/a	n/a	V1A1046

The QC reported here (Summa 0280) applies to the following samples: Method: TO-15

Batch CP1096 cleaned 11/17/17: TD14094-7(0280)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	ND	0.50	ppbv		ND	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-SCC	1A1711466.D	1	11/29/17	KS	n/a	n/a	V1A1047

The QC reported here (Summa 0283) applies to the following samples: Method: TO-15

Batch CP1096 cleaned 11/17/17: TD14094-6(0283)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.071	1.0	ppbv	J	0.17	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-SCC	1A1711466.D	1	11/29/17	KS	n/a	n/a	V1A1047

The QC reported here (Summa 0283) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-6(0283)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	0.039	1.0	ppbv	J	0.073	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	0.062	1.0	ppbv	J	0.15	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.15	0.50	ppbv	J	0.52	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	ND	0.50	ppbv		ND	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

6.4.7  
6

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-SCC	1A1711466.D	1	11/29/17	KS	n/a	n/a	V1A1047

The QC reported here (Summa 0283) applies to the following samples: Method: TO-15

Batch CP1096 cleaned 11/17/17: TD14094-6(0283)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	ND	0.50	ppbv		ND	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	0.014	0.50	ppbv	J	0.061	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	97% 65-128%

6.4.7  
6



# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-SCC	1A1711467.D	1	11/29/17	KS	n/a	n/a	V1A1047

The QC reported here (Summa 0288) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-8(0288)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	0.17	1.0	ppbv	J	0.40	2.4	ug/m3
107-02-8	Acrolein	ND	0.50	ppbv		ND	1.1	ug/m3
107-13-1	Acrylonitrile	ND	0.50	ppbv		ND	1.1	ug/m3
107-05-1	Allyl chloride	ND	1.0	ppbv		ND	3.1	ug/m3
106-99-0	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	Benzene	ND	0.50	ppbv		ND	1.6	ug/m3
100-44-7	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-27-4	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
78-93-3	2-Butanone	ND	0.50	ppbv		ND	1.5	ug/m3
104-51-8	n-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
135-98-8	sec-Butylbenzene	ND	0.50	ppbv		ND	2.7	ug/m3
75-15-0	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
56-23-5	Carbon tetrachloride	ND	0.50	ppbv		ND	3.1	ug/m3
108-90-7	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	Chloroethane	ND	0.50	ppbv		ND	1.3	ug/m3
67-66-3	Chloroform	0.033	0.50	ppbv	J	0.16	2.4	ug/m3
74-87-3	Chloromethane	ND	0.50	ppbv		ND	1.0	ug/m3
110-82-7	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
124-48-1	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
75-35-4	1,1-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
557-91-5	1,1-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.50	ppbv		ND	2.0	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.50	ppbv		ND	2.5	ug/m3
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ppbv		ND	2.0	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
95-50-1	1,2-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
541-73-1	1,3-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	1,4-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-SCC	1A1711467.D	1	11/29/17	KS	n/a	n/a	V1A1047

The QC reported here (Summa 0288) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-8(0288)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-14-2	1,2-Dichlorotetrafluoroethane	ND	0.50	ppbv		ND	3.5	ug/m3
108-20-3	Di-Isopropyl ether	ND	1.0	ppbv		ND	4.2	ug/m3
64-17-5	Ethanol	0.061	1.0	ppbv	J	0.11	1.9	ug/m3
100-41-4	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	Ethyl Acetate	ND	0.50	ppbv		ND	1.8	ug/m3
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
622-96-8	4-Ethyltoluene	ND	1.0	ppbv		ND	4.9	ug/m3
142-82-5	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	Hexachloro-1,3-butadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	Hexane	ND	0.50	ppbv		ND	1.8	ug/m3
591-78-6	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
98-82-8	Isopropylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
67-63-0	Isopropanol	ND	1.0	ppbv		ND	2.5	ug/m3
99-87-6	p-Isopropyltoluene	ND	0.50	ppbv		ND	2.7	ug/m3
75-09-2	Methylene chloride	0.13	0.50	ppbv	J	0.45	1.7	ug/m3
108-10-1	4-Methyl-2-pentanone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	Methyl Tert-Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
80-62-6	Methyl methacrylate	ND	0.50	ppbv		ND	2.0	ug/m3
91-20-3	Naphthalene	ND	0.50	ppbv		ND	2.6	ug/m3
109-66-0	Pentane	ND	0.50	ppbv		ND	1.5	ug/m3
103-65-1	n-Propylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
115-07-1	Propene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ppbv		ND	3.4	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.50	ppbv		ND	2.7	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
76-13-1	1,1,2-Trichlorotrifluoroethane	ND	0.50	ppbv		ND	3.8	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	t-Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
994-05-8	tert Amyl Methyl Ether	ND	1.0	ppbv		ND	4.2	ug/m3
127-18-4	Tetrachloroethene	0.050	0.50	ppbv	J	0.34	3.4	ug/m3
109-99-9	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	Toluene	ND	0.50	ppbv		ND	1.9	ug/m3

# Summa Cleaning Certification

**Job Number:** TD14094  
**Account:** EBICOMAB EBI Consulting  
**Project:** 1217000450/ Issaquah, WA (AIR)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A1047-SCC	1A1711467.D	1	11/29/17	KS	n/a	n/a	V1A1047

The QC reported here (Summa 0288) applies to the following samples: **Method:** TO-15

Batch CP1096 cleaned 11/17/17: TD14094-8(0288)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
79-01-6	Trichloroethene	ND	0.50	ppbv		ND	2.7	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
108-05-4	Vinyl acetate	0.037	0.50	ppbv	J	0.13	1.8	ug/m3
593-60-2	Vinyl Bromide	ND	0.50	ppbv		ND	2.2	ug/m3
75-01-4	Vinyl chloride	ND	0.50	ppbv		ND	1.3	ug/m3
	m,p-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
95-47-6	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	Xylenes, Total	0.0026	0.50	ppbv	J	0.011	2.2	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	95% 65-128%

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**APPENDIX D**  
**PROFESSIONAL QUALIFICATIONS**

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## **SUMMARY OF EXPERIENCE**

Chad Bechtel is an EBI Project Scientist. He has worked in the environmental field since 2005. His experience includes conducting environmental site assessments, asbestos surveys, lead-based paint surveys, limited indoor air quality evaluations, visual mold inspections, hazardous materials inspections, abatement/remediation project oversight and monitoring, and clearance inspections and sampling, as well as preparing reports and project documents and submitting documents for regulatory compliance. He has been assigned to projects involving remedial investigations with tasks including groundwater, soil and soil vapor sampling, monitoring well installations and development of wells and regulatory oversight of underground storage tank removals.

## **RELEVANT PROJECT EXPERIENCE**

**ASTM PHASE I ENVIRONMENTAL SITE ASSESSMENTS (ESAs):** Conducted various Phase I Environmental Assessments for both private sector and municipal clients on properties throughout the western United States. Included visual inspections of properties, comprehensive photographic logs, interviews, review of historical records, and comprehensive written reports. The ESAs were performed in accordance with the American Society of Testing and Materials (ASTM) Standard Practices for Environmental Site Assessment requirements, and Mr. Bechtel meets the ASTM requirements of an Environmental Professional (EP).

**PHASE II ENVIRONMENTAL SITE ASSESSMENTS:** Conducted various Phase II Site Assessment projects to evaluate potential soil and/or groundwater contamination. Performed numerous field activities which included collection of soil, soil vapor, and groundwater samples, measurement of water levels, submittal of samples for laboratory analysis submittal under proper chain of custody, and prepared reports of the findings.

**PHASE III ENVIRONMENTAL REMEDIATION OVERSIGHT:** Provided regulatory oversight for the removal of contaminated groundwater and soil at various facilities including gasoline stations, shooting ranges and industrial facilities. Collected soil and groundwater samples for remediation progress reports and completion confirmation and prepared reports of the findings.

**RADON SAMPLING:** Followed strict guidelines for the placement and collection of radon samples in order to test for the presence of radon gas in indoor air at various apartment complexes and prepared reports of the findings.

**LIMITED/COMPREHENSIVE ASBESTOS SURVEYS:** Performed both Limited and Comprehensive inspections on buildings for asbestos containing materials (ACM) for planned renovations and/or demolitions. Assessed the condition of suspect ACM, either friable or non-friable, on interior and exterior portions of a facility and prepared reports of the findings.

**ASBESTOS ABATEMENT OVERSIGHT:** Performed regulatory oversight of asbestos abatement activities. Inspected worker training and fit test documents, containment construction and performed final visual clearance after abatement was completed. In addition, collected ambient air samples during abatement activities and clearance air samples following abatement activities and prepared reports of the findings.

**NEPA ASSESSMENTS:** Prepared numerous NEPA consultation reports, compliance audits, biological assessments and other various environmental assessments for telecommunications sites. Has helped various clients facilitate the Section 106 / environmental review process to ensure compliance with Federal Communications Commission (FCC) requirements under the National Environmental Policy Act (NEPA).

**EDUCATION**

B.S. in Geology, Arizona State University

**PROFESSIONAL REGISTRATIONS**

State of Arizona Registered Geologist

OSHA 40-Hour Hazardous Materials Training

EPA AHERA Certified Building Inspector/Management Planner/Contractor Supervisor

## **SUMMARY OF EXPERIENCE**

Mr. Ryan Deutsch is a licensed Professional Geologist and has over 11 years of professional consulting experience in finance and development due diligence for environmental site assessments, subsurface contamination investigation and remediation, and indoor air and vapor intrusion assessments on various types of commercial and residential properties for a diverse group of clients including lending institutions, investment and legal firms, special servicers, receiverships, property owners, government agencies, telecommunication companies, and corporations. Mr. Deutsch has successfully performed and managed over 1,200 technical environmental site assessments, contamination and remediation projects in several states.

At EBI Consulting, Mr. Deutsch has worked as a Program Manager since 2010 in the Site Investigation and Remediation (SIR) Group from his office in Denver, Colorado, and specializes in business development and project management including client proposals and cost estimates, contractor and field staff coordination and scheduling, and management of contamination investigation and remediation projects for real estate and telecommunication clients.

## **RELEVANT PROJECT EXPERIENCE**

- Review site documentation and reports to develop project scope of work, budget, and client proposal, obtain cost estimates from specialized subcontractors, coordinate staffing and scheduling, and facilitate contamination investigation projects to determine presence and extent of contamination in soil, soil vapor, groundwater, and/or indoor air.
- Manage field staff and subcontractors, conduct and supervise soil, soil vapor, groundwater and indoor air sampling activities, determine appropriate laboratory analysis requirements, write and review subsurface investigation reports, and make recommendations to clients based on analytical results and state/federal reporting requirements.
- Organize personnel to conduct subsurface investigations involving the location of public and private utilities, obtaining required municipal and/or government agency permits, location of underground tanks, product lines, and utilities using geophysical methods, advancement and logging of soil borings, collection of soil, soil vapor and groundwater samples, installation and surveying of monitoring wells to calculate hydrogeologic gradients, removal and/or remediation of contaminated soil, groundwater, hydraulic equipment, and/or Underground Storage Tanks (usts).
- Analyze and interpret laboratory analytical data and state standard and guidance documents and communicate with state regulatory agencies and clients regarding identified contamination and requirements for reporting, additional investigation, and additional investigation, corrective action and remediation measures.
- Sample for suspect Asbestos Containing Materials (acms), Lead-Based Paint, Lead in Drinking Water, Radon, and Mold in commercial and residential structures.

- Perform all aspects of due diligence associated with environmental assessments and property condition assessments including research of historical property uses, field inspections, personnel interviews, material sampling and testing, database analysis, review of building plans and drawings, property and building component reserve and replacement cost estimates, and report writing.
- Managed and conducted environmental studies for roadway, corridor expansion, and bridge replacement projects for city, county, and state government agencies as well as private properties that were acquired by government and/or private land conservation groups for public parks and nature preserves.

**EDUCATION**

Bachelor of Science, Hydrogeology/Environmental Geology, University of Texas at Austin

**PROFESSIONAL AFFILIATIONS**

- OSHA 40-hour Hazardous Materials Safety Training
- U.S. EPA / Colorado A.H.E.R.A. / A.S.H.A.R.A. Asbestos Inspector Certification
- U.S. Department of Housing and Urban Development Visual Assessment Course for Lead-based Paint Inspection
- Scientist Member of the National Ground Water Association (NGWA)

**PROFESSIONAL REGISTRATIONS**

Professional Licensed Geologist State of Tennessee, ID # 00005309



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## **SUMMARY OF EXPERIENCE**

Mr. Bardsley has over 17 years of experience in soil, soil gas, surface water, stormwater, and groundwater investigations and remediation; and hazardous and solid waste management. He has experience as a project manager and/or project geologist on numerous environmental site assessments including real estate transfer and/or refinancing and/or re-use and re-purposing assessments.

Activities have included all aspects of preliminary site assessments and subsequent site investigations on properties with environmental contamination, hazardous waste investigations, industrial facility closures, and underground storage tanks (USTs) / aboveground storage tanks (ASTs), and remediation projects. Mr. Bardsley has also negotiated with and obtained closure from various regulatory agencies.

Mr. Bardsley has worked with corporate environmental officers, Wall Street lending institutions, legal counsels, investment companies, petroleum related clients and real estate brokers to develop strategies for managing environmental due diligence investigation for property acquisition and financing. Mr. Bardsley has also provided litigation support for different environmental projects; and on-call environmental compliance inspections on several Washington State Department of Transportation (WSDOT) roadway construction projects. He has participated in a variety of projects throughout the western United States including Alaska, Arizona, California, Idaho, Montana, New Mexico, Nevada, Oregon, Texas, Utah, and Washington.

## **RELEVANT PROJECT EXPERIENCE**

- Managed, conducted, and provided technical oversight for numerous phase I Environmental Site Assessments (ESAs) for sites throughout the western United States, as well as initial site assessments (ISAs) and hazardous substance liability assessments (HSLAs) for sites in California, in accordance with ASTM E 1527.
- Designed and conducted/managed numerous subsequent Phase II assessments. Examples include former and existing dry cleaning facilities, aerospace engineering facilities, electrical manufacturing facilities, former and current automobile dealerships and/or repair shops, former and current aggregate mining sites, former shooting ranges, former and current hot mix plants (asphalt concrete), former burn dumps, and former hospitals (including the former Sutter Memorial Hospital in Sacramento, California, which was being repurposed for residential land uses).
- Managed, conducted, and provided technical oversight for the following:
  - Numerous petroleum-related facilities including retail gasoline service stations, bulk fuel facilities, pipeline projects, and automotive dealerships throughout the western United States.
  - A former coal mine that was backfilled with cement kiln dust (CKD) near Ravensdale, Washington.
  - Several “Rails to Trails” projects in California.
  - Various remediation and compliance projects including the following California sites: Port of Richmond, Marina Bay, North Hollywood Operable Unit (NHO) Superfund Site, and the Pacific Gas and Electric’s (PG&E’s) Topock and Hinkley Compressor Station sites. Some of the remediation technologies have included large scale soil remediation projects, dual phase extraction systems, air sparge (AS)/soil vapor extraction (SVE) systems, and sub-slab depressurization (SSD) systems.

- Several Brownfields projects.
- Various solid waste facilities including active and former landfills including former burn dumps.
- Operated and maintained soil, soil gas, and groundwater remediation systems.
- Designed and conducted groundwater monitoring programs.
- Provided geologist services for both environmental and geotechnical subsurface investigations.

## **EDUCATION**

- Bachelor of Arts in Geography (1995), University of Utah, Salt Lake City, Utah
- Bachelor of Arts in Geology (2000), University of Colorado, Boulder, Colorado

## **PROFESSIONAL REGISTRATIONS**

- Professional Geologist, California #9170
- Professional Geologist, Oregon #G2167
- Professional Geologist, Washington #2623
- OSHA 29 CFR 1910.120 40 Hour HAZWOPER