

Supplemental Phase II Environmental Site Assessment Report

**Central Virginia Training Center
521 Colony Road
Madison Heights, Virginia 24572
Amherst County Tax Map Parcel 160 A 69**

Prepared for

**Ron Davia
Capital Outlay Project Manager
DBHDS Office of Architectural and Engineering Services
1220 Bank Street
Richmond, VA 23219**

Prepared by

**EEE Consulting, Inc.
201 Church Street, Suite C
Blacksburg, Virginia 24060**

November 2018

**Prepared by: Jeffrey A. Fisher, QEP
Senior Project Manager**

**Reviewed by: Andrew E. Kassoff, PE, PG, LEED AP
President**



EEE Consulting, Inc.

Environmental, Engineering and Educational Solutions

Table of Contents

Acronyms v

Executive Summary 1

1.0 INTRODUCTION 3

 1.1. Background 3

 1.2. Description and Rationale of Work Performed 3

 1.2.1. Phase II ESA (October 2017) 3

 1.2.2. Supplemental Phase II ESA (November 2018) 4

2.0 PUBLIC CLEARINGS/MARK OUTS 5

3.0 INVESTIGATIVE METHODS 6

 3.1. Soil Sampling Methods 6

 3.2. Groundwater Sampling Methods 6

 3.3. Sample Analytical Methods 7

 3.4. Survey 7

 3.5. Investigation Derived Waste 7

4.0 GEOLOGY & HYDROGEOLOGY 7

 4.1. Geology 7

 4.2. Hydrogeology 8

5.0 SCREENING LEVELS 9

6.0 INVESTIGATIVE RESULTS AND RECOMMENDATIONS PER FINDING 9

 6.1. Findings #3 and #9: Boiler House 9

 6.1.1. Background Summary 9

 6.1.2. Investigation Summary 9

 6.1.3. Results 10

 6.1.3.1. Soil 10

 6.1.3.2. Groundwater 12

 6.1.4. Opinions and Recommendations 15

 6.2. Finding #10: Former Physical Plant and Laundry 15

 6.2.1. Background Summary 15

 6.2.2. Investigation Summary 15

 6.2.3. Results 16

 6.2.4. Recommendations 18

 6.3. Finding #13: Closed Sanitary Landfill 19

 6.3.1. Background Summary 19

 6.3.2. Investigation Summary 19

 6.3.3. Results 19

 6.3.4. Recommendations 21

 6.4. Finding #14: New Scrap Yard 22

 6.4.1. Background Summary 22

 6.4.2. Investigation Summary 22

6.4.3. Results.....	22
6.4.4. Recommendations.....	24
6.5. Finding #15: Coal Ash and Debris Dump	25
6.5.1. Background Summary	25
6.5.2. Investigation Summary	25
6.5.3. Results.....	25
6.5.4. Recommendations.....	27
6.6. Finding #16: Old Scrap Yard	27
6.6.1. Background Summary	27
6.6.2. Investigation Summary	28
6.6.2.1. Surface Soil	28
6.6.2.2. Groundwater	28
6.6.3. Results.....	28
6.6.3.1. Soil	28
6.6.4. Groundwater	30
6.6.5. Recommendations.....	32
6.7. Finding #19: Suspect Pesticide Spill at Building 41	33
6.7.1. Background Summary	33
6.7.2. Investigation Summary	33
6.7.3. Results.....	33
6.7.4. Recommendations.....	35
6.8. Finding #30: Gasoline UST and Diesel AST at Building 36	36
6.8.1. Background Summary	36
6.8.2. Investigation Summary	36
6.8.3. Results.....	36
6.8.4. Recommendations.....	38
6.9. Findings #20 and #27: Bulk Pesticide and Oil Storage in Building 39.....	38
6.9.1. Background Summary	38
6.9.2. Investigation Summary	38
6.9.2.1. Soil Borings	39
6.9.2.2. Incremental Surface Soil Sampling – Within Building 39	39
6.9.2.3. Groundwater	39
6.9.3. Results.....	39
6.9.3.1. Soil Borings	39
6.9.3.2. Incremental Surface Sampling.....	41
6.9.3.3. Groundwater	43
6.9.4. Recommendations.....	45
7.0 ADDITIONAL CONSIDERATIONS	46
7.1. Land Disturbance and Demolition of Existing Structures	46
7.2. Asbestos Containing Materials.....	46

7.3. Lead Based Paint	47
7.4. Monitoring Well Abandonment	47
8.0 CONCLUSIONS AND RECOMMENDATIONS	47
8.1. Naturally Occurring Arsenic in Soil.....	47
8.2. Virginia VRP	48
8.2.1. Purpose of VRP	48
8.2.2. Incorporation of CVTC Findings.....	48
8.2.3. Available Funding Vehicles	49
8.3. Additional Findings.....	49
9.0 LIMITATIONS.....	50
10.0 REFERENCES	50
11.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS	51
12.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS.....	52
Figures.....	1

Figures

- Figure 1. Project Location Map
- Figure 2. Findings: Location, Number, and Type. With Supporting ECA Table 1.
- Figure 3. Environmental Project Flow Chart
- Figure 3-1. Monitoring Well and Soil Boring Locations Boiler Plant Building 77 and Heating Oil AST
- Figure 10-1. Monitoring Well and Soil Boring Locations – Building 47: Former Physical Plant and Laundry
- Figure 13-1. Monitoring Well and Stream Sample Locations – Closed Sanitary Landfill
- Figure 14-1. Monitoring Well Locations – New Scrap Yard
- Figure 16-1. Monitoring Well Locations – Old Scrap Yard
- Figure 16-2. Surface Soil Sample Locations – Old Scrap Yard
- Figure 19-1. Surface Soil Sample Locations – Building 41
- Figure 20-1. Monitoring Well and Soil Boring Locations – Building 39: Former Grounds Maintenance
- Figure 30-1. Monitoring Well and Soil Boring Locations – Building 36: Fueling Station

Appendices

- Appendix A: Standard Operating Procedures
- Appendix B: Soil Boring Logs
- Appendix C: Well Logs
- Appendix D: Well Diagrams
- Appendix E: Laboratory Report and Sample Custody Documentation
- Appendix F: Wetlands Memorandum

Tables

Table 1 Summary of ECA Findings (attached to Figure 2)

Table 4.2-1 Summary of Groundwater Measurements and Elevations..... 8

Table 6.1-1 Summary of Soil Detections at Findings #3 and #9 11

Table 6.1-2 Groundwater Purge Details at Finding #3 13

Table 6.1-3 Summary of Groundwater Detections at Finding #3 14

Table 6.2-1 Groundwater Purge Details at Finding #10 17

Table 6.2-2 Summary of Groundwater Detections at Finding #10 18

Table 6.3-1 Groundwater Purge Details at Finding #13 20

Table 6.3-2 Summary of Groundwater and Surface Water Detections at Finding #13..... 20

Table 6.4-1 Groundwater Purge Details at Finding #14 23

Table 6.4-2 Summary of Groundwater Detections at Finding #14 24

Table 6.5-1 Groundwater Purge Details at Finding #15 26

Table 6.5-2 Summary of Groundwater Detections at Finding #15 26

Table 6.6-1 Summary of Analyte Detections in Surface Soil at Finding #16..... 29

Table 6.6-2 Groundwater Purge Details at Finding #16 31

Table 6.6-3 Summary of Groundwater Detections at Finding #16 32

Table 6.7-1 Summary of TAL Metals and Pesticide Detections at Finding #19 34

Table 6.8-1 Groundwater Purge Details at Finding #30 37

Table 6.8-2 Summary of Groundwater Detections at Finding #30 37

Table 6.9-1 Summary of Soil Sample Detections from Soil Borings at Findings #20 & #27 40

Table 6.9-2 Summary of Soil Sample Detections from Surface Soil within Building 39..... 42

Table 6.9-3 Groundwater Purge Details at Findings #20 and #27 43

Table 6.9-4 Summary of Groundwater Detections at Findings #20 and #27 44

Acronyms

ACM	Asbestos Containing Material
AMSL	Above Mean Sea Level
ASTM	American Society for Testing and Materials
BGS	Below Ground Surface
BRRO	DEQ's Blue Ridge Regional Office
COC	Chain of Custody
CVTC	Central Virginia Training Center
DEQ	Virginia Department of Environmental Quality
DBHDS	Department of Behavioral Health and Developmental Services
DGS	Department of General Services
3e	EEE Consulting, Inc.
ECA	Environmental Conditions Assessment
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
ESC	Erosion & Sediment Control
IDW	Investigation Derived Waste
IS	Incremental Sample
LOQ	Limit of Quantitation
MCL	Maximum Contaminant Level
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
SSL	Site Screening Level
SVOC	Semi-Volatile Organic Compound
SOP	Standard Operating Procedure
SWPPP	Stormwater Pollution Prevention Plan
TPH-DRO	Total Petroleum Hydrocarbons – Diesel Range Organics
TPH-GRO	Total Petroleum Hydrocarbons – Gasoline Range Organics
TPH-ORO	Total Petroleum Hydrocarbons – Oil Range Organics
TOC	Top of Casing
UCL	Upper Confidence Limit
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds
VRP	Voluntary Remediation Program
VSWMR	Virginia Solid Waste Management Regulations

Executive Summary

This report presents the methods and findings of a supplemental Phase II Environmental Site Assessment (ESA) performed at the Central Virginia Training Center (CVTC). The Virginia Department of Behavioral Health and Developmental Services (DBHDS) is the operator of the facility and is in the process of placing CVTC in a surplus property status.

This Phase II ESA was prepared to further characterize findings and fill data gaps in the 2017 Phase II ESA. The 2017 Phase II ESA assessed the presence or absence of contaminants in soil and groundwater from the high and medium priority findings presented in the Site-Specific Environmental Conditions Assessment (ECA) that was performed by EEE Consulting, Inc. (3e) in July 2017. This ECA identified 23 findings that were determined to be Recognized Environmental Conditions (RECs). The subsequent October 2017 Phase II Environmental Site Assessment (ESA) characterized 19 RECs as High to Medium Risk and four (4) RECs to be of Low Risk. It was determined that no additional characterization was appropriate for 12 of the 19 RECs. This November 2018 Supplemental Phase II ESA focused on the remaining seven (7) RECs and two (2) additional areas that were not characterized in 2017, with the following results:

Table EX-1. Summary of Findings and Results

ECA Finding #	Description	Results	Recommendations
3 and 9	Boiler House Building 77 with 90,000-gallon Heating Oil AST and Coal Ash Cleanup	No impacts from the current and former heating oil ASTs. Two small areas of residual shallow soil impact from heavy metals and combustion products, likely former coal ash residuals.	Recommend eligibility determination and enrollment into the Virginia Department of Environmental Quality's (DEQ) Voluntary Remediation Program (VRP). Excavate two small areas of soil impacts.
10	Former Physical Plant and Laundry	No impacts from the former Physical Plant were found in soil or groundwater to date (current location of Building 47).	No further action warranted.
13	Closed Sanitary Landfill	No groundwater impacts from landfilling activities identified to date; however, the monitoring network is still incomplete. Additional wells will be installed after enrollment into the VRP.	Recommend eligibility determination and enrollment into the VRP because of landfilling operations. Remove discarded surficial debris and dispose in accordance with applicable regulations.
14	New Scrap Yard	No groundwater impacts from landfilling activities identified to date. One additional well may be installed after enrollment into the VRP.	Recommend eligibility determination and enrollment into the VRP because of landfilling operations. Remove discarded surficial debris and dispose in accordance with applicable regulations.
15	Coal Ash and Debris Dump	No groundwater impacts above screening levels to date.	Recommend eligibility determination and enrollment into the VRP because of landfilling operations. Remove discarded surficial debris and dispose in accordance with applicable regulations.
16	Old Scrap Yard	No groundwater impacts from landfilling activities identified to date. Surface soil sampling indicated isolated areas of heavy metal impact.	Recommend eligibility determination and enrollment into the VRP because of landfilling operations. Remove discarded surficial debris and dispose in accordance with applicable regulations.
19	Building 41 (aka Jones House)	Heavy metals (arsenic, hexavalent chromium, and lead) and pesticide impacts to soil surrounding and beneath the building	Recommend demolition of the building in a manner to minimize impacted soil disturbance. Subsequent excavation of impacted soil from grade to two (2)-ft. BGS. Eligibility determination and enrollment to complete these activities under the VRP because of the confirmed impacts to soil from detectable heavy metals and pesticides.
20 & 27	Bulk Pesticide and Oil Storage in Building 39	Heavy metals (arsenic, hexavalent chromium, and lead), petroleum, and pesticide impacts to soil surrounding and beneath the building. Low cadmium concentrations above applicable screening levels in groundwater.	Recommend demolition of the building in a manner to minimize impacted soil disturbance. Subsequent excavation of impacted soil from grade to two (2)-ft. BGS. Eligibility determination and enrollment to complete these activities under the VRP because of the confirmed impacts to soil from detectable hexavalent chromium, lead, banned pesticide, and petroleum concentrations
30	Gasoline UST and Diesel AST at Building 36	Trace concentrations of gasoline indicator compounds were no longer detected in groundwater.	No further action warranted.

This Supplemental Phase II ESA provided additional data on those Findings classified as high and moderate risk to third party (offsite) receptors, human health and the environment. The remaining Findings presented in the July 2017 ECA will require assessment and/or management as part of facility closure; however, many of these Findings are associated with processes currently in use (e.g. the 90,000-gallon heating oil AST at the boiler plant, USTs currently in use, etc.). These operational units may require future environmental management should they be decommissioned or demolished.

A flow chart illustrating a summary of prior, current, and recommended path forward to address future environmental conditions is included as **Figure 3**. As described in Table EX-1 and Figure 3, the next phase of environmental management at CVTC will involve determining the feasibility of enrolling the facility in the Virginia Voluntary Remediation Program (VRP). The goal of enrollment in the VRP will be to carry remedial options that will support the issuance of a Certificate of Satisfactory Completion (CSC). Issuance of a CSC will allow for the transfer of land ownership and a productive redevelopment of the property.

1.0 INTRODUCTION

This report presents the methods and findings of a supplemental Phase II Environmental Site Assessment (ESA) performed to further characterize findings and fill data gaps in the 2017 Phase II ESA within the allotted FY2018 special funds budget at the Central Virginia Training Center (CVTC, aka the Site), a ~380-acre campus located on the northern bank of the James River in Madison Heights, Virginia (**Figure 1**).

1.1. Background

The CVTC property and buildings are currently operated by the Virginia Department of Behavioral Health and Developmental Services (DBHDS). DBHDS is now in the process of placing CVTC in a surplus property status.

To determine the potential environmental liabilities associated with the historic land use of the property, EEE Consulting, Inc. (**3e**) performed a Site-Specific Environmental Conditions Assessment (ECA) in July 2017, which documented a total of 38 Findings within the boundaries of the 380-acre campus as shown on **Figure 2** and supporting ECA **Table 1** (attached to Figure 2 for reference). A subset of these Findings were considered *recognized environmental conditions* (RECs) as defined by ASTM E1527-13 (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process):

Recognized Environmental Conditions – the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

A flow chart illustrating a summary of prior, current, and recommended environmental activities is included as **Figure 3**.

1.2. Description and Rationale of Work Performed

1.2.1. Phase II ESA (October 2017)

At the request of DBHDS the 38 RECs/Findings identified at CVTC were prioritized with respect to environmental risk, and general estimates of characterization and management cost were presented for each Finding. Due to limitations of available assessment funding, the Phase II ESA was designed to provide preliminary characterization of the high and moderate priority conditions (19 of 38 Findings), with an emphasis of determining the presence or absence of contaminants in groundwater, and potential groundwater migration pathways. The potential for off-site migration

of contaminated groundwater was determined to represent the greatest potential third party risk from the facility.

1.2.2. Supplemental Phase II ESA (November 2018)

This supplemental Phase II ESA was performed to further characterize findings and fill data gaps in the 2017 Phase II ESA, with an emphasis on collection of additional soil and groundwater sampling at prior identified environmental conditions. The following tasks were proposed to meet this objective:

- ❖ Task 2.1: Assess groundwater and soil for impacts pertaining to the current and historic boiler plant operation at Building 77 (ECA Findings #3 and #9). These operations include former outdoor coal pile and fly ash storage with subsequent DEQ-mandated corrective actions, and both former and current above ground heating oil tanks (ASTs) with capacities of 100,000-gallons and 90,000-gallons, respectively.
- ❖ Task 2.2: Resample three (3) monitoring wells installed in 2017 at the former Physical Plant building and suspected fueling area prior to 1975, located within the area of current Building 47 and surrounding land (ECA Finding #10).
- ❖ Task 2.3: Resample two (2) monitoring wells installed in 2017 at the approximately four (4)-acre former sanitary landfill, that was historically in use since the beginning of facility operation until approximately the 1960s (ECA Finding #13).
- ❖ Task 2.4: Resample three (3) monitoring wells installed in 2017 at the Landfill Area dubbed the "New Scrap Yard" (ECA Finding #14).
- ❖ Task 2.5: Resample the monitoring well installed in 2017 at the small landfilled area with construction and demolition debris and coal ash, located west of the greenhouse Building 83 (ECA Finding #15).
- ❖ Task 2.6: Resample the five (5) monitoring wells installed in 2017 at is the six-plus (6+) acre Landfill Area dubbed the "Old Scrap Yard" (ECA Finding #16). Additionally, 24 surface soil samples will be collected at Finding #16 to determine the potential for residual impacts from historic scrap metal and waste handling.
- ❖ Task 2.7: Collect eight (8) samples of surface soil to characterize the reported surface spill of pesticides in and around the bare earth crawl space of Building 41 (ECA Finding #19).

- ❖ Task 2.8: Resample the two (2) permanent groundwater monitoring wells were installed during the 2017 Phase II ESA at the current vehicle fueling area Building 36 (ECA Finding #30).
- ❖ Task 2.9: Assess groundwater and soil for impacts pertaining to the confirmed pesticide and oil impacts to the soil within and surrounding the grounds crew Building 39 (ECA Findings #20 and 27). This data would expand the footprint and data set from the 2017 Phase II ESA by performing the following:
 - Collect incremental sampling within the building.
 - Advancing six (6) additional soil borings.
 - Installing three (3) permanent groundwater monitoring wells.
 - The data from these activities will be used to estimate the volume of impacted soil requiring excavation and off-site treatment/disposal.

Therefore, the *objectives* of this supplemental Phase II ESA were identified as:

- ❖ ASTM E1903-11 §1.2.1 Objective 1 – “Assess whether there has been a *release of hazardous substances* within the meaning of *CERCLA*, for purposes including *landowner liability protections*.”
- ❖ ASTM E1903-11 §1.2.2 Objective 2 – “Provide information relevant to identifying, defining and implementing *landowner continuing obligations*, or the criteria established under *CERCLA* (e.g., taking *reasonable steps* to prevent or limit exposure to previously released *hazardous substances*) for maintaining the *CERCLA landowner liability protections*.”
- ❖ ASTM E1903-11 §1.2.4 Objective 4 – “Provide information relevant to identifying, defining and evaluating property conditions associated with *target analytes* that may pose risk to human health or the environment, or risk of bodily injury to persons on the property and thereby give rise to potential liability in tort.”
- ❖ ASTM E1903-11 §1.2.5 Objective 5 – “Provide information relevant to evaluating and allocating *business environmental risk* in transactional and contractual contexts, including transferring, financing and insuring properties, and due diligence relating thereto.”
- ❖ ASTM E1903-11 §1.2.6 Objective 6 – “Provide information to support disclosure of liabilities and contingent liabilities in financial statements and securities reporting.”

To meet these objectives, **3e** developed a scope of work that served as a project-specific workplan. A site-specific Sampling & Analysis Plan was drafted for internal use, which utilized **3e** Standard Operating Procedures (SOPs) for all field activities (see **Appendix A**).

2.0 PUBLIC CLEARINGS/MARK OUTS

Prior to implementing the soil boring and monitoring well installations, the approximate locations of subsurface public utilities were identified and marked by Miss Utility of Virginia. As most

subsurface utilities present on the Site are owned and operated by CVTC, a private utility locator was contracted to clear the proposed boring and monitoring well locations on September 4, 2018. No damage or disruption to any subsurface utility was reported in response to the work performed under this supplemental Phase II ESA.

3.0 INVESTIGATIVE METHODS

All field activities described in this supplemental Phase II ESA were performed in accordance with **3e** SOPs (**Appendix A**). Deviations to these SOPs, if any, are detailed in the specific Finding section for which they occurred.

3.1. Soil Sampling Methods

All soil sampling was performed from September 5-25, 2018 utilizing the following established SOPs:

- ❖ Collection from a continuous soil core using a direct-push GeoProbe™ type drill rig (**3e** SOP 2.3).
- ❖ Collected from surface soil, less than 12-inches below ground surface (BGS), using a hand auger and/or shovel (**3e** SOP 2.1). This includes aliquots comprising the Incremental Sampling (IS) in Building 39, which was performed in general accordance with US Army Corps of Engineers Interim Guidance 09-02: *Implementation of Incremental Sampling (IS) of Soil for the Military Munitions Response Program*.
- ❖ Copies of bore logs for all continuous soil core borings are included in **Appendix B**.

3.2. Groundwater Sampling Methods

The groundwater monitoring well installations, liquid level measurements, and groundwater sampling were performed between September 19 and October 4, 2018.

- ❖ Groundwater wells were installed into the first permanent aquifer using air rotary drilling technology, and subsequently developed using a submersible pump in accordance with applicable portions of **3e** SOP 2.4.
- ❖ Copies of the bore logs documenting subsurface conditions during the installations of the monitoring wells are included in **Appendix B**.
- ❖ Monitoring well diagrams depicting construction and elevation detail are included in **Appendix D**.
- ❖ Liquid levels (groundwater elevation measurements) were recorded twice during this supplemental Phase II ESA: all wells at CVTC were measured on September 25, 2018 and each well was measured again prior to sample collect in accordance with **3e** SOP 2.5.
- ❖ Groundwater samples were collected using low flow capable bladder pumps in accordance with **3e** SOP 2.7 and general accordance with both EPA's Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedure (EPA/540/S-95/504) and ASTM D6771-02: *Standard*

Practice for Low-Flow Purging and Sampling for Wells and Devices Used for Ground-Water Quality Investigations.

- ❖ All bladder pumps were set within the screened interval, approximately 5-ft from the bottom of each monitoring well.

3.3. Sample Analytical Methods

All media samples collected during this Phase II ESA were handled, transported, and analyzed in accordance with the following protocols:

- ❖ All sample jars/containers were appropriately labeled and placed on ice in a cooler to maintain an appropriate temperature ($< 4^{\circ}\text{C}$) while in transit to the certified environmental laboratory.
- ❖ Chain of Custody (COC) documentation was completed for all samples submitted for laboratory analysis.
- ❖ All samples were analyzed by Air, Water, & Soil Laboratories, Inc. of Richmond, VA in accordance with the EPA Methods appropriate for each finding.
- ❖ The COC documentation and laboratory analytical data are provided in **Appendix E**. Detailed discussions of the laboratory analytical results are presented in each associated Finding sections.

3.4. Survey

3e contracted Thompson & Litton to survey the location and elevation of all additional monitoring wells installed during this supplemental Phase II ESA. This survey information was used to accurately depict well locations and associated site features on figures, and to determine relative elevations to assist in the calculation of hydrologic parameters such as potential hydraulic gradient.

3.5. Investigation Derived Waste

All investigation derived waste (IDW) was managed in accordance with **3e** SOP 1.2. Disposal of drummed cuttings from monitoring well advancement is currently pending. Copies of transportation and disposal documents for these drums will be forwarded to DBHDS upon receipt.

4.0 GEOLOGY & HYDROGEOLOGY

4.1. Geology

According to the USGS Geologic map of Virginia, the Site is in the Proterozoic Z aged Ashe Formation - Biotite gneiss. This metamorphic geological unit consists primarily of medium- to light-gray, massive, conglomeratic biotite schist and gneiss, with feldspar, quartz, and granitic clasts. This bedrock formation was encountered between 5-ft and 38-ft below ground surface (BGS) during installation of the permanent monitoring wells.

4.2. Hydrogeology

Monitoring wells at CVTC were installed within the biotite gneiss member of the Ashe Formation referred to as the Lynchburg Group, which is a part of the Piedmont and Blue Ridge Crystalline Aquifer System. Groundwater in this formation is primarily stored within fractures that develop within rocks due to physical and chemical weathering. The permanent water table potentiometric surface at CVTC was predominantly encountered at approximate depths ranging from 25-83-ft below the top of well casings, with the exception of permanent groundwater table wells advanced at the Boiler Plant (Building 77). Two of these wells were found to be artesian, while the third exhibited a potentiometric surface four (4) feet below the top of well casing. Groundwater elevations ranged from approximately 618-705-ft above mean sea level (amsl). Pertinent groundwater level and elevation data is presented in the following **Table 4.2-1**.

Table 4.2-1 Summary of Groundwater Measurements and Elevations

Well ID	TOC Elevation (feet amsl)	Depth to Groundwater (feet below TOC)			Groundwater Elevation (feet amsl)			Maximum Fluctuation (feet)
		9/27/2017	10/2/2017	9/25/2018	9/27/2017	10/2/2017	9/25/2018	
10-1	732.97	35.73	35.82	35.31	697.24	697.15	697.66	0.51
10-2	722.70	39.81	38.86	37.82	682.89	683.84	684.88	1.99
10-3	715.16	31.39	30.53	29.06	683.77	684.63	686.10	2.33
13-1	692.38	43.54	43.71	43.00	648.84	648.67	649.38	0.71
13-2	675.49	37.63	37.88	35.06	637.86	637.61	640.43	2.82
14-1	711.43	34.57	34.83	32.54	676.86	676.60	678.89	2.29
14-2	683.43	25.46	25.62	23.42	657.97	657.81	660.01	2.20
14-3	675.19	25.78	26.00	23.87	649.41	649.19	651.32	2.13
15-1	682.82	25.81	25.81	25.40	657.01	657.01	657.42	0.41
16-1	716.20	82.72	69.58	41.63	633.48	646.62	674.57	41.09
16-2	717.77	36.69	36.88	34.77	681.08	680.89	683.00	2.11
16-3	707.74	54.83	43.11	36.03	652.91	664.63	671.71	18.80
16-4	704.78	54.40	52.88	50.51	650.38	651.90	654.27	3.89
16-5	685.25	66.66	66.71	66.10	618.59	618.54	619.15	0.61
30-1	738.90	48.89	39.40	48.62	690.01	699.50	690.28	9.49
30-2	739.92	66.90	67.31	62.26	673.02	672.61	677.66	5.05
39-1	738.94	--	--	43.75	--	--	695.19	0.00
39-2	741.84	--	--	36.55	--	--	705.29	0.00
39-3	740.96	--	--	78.28	--	--	662.68	0.00
77-1	687.02	--	--	0	--	--	687.02	0.00
77-2	687.49	--	--	0	--	--	687.49	0.00
77-3	685.10	--	--	4.05	--	--	681.05	0.00

Notes: TOC = Top of Casing
 amsl = Above Mean Sea Level

5.0 SCREENING LEVELS

All sample results collected during this Phase II investigation were compared against applicable regulatory screening levels to determine if the results indicated anthropogenic impacts, releases, or potential risk to future development. The selection of appropriate screening levels was based on the regulatory programs associated with each Finding type (e.g. petroleum storage, buried waste, etc.), and screening values were selected from one of more of the following:

- ❖ Regional background studies for naturally occurring heavy metal concentrations in native soil, which were sponsored by the Virginia DEQ.
- ❖ EPA Region 3 Screening Levels, updated May 2018. All soil results were compared to Residential Soil Screening Levels, while Maximum Contaminant Levels (MCLs) were utilized to screen groundwater sample results. These levels were chosen because they are commensurate with the DEQ's Voluntary Remediation Program (VRP) Tier II levels for unrestricted (e.g., residential) site use.
- ❖ The Virginia DEQ guidance for petroleum release reporting in the most recent edition of the Storage Tank Program Technical Manual, which is based on 9VAC25-580-190.

6.0 INVESTIGATIVE RESULTS AND RECOMMENDATIONS PER FINDING

6.1. Findings #3 and #9: Boiler House

6.1.1. Background Summary

Findings #3 and #9 as described in the 2017 ECA refer to the current and historic petroleum ASTs (Finding #3) and the 1996 Executive Compliance Agreement to mitigate environmental risk from the boiler plant Building 77 (Finding #9). Full compliance was obtained in 1999 after performance of the following activities:

- Removal of coal silos and any remaining coal fuel
- Remediation of sediments from the unnamed stream receiving storm water from the boiler plant area.
- Removal of the existing 100,000-gallon No. 6 fuel oil above-ground storage tank (AST).
- Installation of a new 90,000-gallon No. 2 fuel oil AST in full compliance with containment and monitoring requirements.

6.1.2. Investigation Summary

The investigation to determine presence or absence of groundwater and soil impacts due to these current and former activities at the boiler plant (Building 77) included the advancement nine (9)

soil borings with a GeoProbe direct-push rig and installation of three (3) monitoring wells into the permanent groundwater table using an air rotary rig in accordance with **3e** SOPs 2.3 and 2.4, respectively (see **Appendix B**). The location of these borings and monitoring wells are depicted on **Figure 3-1**.

Soil samples were collected from the first and last 5-ft sleeves of each boring, to be representative of soil near the ground surface and directly above the bedrock interface. Due to shallow bedrock refusal, only two (2) sleeves were collected from most of the borings. Additional soil borings and sample intervals were proposed for collection in the event of visual, olfactory, or other field observations indicative of anthropogenic impacts; however, no such impacts were observed during soil sample collection.

Because of current and historic petroleum and coal ash material handling, the following analyses were performed on the representative media samples:

- ❖ Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO) and Oil Range Organics (TPH-ORO) by EPA Method 8015C: all soil and groundwater samples.
- ❖ Semi-volatile Organic Compounds (SVOCs), Polycyclic Aromatic Hydrocarbons (PAHs) and dibenzofurans by EPA Method 8270D: all soil and groundwater samples.
- ❖ Dioxins (2,3,7,8-TCDD) by EPA Method 8270D (SIM) – a very sensitive qualitative analysis used to determine presence/absence: soil samples.
- ❖ Polychlorinated Biphenyls (PCBs) by EPA Method 8082A: soil samples.
- ❖ TAL Metals by EPA Methods 6010C, 6020A and 7470A/7471B: all soil and groundwater samples.
- ❖ Hexavalent Chromium by EPA Method 7196A: all soil and groundwater samples.
- ❖ Volatile Organic Compounds (VOCs) by EPA Method 8260B: all groundwater samples.

6.1.3. Results

6.1.3.1. Soil

The following **Table 6.1-1** presents a summary of the TAL Metals and other detected compounds at Findings #3 and #9. No dioxins, dibenzofurans, or PCBs were detected in the samples. The detailed laboratory report in **Appendix E** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.1-1 Summary of Soil Detections at Findings #3 and #9

Boring ID		77-1		77-2		77-3		77-4	77-5	77-6		77-7	77-8		77-9		EPA Residential Soil Screening Level*		
Lab ID		1810505-01	1810505-02	1810505-03	1810505-04	1810505-05	1810505-06	1810505-07	1810505-08	1810505-09	1810505-10	1810501-01	1810501-02	1810501-03	1810501-04	1810501-05		1810501-06	
Depth (feet BGS)		0-5	5-7	0-5	10-14	0-5	5-7	0-6	0-5	0-5	5-11	0-6	0-5	5-7	0-5	5-10		10-12	
Date Collected		9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018		
Analyte	CAS	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	(mg/kg)	
TAL Metals																			
Aluminum	7429-90-5	mg/kg	28,600	33,700	33,900	25,600	20,000	38,500	35,900	22,300	18,900	19,000	15,700	18,400	16,500	27,600	35,900	16,100	77,000
Antimony	7440-36-0	mg/kg	< 5.52	< 5.62	< 6.32	< 5.38	< 6.07	< 6.12	< 5.75	< 5.74	< 5.92	< 5.36	< 5.52	< 5.48	< 5.22	< 5.43	< 6.53	< 5.36	31
Arsenic	7440-38-2	mg/kg	4.23	< 1.12	< 1.26	< 1.08	< 1.21	< 1.22	1.21	1.28	15.2	< 1.07	2.61	1.6	< 1.04	< 1.09	< 1.31	< 1.07	0.68
Barium	7440-39-3	mg/kg	191	146	262	165	106	165	151	136	145	126	98.9	130	148	127	124	269	15,000
Beryllium	7440-41-7	mg/kg	1.99	2.27	2.1	1.99	1.39	3.15	2.28	1.51	2.4	1.51	1.95	1.56	1.17	2.6	2	1.84	160
Cadmium	7440-43-9	mg/kg	0.613	0.627	1.06	0.713	0.246	1.1	0.428	< 0.229	0.257	< 0.215	0.295	< 0.219	0.298	0.461	0.391	0.797	71
Calcium	7440-70-2	mg/kg	2,110	2,330	5,360	2,300	93,800	2,040	1,790	1,120	36,900	1,680	22,700	5,670	1,960	7,530	2,410	9,740	--
Chromium	7440-47-3	mg/kg	25.2	28.9	42.2	36.9	21.4	32.4	27.5	22.1	19.5	22	20.6	17.3	27.2	25.2	27	9.12	120,000
Chromium, Hexavalent	18540-29-9	mg/kg	0.37	< 0.22	0.3	< 0.23	0.29	< 0.26	< 0.24	< 0.24	< 0.25	< 0.23	< 0.24	< 0.23	< 0.22	< 0.23	0.57	< 0.21	0.3
Cobalt	7440-48-4	mg/kg	13	22.7	6.69	22.1	7.31	22.3	20.7	15.4	15.6	13.1	12.4	12.8	16.6	16.6	15.6	29.8	23
Copper	7440-50-8	mg/kg	16.3	11.1	17.5	23.4	11.4	17.1	16.5	4.57	36.2	7.16	26	10.2	10.8	5.47	27.3	3.100	3,100
Iron	7439-89-6	mg/kg	37,000	38,700	52,000	41,400	26,700	56,700	35,700	26,400	22,200	24,000	25,400	22,200	26,100	33,000	36,700	38,900	55,000
Lead	7439-92-1	mg/kg	38.4	5.34	31	6.07	15.9	18.8	10.9	5.05	17.2	3.69	24.8	9.54	1.8	5.89	9.81	< 0.536	400
Magnesium	7439-95-4	mg/kg	7,050	11,800	2,590	12,000	11,800	10,700	8,570	7,770	8,840	6,900	8,770	6,430	9,780	10,400	6,600	11,100	--
Manganese	7439-96-5	mg/kg	36.3	645	718	553	232	490	476	444	284	394	296	298	551	358	358	963	1,800
Mercury	7439-97-6	mg/kg	0.036	0.012	0.078	0.016	0.025	0.041	0.047	0.013	0.137	0.013	0.141	0.017	< 0.009	0.045	0.017	< 0.008	11
Nickel	7440-02-0	mg/kg	13.2	20.2	8.44	19.3	11.7	17.1	15	11.9	14.4	10.3	16.4	13	15.6	13.7	6.85	--	
Potassium	7440-09-7	mg/kg	7,010	14,100	2,240	15,700	4,770	10,900	7,730	7,040	3,960	6,850	4,910	5,490	12,600	11,900	5,510	8,770	--
Selenium	7782-49-2	mg/kg	< 2.76	< 2.81	< 3.16	< 2.69	< 3.03	< 3.06	< 2.87	< 2.87	< 2.96	< 2.68	< 2.76	< 2.74	< 2.61	< 2.71	< 3.26	< 2.68	390
Silver	7440-22-4	mg/kg	< 0.552	< 0.562	< 0.632	< 0.538	< 0.607	< 0.612	< 0.575	< 0.574	< 0.592	< 0.536	< 0.552	< 0.548	< 0.522	< 0.543	< 0.653	< 0.536	390
Sodium	7440-23-5	mg/kg	69.4	76.3	57.7	101	442	73	57.4	55.1	205	84.6	88.6	57.8	64.9	90.2	153	666	--
Thallium	7440-28-0	mg/kg	< 2.76	< 2.81	< 3.16	< 2.69	< 3.03	< 3.06	< 2.87	< 2.87	< 2.96	< 2.68	< 2.76	< 2.74	< 2.61	< 2.71	< 3.26	< 2.68	--
Vanadium	7440-62-2	mg/kg	45.5	43.8	102	60.8	32.9	99.8	44.4	33.3	40.9	31.2	35.4	25.5	31.5	41.6	57.9	97.6	390
Zinc	7440-66-6	mg/kg	89	119	48.4	110	46	112	98.5	83.9	70.1	74.7	79.6	71.5	91.8	95.2	79.8	63.4	23,000
SVOCs and PAHs																			
Benzo (a) anthracene	56-55-3	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	0.947	< 0.0951	< 0.390	< 0.0907	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	1.1
Benzo (a) pyrene	50-32-8	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	0.694	< 0.0951	< 0.390	< 0.0907	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	0.11
Benzo (b) fluoranthene	205-99-2	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	1.57	< 0.0951	< 0.390	< 0.0907	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	0.42
Benzo (g,h,i) perylene	191-24-2	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	0.422	< 0.0951	< 0.390	< 0.0907	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	--
Chrysene	218-01-9	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	0.985	< 0.0951	< 0.390	< 0.0907	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	110
Fluoranthene	206-44-0	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	2.22	< 0.0951	< 0.390	< 0.0907	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	2400
Indeno (1,2,3-cd) pyrene	193-39-5	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	0.413	< 0.0951	< 0.390	< 0.0907	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	1.1
Phenanthrene	85-01-8	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	1.49	< 0.0951	< 0.390	< 0.0907	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	--
Pyrene	129-00-0	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	1.29	< 0.0951	< 0.390	< 0.0907	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	1800
bis (2-Ethylhexyl) phthalate	117-81-7	mg/kg	< 0.364	< 0.0915	< 0.424	< 0.375	< 0.392	< 0.0998	< 0.373	< 0.0951	< 0.390	0.094	< 0.0966	< 0.0962	< 0.0833	< 0.0932	< 0.0961	< 0.0899	39
Total Petroleum Hydrocarbons (TPH)																			
TPH-Semi-Volatiles (DRO)	NA	mg/kg	16.5	< 10.5	< 12.0	34.8	< 11.4	< 12.0	< 11.2	< 11.4	33.5	< 10.8	36.8	< 11.2	< 10.9	< 10.9	< 12.2	< 11.1	96**
TPH-Semi-Volatiles (ORO)	NA	mg/kg	< 11.5	< 11.2	< 12.9	25.5	< 11.8	< 12.7	49.5	< 11.4	34.7	< 10.9	44.3	< 11.2	< 10.6	< 11.4	< 12.7	< 10.7	100***

Notes:

Bold = Detection

Bold & Highlight = Detection Above Residential SSL

*EPA Residential Screening Levels, May 2018

**Value for Aliphatic Medium (C9-C18), representative of liquid fuels and appropriate for TPH-DRO

***Value for reporting a release of petroleum from UST or AST to the Virginia DEQ

A review of **Table 6.1-1** indicates that:

- ❖ Arsenic was detected at total concentrations exceeding the EPA Tier II Site Screening Level (SSL) for unrestricted use; however, only one (1) of the detected concentrations exceeded the 12.41 mg/kg value for naturally occurring arsenic in the Piedmont physiographic province (explained in detail at **Section 8.1**). The arsenic concentration of 15.2 mg/kg in soil boring 77-6 at a depth of 0-5-ft BGS is consistent with documented background values.
- ❖ Hexavalent chromium was detected in three (3) of the samples at total concentrations at, or slightly above, the EPA Tier II SSL of 0.3 mg/kg.
- ❖ Copper was detected in one (1) of the samples at total concentrations slightly above the EPA Tier II SSL of 23 mg/kg.
- ❖ Iron was detected in one (1) of the samples at total concentrations slightly above the EPA Tier II SSL of 55,000 mg/kg.
- ❖ PAHs were elevated in sample 77-4, and both benzo (a) pyrene and benzo (b) fluoranthene exceeded the Tier II SSL.
- ❖ TPH-DRO and TPH-ORO concentrations were present in several of the samples; however, none exceeded their respective Tier II SSL or the Virginia Solid Waste Management Regulations (VSWMR) TPH limit of 50-mg/kg for fill material (9VAC 20-81-660D.2.d).

6.1.3.2. Groundwater

The three (3) monitoring wells at Finding #3 were purged and sampled using low-flow bladder pumps on September 27 and October 1, 2018. The following **Table 6.1-2** summarizes groundwater parameters collected during the purge process method.

Table 6.1-2 Groundwater Purge Details at Finding #3

Well ID	Date	Time*	Purge Volume (gallons)	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
MW 77-1	9/27/2018	1110	0.0	21.44	8.56	0.264	>1000	1.14	184
		1118	0.2	20.06	7.81	0.248	>1000	0.00	169
		1126	0.4	19.49	7.80	0.247	>1000	0.00	114
		1136	0.6	19.26	7.80	0.248	1000	0.00	51
		1143	0.8	19.13	7.81	0.249	816	0.00	12
		1148	1.0	19.04	7.81	0.249	685	0.00	-2
		1200	1.3	18.97	7.82	0.250	596	0.00	-23
		1200	Sample	--	--	--	--	--	--
MW 77-2	9/27/2018	1410	0.0	19.09	7.75	0.285	646	1.10	114
		1416	0.2	19.19	7.45	0.283	470	0.00	-21
		1421	0.3	19.08	7.45	0.282	372	0.00	-45
		1426	0.5	19.03	7.46	0.281	230	0.00	-56
		1431	0.9	18.99	7.46	0.279	156	0.00	-67
		1435	1.0	18.98	7.46	0.278	128	0.00	-72
		1440	1.2	18.98	7.46	0.278	103	0.00	-74
		1440	Sample	--	--	--	--	--	--
MW 77-3	10/2/2018	0955	0.0	20.22	7.75	0.309	241	6.36	205
		1000	0.5	17.80	7.53	0.317	123	4.38	215
		1005	1.0	17.61	7.53	0.316	19.3	2.50	215
		1010	1.5	17.59	7.55	0.316	9.4	1.68	204
		1015	2.0	17.49	7.55	0.314	1.5	1.14	156
		1020	2.5	17.43	7.53	0.313	0	0.77	93
		1025	3.0	17.36	7.54	0.313	0	0.49	66
		1030	3.5	17.30	7.52	0.313	0	0.20	49
		1035	4.0	17.26	7.51	0.311	0	0.00	41
		1035	Sample	--	--	--	--	--	--

Notes:

* **Bold** indicates time of sample collection

A review of **Table 6.1-2** indicates that:

- ❖ An adequate purge was performed at each well, per **3e** SOP 2.7 and low-flow sampling guidance.
- ❖ Turbidity decreased significantly in all monitoring wells during the purge; however, it was still elevated in MW 77-1 at time of sample collection. High turbidity (suspended particulates) can contribute to detected concentrations of total metals in the groundwater sample.

Analytical results of groundwater samples collected from these three (3) monitoring wells indicated that no petroleum compounds, SVOCs or VOCs were detected in groundwater. Low concentrations of several TAL metals were detected above the laboratory LOQ at Finding #3, as presented in the following **Table 6.1-3**. The detailed laboratory report in **Appendix E** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.1-3 Summary of Groundwater Detections at Finding #3

Well ID		MW 77-1	MW 77-2	MW 77-3	EPA MCL*	
Lab ID		18I1066-01	18I1066-02	18J0020-01		
Date Collected		9/27/2018	9/27/2018	10/1/2018		
Analyte	CAS	Units	Result	Result	Result	(mg/l)
TAL Metals - Total						
Aluminum	7429-90-5	mg/l	9.7	0.329	0.053	--
Antimony	7440-36-0	mg/l	< 0.001	< 0.001	< 0.001	0.006
Arsenic	7440-38-2	mg/l	0.0019	< 0.001	< 0.001	0.01
Barium	7440-39-3	mg/l	0.322	0.093	0.0902	2.0
Beryllium	7440-41-7	mg/l	< 0.0040	< 0.0040	< 0.0040	0.004
Cadmium	7440-43-9	mg/l	< 0.0040	< 0.0040	< 0.0040	0.005
Calcium	7440-70-2	mg/l	39.5	37.3	46.1	--
Chromium	7440-47-3	mg/l	0.0145	< 0.0100	< 0.0100	0.1
Chromium, Hexavalent	18540-29-9	mg/l	< 0.005	< 0.005	< 0.005	--
Cobalt	7440-48-4	mg/l	0.0204	< 0.0040	< 0.0040	--
Copper	7440-50-8	mg/l	0.017	< 0.0100	< 0.0100	1.3
Iron	7439-89-6	mg/l	23.8	0.928	0.138	--
Lead	7439-92-1	mg/l	0.0203	< 0.0100	< 0.0100	0.015
Magnesium	7439-95-4	mg/l	9.91	6.42	6.85	--
Manganese	7439-96-5	mg/l	0.753	0.54	0.464	--
Mercury	7439-97-6	mg/l	< 0.00020	< 0.00020	< 0.00020	0.002
Nickel	7440-02-0	mg/l	< 0.0100	< 0.0100	< 0.0100	--
Potassium	7440-09-7	mg/l	8.66	3.81	4.78	--
Selenium	7782-49-2	mg/l	0.00154	< 0.001	0.00105	0.05
Silver	7440-22-4	mg/l	< 0.0100	< 0.0100	< 0.0100	--
Sodium	7440-23-5	mg/l	17.3	14.2	17	--
Thallium	7440-28-0	mg/l	< 0.001	< 0.001	< 0.001	0.002
Vanadium	7440-62-2	mg/l	0.0503	< 0.0100	< 0.0100	--
Zinc	7440-66-6	mg/l	0.0481	< 0.0100	< 0.0100	--

Notes:

Bold = Detection

Highlight = Detection exceeds MCL

*EPA Maximum Contaminant Level, May 2018

A review of **Table 6.1-3** indicates that:

- ❖ Total lead was present in MW 77-1 slightly above its MCL of 0.015 mg/l.
- ❖ Hexavalent chromium was not detected in any of the monitoring well samples.
- ❖ Numerous other total TAL metals were detected at concentrations an order of magnitude less than their respective EPA Maximum Contaminant Level (MCL).
- ❖ The elevated total TAL metal concentrations (including lead) in MW 77-1 is likely attributed to turbidity measured at 596 NTU during sample collection (**Table 6.1-2**).

6.1.4. Opinions and Recommendations

The Boiler House (Finding #11) has been determined to not warrant additional characterization because:

- ❖ Concentrations of arsenic exceeded the residential SSL in all soil samples but were determined to be within the naturally occurring range for soil of the Piedmont physiographic province. One (1) soil sample collected at boring 77-6 from 0-6-ft BGS was slightly elevated above the average background concentration. Targeted soil removal could occur at this location to remove this elevated arsenic data point from future human health risk assessment calculations.
- ❖ The occasional concentrations of hexavalent chromium, copper, and iron that exceeded their respective residential SSLs are likely naturally-occurring or background levels and are not likely indicative of anthropogenic sources or releases.
- ❖ All TPH-DRO and ORO concentrations detected were below their respective SSLs and release reporting threshold.
- ❖ The elevated concentrations of PAHs at soil boring 77-4 are likely indicative of prior coal ash combustion products, and as such soil in this area should be excavated to a depth of 5-ft BGS. Post-excavation samples should be collected and analyzed for PAHs to ensure that impacted soil was removed to the maximum extent practicable.
- ❖ Targeted excavation to remove approximately 190 cubic yards (290 tons) of soil to be disposed as non-hazardous solid waste.

Should demolition of the boiler plant (Building 77) and 90,000-gallon heating oil AST occur, such activities must be performed in compliance with all applicable state and local codes, including identification and removal of asbestos containing materials within the structures. Additional information on demolition, AST closure and asbestos requirements are included in **Section 7.0**.

6.2. Finding #10: Former Physical Plant and Laundry

6.2.1. Background Summary

ECA Finding #10 is the location of the original Physical Plant, Laundry, and Carpenter Shop, which is now the location of Building 47. These prior structures were apparently razed for the subsequent construction of Building 47 in the mid-1970s.

6.2.2. Investigation Summary

Both soil and groundwater investigations were performed during the 2017 Phase II ESA, which included the advancement five (5) soil borings with a GeoProbe direct-push rig and installation of three (3) monitoring wells into the permanent groundwater table using an air rotary rig. Resultant soil and groundwater samples did not detect any constituents above their respective SSLs or MCLs. The results of soil and groundwater samples indicate no evidence of relic contamination from prior

Physical Plant operations at Finding #10. Based on this information, no additional characterization was recommended.

As described in Task 2.2, all three (3) groundwater monitoring wells were resampled during this supplemental Phase II ESA. Because historic petroleum, paint and solvent use were determined to be the likely contaminants, the following analyses were performed on the groundwater samples:

- ❖ Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO) by EPA Method 8015C.
- ❖ TPH-DRO by EPA Method 8015C.
- ❖ VOCs by EPA Method 8260B
- ❖ Total TAL Metals by EPA Methods 6010C, 6020A and 7470A/7471B. Note: only total 8 RCRA metals were analyzed in 2017. With the pending inclusion of the facility into the VRP, total TAL metals were chosen for the resampling in an effort to collect data commensurate with the human health risk assessment process.
- ❖ Hexavalent Chromium by EPA Method 7196A.

6.2.3. Results

All three monitoring wells at Finding #10 were purged and sampled using low-flow bladder pumps on October 1 to 2, 2018. The following **Table 6.2-1** summarizes groundwater parameters collected during the purge process method.

Table 6.2-1 Groundwater Purge Details at Finding #10

Well ID	Date	Time*	Purge Volume (gallons)	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
MW 10-1	10/2/2018	1005	0.2	25.31	5.97	0.241	121	5.62	194
		1010	0.3	24.39	5.95	0.243	142	2.06	210
		1015	0.5	23.85	5.92	0.241	151	1.86	218
		1020	0.8	23.55	5.85	0.250	143	1.8	228
		1025	1.0	23.54	5.81	0.255	134	1.79	236
		1030	1.2	23.57	5.79	0.257	128	1.78	239
		1035	Sample	--	--	--	--	--	--
MW 10-2	10/2/2018	0845	0.1	20.63	6.58	0.472	75.5	2.74	124
		0850	0.4	21.18	6.63	0.466	47.3	1.15	118
		0855	0.7	20.94	6.67	0.455	42.1	0.71	120
		0900	1.0	19.74	6.64	0.439	26.1	0.0	126
		0905	1.3	19.64	6.60	0.440	31.7	0.0	133
		0910	1.6	19.71	6.54	0.445	43.2	0.44	141
		0915	Sample	--	--	--	--	--	--
MW 10-3	10/1/2018	1705	0.2	20.12	5.68	0.466	>1000	6.5	225
		1710	0.3	19.23	5.64	0.462	>1000	5.6	245
		1715	0.5	19.06	5.64	0.446	>1000	5.3	256
		1720	0.8	18.94	5.64	0.465	>1000	5.2	265
		1725	1.1	18.89	5.63	0.465	472	5.0	275
		1730	1.4	18.97	5.63	0.464	1000	4.9	275
		1735	1.8	19.00	5.63	0.464	898	4.9	279
		1740	Sample	--	--	--	--	--	--

Notes:

* **Bold** indicates time of sample collection

A review of **Table 6.1-2** indicates that:

- ❖ An adequate purge was performed at each well, per **3e** SOP 2.7 and low-flow sampling guidance.
- ❖ Turbidity in MW 10-3 did not significantly decrease during the purge. High turbidity (suspended particulates) can contribute to detected concentrations of Total TAL Metals in the groundwater sample.

Analytical results of groundwater samples collected from these three (3) monitoring wells indicated that no petroleum compounds or VOCs were detected in groundwater. Low concentrations of several TAL metals were detected above the laboratory LOQ at Finding #10, as presented in the following **Table 6.2-2**. The detailed laboratory report in **Appendix E** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.2-2 Summary of Groundwater Detections at Finding #10

Well ID		MW 10-1		MW 10-2		MW 10-3		EPA MCL*	
Lab ID		17J0112-01	18J0081-01	17J0112-02	18J0081-02	17J0112-03	18J0020-07		
Date Collected		10/2/2017	10/2/2018	10/2/2017	10/2/2018	10/2/2017	10/1/2018		
Analyte	CAS	Units	Result		Result		Result		(mg/l)
Aluminum	7429-90-5	mg/l	--	1.84	--	0.355	--	19.1	--
Antimony	7440-36-0	mg/l	--	< 0.001	--	< 0.001	--	< 0.001	0.006
Arsenic	7440-38-2	mg/l	< 0.0200	0.0037	< 0.0200	< 0.001	< 0.0200	0.0046	0.01
Barium	7440-39-3	mg/l	0.168	0.133	0.105	0.0766	0.385	0.258	2.0
Beryllium	7440-41-7	mg/l	--	< 0.0040	--	< 0.0040	--	0.0043	0.004
Cadmium	7440-43-9	mg/l	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.005
Calcium	7440-70-2	mg/l	--	23.1	--	52.1	--	39	--
Chromium	7440-47-3	mg/l	< 0.0100	< 0.0100	< 0.0100	< 0.0100	0.0246	0.0143	0.1
Chromium, Hexavalent	18540-29-9	mg/l	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--
Cobalt	7440-48-4	mg/l	--	< 0.0040	--	< 0.0040	--	0.0282	--
Copper	7440-50-8	mg/l	--	0.0103	--	< 0.0100	--	0.0154	1.3
Iron	7439-89-6	mg/l	--	4.39	--	0.589	--	21.7	--
Lead	7439-92-1	mg/l	< 0.0100	0.0106	< 0.0100	< 0.0100	< 0.0100	0.0198	0.015
Magnesium	7439-95-4	mg/l	--	8.84	--	10.6	--	14.2	--
Manganese	7439-96-5	mg/l	--	0.131	--	0.146	--	1.33	--
Mercury	7439-97-6	mg/l	< 0.00020	< 0.00020	< 0.00020	< 0.00020	0.00036	< 0.00020	0.002
Nickel	7440-02-0	mg/l	--	< 0.0100	--	< 0.0100	--	< 0.0100	--
Potassium	7440-09-7	mg/l	--	5.33	--	14.5	--	7.45	--
Selenium	7782-49-2	mg/l	< 0.0500	0.0139	< 0.0500	0.00447	< 0.0500	0.0119	0.05
Silver	7440-22-4	mg/l	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	--
Sodium	7440-23-5	mg/l	--	25.5	--	25.8	--	44.5	--
Thallium	7440-28-0	mg/l	--	< 0.001	--	< 0.001	--	< 0.001	0.002
Vanadium	7440-62-2	mg/l	--	< 0.0100	--	< 0.0100	--	0.0449	--
Zinc	7440-66-6	mg/l	--	0.0127	--	0.0227	--	0.0606	--

Notes:

Bold = Detection

Highlight = Detection exceeds MCL

*EPA Maximum Contaminant Level, May 2018

A review of **Table 6.2-2** indicates that:

- ❖ Total beryllium and lead were detected slightly above their MCLs in MW 10-3. These and other elevated total TAL metal concentrations in MW 10-3 are likely attributed to turbidity measured at 898 NTU during sample collection (**Table 6.2-1**).
- ❖ Numerous other total TAL metals were detected at concentrations less than their respective EPA Maximum Contaminant Level (MCL).
- ❖ Total chromium was detected in groundwater from 10-3; however, hexavalent chromium was not detected above the LOQ.

6.2.4. Recommendations

The results of soil and groundwater samples collected in 2017 and additional groundwater samples collected in 2018 indicate no evidence of relic contamination from prior Physical Plant operations at Finding #10. Based on this information, no additional characterization is recommended.

6.3. Finding #13: Closed Sanitary Landfill

6.3.1. Background Summary

ECA Finding #13 was the ~4-acre sanitary landfill that operated from approximately 1950 through the 1970s. This landfill was sited in an existing low spot and adjoining ravine, which was subsequently filled over the span of several decades. It is likely that all waste generated by CVTC operation during this time-period was landfilled at this location, and/or burned in the adjoining incinerator (Finding #11), with burial of the resultant combustion products at this location. According to facility staff, friable asbestos pipe insulation may also have been buried in this closed landfill.

6.3.2. Investigation Summary

A groundwater investigation to determine presence or absence of groundwater impacts at Finding #13 commenced during the 2017 Phase II ESA, with the installation of two (2) monitoring wells into the permanent groundwater table using an air rotary rig. Groundwater samples were collected from these wells and surface water samples were collected from Williams Run because it was located directly downgradient from the closed landfill and was identified as the closest sensitive receptor for potential migration of groundwater. The groundwater samples did not detect any constituents above their respective MCLs, and all three stream samples exhibited no significant variation in the detected concentrations between upstream and downstream, indicating no quantifiable impacts from the former landfill. Based on this information, no additional characterization was recommended.

As described in Task 2.3, the two (2) groundwater monitoring wells were resampled during this supplemental Phase II ESA. Because of historic landfill activity, the groundwater samples were analyzed for constituents listed on Appendix II to 40 CFR Part 258—List of Hazardous Inorganic and Organic Constituents (Criteria for Municipal Solid Waste Landfills).

6.3.3. Results

Both monitoring wells at Finding #13 were purged and sampled using low-flow bladder pumps on October 2, 2018. The following **Table 6.3-1** summarizes groundwater parameters collected during the purge process method.

Table 6.3-1 Groundwater Purge Details at Finding #13

Well ID	Date	Time*	Purge Volume (gallons)	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
MW 13-1	10/2/2018	1115	0.1	17.44	6.32	0.234	371	6.26	205
		1120	0.5	16.53	5.88	0.167	302	2.48	215
		1125	0.8	16.13	5.6	0.133	119	1.75	235
		1130	1.2	16.12	5.66	0.131	64.7	1.5	242
		1135	1.5	16.07	5.61	0.128	37.6	1.29	249
		1140	1.8	15.95	5.61	0.126	24.0	1.26	252
		1145	Sample	--	--	--	--	--	--
MW 13-2	10/2/2018	1345	0.1	17.9	5.95	0.39	1000	2.44	238
		1350	0.5	16.59	5.87	0.369	335	0.0	244
		1355	0.9	16.44	5.80	0.326	104	0.0	247
		1400	1.3	16.32	5.78	0.309	30.6	0.0	250
		1405	1.7	16.38	5.80	0.311	8.5	0.0	252
		1410	2.1	16.36	5.86	0.328	4.2	0.0	252
		1415	Sample	--	--	--	--	--	--

Notes:

* **Bold** indicates time of sample collection

A review of **Table 6.3-1** indicates that:

- ❖ An adequate purge was performed at each well, per **3e** SOP 2.7 and low-flow sampling guidance.
- ❖ Turbidity was very low in both wells at the time of collection, indicating that any total metals in groundwater samples would likely be dissolved in the aquifer.

Analytical results of the representative groundwater and surface water samples indicate that herbicides, pesticides, VOCs, or SVOCs were not present at detectable concentrations. Low total concentrations of barium were detected above the laboratory LOQ in groundwater at concentrations commensurate with prior results of October 2017, while mercury was not detected in MW 13-2 in 2018, as presented in the following **Table 6.3-2**. The detailed laboratory report in **Appendix E** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.3-2 Summary of Groundwater and Surface Water Detections at Finding #13

Well ID		MW 13-1		MW 13-2		S1 (midpoint)	S2 (upstream)	S3 (downstream)	EPA MCL*	
Lab ID		17J0155-05	18J0081-03	17J0155-06	18J0081-04	17J0515-01	17J0515-02	17J0515-03		
Date Collected		10/2/2017	10/2/2018	10/2/2017	10/2/2018	10/16/2017	10/16/2017	10/16/2017		
Analyte	CAS	Units	Result		Result		Result	Result	Result	
Arsenic	7440-38-2	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	0.0012	0.0011	0.0011	0.01
Barium	7440-39-3	mg/l	0.0548	0.0692	0.0895	0.13	0.0406	0.0378	0.0402	2.0
Mercury	7439-97-6	mg/l	< 0.00020	< 0.00020	0.00032	< 0.00020	< 0.00020	< 0.00020	< 0.00020	0.002

Notes:

Bold = Detection

*EPA Maximum Contaminant Level, May 2018

A review of **Table 6.3-2** indicates that:

- ❖ Barium was detected in all groundwater (2017 and 2018) and surface water samples (2017), at concentrations two orders of magnitude less than the MCL of 2.0 mg/l.

- ❖ Total arsenic was detected in all surface water samples from Williams Run in 2017, at concentrations an order of magnitude less than the MCL of 0.01 mg/l.
- ❖ Mercury was detected in groundwater from MW 13-2 in October 2017 at an order of magnitude less than the MCL of 0.002 mg/l but was no longer detected above the LOQ in the recent sampling event.
- ❖ All three stream samples in 2017 exhibited no significant variation in the detected concentrations, indicating no quantifiable impacts from the former landfill.

6.3.4. Recommendations

While no detected groundwater constituents exceeded their respective MCLs, the groundwater monitoring well network is incomplete at this time, as additional monitoring wells were not planned during this supplemental Phase II ESA.

Because this Finding #13 is a former sanitary landfill predating modern permitting requirements, it has had no prior assessment, boundary survey, or other protections afforded by commensurate landfills that have operated under a permit. Therefore, it should be enrolled into the Virginia DEQ's Voluntary Remediation Program (VRP) to obtain a Certification of Satisfactory Completion of Remediation. Additional information on the process and protections afforded by the VRP is included in **Section 8.2**.

The VRP process for this former sanitary landfill would likely include the following general activities:

- ❖ Determine site eligibility and apply for enrollment into the VRP.
- ❖ Delineate the extent of buried waste using non-intrusive geophysical testing (terrain conductivity) and ground penetrating radar (GPR).
- ❖ Confirm the waste limits with a direct-push GeoProbe drill rig.
- ❖ Collect soil samples and determine the thickness of the existing landfill cap.
- ❖ Remove and properly dispose of all debris exposed and/or dispersed at the ground surface.
- ❖ Survey locate the bounds of waste and the limits of the VRP Site.
- ❖ Enter an access agreement with neighboring property owner(s) to install at least one (1) downgradient monitoring well. It has been determined that this lowland area is a forested wetland (see letter in **Appendix F**). Any monitoring well installed in this area would be constructed by hand auger (no mobile equipment).
- ❖ Collect deep soil gas samples within and adjoining the delineated limits of waste.
- ❖ Perform at least two (2) complete rounds of groundwater sampling.
- ❖ Subdivide the landfill from the larger CVTC parcel, and record land use restrictions into the deed for this VRP Site.
- ❖ Determine if the specification and placement of additional cap material (clay) is warranted.

6.4. Finding #14: New Scrap Yard

6.4.1. Background Summary

ECA Finding #14 was the area identified as the “New Scrap Yard” by an undated facility map. This area contained evidence of fill piles and large ground disturbances, while historic aerial photographs and interviews indicate that the southern portion was used to landfill debris. The investigation to determine presence or absence of groundwater impacts at Finding #14 began in the 2017 Phase II ESA, which included the installation of three (3) monitoring wells into the permanent groundwater table using an air rotary rig and subsequent groundwater sample analysis. The locations of these monitoring wells are depicted on **Figure 14-1**.

6.4.2. Investigation Summary

As described in Task 2.4, the three (3) groundwater monitoring wells were resampled during this supplemental Phase II ESA. Because of historic landfill activity, the groundwater samples were analyzed for constituents listed on Appendix II to 40 CFR Part 258—List of Hazardous Inorganic and Organic Constituents (Criteria for Municipal Solid Waste Landfills).

6.4.3. Results

All three (3) monitoring wells at Finding #14 were purged and sampled using low-flow bladder pumps on October 2-3, 2017. The following **Table 6.4-1** summarizes groundwater parameters collected during the purge process method.

Table 6.4-1 Groundwater Purge Details at Finding #14

Well ID	Date	Time*	Purge Volume (gallons)	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
MW 14-1	10/2/2018	1600	0.1	20.47	7.49	0.374	172	2.34	67
		1605	0.3	17.42	7.8	0.384	190	0	-54
		1610	0.6	16.79	7.83	0.378	168	0	-84
		1615	0.9	16.62	7.87	0.363	169	0	-100
		1620	1.2	16.72	7.94	0.342	160	0	-117
		1625	1.5	16.63	7.95	0.322	153	0	-125
		1625	Sample	--	--	--	--	--	--
MW 14-2	10/3/2018	0930	0.1	18.84	7.33	0.259	>1000	5.73	160
		0935	0.2	16.51	7.05	0.264	>1000	0.54	166
		0940	0.3	16.34	7.00	0.261	>1000	0.0	167
		0945	0.5	15.88	6.99	0.260	>1000	0.0	166
		0950	0.8	15.87	7.01	0.260	>1000	0.0	164
		0955	1.1	15.91	7.02	0.260	792	0.0	160
		1000	Sample	--	--	--	--	--	--
MW 14-3	10/2/2018	1450	0.1	19.48	6.17	0.186	20.1	4.03	230
		1455	0.3	19.55	6.10	0.186	24.1	2.45	234
		1500	0.6	18.43	6.10	0.182	29.7	2.75	233
		1505	0.9	18.18	6.04	0.178	34.2	2.36	236
		1510	1.3	18.17	6.08	0.180	33.4	2.23	235
		1515	1.7	18.06	6.15	0.187	29.1	2.18	233
		1520	Sample	--	--	--	--	--	--

Notes:

* **Bold** indicates time of sample collection

A review of **Table 6.4-1** indicates that:

- ❖ An adequate purge was performed at each well, per **3e** SOP 2.7 and low-flow sampling guidance.
- ❖ Turbidity in monitoring well MW 14-2 did not significantly decrease during the purge. High turbidity (suspended particulates) can contribute to elevated concentrations of metals in the groundwater samples.

Analytical results of the groundwater samples collected from these three (3) monitoring wells indicated that herbicides, pesticides, and VOCs were not present in groundwater at detectable concentrations. Low concentrations of select heavy metals were detected above the laboratory LOQ at Finding #14, as presented in the following **Table 6.4-2**. The detailed laboratory report in **Appendix EF** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.4-2 Summary of Groundwater Detections at Finding #14

Well ID		MW 14-1		MW 14-2		MW 14-3		EPA MCL*	
Lab ID		17J0112-04	18J0081-06	17J0112-05	18J0154-01	17J0112-06	18J0081-05		
Date Collected		10/3/2017	10/2/2018	10/3/2017	10/3/2018	10/3/2017	10/2/2018		
Analyte	CAS	Units	Result		Result		Result		(mg/l)
bis (2-Ethylhexyl) phthalate	117-81-7	mg/l	< 0.00260	< 0.00260	< 0.00269	< 0.00294	0.00309	< 0.00272	0.006
Arsenic	7440-38-2	mg/l	0.0014	0.0016	0.0055	0.002	0.001	< 0.001	0.01
Barium	7440-39-3	mg/l	0.0505	0.0281	0.0883	0.074	0.0405	0.0244	2.0
Cobalt	7440-48-4	mg/l	< 0.0040	< 0.0040	0.0047	< 0.0040	< 0.0040	< 0.0040	--
Chromium	7440-47-3	mg/l	< 0.0100	< 0.0100	< 0.0100	0.0109	< 0.0100	< 0.0100	0.1
Chromium, Hexavalent	18540-29-9	mg/l	--	--	--	< 0.005	--	--	--
Copper	7440-50-8	mg/l	< 0.0100	< 0.0100	0.0161	< 0.0100	< 0.0100	< 0.0100	1.3
Lead	7439-92-1	mg/l	< 0.0100	< 0.0100	0.0231	0.0207	< 0.0100	< 0.0100	0.015
Vanadium	7440-62-2	mg/l	< 0.0100	< 0.0100	0.0147	0.0131	< 0.0100	< 0.0100	--
Zinc	7440-66-6	mg/l	0.0129	< 0.0100	0.0577	0.0451	0.0152	0.0108	--

Notes:

Bold = Detection

Highlight = Detection exceeds MCL

*EPA Maximum Contaminant Level, May 2018

A review of **Table 6.4-2** indicates that:

- ❖ The single one incidence of bis (2-ethylhexyl) phthalate (a plasticizer) in MW 14-3 during the 2017 Phase II ESA was not detected in 2018 resampling event. Phthalates are common laboratory contaminants.
- ❖ Arsenic, barium, and zinc were detected at low concentrations in all groundwater samples in October 2017 and 2018. The detected arsenic and barium concentrations were at least an order of magnitude less than their respective MCLs. Zinc does not have an EPA MCL.
- ❖ Cobalt, Chromium, Copper, Lead, and Vanadium were also detected in MW 14-2, with lead detected above its MCL of 0.015 mg/l. Hexavalent chromium was not detected MW 14-2.
- ❖ The elevated total metal concentrations in MW 14-2 are likely attributed to turbidity measured at 792 NTU during sample collection (**Table 6.4-1**).

6.4.4. Recommendations

Because this Finding #14 is a former scrap yard and an apparent demolition debris landfill predating modern permitting requirements, it has had no prior assessment, boundary survey, or other protections afforded commensurate landfills that have operated under a permit. Therefore, it should be enrolled into the Virginia DEQ's VRP to obtain a Certification of Satisfactory Completion of Remediation. Additional information on the process and protections afforded by the VRP is included in **Section 8.2**.

The VRP process for this former scrap yard and demolition debris landfill would likely include the following general activities:

- ❖ Determine site eligibility and apply for enrollment into the VRP.
- ❖ Delineate the extent of buried waste using non-intrusive geophysical testing (terrain conductivity) and ground penetrating radar (GPR).

- ❖ Confirm the waste limits with a direct-push GeoProbe drill rig.
- ❖ Collect soil samples and determine the thickness of the existing landfill cap.
- ❖ Remove and properly dispose of all debris exposed and/or dispersed at the ground surface.
- ❖ Survey locate the bounds of waste and the limits of the VRP Site.
- ❖ Install one (1) additional monitoring well west of this area, which will likely require installation of an access road to allow both drill rig and future monitoring well access.
- ❖ Collect deep soil gas samples within and adjoining the delineated limits of waste.
- ❖ Perform at least two (2) complete rounds of groundwater sampling.
- ❖ Subdivide the landfill from the larger CVTC parcel, and record land use restrictions into the deed for this VRP Site.
- ❖ Determine if the specification and placement of additional cap material (clay) is warranted.

6.5. Finding #15: Coal Ash and Debris Dump

6.5.1. Background Summary

ECA Finding #15 was a small (less than 1-acre) area in the wooded ravine immediately west of the greenhouse (Building 83), where mounds of coal ash and partially buried construction debris were observed. One (1) monitoring well (MW 15-1) was installed immediately below the waste into the permanent groundwater table using an air rotary rig during the October 2017 Phase II ESA. Analytical results of the groundwater sample collected from monitoring well 15-1 indicated that only two compounds were detected above the laboratory LOQ at Finding #15: chloroform (a VOC) and barium (a heavy metal), both at concentrations below their respective MCLs.

6.5.2. Investigation Summary

As described in Task 2.5, MW 15-1 was resampled during this supplemental Phase II ESA. This well was installed proximate to Finding #16, therefore its location is depicted on **Figure 16-1**. Because the coal ash and debris indicated landfilling activities, the groundwater sample was analyzed for constituents listed on Appendix II to 40 CFR Part 258—List of Hazardous Inorganic and Organic Constituents (Criteria for Municipal Solid Waste Landfills).

6.5.3. Results

The monitoring well at Finding #15 was installed immediately down gradient of the partially buried coal ash and demolition debris piles. This monitoring well was purged and sampled using a low-flow bladder pump on October 3, 2018. The following **Table 6.5-1** summarizes groundwater parameters collected during the purge process method.

Table 6.5-1 Groundwater Purge Details at Finding #15

Well ID	Date	Time*	Purge Volume (gallons)	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
MW 15-1	10/3/2018	1057	0.1	17.50	6.09	0.167	628	11.06	192
		1102	0.4	14.87	5.34	0.175	132.0	7.13	257
		1107	0.8	15.17	5.34	0.173	82.5	6.98	265
		1112	1.2	15.19	5.33	0.173	29.3	7.06	279
		1117	1.6	14.98	5.32	0.172	14.9	7.10	283
		1122	2.0	14.90	5.34	0.172	10.8	6.92	236
		1127	2.5	14.90	5.34	0.171	8.9	6.9	285
		1130	Sample	--	--	--	--	--	--

Notes:

* **Bold** indicates time of sample collection

A review of **Table 6.5-1** indicates that:

- ❖ An adequate purge was performed at this well, per **3e** SOP 2.7 and low-flow sampling guidance.
- ❖ Turbidity in MW 15-1 decreased significantly during the purge.

Analytical results of the groundwater sample collected from MW 15-1 indicated that only two compounds were detected above the laboratory LOQ at Finding #15: chloroform (a VOC) and barium (a heavy metal), as presented in the following **Table 6.5-2**. The detailed laboratory report in **Appendix F** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.5-2 Summary of Groundwater Detections at Finding #15

Well ID		MW 15-1		EPA MCL*
Lab ID		17J0112-07	18J0154-03	
Date Collected		10/3/2017	10/3/2018	
Analyte	CAS	Units	Result	(mg/l)
Chloroform	67-66-3	mg/l	0.00134 0.00107	0.08
Barium	7440-39-3	mg/l	0.0496 0.0624	2.0

Notes:

Bold = Detection

*EPA Maximum Contaminant Level, May 2018

A review of **Table 6.5-2** indicates that:

- ❖ Both barium and chloroform were detected in both 2017 and 2018, but at concentrations at least an order of magnitude less than their respective MCLs.
- ❖ While chloroform can be attributed to laboratory cross contamination when also present at low concentrations in the trip blanks submitted and analyzed as part of the QA/QC process, neither trip blank (2017 or 2018) contained chloroform above the LOQ of 0.0005 mg/l. Additionally, because it was present in both sampling event, this low concentration of chloroform could be classified as groundwater impact proximate to Finding #15.

6.5.4. Recommendations

While chloroform impact has been confirmed in MW 15-1, it is consistently below the MCL. Because groundwater is great than 15-ft BGS, vapor intrusion scenarios would not apply during risk assessment; therefore, expansion of the monitoring well network (installation of additional wells) is not warranted.

Because this Finding #15 could be considered an uncontrolled dump, or unpermitted waste area containing coal ash and demolition debris, it should be enrolled into the Virginia DEQ's VRP to obtain a Certification of Satisfactory Completion of Remediation. Additional information on the process and protections afforded by the VRP is included in **Section 8.2**.

The VRP process for this area would likely include the following general activities:

- ❖ Determine site eligibility and apply for enrollment into the VRP.
- ❖ Due to the smaller area and apparent lesser amount of total wastes, all coal ash and disposed demolition debris should be characterized for waste classification and then removed from Finding #15 and properly disposed of according to waste characteristics (e.g. hazardous or non-hazardous).
- ❖ Collect soil samples after excavation of wastes to demonstrate completion and establish risk.
- ❖ Survey locate the bounds of disturbance and the limits of the VRP Site.
- ❖ Collect a deep soil gas sample within the former area of waste after excavation is complete.
- ❖ Perform at final groundwater sampling event.
- ❖ If risk assessment indicates a potential risk, , then subdivide this area from the larger CVTC parcel, and record land use restrictions into the deed for this VRP Site.

6.6. Finding #16: Old Scrap Yard

6.6.1. Background Summary

ECA Finding #16 was the area identified as the "Old Scrap Yard" by an undated facility map. This area contained evidence of dead or distressed vegetation on the forest floor, construction debris and significant amounts of suspect asbestos tile protruding from the ground, several piles of discarded 55-gallon drums, and other evidence indicating that this area was a combined metal scrap yard and construction debris landfill. Suspect coal ash material was also observed on the forested ground surface in several areas within the area of Finding #16.

The investigation to determine presence or absence of groundwater impacts at Finding #16 began in the 2017 Phase II ESA, which included the installation of five (5) monitoring wells into the permanent groundwater table using an air rotary rig and subsequent groundwater sample analysis.

6.6.2. Investigation Summary

6.6.2.1. Surface Soil

A total of 24 grab samples of surface soil (0-12-inches BGS) were collected within the “Old Scrap Yard” (Finding #16) to determine the potential for residual impacts from historic scrap metal and waste handling. Samples were collected in accordance with 3e SOP 2.1. Because of historic landfill and metal scrapyards activities, the following analyses were performed on the representative media samples:

- ❖ TPH-GRO, TPH-DRO, and TPH-ORO by EPA Method 8015C.
- ❖ SVOCs, PAHs and dibenzofurans by EPA Method 8270D.
- ❖ Dioxins (2,3,7,8-TCDD) by EPA Method 8270D (SIM) – a very sensitive qualitative analysis used to determine presence/absence.
- ❖ Polychlorinated Biphenyls (PCBs) by EPA Method 8082A.
- ❖ TAL Metals by EPA Methods 6010C, 6020A and 7470A.
- ❖ Hexavalent Chromium by EPA Method 7196A: all soil and groundwater samples.

6.6.2.2. Groundwater

As described in Task 2.6, the five (5) monitoring wells were resampled during this supplemental Phase II ESA. This well was installed proximate to Finding #16, therefore its location is depicted on **Figure 16-1**. Because of historic debris disposal, buried demolition waste, and scrap yarding activity, the groundwater samples were analyzed for constituents listed on Appendix II to 40 CFR Part 258—List of Hazardous Inorganic and Organic Constituents (Criteria for Municipal Solid Waste Landfills).

6.6.3. Results

6.6.3.1. Soil

The following **Table 6.6-1** presents a summary of the TAL Metals and other detected compounds at Findings #16. No dioxins, dibenzofurans, or SVOCs were detected in the samples. The detailed laboratory report in **Appendix E** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.6-1 Summary of Analyte Detections in Surface Soil at Finding #16

Analyte	CAS	Units	Date Collected																								EPA Residential Soil Screening Level*
			16-S1	16-S2	16-S3	16-S4	16-S5	16-S6	16-S7	16-S8	16-S9	16-S10	16-S11	16-S12	16-S13	16-S14	16-S15	16-S16	16-S17	16-S18	16-S19	16-S20	16-S21	16-S22	16-S23	16-S24	
TAL Metals																											
Aluminum	7429-90-5	mg/kg	18,300	36,600	25,900	11,600	20,000	24,000	52,200	15,800	28,200	25,200	23,400	26,400	9,290	17,200	13,100	11,600	22,000	19,700	25,900	19,800	19,200	19,700	27,500	26,900	77,000
Antimony	7440-36-0	mg/kg	< 6.58	< 6.13	< 6.64	< 5.53	< 6.54	< 7.14	< 5.41	< 5.94	< 6.24	< 5.00	< 5.83	< 6.34	< 6.67	< 7.26	< 6.98	< 5.90	< 6.84	< 6.22	< 6.30	< 6.30	< 6.79	< 7.51	< 6.89	< 6.77	31
Arsenic	7440-38-2	mg/kg	12.3	2.56	1.56	2.07	5.01	4.43	4.02	1.89	3.18	3.85	1.39	2.75	4.83	1.94	1.67	5.06	2.57	2.84	3.49	< 1.26	1.85	1.6	< 1.38	1.93	0.68
Barium	7440-39-3	mg/kg	171	102	98.9	53.8	135	140	94.8	86.2	119	86.5	92.7	108	53.9	70	82.2	119	103	159	141	91.3	118	164	130	163	15,000
Beryllium	7440-41-7	mg/kg	3.61	2.14	1.65	0.918	2.46	1.77	1.92	1.07	1.46	1.43	1.46	1.36	1.08	1.48	1.00	1.94	1.60	1.52	1.78	1.57	1.53	1.74	1.84	1.84	160
Cadmium	7440-43-9	mg/kg	0.426	0.474	0.433	0.302	1.32	3.3	1.18	0.428	0.607	0.718	0.532	0.698	0.412	0.808	0.714	1.77	0.811	0.963	1.14	0.925	0.879	1.08	0.939	1.14	71
Calcium	7440-70-2	mg/kg	7,890	617	4,680	133,000	6,970	3,810	1,620	2,150	1,430	1,190	919	1,380	92,800	121,000	235,000	58,000	4,330	1,230	894	1,020	2,170	2,750	2,430	3,460	--
Chromium	7440-47-3	mg/kg	20.9	27.7	21.0	13.5	18.9	20.7	31.0	14.5	18.0	16.4	18.8	20.4	11.8	18.2	12.7	21.8	23.2	35.3	30.4	22.1	20.1	21.0	19.4	20.6	120,000
Chromium, Hexavalent	18540-29-9	mg/kg	2.95	< 0.26	< 0.29	< 0.23	< 0.28	< 0.28	< 0.34	< 0.26	< 0.25	< 0.31	< 0.24	1.67	< 0.27	< 0.29	< 0.29	< 0.25	< 0.28	< 0.26	< 0.26	< 0.26	< 0.28	< 0.30	< 0.29	30.6	0.3
Cobalt	7440-48-4	mg/kg	14.9	16.2	12.1	8.23	17.8	9.37	9.22	9.59	10.1	10.7	11.8	12.6	6.82	11.4	6.61	11.0	17.3	13.0	19.6	14.2	17.9	16.2	14.9	19.4	23
Copper	7440-50-8	mg/kg	27.5	25.4	12.8	10.9	18.4	37.7	10.8	7.3	14.8	16.8	18.0	16.0	10.4	15.0	10.6	25.4	18.7	14.3	9.51	27.9	15.8	16.5	11.8	14.2	3,100
Iron	7439-89-6	mg/kg	21,000	38,600	33,700	16,800	30,400	30,700	46,700	21,100	29,000	28,200	26,600	30,200	12,600	23,300	18,300	29,300	24,700	22,200	28,900	23,900	21,500	26,700	25,800	26,200	55,000
Lead	7439-92-1	mg/kg	26.1	29.1	31.3	99.5	60.6	81.8	15.3	14.5	19.8	12.3	9.88	42.6	8.84	46.3	21.2	80.0	9.24	36.8	33.8	8.65	18.1	28.2	8.52	28.9	400
Magnesium	7439-95-4	mg/kg	4,990	7,980	5,680	11,300	5,000	4,100	4,900	5,940	5,030	6,800	7,340	7,150	7,610	11,500	12,100	9,230	6,940	3,160	8,910	7,650	6,040	7,100	7,240	7,610	--
Manganese	7439-96-5	mg/kg	227	337	280	200	277	289	192	354	252	282	378	551	180	294	365	277	476	562	596	371	612	518	441	682	1,800
Mercury	7439-97-6	mg/kg	0.077	0.058	0.047	< 0.009	0.068	0.319	0.045	0.037	0.041	0.03	0.016	0.036	0.05	< 0.011	0.057	0.043	0.03	0.044	0.041	0.014	0.033	0.038	0.041	0.044	11
Nickel	7440-02-0	mg/kg	20	19.4	13.4	14.1	16.1	24.4	14.1	10.1	11.4	14.1	11.6	14.7	13.6	17.5	9.67	21.1	9.66	11.1	24.3	13.4	10.2	12.3	12.3	15.3	--
Potassium	7440-09-7	mg/kg	4,380	7,880	5,910	3,840	4,680	4,320	4,350	6,330	5,680	6,700	8,880	7,300	2,780	5,130	2,940	3,120	8,690	2,580	8,280	8,410	7,340	7,970	8,060	8,620	--
Selenium	7782-49-2	mg/kg	< 3.29	< 3.07	< 3.32	< 2.76	< 3.27	< 3.57	< 2.71	< 2.97	< 3.12	< 2.50	< 2.92	< 3.17	< 3.33	< 3.63	< 3.49	< 2.95	< 3.42	< 3.11	< 3.15	< 3.15	< 3.40	< 3.75	< 3.44	< 3.38	390
Silver	7440-22-4	mg/kg	< 0.658	< 0.613	< 0.664	< 0.553	< 0.654	< 0.714	< 0.541	< 0.594	< 0.624	< 0.500	< 0.583	< 0.634	< 0.667	< 0.726	< 0.698	< 0.590	< 0.684	< 0.622	< 0.630	< 0.630	< 0.679	< 0.751	< 0.689	< 0.677	390
Sodium	7440-23-5	mg/kg	135	52	43.2	59.9	80	52.5	35.8	35.3	40	36.8	42	35.5	50.7	61.7	225	134	45.3	31.6	49.9	45.9	44.2	58	46.1	44.5	--
Thallium	7440-28-0	mg/kg	< 3.29	< 3.07	< 3.32	< 2.76	< 3.27	< 3.57	< 2.71	< 2.97	< 3.12	< 2.50	< 2.92	< 3.17	< 3.33	< 3.63	< 3.49	< 2.95	< 3.42	< 3.11	< 3.15	< 3.15	< 3.40	< 3.75	< 3.44	< 3.38	--
Vanadium	7440-62-2	mg/kg	39.4	38.9	27.6	18.1	32.7	37.1	52.8	17.5	34.1	25	23.9	27.3	15.5	19.2	22.9	35.5	25.5	36.1	31.1	24.7	27	36.8	32.3	33.1	390
Zinc	7440-66-6	mg/kg	118	114	117	73.8	141	436	85.7	101	112	111	102	143	44	123	71	231	103	127	141	106	106	133	110	176	23,000
Total Petroleum Hydrocarbons (TPH)																											
TPH-Volatiles (GRO)	NA	mg/kg	< 0.14	< 0.13	< 0.14	< 0.11	< 0.14	0.28	< 0.17	< 0.59	< 0.13	< 0.15	< 0.12	< 0.13	< 0.13	< 0.14	< 0.14	< 0.13	< 0.14	< 0.13	< 0.14	< 0.13	< 0.14	< 0.15	< 0.15	< 0.14	82**
TPH-Semi-Volatiles (DRO)	NA	mg/kg	20.7	< 13.1	< 13.9	< 10.7	13.4	14.4	< 15.5	< 12.3	< 12.2	< 14.0	< 11.8	< 13.1	< 13.5	< 14.3	16.3	17.2	< 13.6	< 12.9	< 12.8	< 12.9	< 14.2	< 15.1	< 14.5	< 13.2	96***
TPH-Semi-Volatiles (ORO)	NA	mg/kg	< 13.7	< 12.8	< 14.2	19.4	14.8	15.0	< 16.0	< 12.5	< 12.2	< 15.3	< 11.7	< 13.2	< 13.1	< 13.6	< 13.9	< 12.6	< 13.7	13.8	< 12.9	< 12.9	< 14.3	< 15.0	< 14.4	15.5	230,000
Polychlorinated Biphenyls (PCBs)																											
PCB as Aroclor 1016	12674-11-2	mg/kg	< 0.136	< 0.129	< 0.136	< 0.110	< 0.132	< 0.134	< 0.168	< 0.124	< 0.122	< 0.149	< 0.114	< 0.126	< 0.134	< 0.129	< 0.138	< 0.122	< 0.134	< 0.129	< 0.126	< 0.114	< 0.136	< 0.146	< 0.130	< 0.142	4.1
PCB as Aroclor 1221	11104-28-2	mg/kg	< 0.136	< 0.129	< 0.136	< 0.110	< 0.132	< 0.134	< 0.168	< 0.124	< 0.122	< 0.149	< 0.114	< 0.126	< 0.134	< 0.129	< 0.138	< 0.122	< 0.134	< 0.129	< 0.126	< 0.114	< 0.136	< 0.146	< 0.130	< 0.142	0.2
PCB as Aroclor 1232	11141-16-5	mg/kg	< 0.136	< 0.129	< 0.136	< 0.110	< 0.132	< 0.134	< 0.168	< 0.124	< 0.122	< 0.149	< 0.114	< 0.126	< 0.134	< 0.129	< 0.138	< 0.122	< 0.134	< 0.129	< 0.126	< 0.114	< 0.136	< 0.146	< 0.130	< 0.142	0.2
PCB as Aroclor 1242	53469-21-9	mg/kg	< 0.136	< 0.129	< 0.136	< 0.110	< 0.132	< 0.134	< 0.168	< 0.124	< 0.122	< 0.149	< 0.114	< 0.126	< 0.134	< 0.129	< 0.138	< 0.122	< 0.134	< 0.129	< 0.126	< 0.114	< 0.136	< 0.146	< 0.130	< 0.142	0.2
PCB as Aroclor 1248	12672-29-6	mg/kg	< 0.136	< 0.129	< 0.136	< 0.110	< 0.132	< 0.134	< 0.168	< 0.124	< 0.122	< 0.149	< 0.114	< 0.126	< 0.134	< 0.129	< 0.138	< 0.122	< 0.134	< 0.129	< 0.126	< 0.114	< 0.136	< 0.146	< 0.130	< 0.142	0.2
PCB as Aroclor 1254	11097-69-1	mg/kg	< 0.136	< 0.129	< 0.136	< 0.110	< 0.132	0.227	< 0.168	< 0.124	< 0.122	< 0.149	< 0.114	< 0.126	< 0.134	< 0.129	< 0.138	< 0.122	< 0.134	< 0.129	< 0.126	< 0.114	< 0.136	< 0.146	< 0.130	< 0.142	0.24
PCB as Aroclor 1260	11096-82-5	mg/kg	< 0.136	< 0.129	< 0.136	< 0.110	< 0.132	0.134	< 0.168	< 0.124	< 0.122	< 0.149	< 0.114	< 0.126	< 0.134	< 0.129	< 0.138	< 0.122	< 0.134	< 0.129	< 0.126	< 0.114	< 0.136	< 0.146	< 0.130	< 0.142	0.24

Notes:
Bold = Detection
Bold & Highlight = Detection Above Residential SSL
 *EPA Residential Screening Levels, May 2018

** Value for Aromatic Low (C6-C8), most conservative value for TPH-GRO
 ***Value for Aliphatic Medium (C9-C18), representative of liquid fuels and appropriate for TPH-DRO

A review of **Table 6.6-1** indicates that:

- ❖ Arsenic was detected at total concentrations exceeding the EPA Tier II SSL for unrestricted use; however, none of the detected concentrations exceeded the 12.41 mg/kg threshold for naturally occurring arsenic in the Piedmont physiographic province (explained in detail at **Section 8.1**).
- ❖ Hexavalent chromium in three (3) of the sample locations was detected at concentrations above the EPA Tier II SSL of 0.3 mg/kg. One sample (16-S24) contained a hexavalent chromium concentration of 30.6 mg/kg.
- ❖ TPH-GRO, DRO, and ORO concentrations were present in several of the samples; however, none exceeded their respective Tier II SSL or the Virginia Solid Waste Management Regulations (VSWMR) TPH limit of 50-mg/kg for fill material (9VAC 20-81-660D.2.d).
- ❖ Low concentrations of PCBs were detected at one sample location (16-S6); however, the concentrations were both below their respective SSLs and the Toxic Substance Control Act (TSCA) PCB cleanup threshold of 1 mg/kg.

6.6.4. Groundwater

The monitoring wells at Finding #16 were purged and sampled using low-flow bladder pumps on October 3-4, 2018. The following **Table 6.6-2** summarizes groundwater parameters collected during the purge process method.

Table 6.6-2 Groundwater Purge Details at Finding #16

Well ID	Date	Time*	Purge Volume (gallons)	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
MW 16-1	10/4/2018	1155	0.1	19.40	5.95	0.259	5.4	3.63	222
		1200	0.3	18.90	5.81	0.256	3.2	2.37	232
		1205	0.6	18.51	5.75	0.256	2.4	1.91	239
		1210	0.9	18.54	5.76	0.256	3.1	1.88	239
		1215	1.3	18.66	5.79	0.256	4.8	1.77	240
		1220	1.6	18.89	5.81	0.256	6.2	1.73	241
		1230	Sample	--	--	--	--	--	--
MW 16-2	10/4/2018	1030	0.1	16.76	6.63	0.129	21.0	12.55	190
		1035	0.3	14.92	6.40	0.124	0	3.38	202
		1040	0.6	14.54	6.29	0.128	0	3.06	206
		1045	1.0	14.88	6.16	0.132	0	2.49	212
		1050	1.5	14.81	6.14	0.130	0	2.28	216
		1055	1.9	14.83	6.12	0.129	0	1.93	219
		1100	Sample	--	--	--	--	--	--
MW 16-3	10/3/2018	1619	0.1	21.93	6.49	0.170	145	10.1	131
		1624	0.2	19.29	6.01	0.172	105	3.4	179
		1629	0.4	18.81	6.02	0.169	111	3.1	186
		1634	0.6	17.85	5.99	0.170	131	2.6	201
		1639	1.0	18.01	6.05	0.172	128	2.6	202
		1644	1.4	17.68	6.05	0.172	119	2.3	208
		1649	1.8	17.51	6.04	0.173	106	2.2	209
		1650	Sample	--	--	--	--	--	--
MW 16-4	10/3/2018	1320	0.1	20.11	6.13	0.191	16.8	8.10	208
		1325	0.5	17.11	6.07	0.186	0	2.62	209
		1330	0.9	16.73	6.05	0.185	0	1.84	212
		1335	1.3	16.74	6.02	0.184	0	1.43	215
		1340	1.7	16.69	6.04	0.184	0	1.33	214
		1345	2.0	16.64	6.05	0.184	0	1.67	214
		1350	Sample	--	--	--	--	--	--
MW 16-5	10/3/2018	1503	0.1	23.01	6.60	0.283	1000	4.1	61
		1508	0.3	18.32	6.48	0.273	702	0.9	57
		1513	0.5	17.60	6.57	0.280	544	0.0	53
		1518	0.8	17.35	6.68	0.286	472	0.0	29
		1523	1.0	17.40	6.69	0.286	417	0.0	20
		1528	1.3	17.43	6.72	0.283	299	0.0	8
		1530	Sample	--	--	--	--	--	--

Notes:

* **Bold** indicates time of sample collection

A review of **Table 6.6-2** indicates that:

- ❖ An adequate purge was performed at each well, per **3e** SOP 2.7 and low-flow sampling guidance.
- ❖ Turbidity decreased significantly in all five (5) monitoring wells, although MW 16-5 still exhibited elevated turbidity at the time of sample collection.

Analytical results of samples collected from these five (5) monitoring wells indicated that low concentrations of barium were detected in all monitoring wells at Finding #16. The two polycyclic

aromatic hydrocarbons (PAHs) detected at MW 16-2 in October 2017 were not present above the laboratory LOQ in October 2018. These results are presented in the following **Table 6.6-3**. The detailed laboratory report in **Appendix E** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.6-3 Summary of Groundwater Detections at Finding #16

Well ID		MW 16-1		MW 16-2		MW 16-3		MW 16-4		MW 16-5		EPA MCL*	
Lab ID		17J0112-08	18J0250-01	17J0155-01	18J0250-02	17J0155-02	18J0154-05	17J0155-03	18J0154-02	17J0155-04	18J0154-04		
Date Collected		10/3/2017	10/4/2018	10/3/2017	10/4/2018	10/3/2017	10/3/2018	10/4/2017	10/3/2018	10/4/2017	10/3/2018		
Analyte	CAS	Units	Result		Result		Result		Result		Result		(mg/l)
Benzo (a) anthracene	56-55-3	mg/l	< 0.00005	< 0.00006	0.00088	< 0.00006	< 0.00005	< 0.00006	< 0.00005	< 0.00005	< 0.00005	< 0.00006	--
Benzo (a) pyrene	50-32-8	mg/l	< 0.00011	< 0.00011	0.00037	< 0.00011	< 0.00011	< 0.00011	< 0.00011	< 0.00011	< 0.00011	< 0.00011	0.0002
Arsenic	7440-38-2	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0023	0.01
Barium	7440-39-3	mg/l	0.044	0.0424	0.0206	0.0191	0.0170	0.0118	0.0300	0.0111	0.0893	0.0732	2.0
Zinc	7440-66-6	mg/l	< 0.01	0.0227	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--

Notes:

Bold = Detection

Highlight = Detection exceeds MCL

*EPA Maximum Contaminant Level, May 2018

A review of **Table 6.6-3** indicates that:

- ❖ The total barium concentration detections in all groundwater samples were at least an order of magnitude less than the respective MCL of 2.0 mg/l.
- ❖ The two PAHs (benzo (a) anthracene and benzo (a) pyrene) detected in MW 16-2 during the October 2017 sampling event were not detected above the LOQ in October 2018.
- ❖ The low concentration or total arsenic in MW 16-5 was an order of magnitude less than the MCL of 0.01 mg/l and is likely attributed to turbidity measured at 299 NTU during sample collection (**Table 6.6-2**).

6.6.5. Recommendations

Because Finding #16 is a former scrap yard and an apparent demolition debris landfill predating modern permitting requirements, it has had no prior assessment, boundary survey, or other protections afforded commensurate landfills that have operated under a permit. Therefore, it should be enrolled into the Virginia DEQ's VRP to obtain a Certification of Satisfactory Completion of Remediation. Additional information on the process and protections afforded by the VRP is included in **Section 8.2**.

The VRP process for this former scrap yard and demolition debris landfill would likely include the following general activities:

- ❖ Determine site eligibility and apply for enrollment into the VRP.
- ❖ Delineate the extent of buried waste using non-intrusive geophysical testing (terrain conductivity) and GPR.
- ❖ Confirm the waste limits with a direct-push GeoProbe drill rig.
- ❖ Delineate the horizontal extent of hexavalent chromium impact near soil sample 16-S24.
- ❖ Determine the thickness of the existing landfill cap.
- ❖ Remove and properly dispose of all debris exposed and/or dispersed at the ground surface.

- ❖ Survey locate the bounds of waste and the limits of the VRP Site.
- ❖ Collect deep soil gas samples within and adjoining the delineated limits of waste.
- ❖ Perform at least two (2) complete rounds of groundwater sampling.
- ❖ Subdivide the landfill from the larger CVTC parcel, and record land use restrictions into the deed for this VRP Site.
- ❖ Determine if the specification and placement of additional cap material (clay) is warranted.

6.7. Finding #19: Suspect Pesticide Spill at Building 41

6.7.1. Background Summary

As reported in the 2017 ECA, according to the CVTC Safety Officer, a cardboard container of pesticide was stored in the earthen floor crawl space of Building 41 (aka The Jones House), a one-story dilapidated building in the southeastern portion of CVTC. This container had reportedly disintegrated and released the pesticide into the crawl space beneath Building 41.

6.7.2. Investigation Summary

On September 5, 2018 **3e** staff collected surface (0-6-inches BGS) soil samples with a hand auger from the earthen crawl space, the building perimeter, downgradient of the building, and upgradient near the access road. All soil samples were collected in accordance with **3e** SOP 2.1. The samples were then submitted for analysis of pesticides, herbicides, hexavalent chromium, and total TAL Metals by the following methods:

- ❖ Pesticides by EPA Method 8081B
- ❖ Herbicides by EPA Method 8151A
- ❖ TAL Metals by EPA Methods 6010C, 6020A, and 7471B
- ❖ Hexavalent Chromium by EPA Method 7196A

6.7.3. Results

The following **Table 6.7-1** presents a summary of the TAL Metals and Pesticide detections within this area defined as Finding #19.

Table 6.7-1 Summary of TAL Metals and Pesticide Detections at Finding #19

Boring ID		41-S1	41-S2	41-S3	41-S4	41-S5	41-S6	41-S7	41-S8	EPA Residential Soil Screening Level*	
Lab ID		1810123-01RE1	1810123-02RE1	1810123-03RE1	1810123-04RE1	1810123-05RE1	1810123-06RE1	1810123-07RE1	1810123-08RE1		
Representative Area		Crawl Space North	Building Perimeter	Building Perimeter	Crawl Space South	Building Perimeter	Building Perimeter	Upgradient	Downgradient		
Date Collected		9/5/2018	9/5/2018	9/5/2018	9/5/2018	9/5/2018	9/5/2018	9/5/2018	9/5/2018		
Analyte	CAS	Units	Result	Result	Result	Result	Result	Result	Result	Result	
TAL Metals											
Aluminum	7429-90-5	mg/kg	41,500	24,500	26,200	36,800	25,800	12,000	16,300	37,800	77,000
Antimony	7440-36-0	mg/kg	< 5.96	< 8.10	< 5.53	< 5.91	< 5.50	< 6.73	< 5.49	< 6.03	31
Arsenic	7440-38-2	mg/kg	< 1.19	4.12	2.35	1.6	1.49	7.12	7.24	1.67	0.68
Barium	7440-39-3	mg/kg	97	167	149	141	105	162	135	117	15,000
Beryllium	7440-41-7	mg/kg	2.68	1.75	1.72	2.17	1.6	1.81	2.78	1.83	160
Cadmium	7440-43-9	mg/kg	3.37	26.3	20.2	5.84	2.46	3.46	5.13	4.02	71
Calcium	7440-70-2	mg/kg	4,500	3,900	4,420	20,600	3,980	2,470	39,200	2,950	--
Chromium	7440-47-3	mg/kg	23.3	48.4	36.1	22.4	24.1	21.6	19.1	28.1	120,000
Chromium, Hexavalent	18540-29-9	mg/kg	< 2.49	< 0.34	0.36	< 0.26	< 0.22	0.39	1.12	< 0.25	0.3
Cobalt	7440-48-4	mg/kg	8.76	12.1	12	11.5	9.24	10.6	9.69	9.71	23
Copper	7440-50-8	mg/kg	6.61	101	67.5	39.3	8.23	26.4	38.7	13.2	3,100
Iron	7439-89-6	mg/kg	40,100	47,000	56,400	98,600	51,200	39,000	29,400	78,100	55,000
Lead	7439-92-1	mg/kg	79.1	4,490	16,300	1,690	5,880	1,730	69.6	116	400
Magnesium	7439-95-4	mg/kg	1,760	3,430	2,820	3,270	2,470	2,610	6,160	2,550	--
Manganese	7439-96-5	mg/kg	244	520	475	352	262	455	251	294	1,800
Mercury	7439-97-6	mg/kg	0.071	0.525	0.275	0.11	0.048	0.149	0.119	0.085	11
Nickel	7440-02-0	mg/kg	6.07	20.2	15.4	17.6	8.93	14.5	23	8.76	--
Potassium	7440-09-7	mg/kg	1,290	2,510	1,980	2,120	2,120	1,650	1,650	2,300	--
Selenium	7782-49-2	mg/kg	< 2.98	< 4.05	< 2.77	< 2.95	< 2.75	< 3.36	< 2.75	< 3.01	390
Silver	7440-22-4	mg/kg	< 0.596	2.98	1.54	< 0.591	< 0.550	< 0.673	< 0.549	< 0.603	390
Sodium	7440-23-5	mg/kg	124	59.8	56.3	1,080	65.6	55.8	129	79.7	--
Thallium	7440-28-0	mg/kg	< 2.98	< 4.05	< 2.77	< 2.95	< 2.75	< 3.36	< 2.75	< 3.01	--
Vanadium	7440-62-2	mg/kg	258	45.2	77.3	165	94.5	32.2	39	118	390
Zinc	7440-66-6	mg/kg	69.7	706	832	1,400	728	326	139	133	23,000
Pesticides											
4,4'-DDD	72-54-8	mg/kg	< 0.00715	0.0164	0.0124	0.461	0.0148	0.00876	< 0.00650	< 0.00694	1.9
4,4'-DDE	72-55-9	mg/kg	0.0795	0.0465	0.0124	0.377	0.0111	0.0307	< 0.00433	0.0116	2.0
4,4'-DDT	50-29-3	mg/kg	0.238	0.0383	0.0142	0.700	< 0.0445	0.0219	< 0.00433	0.00964	1.9
Heptachlor	76-44-8	mg/kg	< 0.00238	< 0.00328	< 0.00212	1.68	0.00556	< 0.00263	< 0.00217	< 0.00231	0.13
Heptachlor epoxide	1024-57-3	mg/kg	< 0.0477	< 0.0656	< 0.0425	0.838	0.167	< 0.0525	< 0.0433	< 0.0463	0.07
Methoxychlor	72-43-5	mg/kg	< 0.0477	< 0.0656	< 0.0425	0.251	< 0.0445	< 0.0525	< 0.0433	< 0.0463	320

Notes:

Bold = Detection

Bold & Highlight = Detection Above Residential SSL

*EPA Residential Screening Levels, May 2018

A review of **Table 6.7-1** indicates that:

- ❖ Arsenic was detected at total concentrations exceeding the EPA Tier II SSL for unrestricted use; however, none of the detected concentrations exceeded the 12.41 mg/kg value for naturally occurring arsenic in the Piedmont physiographic province (explained in detail at **Section 8.1**).
- ❖ Hexavalent chromium in three (3) of the sample locations was detected at concentrations slightly above the EPA Tier II SSL of 0.3 mg/kg.
- ❖ Iron in three (3) of the sample locations was detected at concentrations above the EPA Tier II SSL of 55,000 mg/kg. The highest concentration was at sample 41 S-4, which was collected from the earthen floor crawl space. This area had numerous pieces of scrap corrugated roof material and other metallic debris, thus the iron concentration may be attributed to this debris.
- ❖ Lead was detected in all samples; however, elevated concentrations significantly exceeding the SSL of 400 mg/kg were detected in those samples near the building foundation and within the crawl space. It is likely that the deteriorated paint surface of the building is the primary source of this lead. The total concentrations observed may contain leachable lead concentrations that are characteristic of a hazardous waste. This hazardous/non-hazardous determination should be made prior to any soil excavation and disposal.

- ❖ Seven (7) of the eight (8) borings contained detections of pesticides, all of which have been banned from purchase since the late 1980s. Therefore, detections of these substances are likely from historic uses.
- ❖ Borings 41 S-4 and 41 S-5 contained the insecticide compound heptachlor and its daughter product heptachlor epoxide at concentrations exceeding their respective EPA Tier II SSLs. These detections indicate residual impact from storage, handling, and/or the reported spill of pesticides within the earthen floor crawl space of Building 41.

6.7.4. Recommendations

The shallow soil samples collected at Finding #19 contained detectable concentrations of hexavalent chromium, lead, and pesticides, many of which exceeded their respective Tier II SSLs. Based on this information, this area should be enrolled into the Virginia DEQ's VRP to obtain a Certification of Satisfactory Completion of Remediation. Additional information on the process and protections afforded by the VRP is included in **Section 8.2**.

The VRP process for this area would likely include the following general activities:

- ❖ Determine site eligibility and apply for enrollment into the VRP.
- ❖ Deconstruct/demolish Building 41 in a way to minimize disturbance of the earthen crawl space and soil proximate to the structure. An asbestos containing materials survey and demolition permit must be obtained prior to demolition.
- ❖ Perform in-situ waste characterization to determine proper disposal of soil to be excavated.
- ❖ Excavate all soil within and 5-ft beyond the footprint of Building 41 (total of approximately 2,000-ft²) after it has been demolished. Soil should be excavated to a minimum depth of 2-ft BGS. This would result in excavation of approximately 150 cubic yards (~230 tons) of soil.
- ❖ Collect samples after excavation of wastes to demonstrate removal of contaminants from the area. This data will also support the VRP quantitative risk assessment.
- ❖ Survey locate the bounds of the VRP Site.
- ❖ Heptachlor and the other detected pesticides are hydrophobic, indicating that impact to groundwater at this area is not likely. Additionally, depth to groundwater is greater than 15-ft BGS and future development should not encounter groundwater during excavation or construction activities. Therefore, groundwater characterization is not warranted at this time.

6.8. Finding #30: Gasoline UST and Diesel AST at Building 36

6.8.1. Background Summary

ECA Finding #30 was the current vehicle fueling area (Building 36) with the current 8,000-gallon gasoline UST. Two other proximate findings (#1 2,000-gallon diesel AST and #34 former 10,000-gallon gasoline UST) were also assessed under Finding #30.

6.8.2. Investigation Summary

Groundwater and soil were assessed in the 2017 Phase II ESA, which included the installation of five (5) soil borings with a GeoProbe direct-push rig and installation of two (2) monitoring wells into the permanent groundwater table using an air rotary rig. The location of these borings and monitoring wells are depicted on **Figure 30-1**. The soil samples collected at Finding #30 did not contain detectable petroleum impact; however, MW 30-1 contained low concentrations of TPH-GRO and methyl tertiary-butyl ether (MTBE), a fuel oxygenate. **3e** recommended that MW 30-1 be resampled to confirm the presence of these petroleum-indicator compounds.

As described in Task 2.6, the two (2) monitoring wells were resampled during this supplemental Phase II ESA. Because petroleum compounds were determined to be the likely contaminants, the following analyses were performed on the groundwater samples:

- ❖ TPH-GRO by EPA Method 8015C.
- ❖ TPH-DRO by EPA Method 8015C.
- ❖ VOCs by EPA Method 8260B.

6.8.3. Results

Both monitoring wells were purged and sampled using low-flow bladder pumps on September 28, 2018. The following **Table 6.8-1** summarizes groundwater parameters collected during the purge process method.

Table 6.8-1 Groundwater Purge Details at Finding #30

Well ID	Date	Time*	Purge Volume (gallons)	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
MW 30-1	9/28/2018	0937	0.0	18.48	7.00	0.542	379	2.59	221
		0942	0.1	18.79	6.85	0.624	>1000	0	229
		0947	0.2	18.28	6.99	0.677	893.0	0	223
		0952	0.4	17.93	6.96	0.676	606.0	0	218
		0957	0.6	17.76	6.77	0.643	363.0	0	217
		1002	0.8	17.8	6.75	0.644	152.0	0	214
		1012	1.4	17.79	6.76	0.653	72.2	0	207
		1020	1.8	17.91	6.78	0.658	64.7	0	203
		1020	Sample	--	--	--	--	--	--
MW 30-2	9/28/2018	1045	0.0	19.47	7.65	0.503	167	5.83	190
		1050	0.3	17.13	6.09	0.555	159	2.35	223
		1055	0.6	16.71	6.12	0.566	94.5	1.62	228
		1100	1.0	16.66	6.14	0.571	77.3	1.13	229
		1105	1.3	16.58	6.15	0.573	63.1	0.90	230
		1110	1.6	16.62	6.17	0.572	45.5	1.05	230
		1110	Sample	--	--	--	--	--	--

Notes:

* **Bold** indicates time of sample collection

A review of **Table 6.8-1** indicates that:

- ❖ An adequate purge was performed at each well, per **3e** SOP 2.7 and low-flow sampling guidance.
- ❖ Turbidity in monitoring wells 30-1 and 30-2 decreased significantly during the purge.

No petroleum indicator compounds or other VOCs were detected above laboratory LOQs in the 2018 groundwater samples. Therefore, both TPH-GRO and MTBE were absent from MW 30-1, as presented in the following **Table 6.8-2**. The detailed laboratory report in **Appendix E** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.8-2 Summary of Groundwater Detections at Finding #30

Well ID		MW 30-1		MW 30-2		EPA MCL*	
Lab ID		17J0020-02	18J0020-02	17J0020-01	18J0020-03		
Date Collected		10/2/2017	9/28/2018	10/2/2017	9/28/2018		
Analyte	CAS	Units	Result		Result		(mg/l)
Methyl-t-butyl ether (MTBE)	1634-04-4	mg/l	0.0264	< 0.001	< 0.001	< 0.001	--
TPH-GRO		mg/l	0.10	< 0.10	< 0.10	< 0.10	--

Notes:

Bold = Detection

*EPA Maximum Contaminant Level, May 2018

A review of **Table 6.8-2** indicates that dissolved-phase TPH-GRO and MTBE concentrations were not detected in MW 30-1 in 2018.

6.8.4. Recommendations

The 2017 Phase II ESA recommended that the monitoring wells at Finding #30 be resampled to confirm the low concentrations of TPH-GRO and MTBE in MW 30-1. Resampling has demonstrated that dissolved-phase petroleum impacts are not present above laboratory LOQs at Finding #30. No additional assessment or remedial actions are warranted at this time.

6.9. Findings #20 and #27: Bulk Pesticide and Oil Storage in Building 39

6.9.1. Background Summary

ECA Findings #20 and #27 were both within and proximate to Building 39, utilized by facility grounds maintenance for many decades (likely since at least the 1940s). An interior room within Building 39 was used by grounds maintenance to store and handle bulk pesticide containers. Several 55-gallon drums of used motor oil were located within Building 39, and smaller fuel containers were in a block structure just outside this building. Significant oil stains were observed on the earthen floor surrounding these drums and within the block structure.

Six (6) shallow soil borings (0-5-ft below ground surface) were advanced inside the earthen floor of Building 39 and immediately outside during the 2017 Phase II ESA (borings 39-1 through 39-6 on **Figure 20-1**). Results of soil samples confirmed residual petroleum impact from equipment maintenance and fuel/oil storage within the building and detected residual pesticide concentrations in excess of SSLs, including DDT, chlordane and heptachlor.

6.9.2. Investigation Summary

As described in Task 2.9, this supplemental Phase II ESA expanded the investigation at Building 39 (Finding #20 and #27) to include groundwater assessment, define the horizontal and vertical extent of soil impacts beyond Building 39, and quantify impacts within the earthen floor of Building 39.

Due to the type confirmed impacts (metals, petroleum and pesticides), the following analyses were performed on the representative media samples:

- ❖ TPH-GRO, TPH-DRO and TPH-ORO by EPA Method 8015C: all soil and groundwater samples.
- ❖ Pesticides by EPA Method 8081B: all soil and groundwater samples.
- ❖ Herbicides by EPA Method 8151A: all soil and groundwater samples.
- ❖ VOCs by EPA Method 8260B: all groundwater samples
- ❖ TAL Metals by EPA Methods 6010C, 6020A and 7470A/7471B: all soil and groundwater samples.
- ❖ Hexavalent Chromium by EPA Method 7196A: all soil and groundwater samples.

6.9.2.1. Soil Borings

Delineation of the horizontal and vertical extent of soil impacts beyond Building 39 was performed through the advancement of six (6) soil borings with a GeoProbe direct-push rig in accordance with **3e** SOP 2.3 (see **Appendix A**). The location of these borings (39-21 through 39-26) are depicted on **Figure 3-1**.

Soil samples were collected from every 5-ft sleeve in each boring. Each boring was advanced to refusal, which was encountered between 5-ft and 14-ft BGS. Only one boring (39-25) contained a strong bitter odor near refusal at 14.5-ft, indicative of possible chemical impacts; however, VOCs were not detected with the photoionization detector (PID) during interval classification in the field.

6.9.2.2. Incremental Surface Soil Sampling – Within Building 39

Incremental sampling (IS) was performed as the most representative method to determine presence/absence of impacts to surface soil (0-6-inches BGS) within the earthen floor of Building 39. To perform IS, the Building 39 was first divided into six equal quadrants, and 10 aliquots of equal mass were collected and composited to form one IS from each quadrant. The locations of these quadrants are depicted as 39-A through 39-F on **Figure 3-1**.

6.9.2.3. Groundwater

Groundwater at Building 39 was assessed by the installation of three (3) monitoring wells into the permanent groundwater table using an air rotary rig in accordance with **3e** SOP 2.4 (see **Appendix A**).

6.9.3. Results

6.9.3.1. Soil Borings

The following **Table 6.9-1** presents a summary of the TAL Metals, petroleum, and detected pesticides.

Table 6.9-1 Summary of Soil Sample Detections from Soil Borings at Findings #20 & #27

Boring ID			39-21			39-22			39-23			39-24			39-25			39-26			EPA
Lab ID			1810511-01	1810511-02RE2	1810511-03	1810511-04RE2	1810511-05RE2	1810511-06RE2	1810511-07RE2	1810511-08RE2	1810511-09RE2	1810511-10RE2	1810511-11RE2	1810511-12RE2	1810511-13RE2	1810511-14RE2	1810511-15RE2	Residential			
Depth (feet BGS)			0-5	5-9	0-5	0-5	5-10	10-13	0-5	5-10	10-14.5	0-5	5-10	10-14	0-5	5-10	10-13	Soil Screening			
Date Collected			9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	Level*			
Analyte	CAS	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	(mg/kg)		
TAL Metals																					
Aluminum	7429-90-5	mg/kg	16,200	35,400	14,200	44,100	48,700	39,700	38,800	40,900	40,500	32,800	49,400	33,500	23,000	26,800	21,600		77,000		
Antimony	7440-36-0	mg/kg	< 5.48	< 5.50	< 5.28	< 5.57	< 5.34	< 5.31	< 5.75	< 5.95	< 5.35	< 5.46	< 5.63	< 5.21	< 6.23	< 5.68	< 5.44		31		
Arsenic	7440-38-2	mg/kg	< 1.10	< 1.10	5.26	< 1.11	< 1.07	< 1.06	< 1.15	< 1.19	< 1.07	1.35	7.55	2.97	< 1.25	< 1.14	< 1.09		0.68		
Barium	7440-39-3	mg/kg	102	112	393	150	155	136	67.8	109	204	107	223	213	59.3	79.4	82.6		15,000		
Beryllium	7440-41-7	mg/kg	1.63	1.95	1.72	1.51	1.9	1.91	1.71	1.74	1.9	1.67	2.05	1.75	1.52	1.58	1.67		160		
Cadmium	7440-43-9	mg/kg	0.391	0.455	0.699	0.35	0.434	0.33	0.576	0.392	0.305	0.629	< 0.225	0.233	0.621	0.398	0.447		71		
Calcium	7440-70-2	mg/kg	713	436	79,600	30,500	491	481	370	50.4	105	26,500	296	274	67,100	296	652		--		
Chromium	7440-47-3	mg/kg	13.1	25.5	18.7	29	30.7	20	34.5	28.9	24.4	20.4	15.9	14.4	18	15.2	12.5		120,000		
Chromium, Hexavalent	18540-29-9	mg/kg	< 0.22	< 0.22	< 0.23	< 0.23	< 0.23	< 0.22	< 0.24	0.24	< 0.23	< 0.23	< 0.23	< 0.21	< 0.25	< 0.23	< 0.22		0.3		
Cobalt	7440-48-4	mg/kg	11.6	12.2	7.8	13.9	19	14.4	5.78	11.9	47.8	9.59	15.4	22.9	6.63	7.76	9.62		23		
Copper	7440-50-8	mg/kg	5.23	5.91	16	4.95	9.1	3.66	6.5	24.5	10.4	5.94	25.4	17.9	3.61	< 2.84	< 2.72		3,100		
Iron	7439-89-6	mg/kg	37,300	40,500	18,600	31,200	39,600	34,100	41,300	39,200	30,500	39,200	28,900	29,900	37,500	38,000	40,500		55,000		
Lead	7439-92-1	mg/kg	111	14.5	162	24.8	10.3	7.57	16.9	13.3	15.8	24.4	11.6	8.45	196	11.6	8.07		400		
Magnesium	7439-95-4	mg/kg	4,700	6,050	6,010	9,730	11,300	8,850	2,750	6,310	9,060	6,670	7,960	8,780	6,040	4,180	4,930		--		
Manganese	7439-96-5	mg/kg	368	204	3,300	382	436	299	122	255	814	187	276	525	166	126	160		1,800		
Mercury	7439-97-6	mg/kg	0.017	0.015	0.087	0.034	0.017	< 0.009	0.014	0.019	0.012	0.034	0.012	0.01	0.04	< 0.009	< 0.009		11		
Nickel	7440-02-0	mg/kg	18.4	15.1	11	14.9	18.1	16	6.21	11.1	15.9	15.1	14	13.1	11.6	12.9	15.7		--		
Potassium	7440-09-7	mg/kg	5,730	6,670	2,550	8,160	13,900	7,720	3,490	7,360	8,850	5,910	7,850	8,680	3,650	4,200	5,130		--		
Selenium	7782-49-2	mg/kg	< 2.74	< 2.75	< 2.64	< 2.79	< 2.67	< 2.66	< 2.88	< 2.98	< 2.68	< 2.73	< 2.82	< 2.61	< 3.11	< 2.84	< 2.72		390		
Silver	7440-22-4	mg/kg	< 0.548	< 0.550	< 0.528	< 0.557	< 0.534	< 0.531	< 0.575	< 0.595	< 0.535	< 0.546	< 0.563	< 0.521	< 0.623	< 0.568	< 0.544		390		
Sodium	7440-23-5	mg/kg	268	388	146	102	62.1	48.5	46.5	52.7	61.9	192	276	171	70.2	43.6	45.6		--		
Thallium	7440-28-0	mg/kg	< 2.74	< 2.75	3.58	< 2.79	< 2.67	< 2.66	< 2.88	< 2.98	< 2.68	< 2.73	< 2.82	< 2.61	< 3.11	< 2.84	< 2.72		--		
Vanadium	7440-62-2	mg/kg	23.3	36.7	24.5	34.9	39.2	28	54.6	41.6	35.5	35.6	24.6	23.3	30.8	29.5	25.6		390		
Zinc	7440-66-6	mg/kg	120	81.3	137	101	126	98.5	54.4	78.8	112	82.6	99.2	111	75.4	52.8	64.3		23,000		
Pesticides																					
4,4'-DDE	72-55-9	mg/kg	< 0.004	< 0.00444	0.00928	< 0.00453	< 0.00436	< 0.00442	< 0.00487	< 0.00479	< 0.00454	< 0.00413	< 0.00454	< 0.00433	< 0.0049	< 0.00414	< 0.00422		1.9		
Total Petroleum Hydrocarbons (TPH)																					
TPH-Volatiles (GRO)	NA	mg/kg	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.62	< 0.12	< 0.12	< 0.11	< 0.11	< 0.12	< 0.11	< 0.13	< 0.12	< 0.11		82**		
TPH-Semi-Volatiles (DRO)	NA	mg/kg	< 11.1	< 10.9	40.9	< 11.0	< 11.0	16.4	< 12.1	< 11.7	< 11.2	30.9	< 11.4	< 10.5	75.8	< 11.4	< 10.6		96***		
TPH-Semi-Volatiles (ORO)	NA	mg/kg	< 10.7	< 11.1	40.6	< 11.3	< 11.3	< 11.3	< 11.8	< 12.1	< 11.5	58.4	< 11.5	< 10.7	< 12.6	< 11.1	< 10.5		230,000		

Notes:
Bold = Detection
Bold & Highlight = Detection Above Residential SSL
 *EPA Residential Screening Levels, May 2018
 ** Value for Aromatic Low (C6-C8), most conservative value for TPH-GRO
 ***Value for Aliphatic Medium (C9-C18), representative of liquid fuels and appropriate for TPH-DRO

A review of **Table 6.9-1** indicates that:

- ❖ Arsenic was detected at total concentrations exceeding the EPA Tier II SSL for unrestricted use; however, none of the detected concentrations exceeded the 12.41 mg/kg value for naturally occurring arsenic in the Piedmont physiographic province (explained in detail at **Section 8.1**).
- ❖ Hexavalent chromium was not detected at concentrations above the EPA Tier II SSL of 0.3 mg/kg.
- ❖ Lead did not exceed the EPA Tier II SSL of 400 mg/kg.
- ❖ Only one (1) pesticide was detected in the soil borings (4,4'-DDE), in boring 39-22 0-5-ft BGS. This pesticide was not present above its SSL of 1.9 mg/kg.
- ❖ None of the TPH (GRO/DRO/ORO) exceeded their respective EPA Tier II SSLs.

6.9.3.2. Incremental Surface Sampling

The following **Table 6.9-2** presents a summary of the TAL Metals, petroleum, and detected pesticides

Table 6.9-2 Summary of Soil Sample Detections from Surface Soil within Building 39

Boring ID		39-A	39-B	39-C	39-D	39-E	39-F	EPA Residential Soil Screening Level*	
Lab ID		1810746-01	1810746-02	1810746-03	1810746-04	1810746-05	1810746-06		
Depth (feet BGS)		0	0	0	0	0	0		
Date Collected		9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018		
Analyte	CAS	Units	Result	Result	Result	Result	Result	(mg/kg)	
TAL Metals									
Aluminum	7429-90-5	mg/kg	20,200	20,700	15,100	15,600	21,500	35,000	77,000
Antimony	7440-36-0	mg/kg	< 5.02	< 5.19	< 5.00	< 5.05	< 5.25	< 5.28	31
Arsenic	7440-38-2	mg/kg	2.86	3.8	2.08	24.1	33.1	11.5	0.68
Barium	7440-39-3	mg/kg	236	286	183	189	314	290	15,000
Beryllium	7440-41-7	mg/kg	1.05	0.999	0.885	1.04	1.9	1.74	160
Cadmium	7440-43-9	mg/kg	1.84	2.85	1.07	1.64	2.38	2	71
Calcium	7440-70-2	mg/kg	71,100	56,100	79,000	30,800	55,900	24,400	--
Chromium	7440-47-3	mg/kg	19.4	24.8	19.2	23	72.4	48.2	120,000
Chromium, Hexavalent	18540-29-9	mg/kg	1.76	0.47	< 0.21	< 0.21	1.72	< 0.27	0.3
Cobalt	7440-48-4	mg/kg	8.76	6.86	12.9	6.4	11	15.4	23
Copper	7440-50-8	mg/kg	31.9	29.6	46.9	28.1	50.7	30.6	3,100
Iron	7439-89-6	mg/kg	25,800	23,300	26,900	17,800	40,200	31,200	55,000
Lead	7439-92-1	mg/kg	1,520	2,150	954	230	759	951	400
Magnesium	7439-95-4	mg/kg	11,700	9,730	18,600	4,610	8,080	7,970	--
Manganese	7439-96-5	mg/kg	337	299	307	496	779	1,070	1,800
Mercury	7439-97-6	mg/kg	0.036	0.14	0.057	0.081	0.08	0.112	11
Nickel	7440-02-0	mg/kg	17.4	18.4	19.1	11.9	21.7	17.4	--
Potassium	7440-09-7	mg/kg	4,080	3,170	5,270	3,620	5,750	8,880	--
Selenium	7782-49-2	mg/kg	< 2.51	< 2.59	< 2.50	< 2.52	< 2.63	< 2.64	390
Silver	7440-22-4	mg/kg	< 0.502	< 0.519	< 0.500	< 0.505	< 0.525	< 0.528	390
Sodium	7440-23-5	mg/kg	7,710	817	19,500	1,760	793	1,300	--
Thallium	7440-28-0	mg/kg	< 2.51	< 2.59	< 2.50	< 2.52	< 2.63	< 2.64	--
Vanadium	7440-62-2	mg/kg	30.4	28	45.5	24.9	33.5	39.9	390
Zinc	7440-66-6	mg/kg	600	848	209	569	391	425	23,000
Pesticides									
2,4-D	94-75-7	mg/kg	0.876	0.0973	1.36	1.95	1.87	84.0	700
2,4,5-T	93-76-5	mg/kg	< 0.631	0.0139	0.307	0.114	0.15	3.73	630
4,4'-DDD	72-54-8	mg/kg	< 0.0314	< 0.0320	< 0.0317	< 0.0324	< 0.0325	< 0.0335	1.9
4,4'-DDE	72-55-9	mg/kg	< 0.021	0.0267	0.0616	< 0.0216	< 0.0217	0.167	2.0
4,4'-DDT	50-29-3	mg/kg	< 0.0210	0.0889	0.088	< 0.0216	< 0.0217	0.093	1.9
Total Petroleum Hydrocarbons (TPH)									
TPH-Volatiles (GRO)	NA	mg/kg	< 0.53	< 0.54	< 0.53	< 0.11	0.54	< 0.11	82
TPH-Semi-Volatiles (DRO)	NA	mg/kg	1,050	1,010	1,630	1,790	2,860	542	96
TPH-Semi-Volatiles (ORO)	NA	mg/kg	13,700	2,410	4,390	< 10.8	11,100	7,200	230,000

Notes:

Bold = Detection

Bold & Highlight = Detection Above Residential SSL

*EPA Residential Screening Levels, May 2018

**Value for Aliphatic Medium (C9-C18), representative of liquid fuels and appropriate for TPH-DRO

A review of **Table 6.9-2** indicates that:

- ❖ Arsenic was detected at total concentrations exceeding the EPA Tier II SSL for unrestricted use, and two (2) exceeded the 12.41 mg/kg threshold for naturally occurring arsenic in the Piedmont physiographic province (explained in detail at **Section 8.1**).
- ❖ Hexavalent chromium in three (3) of the sample locations was detected at concentrations above the EPA Tier II SSL of 0.3 mg/kg.
- ❖ Lead was detected in all samples, and only one (1) was below the SSL of 400 mg/kg.
- ❖ The sodium concentration in 39-C was an order of magnitude higher than the other surface samples. This concentration is indicative of former road salt storage. There is no current SSL for sodium.
- ❖ All surface samples contained detections of pesticides, all of which have been banned from purchase since the late 1980s. None of the pesticides exceeded their respective SSLs. Chlordane and heptachlor (both present in the 2017 Phase II ESA) were not detected above their respective LOQs.

- ❖ TPH-DRO and TPH-ORO were detected at moderate concentrations indicative of surface spills, while TPH-DRO exceeded its SSL in every sample.

6.9.3.3. Groundwater

The three (3) monitoring wells installed to assess groundwater at Findings #20 and #27 were purged and sampled using low-flow bladder pumps on October 1, 2018. The following **Table 6.9-3** summarizes groundwater parameters collected during the purge process method. It was noted during purging that groundwater drawn from MW 39-1 and MW 39-3 exhibited a strong, stagnant odor.

Table 6.9-3 Groundwater Purge Details at Findings #20 and #27

Well ID	Date	Time*	Purge Volume (gallons)	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
MW 39-1	10/1/2018	1137	0.0	23.00	6.37	11.9	>1000	8.46	207
		1140	0.1	18.94	5.59	12.5	>1000	6.91	251
		1145	0.3	17.93	5.54	12.7	787	6.40	260
		1150	0.6	17.75	5.48	12.8	373	6.02	265
		1155	0.8	17.6	5.39	12.9	170	5.65	272
		1200	1.0	17.61	5.34	13.1	128	4.89	280
		1205	1.2	17.57	5.33	13.1	125	4.50	285
		1205	Sample	--	--	--	--	--	--
MW 39-2	10/1/2018	1410	0.0	21.67	5.44	11.4	>1000	11.35	233
		1415	0.2	17.51	5.39	12.0	>1000	10.57	224
		1420	0.4	16.67	5.32	12.0	>1000	8.93	225
		1425	0.6	16.48	5.28	12.0	>1000	8.60	228
		1430	0.8	16.3	5.23	12.0	386	9.17	236
		1435	1.0	16.29	5.18	12.0	140	9.28	246
		1440	1.3	16.31	5.14	12.0	70.6	8.73	252
		1445	1.5	16.25	5.11	12.0	59.8	8.55	258
1445	Sample	--	--	--	--	--	--	--	
MW 39-3	10/1/2018	1525	0.0	20.20	5.8	8.22	754	14.59	228
		1530	0.2	19.36	5.78	8.29	716	12.74	207
		1535	0.3	18.08	5.72	8.64	674	9.56	190
		1540	0.4	18.63	5.72	8.62	575	9.80	191
		1545	0.5	17.93	5.73	8.39	438	10.18	192
		1550	0.6	16.85	5.79	8.09	214	9.84	193
		1555	0.8	16.74	5.82	7.94	139	12.31	195
		1600	1.0	17.12	5.83	7.68	111	10.82	196
1600	Sample	--	--	--	--	--	--	--	

Notes:

* **Bold** indicates time of sample collection

A review of **Table 6.9-3** indicates that:

- ❖ An adequate purge was performed at each well, per **3e** SOP 2.7 and low-flow sampling guidance.
- ❖ Turbidity in all monitoring wells decreased significantly during the purge.

Analytical results of samples collected from these five (5) monitoring wells indicated that low concentrations of barium were detected in all monitoring wells at Finding #16. The two polycyclic aromatic hydrocarbons (PAHs) detected at MW 16-2 in October 2017 were no longer present above the laboratory LOQ. These results are presented in the following **Table 6.9-4**. The detailed laboratory report in **Appendix E** includes LOQ, quality control, and quantitative results for all samples and analytes.

Table 6.9-4 Summary of Groundwater Detections at Findings #20 and #27

Well ID		MW 39-1	MW 39-2	MW 39-3	EPA MCL*	
Lab ID		18J0020-04	18J0020-05	18J0020-06		
Date Collected		10/1/2018	10/1/2018	10/1/2018		
Analyte	CAS	Units	Result	Result	Result	(mg/l)
TAL Metals - Total						
Aluminum	7429-90-5	mg/l	4.13	0.844	0.249	--
Antimony	7440-36-0	mg/l	< 0.001	< 0.001	< 0.001	0.006
Arsenic	7440-38-2	mg/l	0.0037	< 0.001	< 0.001	0.01
Barium	7440-39-3	mg/l	1.89	5.41	0.742	2.0
Beryllium	7440-41-7	mg/l	< 0.0040	< 0.0040	< 0.0040	0.004
Cadmium	7440-43-9	mg/l	0.0064	0.015	< 0.0040	0.005
Calcium	7440-70-2	mg/l	< 0.0500	< 0.0500	< 0.0500	--
Chromium	7440-47-3	mg/l	< 0.0100	< 0.0100	< 0.0100	0.1
Chromium, Hexavalent	18540-29-9	mg/l	< 0.005	< 0.005	< 0.005	--
Cobalt	7440-48-4	mg/l	0.0045	< 0.0040	0.0087	--
Copper	7440-50-8	mg/l	0.0104	0.0525	0.0144	1.3
Iron	7439-89-6	mg/l	3.42	0.999	0.341	--
Lead	7439-92-1	mg/l	< 0.0100	< 0.0100	< 0.0100	0.015
Magnesium	7439-95-4	mg/l	296	224	170	--
Manganese	7439-96-5	mg/l	0.853	1.00	0.828	--
Mercury	7439-97-6	mg/l	0.0007	0.00082	< 0.00020	0.002
Nickel	7440-02-0	mg/l	0.0228	0.0524	0.0292	--
Potassium	7440-09-7	mg/l	28.6	27.5	30.3	--
Selenium	7782-49-2	mg/l	0.0097	0.00315	0.00355	0.05
Silver	7440-22-4	mg/l	0.0423	0.0163	< 0.0100	--
Sodium	7440-23-5	mg/l	1,220	1,360	782	--
Thallium	7440-28-0	mg/l	< 0.001	< 0.001	< 0.001	0.002
Vanadium	7440-62-2	mg/l	< 0.0100	< 0.0100	< 0.0100	--
Zinc	7440-66-6	mg/l	0.0779	0.161	0.0526	--

Notes:

Bold = Detection

Highlight = Detection exceeds MCL

*EPA Maximum Contaminant Level, May 2018

A review of **Table 6.9-4** indicates that:

- ❖ Total cadmium was present in MW 39-1 and MW 39-2 slightly above its MCL of 0.005 mg/l.
- ❖ Hexavalent chromium was not detected in any of the monitoring well samples.
- ❖ Numerous other total TAL metals were detected at concentrations an order of magnitude less than their respective EPA Maximum Contaminant Level (MCL).
- ❖ Elevated sodium concentrations were detected in all three (3) monitoring wells. This may be the result of former road salt storage in the northeast corner of the building, as detected in the surface sample 39-C.
- ❖ No TPH or pesticides (primary contaminants of concern at Building 39) or daughter products were detected in the groundwater.

6.9.4. Recommendations

The shallow soil samples collected at Findings #20 and #27 (Building 39) during the 2017 Phase II ESA and this supplemental Phase II ESA confirmed heavy metal (arsenic, hexavalent chromium, and lead), petroleum, and pesticide impacts exceeded their respective Tier II SSLs within the earthen floor of Building 39. Based on this information, this area should be enrolled into the Virginia DEQ's VRP to obtain a Certification of Satisfactory Completion of Remediation. Additional information on the process and protections afforded by the VRP is included in **Section 8.2**.

The VRP process for this area would likely include the following general activities:

- ❖ Determine site eligibility and apply for enrollment into the VRP.
- ❖ Deconstruct/demolish Building 39 in a way to minimize disturbance of the earthen floor and soil proximate to the structure. An asbestos containing materials survey and demolition permit must be obtained prior to demolition.
- ❖ Perform in-situ waste characterization to determine proper disposal of soil to be excavated.
- ❖ Excavate all soil within and 5-ft beyond the footprint of Building 39 once it has been demolished. Soil should be excavated to a minimum depth of 2-ft BGS. This would result in excavation of approximately 230 cubic yards (350 tons) of soil.
- ❖ Collect samples after excavation of wastes to demonstrate removal of contaminants from the area. This data will also support the VRP required risk assessment.
- ❖ Survey locate the bounds of the VRP Site.
- ❖ If risk assessment activities identify the potential for impacts to sensitive receptors, then subdivide this area from the larger CVTC parcel, and record land use restrictions into the deed for this VRP Site.

7.0 ADDITIONAL CONSIDERATIONS

7.1. Land Disturbance and Demolition of Existing Structures

Prior to any land disturbance, including building demolition, the total amount (square footage) of disturbance must be calculated to determine applicability of an Erosion & Sediment Control Plan and Stormwater Pollution Prevention Plan.

- ❖ CVTC is located in an area of Amherst County not governed by the Chesapeake Bay Preservation Act. Therefore, an Erosion & Sediment Control Plan (ESC) will be required if total disturbance exceeds 10,000-ft².
- ❖ If total disturbance exceeds one (1) acre, then a Stormwater Pollution Prevention Plan (SWPPP) will be required in addition to the ESC Plan.
- ❖ If either of these plans are required, they must incorporate control of contaminants of concern in addition to traditional sediment and nutrient control.

Additionally, the following must occur prior to demolition of existing structures on state owned property:

- ❖ Obtain DGS permit for demolition of building on state property (DGS-30-176).
- ❖ The Virginia Department of Labor and Industry (DOLI) requires the acquisition of an Asbestos Removal and Demolition Permit before the demolition of a building or facility, even when no asbestos containing material (ACM) is present.

7.2. Asbestos Containing Materials

As referenced in **Section 7.1**, the Virginia DOLI demolition permit form combines the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR, Subpart M and the Virginia Department of Labor and Industry Regulation Concerning Licensed Asbestos Contractor Notification, Asbestos Project Permits, and Permits Fees (16VAC25-20). Both regulations require submittal of written notification before beginning renovation project, which include the disturbance of any asbestos-containing material (ACM) in a building or facility or before the demolition of a building or facility, even when no asbestos is present.

Therefore, an ACM survey will be required prior to demolition of any structure. Prior to performing an ACM survey, any and all information documenting the methods, results, conclusions, and recommendations of previously conducted ACM surveys should be made available and reviewed.

7.3. Lead Based Paint

Virginia DOLI Regulation Concerning Certified Lead Contractors Notification, Lead Project Permits and Permit Fees (16 VAC25-35) requires that written notification be submitted before beginning lead-based paint activities in target housing (built before 1978) and child-occupied facilities (e.g. day-care centers, preschools and kindergarten classrooms). Any existing structure to be renovated and used for housing or child-occupied space must meet these requirements.

Additionally, any lead-based paint assessment at CVTC should incorporate sampling of soil within the dripline of buildings. The dripline of some existing buildings has the potential to contain soil that is characteristic of a hazardous waste with respect to lead. This potential is based on TCLP leachable lead concentrations results associated with the spill cleanup at Building #45-5A (Finding #36) reported in the 2017 Phase II ESA **Section 6.17**, and concentrations detected at both Building 39 and 41 as reported in this supplemental Phase II ESA **Sections 6.7.3 and 6.9.3**.

7.4. Monitoring Well Abandonment

Any monitoring wells not incorporated into future characterization or monitoring activities should be abandoned in accordance with current Virginia Department of Health Private Well regulations governing observation, monitoring, and remediation wells (12VAC5-630-450).

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1. Naturally Occurring Arsenic in Soil

Total arsenic was ubiquitous in all soil analyzed across the CVTC campus at concentrations exceeding the risk-based EPA Region 3 Residential Soil Screening Level of 0.68 mg/kg. The arsenic concentration detected above this risk-based endpoint for unrestricted site use is likely to be naturally-occurring as detailed below.

To document the natural occurrence of arsenic, **3e** utilized the 2012 Draft Metals Background Document prepared by the DEQ, which compiled true background sample data from the VRP program to establish both mean concentrations and the upper prediction limit (UPC) at the 95-percent upper confidence interval (UCL) for the RCRA 8 metals within the Piedmont physiographic province of Virginia. A comparison of the data presented in the DEQ background metals study to the total arsenic concentrations detected at CVTC, indicates the following:

- ❖ The arsenic calculations were based on a set of 102 background samples
- ❖ The calculated mean background concentration of arsenic was 4.008 mg/kg within the Piedmont physiographic province
- ❖ The calculated UCL of background arsenic was concentrations 12.41 mg/kg within the Piedmont physiographic province.

- ❖ Therefore, any arsenic concentration at or below this 12.41 mg/kg UCL should be considered background (i.e. naturally occurring).

8.2. Virginia VRP

8.2.1. Purpose of VRP

The purpose of the VRP is to encourage the productive re-use of previously developed properties that may be environmentally impacted. The VRP program is a streamlined mechanism for site owners or operators to voluntarily address contamination at sites with concurrence from the Virginia DEQ.

When the remediation is satisfactorily completed, DEQ issues a "certification of satisfactory completion of remediation." This VRP certification provides assurance that the remediated site will not become the subject of a future DEQ enforcement action unless new issues are discovered. It is anticipated that the VRP will facilitate the sale and reuse of industrial and commercial properties in the Commonwealth, which is an important benefit to all Virginia residents.

As the potential environmental liabilities of reusing or further developing existing commercial properties diminishes, economic benefits are expected for both the buyer and seller. An added benefit is the decrease of expansion of commercial sites onto pristine lands. By overseeing the process, DEQ is able to ensure that the cleanup achieves a satisfactory level of human health and environmental protection.

8.2.2. Incorporation of CVTC Findings

At a minimum, the following findings assessed to date are recommended for an eligibility determination and subsequent application for enrollment into the Virginia VRP:

- ❖ Findings #3 and #9: Boiler House and Coal Ash Cleanup (**Section 6.1**)
- ❖ Finding #13: Closed Sanitary Landfill (**Section 6.2**)
- ❖ Finding #14: New Scrap Yard (**Section 6.4**)
- ❖ Finding #15: Coal Ash and Debris Dump (**Section 6.5**)
- ❖ Finding #16: Old Scrap Yard (**Section 6.6**)
- ❖ Finding #19: Pesticide and Lead impacts at Building 41 (**Section 6.7**)
- ❖ Findings #20 and #27: Bulk Pesticide and Oil Storage in Building 39 (**Section 6.9**)

Due to the VRP application process requirements and associated fees, it is suggested that all findings to date be recommended for enrollment into the VRP as one "Site," even if the Findings are physically separated across the CVTC property. Each finding can be surveyed and assessed independently, and land use restrictions, if required for one or more of the Findings, can be addressed under one VRP determination. This approach and corresponding conclusions will be

dependent on site-specific conditions, assessment/characterization data and associated risk assessments performed for each Finding as part of the VRP completion processes.

8.2.3. Available Funding Vehicles

Further assessment at CVTC is likely eligible for funding assistance, as it should meet the definition of a “brownfield site” under the 2002 Small Business Liability Relief and Brownfields Revitalization Act:

With certain legal exclusions and additions, the term "brownfield site" means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands.

Several funding mechanisms (including loans and grants) have been established by the Commonwealth of Virginia to assist with financing the assessment and remediation of impacted properties, as stated in the Code of Virginia §10.1-1231 (Brownfield restoration and land renewal policy and programs):

It shall be the policy of the Commonwealth to encourage remediation and restoration of brownfields by removing barriers and providing incentives and assistance whenever possible. The Department of Environmental Quality and the Economic Development Partnership and other appropriate agencies shall establish policies and programs to implement these policies, including a Voluntary Remediation Program, the Brownfields Restoration and Redevelopment Fund, and other measures as may be appropriate.

In addition to state-level funding opportunities, the federal EPA maintains a Brownfield grant program that provides direct funding for Brownfields assessment, cleanup, revolving loans, and environmental job training. To facilitate the leveraging of public resources, EPA's Brownfields Program collaborates with other EPA programs, other federal partners, and state agencies to identify and make available resources that can be used for Brownfields activities.

8.3. Additional Findings

The 2017 Phase II ESA and this supplemental Phase II ESA assessed those Findings classified as high and moderate risk to third party (offsite) receptors, human health and the environment. The remaining Findings presented in the July 2017 ECA will require assessment and/or management as part of facility closure; however, many of these Findings are associated with processes currently in use at CVTC (e.g. the 90,000-gallon heating oil AST at the boiler plant, USTs currently in use, etc.).

There will be future environmental management costs associated with these findings during facility closure, which should be assessed if/when the associated structures are demolished and/or removed from the site. For instance, a closure assessment will be required for all regulated petroleum storage tanks at CVTC, both above and underground. Such closures must comply with current above ground and underground storage tank regulations (9 VAC 25-91-10 et seq. and 9 VAC 25-580-10 et seq., respectively).

9.0 LIMITATIONS

It is impossible to know with certainty the entirety of a site is free of hazardous substances or conditions even with extensive subsurface testing. The conclusions of this investigation are based solely on the scope-of-work and on the sources of information reviewed during this investigation. This report was prepared for the exclusive use of DBHDS and their expressly-designated affiliates. **3e** accepts no responsibility for damages or claims resulting from past or future environmental degradation related to the subject property.

10.0 REFERENCES

The following is a list of references used for this supplemental Phase II ESA:

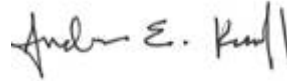
- ❖ Google Earth
- ❖ ASTM E1903-11: Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process
- ❖ Site Specific Environmental Conditions Assessment: Central Virginia Training Center, EEE Consulting, Inc., July 2017
- ❖ Phase II Environmental Site Assessment: Central Virginia Training Center, EEE Consulting, Inc., October 2017
- ❖ Virginia Department of Environmental Quality (Adam Koling), August 23, 2012: Draft Background Metals Project. Included as Attachment 1 in Fact Sheet – Reissuance of a General VPDES Permit for Industrial Activity Stormwater Discharges.

11.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312, and we have the specific qualifications based on education, training, and experience to assess the nature, history, and setting of the subject property. We have developed and performed all appropriate inquiries in general conformance with the standards and practices set forth in 40 CFR Part 312.



Jeffrey A. Fisher, QEP
Senior Project Manager
Preparer



Andrew E. Kassoff, PE, PG, LEED AP
President
Reviewer

12.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

The following individuals from EEE Consulting, Inc. were involved in the preparation of this Phase I ESA:

Jeffrey A. Fisher, QEP

B.A., Natural Science, Messiah College, 1996
Qualified Environmental Professional, 2012
Virginia Certified Erosion and Sediment Control Combined Administrator, #6210, 2014
Virginia Certified Stormwater Inspector, #SWIN0485
OSHA 40-hr HAZWOPER, 8-hr Manager, Confined Space Entry

Areas of Relevant Expertise

- Phase I, II and III Environmental Site Assessments
- Site Characterizations and Contaminant Plume Delineation
- VA Petroleum Storage Tank Program and Fund
- Soil and Groundwater Sampling
- Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) Preparation
- Hazardous Materials Management
- Virginia Voluntary Remediation Program (VRP)

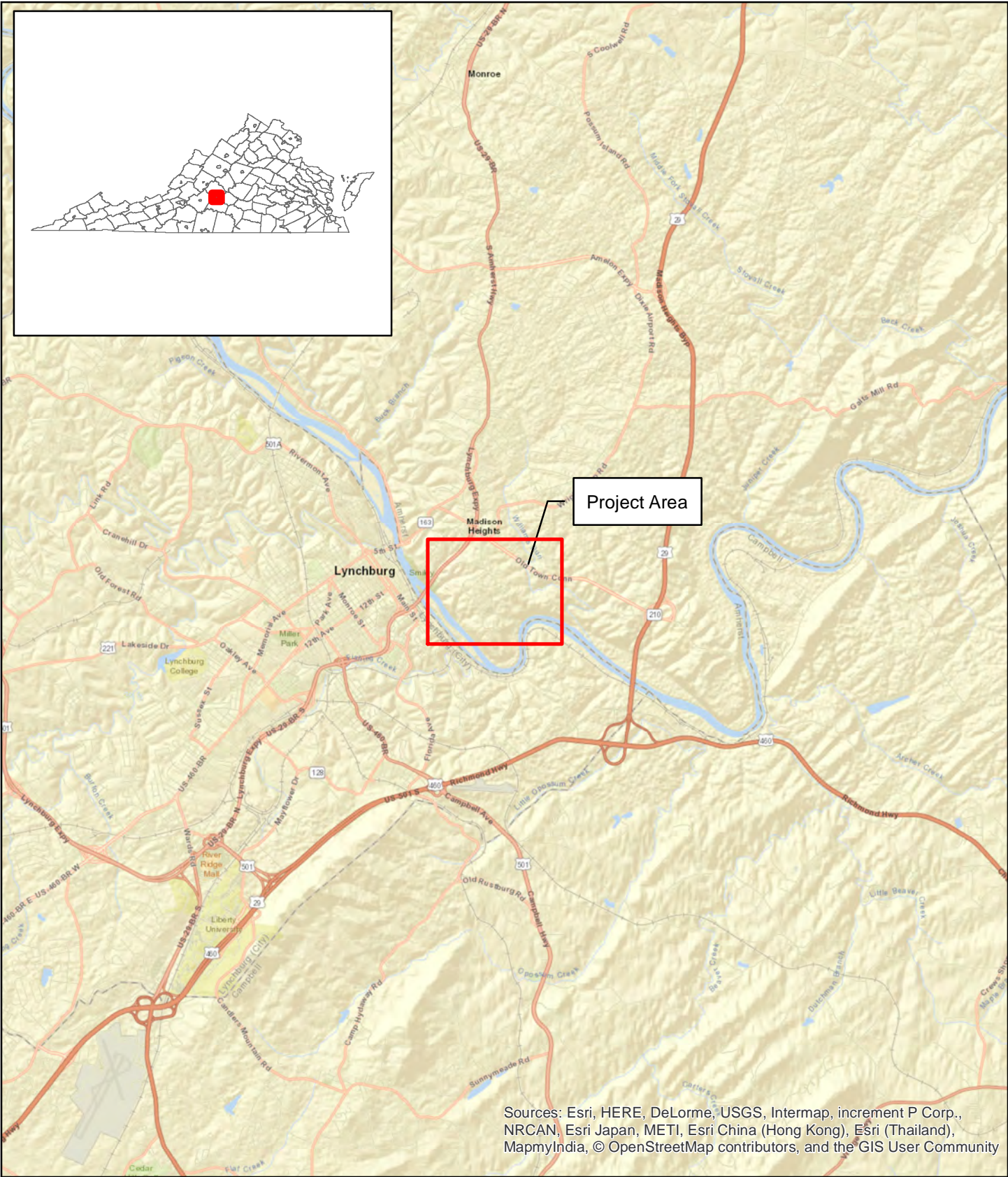
Andrew E. Kassoff

M.S., Environmental Engineering, Virginia Polytechnic Institute and State University, 2003
B.S., Hydrogeology, James Madison University, 1981
Professional Engineer, #402043711, Virginia, 2008
Professional Engineer, #35181, North Carolina, 2008
Professional Geologist, #2801000873, Virginia, 1992
Professional Geologist, #1227, North Carolina, 1992
LEED Accredited Professional, 2008

Areas of Relevant Expertise

- Environmental and Regulatory Compliance
- Contaminant Transport and Fate Evaluations
- Landfill Siting/Permitting/Monitoring
- RCRA/CERCLA Investigations
- RCRA Facility Investigation, Corrective Measures, Implementation and Permitting
- Site Plan Design and Review
- Soil and Groundwater Contamination Assessment and Remediation
- Soils Evaluation/Engineering
- Virginia VRP Program

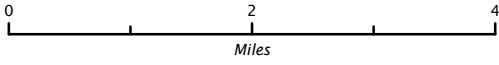
Figures



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



FIGURE 1
PROJECT LOCATION MAP
 CVTC Phase II ESA



Madison Heights, Virginia
 Sources: ESRI World Street Map
 Prepared by J.Kimmel, October 2017

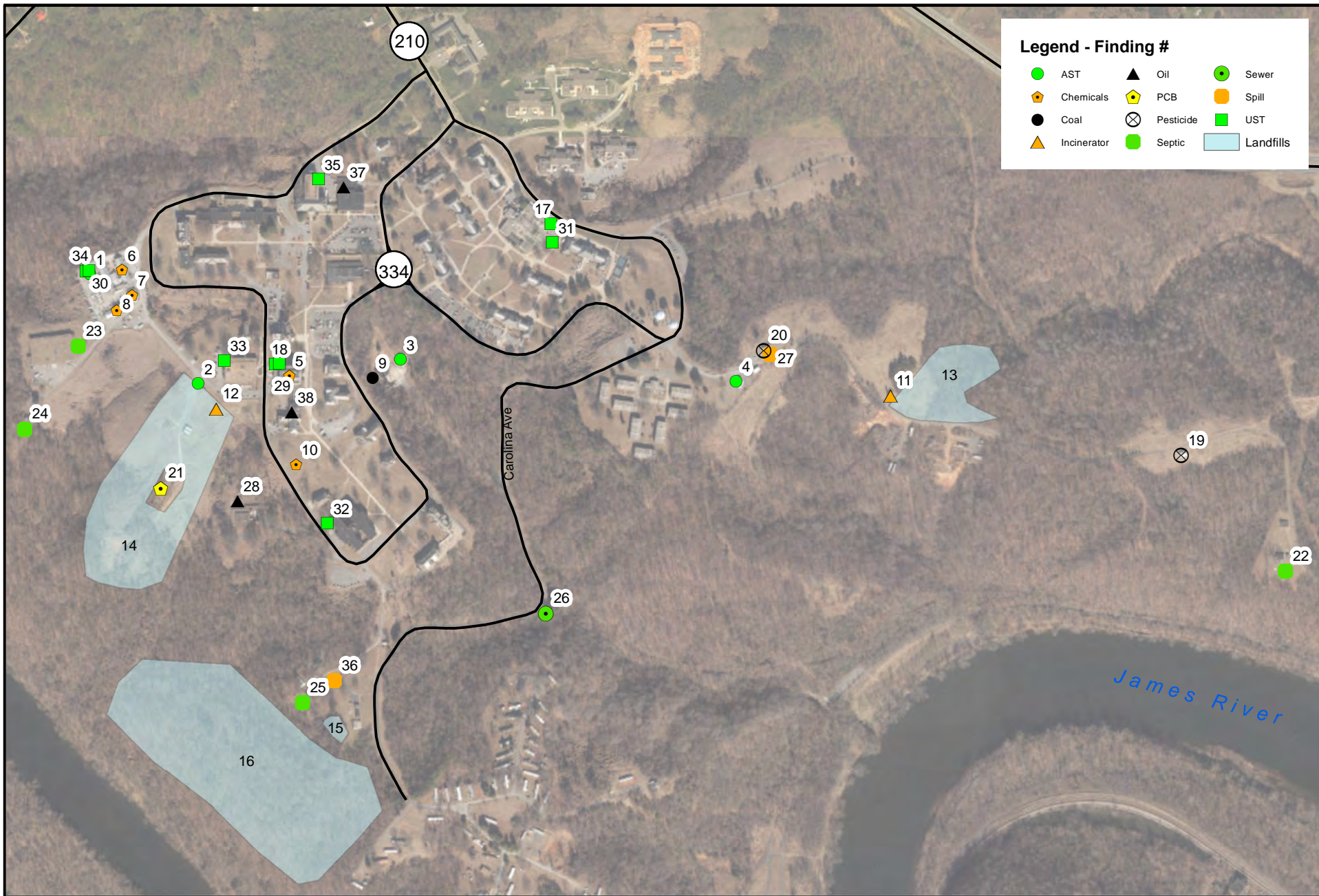


Figure 2. Findings: Locations, Number, and Type
 Central Virginia Training Center
 Madison Heights, Virginia

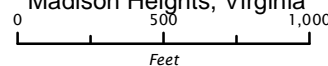


Table 1 - Summary of Findings

Finding #	Identity	Building #	Lat	Lon	Description	Source	REC Per ASTM E1527-13?	Recommendations & Notes
1	AST	36	37.41242	-79.1259	current 2,000-gallon diesel AST	Site visit	No	No evidence of staining around tank
2	AST	west of 31	37.4109	-79.124	1,000-gallon diesel AST in good condition, former tank from grounds crew building 37	Site visit, interview	No	No evidence of staining around tank
3	AST	77	37.41127	-79.1205	90,000-gallon #2 AST, formerly 100,000-gallon #6 AST with remote fill	Site visit, interview, FOIA	No	No evidence of staining around tank
4	AST	37	37.41094	-79.124	1,000-gallon diesel AST used to be located at grounds crew facility	Interview	De minimis	AST no longer present, moved and appears to be in good condition. No evidence of leaks or stains
5	Chemicals	46	37.41117	-79.1225	X-ray chemicals and other medically related interior storage	Site visit	No	Stored and used appropriately, no significant materials in lab
6	Chemicals	51	37.41245	-79.1256	Physical plant chemicals, all small containers	Site visit	No	All stored appropriately and no evidence of spills
7	Chemicals	56	37.41214	-79.1251	Screen building used to create vinyl signs and repair window screens, Small amounts of adhesives and paints	Site visit	No	
8	Chemicals	82	37.41194	-79.1254	Paint shop, some generation of hazardous wastes	Site visit	No	All stored appropriately and no evidence of spills. No floor drains present
9	COAL	77	37.41103	-79.121	Coal burning, ash, and accidental discharges to tributary via storm water inlets. Cleaned and ceased coal operations in 1999	FOIA	HREC	All coal ash and remaining coal were removed and excavated under DEQ supervision between 1996 and 1998. This includes around the boiler plant, and the rail siding unloading area to the southeast.
10	Historic Chemicals	47	37.40989	-79.1224	Location of former buildings & grounds, a building prior to 47	Historic Fire insurance maps, aerials, interviews	Yes	Use of paints, solvents, etc. prior to regulatory requirements for storage and disposal
11	Incinerator	13	37.41081	-79.1122	Former coal powered incinerator, used for sanitary and likely also medical waste	Site visit, interview, historic sources	Yes	Shallow soil samples for dioxins, dibenzofurans, PAHs and metals
12	Incinerator	west of 31	37.41057	-79.1237	Former medical waste incinerator, no longer operational	Site visit, interview, FOIA	Yes	Within the limits of the new scrapyard compound (see Finding 14)
13	Landfill	13	37.41097	-79.1109	~4-acre former sanitary landfill, operated since beginning of facility until approximately 1960s	Site visit, interview, historic sources	Yes	Delineate groundwater, secure cover, etc. and put through the VRP
14	Landfill	west of 31	37.40871	-79.1255	Landfill area, dubbed "New Scrap Yard"	Site visit, interview, historic sources	Yes	Delineate groundwater, secure cover, etc. and put through the VRP
15	Landfill	west of 83	37.40629	-79.122	Small landfilled area with construction debris and coal ash	Site visit, interview, historic sources	Yes	Delineate groundwater, secure cover, etc. and put through the VRP
16	Landfill	southwest of 83	37.4052	-79.1225	Large landfill area (6+ acres) dubbed "Old Scrap Yard." Asbestos tiles observed becoming exposed in forest floor, several mounds of discarded drums, etc.	Site visit, interview, historic sources	Yes	Delineate groundwater, secure cover, etc. and put through the VRP
17	LUST, UST	65	37.41312	-79.118	PC 1992-1677. 1,000-gallon gasoline UST removed, along with 26-tons of soil. 3/18/1992. no groundwater encountered above rock at 40.5-ft. All TPH less than 50 mg/kg in final soil samples	Interview, FOIA	HREC	Notation of prior work.
18	LUST, UST	46	37.41124	-79.1226	1,000-gallon diesel UST for backup generator, closed in place due to oxygen lines crossing tank. One sample was 112 mg/kg TPH-DRO, release reported and recorded as PC 2000-2032, but no requirements for follow-up. Appears duplicative of PC 1999-1203	Site visit, interview, FOIA	HREC	Note location of old UST (filled in place), remove UST if possible and perform proper closure assessment
19	Pesticide	41	37.41003	-79.1071	Spilled container of sulfur compound in crawl space, per Reve Carwile	Interview	Yes	segregate first foot of soil beneath building during demolition
20	Pesticide	39	37.41144	-79.1143	Pesticide storage, all bulk containers previously removed	Site visit, interview	Yes	segregate first foot of soil beneath building during demolition
21	PCBs	west of 31	37.40955	-79.1246	fence-enclosed area, formerly housed PCB containing transformers	Site visit, interview	Yes	Prior storage of PCB transformers pending final disposal considered an REC due to material threat of release of PCBs to surrounding ground surface
22	Septic	34-A	37.40862	-79.1053	Septic system for part time residence	Site visit, interview	No	
23	Septic	66	37.41151	-79.1269	Septic system for stock warehouse	Site visit, interview	No	No floor drains, system only for sanitary wastes
24	Septic	48	37.41034	-79.1269	Septic system for part time residence	Site visit, interview	No	
25	Septic	45	37.40664	-79.122	Septic system for part time residence	Site visit, interview	No	
26	Sewer	42-43	37.40786	-79.118	Former sewage treatment plant and outlet	Site visit	No	Long since out of operation, and receiving stream appeared free of any visual impacts
27	Spills	39	37.41136	-79.1143	Surficial oil spills inside garage dirt floor, and inside block containment structure	Site visit	Yes	excavate visually impacted soil, shallow soil borings
28	Suspected Heating Oil	53	37.40933	-79.1233	Originally identified as a boiler house adjoining laundry services building.	Site visit, historic sources	Yes	One soil boring to determine presence/absence of heating oil
29	UST	46	37.41124	-79.1227	1,000-gallon diesel UST for backup generator	Site visit, interview	Yes	Remove UST, perform closure assessment
30	UST	36	37.41253	-79.1258	current 8,000-gallon gasoline UST	Site visit	Yes	Remove UST, perform closure assessment
31	UST	65	37.4129	-79.1179	1,000-gallon diesel UST for backup generator, same place as former	Site visit, interview	Yes	Remove UST, perform closure assessment
32	UST	47	37.40901	-79.1219	1,000-gallon diesel UST for backup generator, same place as former	Site visit, interview	Yes	Remove UST, perform closure assessment
33	UST	31	37.41114	-79.1236	1,000-gallon diesel UST for backup generator, same place as former	Site visit, interview	Yes	Remove UST, perform closure assessment
34	UST	36	37.41253	-79.1258	former 10,000-gallon gasoline UST removed March 13, 1995. Same pit as new UST	Site visit, interview, FOIA	Yes	
35	UST	49	37.41378	-79.122	former 1,000-gallon UST, removed March 27, 1995. 4-ft NE corner of Bldg. 49	Site visit, interview, FOIA	Yes	place one boring in location of former pit
36	Unknown Spill	45-5	37.40689	-79.1224	drum labelled Sta-Fil, but spills of unknown contents (not a vinyl asphalt patch as labelled), dead vegetation	Site visit	Yes	Characterize and excavate soil
37	Oil and Automotive	50	37.41364	-79.1216	Oil, petroleum and chemical storage for automotive maintenance	Site visit	No	All stored in good condition, free of spills or staining
38	Oil drum	30	37.4104	-79.1225	One old Drydene oil drum (company out of business since 1991) and air compressors, suggesting compressor maintenance. 32 aw hydraulic oil	Site visit	Undetermined	Some evidence of minor spill, recommend characterization of contents to determine presence or absence of PCB's

July 2017 ECA

- 38 Environmentally Relevant Findings Identified at CVTC.
- 23 Findings Determined to be RECs.
- 23 RECs Categorized into High, Medium, and Low Priority Based on Risk

October 2017 Phase II ESA

- Triage Approach to Assessment
- Characterized 19 High and Medium Risk RECs
- Determined that No Further Action was Appropriate for 12 of the 19 RECs
- Recommended Additional Groundwater Sampling and Characterization of Landfill Areas

November 2018 Supplemental Phase II ESA

- Collected Additional Data at 9 RECs: 7 remaining from 2017 and 2 Additional Medium-Low Risk Sites
- Sampled all New and Existing Groundwater Monitoring Wells (9 Sites)
- Determined that No Further Action was Appropriate for 2 of the 9 RECs
- Recommend Enrolling CVTC into the DEQ's Voluntary Remediation Program to Remedy the 7 remaining RECs

Path Forward for Further Action

- Complete VRP Enrollment (December 2018)
- Establish Boundaries and Limits of Waste for all 4 Landfill Areas (January 2019)
- Collect Surface Soil Samples and Install Soil Gas Sample Points (January 2019)
- Complete Groundwater Monitoring Well Network at Landfill Areas (February 2019)
- Demolition of Buildings 39 and 41 Followed by Shallow Soil Excavation (April 2019)
- Limited Removal Action of Surficial Debris and Apply Additional Cap Material to Landfill Areas as Needed (late 2019)

Certificate of Satisfactory Completion (mid 2020)








EEE Consulting, Inc.
Environmental, Engineering and Educational Solutions

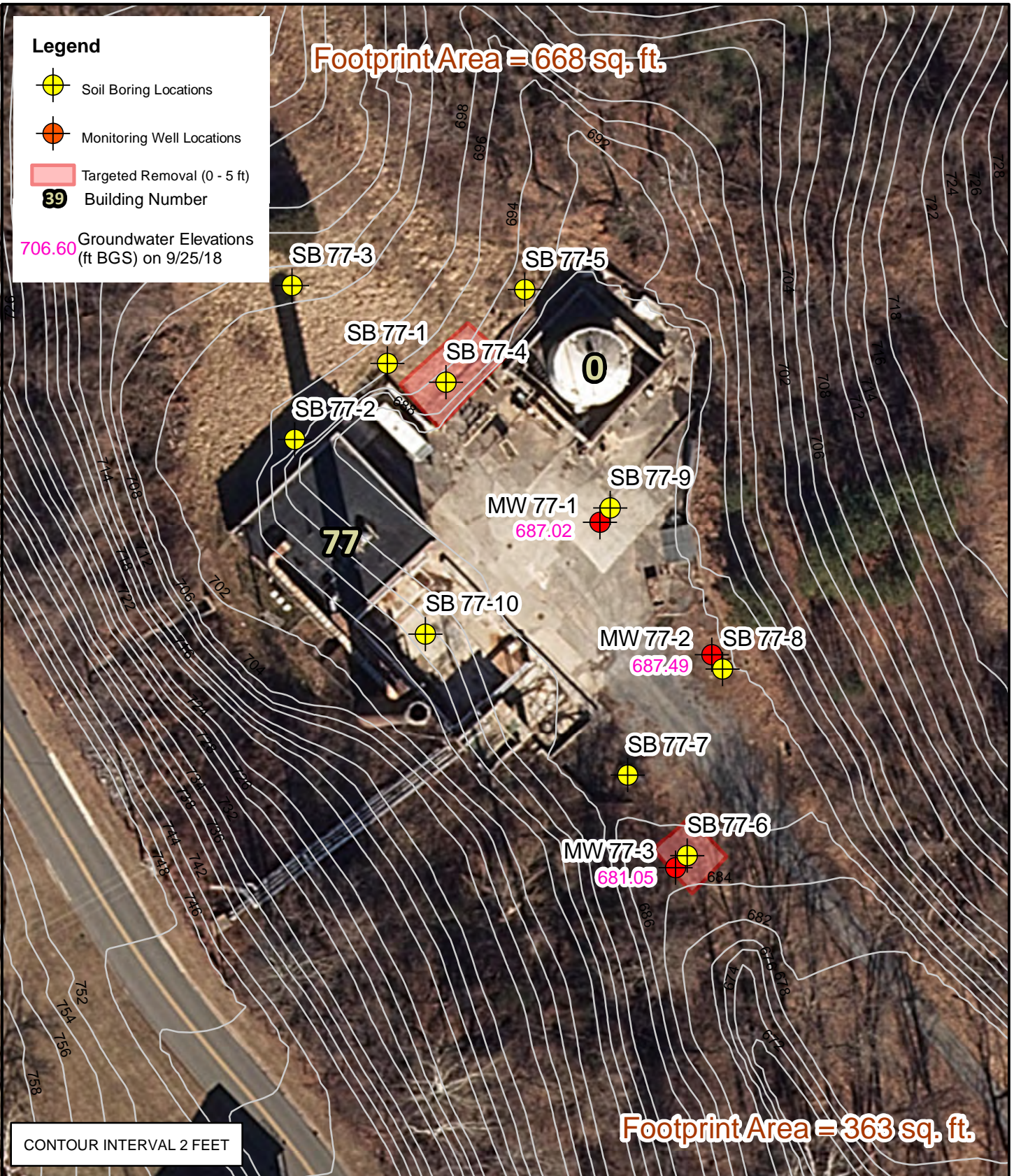
FIGURE 3
Environmental Project Flow Chart
Central Virginia Training Center

October 2018

Legend

-  Soil Boring Locations
-  Monitoring Well Locations
-  Targeted Removal (0 - 5 ft)
-  Building Number
-  706.60 Groundwater Elevations (ft BGS) on 9/25/18

Footprint Area = 668 sq. ft.

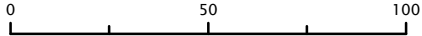


CONTOUR INTERVAL 2 FEET

Footprint Area = 363 sq. ft.



FIGURE 3-1 CVTC PHASE II ESA
Monitoring Well and Soil Boring Locations
Boiler Plant Building 77 and Heating Oil AST



Feet
Madison Heights, Virginia
Source: ESRI USA Aerial
Prepared by Leah Potts, Oct 2018
EEE Project No. 18-760



Legend



Soil Boring Locations

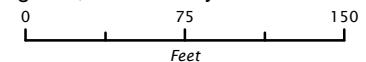


Monitoring Well Locations

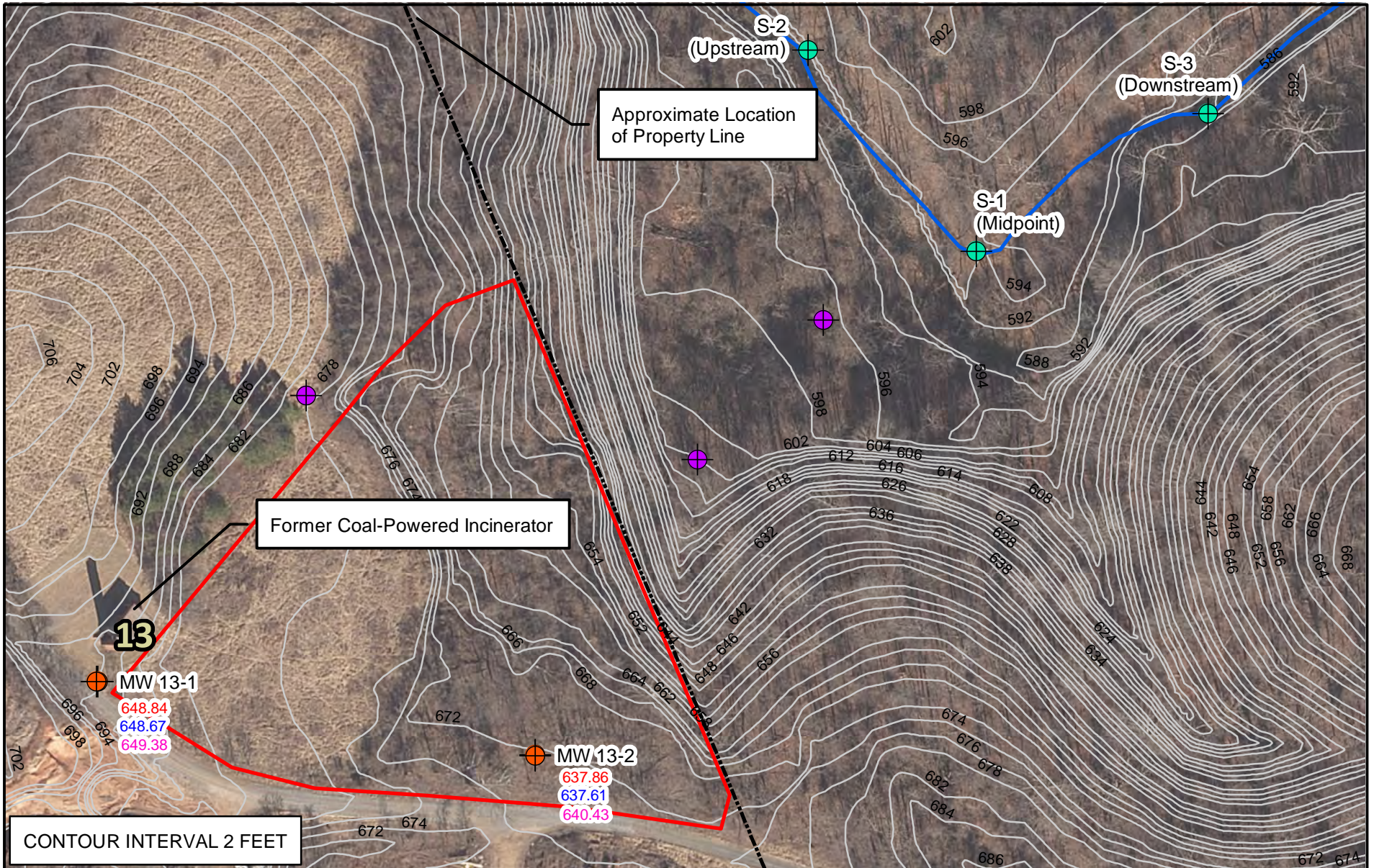
53 Building Number

- 697.24 Groundwater Elevations (ft BGS) on 9/27/17
- 684.63 Groundwater Elevations (ft BGS) on 10/2/17
- 686.22 Groundwater Elevations (ft BGS) on 9/25/18

**FIGURE 10-1 CVTC PHASE II ESA
Monitoring Well and Soil Boring Locations
Building #47; Former Physical Plant and Laundry**



Feet
Madison Heights, Virginia
Source: ESRI USA Aerial
Prepared by Leah Potts, Oct 2018
EEE Project No. 18-760



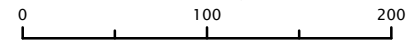
CONTOUR INTERVAL 2 FEET



Legend




- Proposed Monitoring Well
 - Monitoring Well Locations
 - Surface Water Sample Locations
 - Williams Run
 - Approximate Landfill Limits
 - Building Number
- | Groundwater Elev. (ft BGS) | |
|----------------------------|---------|
| 637.86 | 9/27/17 |
| 637.61 | 10/2/17 |
| 649.50 | 9/25/18 |

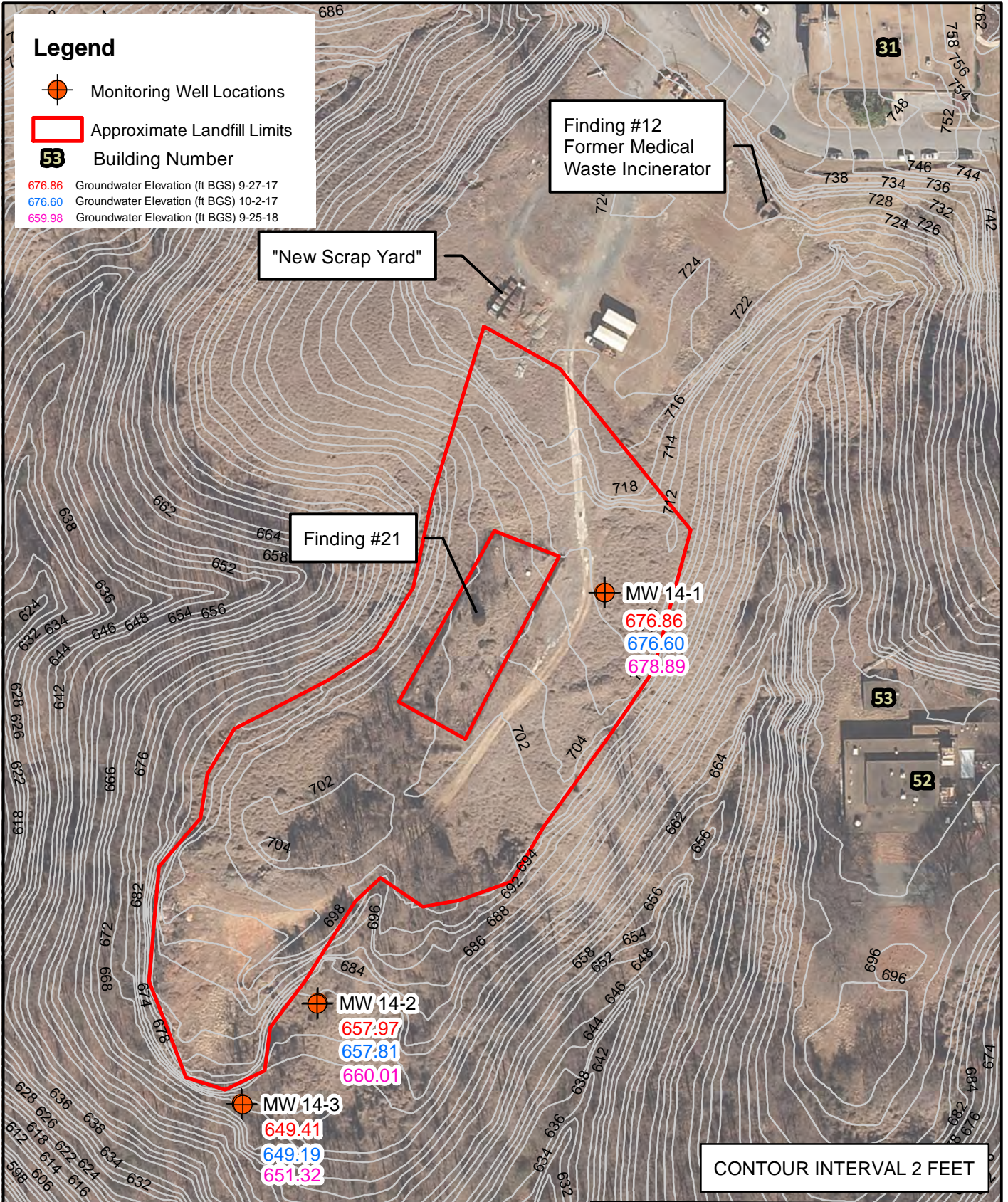
FIGURE 13-1 CVTC PHASE II ESA
Monitoring Well and Stream Sample Locations
Closed Sanitary Landfill



Madison Heights, Virginia
Source: ESRI USA Aerial
Prepared by Leah Potts, Oct 2018
EEE Project No. 18-760

Legend

-  Monitoring Well Locations
-  Approximate Landfill Limits
-  Building Number
- 676.86 Groundwater Elevation (ft BGS) 9-27-17
- 676.60 Groundwater Elevation (ft BGS) 10-2-17
- 659.98 Groundwater Elevation (ft BGS) 9-25-18



CONTOUR INTERVAL 2 FEET



**FIGURE 14-1 CVTC PHASE II ESA
Monitoring Well Locations**



Feet
Madison Heights, Virginia
Source: ESRI USA Aerial
Prepared by Leah Potts, Oct 2018
EEE Project No. 18-760

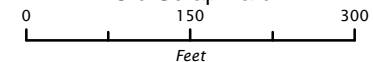
Projection: NAD 1983 StatePlane Virginia South FIPS 4502 Feet



Legend

- Monitoring Well Locations
- Approximate Landfill Limits
- Lidar_contours
- 45** Building Number
- 657.01 Groundwater Elevations (ft BGS) on 9-27-17
- 657.01 Groundwater Elevations (ft BGS) on 10-2-17
- 683.03 Groundwater Elevations (ft BGS) on 9-25-18

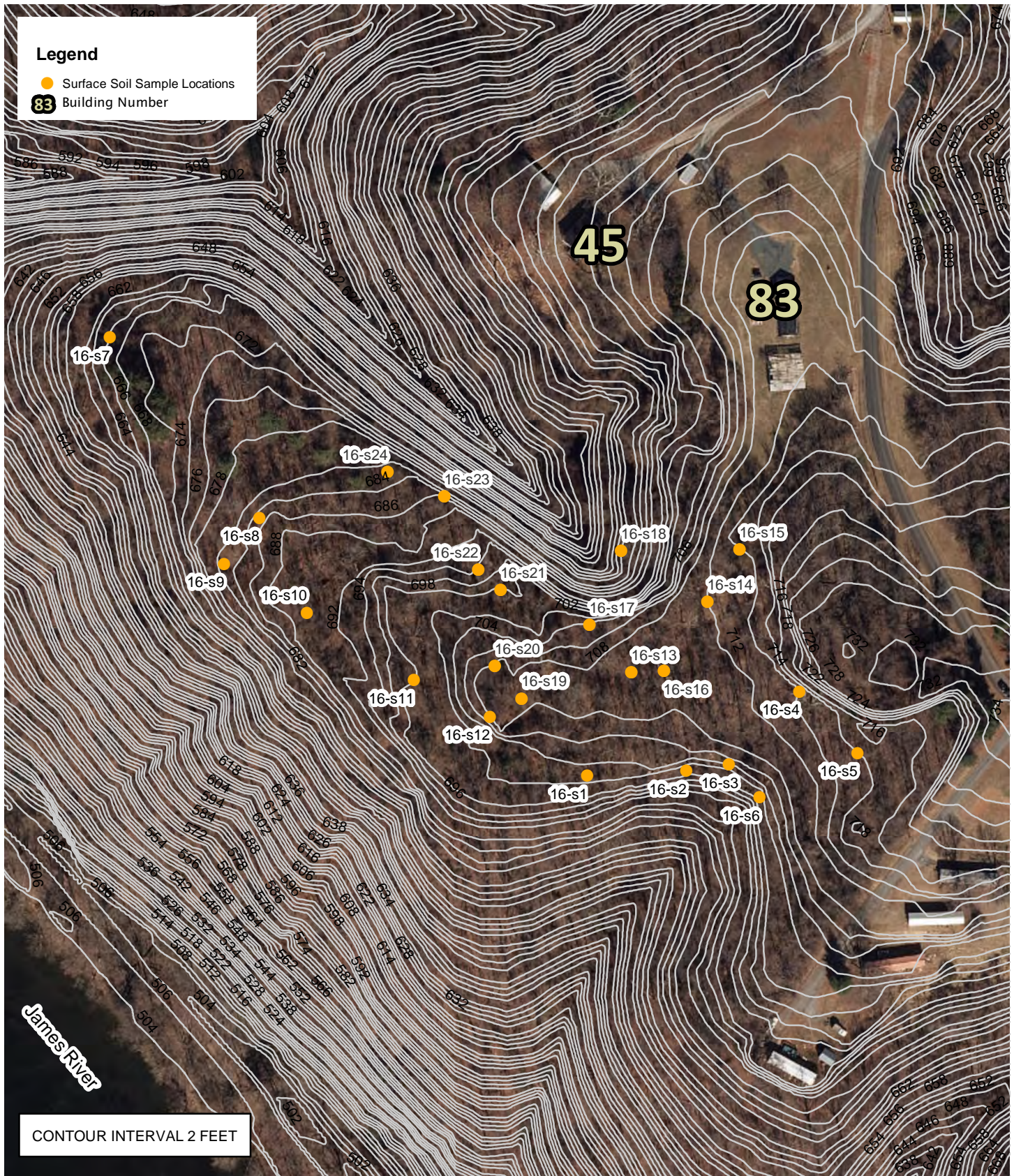
FIGURE 16-1 CVTC PHASE II ESA
Monitoring Well Locations
"Old Scrap Yard"



Feet
Madison Heights, Virginia
Source: ESRI USA Aerial
Prepared by Leah Potts, Oct 2018
EEE Project No. 18-760

Legend

- Surface Soil Sample Locations
- 83 Building Number



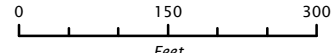
James River

CONTOUR INTERVAL 2 FEET

 **EEE Consulting, Inc.**
Environmental, Engineering and Educational Solutions



**FIGURE 16-2 CVTC PHASE II ESA
Surface Soil Sample Locations
"Old Scrap Yard"**



Madison Heights, VA
Source: ESRI USA Aerial
Prepared by Leah Potts, Oct 2018
EEE Project No. 18-760

Projection: NAD 1983 StatePlane Virginia South FIPS 4502 Feet

Legend

- Surface Soil Sample Locations
- Building 41 with 5 foot buffer
- 41 Building Number

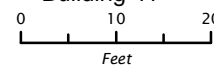
Building Footprint Area = 1976 sq. ft.



CONTOUR INTERVAL 2 FEET







FIGURE 19-1 CVTC PHASE II ESA
Surface Soil Sample Locations
Building 41



Feet
Madison Heights, Virginia
Source: ESRI USA Aerial
Prepared by Leah Potts, Oct 2018
EEE Project No. 18-760

Legend

-  Soil Boring Locations
-  Monitoring Well Locations
-  Soil Sample Areas
-  Building 39 with 5 foot buffer
- 39** Building Number
- A** Soil Sample Area IDs
- 695.23 Groundwater Elevations (ft BGS) on 9/25/18

Footprint Area = 3120 sq. ft.



CONTOUR INTERVAL 2 FEET





FIGURE 20-1 CVTC PHASE II ESA
Monitoring Well and Soil Boring Locations
Bulk Pesticide and Oil Storage in Building 39



Feet
Madison Heights, Virginia
Source: ESRI USA Aerial
Prepared by Leah Potts, Oct 2018
EEE Project No. 18-760

Legend

-  Soil Boring Locations
-  Monitoring Well Locations
- 36** Building Number
- 673.02 Groundwater Elevations (ft BGS) on 9/27/17
- 672.61 Groundwater Elevations (ft BGS) on 10/2/17
- 677.95 Groundwater Elevations (ft BGS) on 9/25/18



CONTOUR INTERVAL 2 FEET



FIGURE 30-1 CVTC PHASE II ESA
Monitoring Well and Soil Boring Locations

Building #36, Fueling Station.

Feet
Madison Heights, Virginia
Source: ESRI USA Aerial
Prepared by Leah Potts, Oct 2018
EEE Project No. 18-760

Appendix A: Standard Operating Procedures

1.0 CONTAMINATION PREVENTION

1.1. Decontamination and Cross-Contamination Prevention

The following procedures shall be implemented to ensure sample collection and other related equipment is properly decontaminated to prevent possible cross-contamination of samples. It is imperative that equipment be properly decontaminated and measures be implemented to prevent cross-contamination of field/sample collection equipment and actual samples that are collected.

1. All work should proceed from areas of suspected or known low contamination to areas of suspected or known high contamination.
2. All heavy equipment (e.g., drill rigs, Geoprobe™ units, backhoes, etc.) shall be decontaminated prior to coming on-site for work and all down-hole drilling equipment (e.g., auger flights, drilling rods, split spoons, etc.) shall be decontaminated between each drilling/sampling location.
 - a. A decontamination station/pad shall be established for cleaning down-hole equipment. Decontamination wastes shall be contained and collected for disposal.
 - b. Large equipment (e.g., augers, drilling rods) shall be decontaminated using a steam cleaner or equivalent, while use of a detergent solution may be appropriate for smaller pieces of equipment (e.g., split spoons).
3. All equipment utilized in water level measurement, sample collection, or that otherwise contacts material to be sampled will be decontaminated between each location and prior to returning to its case and being stowed with other equipment.
 - a. Personnel involved with equipment decontamination shall wear clean gloves during the decontamination process.
 - b. Cleaning shall be performed using a detergent solution (e.g., Alconox) with a distilled water rinse. If equipment has contacted free product, the decontamination process shall include an isopropyl alcohol rinse. All wash/rinse activities shall be performed in buckets or other suitable containers. Used water should be contained in 55-gallon drums for disposal (SOP 1.2) or disposed on-site in accordance with Virginia Department of Environmental Quality Guidelines if deemed appropriate.*
 - c. Reusable sampling equipment that has been cleaned for later use (e.g., steel trowels, hand auger buckets, etc.) shall be wrapped in clean aluminum foil, sealed in plastic bags, or similarly isolated from potential contamination until used.
4. Field Personnel shall use clean gloves when handling any sampling equipment and shall avoid contacting sampling equipment with other potentially contaminated surfaces/materials. New gloves shall be used whenever a new sample is collected or when a break in sampling occurs (e.g. between well purging and sampling).

5. Investigation derived waste (IDW) and other trash and debris shall be staged away from sampling equipment and other materials to avoid potential cross-contamination.
6. Trip blanks should be sent in any cooler where significant volatile organic compound (VOC) contamination is suspected.

* Purged, petroleum contaminated groundwater and other rinsewater from routine sampling/monitoring activities may be discharged back to the area of contamination with certain restrictions (Storage Tank Program Technical Manual).

1.2. Disposal of Investigation Derived Waste

The following activities shall be completed upon completion of fieldwork:

1. All field equipment, instruments, buckets, etc. shall be thoroughly cleaned/ decontaminated per Standard Operating Procedure 1.1 prior to leaving the site.
2. All Investigation Derived Waste (IDW) including purge water, excess soil cuttings, etc. that may be contaminated must be properly contained, labeled and disposed. IDW is and will remain the property of the facility Owner although the Client may pay to dispose of this material as part of its access agreement with a third-party property owner.*
 - a. Use on-site disposal (roll-off container, etc.) for IDW if approved by property owner and appropriate for the type of waste generated, if approved by property owner and Client.
 - b. Provide drums to stage IDW for disposal. Drum staging must be coordinated with the property owner and Client.
3. Any ancillary IDW materials (such as used bailers, gloves, used sample containers, etc.) that may be disposed as solid sanitary waste (e.g. trash) should be properly disposed as such into a proper waste container.
4. Unused equipment may be shipped back to the supplier, as appropriate, or stored for future use.
5. The Client and its consultant shall define responsibility for IDW disposal as part of site specific scopes of work.
6. All IDW will be handled by and disposed in accordance with applicable federal state and local regulations at an appropriately permitted treatment or disposal facility.

* Purged, petroleum contaminated groundwater and other rinsewater from routine sampling/monitoring activities may be discharged back to the area of contamination with certain restrictions (Storage Tank Program Technical Manual).

2.0 SAMPLING PROTOCOL

2.1. Surface and Shallow Soil Sample Collection

Surface and shallow soil samples can be collected to evaluate surface conditions and to characterize shallow soil profiles.

Surface soil samples are typically collected using stainless steel trowels, spoons, or scoops using the following procedure:

1. A decontaminated trowel, spoon, or scoop is used to remove grass, gravel, or other surface cover in the area to be sampled.
2. The underlying soil material is then collected and placed into a decontaminated bowl or directly into the sample container using a second decontaminated trowel, spoon, or scoop.
 - a. For volatile analysis, soil is collected using specially designed equipment (e.g., EPA Method 5035) to minimize the loss of volatile constituents.
 - b. For non-volatile analysis, soil may be placed into a bowl, then mixed and sieved to assure that a homogenous sample free of rocks and debris is delivered to the laboratory for analysis. Once the soil is properly mixed and sieved (if appropriate), it is then placed into the appropriate sample container(s).
3. The steel trowels, spoons, or scoops are decontaminated between each sampling location.

Hand augers can be used to collect shallow soil samples in an effort to characterize shallow soil strata, determine presence of organic vapors, and obtain soil samples for subsequent laboratory analysis. The hand auger method is typically used as a screening method and can provide preliminary indication of stratigraphy and the presence of contaminants in shallow soils. Where more rigorous sampling methods or deeper samples are required, other methods (such as hollow-stem auger borings) are employed.

A hand-auger borehole is advanced by pushing and turning the auger assembly (handle, extension rods and bucket) and retrieving collected soil from the auger bucket. Samples collected from hand auger borings are considered "disturbed" samples.

The following procedure is typically used in collecting soil samples using a hand auger:

1. A decontaminated hand auger assembly (handle, extensions and auger head or bucket) is manually advanced to the desired sampling depth by turning clockwise and pushing downward on the assembly handle.
2. After the auger head is filled with soil, the assembly is pulled from the subsurface, and the contents are removed by either turning the assembly upside-down or by inserting a hand

tool such as a decontaminated stainless steel spoon, trowel, etc. This process continues until the boring is terminated or the collection of a sample for laboratory analysis is desired.

3. Samples for laboratory analysis are collected using a decontaminated auger head. The soil sample is collected directly from the auger head or by the use of decontaminated hand tools depending on soil consistency.
 - a. For volatile analysis, soil is collected from the auger head utilizing EPA Method 5035 to minimize the loss of volatile constituents.
 - b. For non-volatile analysis, soil may be placed into a bowl, then mixed and sieved (if appropriate) to assure that a homogenous sample free of rocks and debris is delivered to the laboratory for analysis. Once the soil is mixed it is then placed into the appropriate sample container(s).
4. Abandonment of the boring entails backfilling with auger cuttings (if allowed), or chipped bentonite or grout if the boring is terminated below the water table.
5. The steel auger head, as well as the extension rods and handle, are decontaminated prior to the start of each hand-auger boring.

2.2. Hollow Stem Auger Drilling and Soil Profiling/Sampling

Hollow-stem auger borings can be used to characterize soil profiles, determine the presence of organic vapors, and to obtain soil samples for subsequent laboratory analysis. Hollow-stem auger borings can also be the first step in the process of installing a groundwater-monitoring well. (Refer to appropriate standard procedures for well installation.)

1. Decontaminate all down-hole drilling/sampling equipment prior to the start of work and between drilling/sampling locations (i.e. between each boring for augers and between each sample location for splits spoons and other sampling equipment).
2. Advance augers to desired depth using continuous flight, hollow-stem augers attached to a truck, trailer, or ATV-mounted drilling rig.
3. Soil samples are collected at regular intervals, as required by the Sampling and Analysis Plan, by advancing the augers to a depth just above the desired sampling zone. (Typically, a five-foot sample interval is used.) A decontaminated split-spoon sampler is attached to the drill rod and lowered through the center of the augers and driven into the soil with a 140-pound hammer according to ASTM D-1586. The split-spoon is retrieved and opened to reveal the semi-undisturbed soil sample. The following information is recorded on the *Boring Log* maintained for each boring (see attached example of an appropriate boring log form in Appendix B):
 - a. Standard Penetration Test (SPT) results (i.e. the number of hammer blows per each six-inch increment of the 18-inch to 24-inch split-spoon penetration or fraction thereof).
 - b. The soil type classified according to the Unified Soil Classification System (USCS) Visual-Manual Procedure (ASTM D-2488) or other recognized method (e.g., USDA soil triangle).
 - c. Other pertinent comments, including color, odor, and moisture content.
4. Collect samples from each split spoon for organic vapor [total volatile organic compounds (VOCs)] using the following procedure:
 - a. Place an aliquot of the soil sample in a clean, airtight container (either sealed Zip-Lock[®] bag, sealed glass jar, or plastic container) as quickly as possible after sample collection.
 - b. Label the container with boring number and sample depth.
 - c. Allow the samples to sit for approximately 15 minutes to allow the VOC concentration to equilibrate between the soil and air in the container headspace.
 - d. A flame ionization detector (FID) or photo-ionization detector (PID) instrument probe is then inserted into the container to measure the headspace VOC concentration (read directly from the read-out display in parts-per-million (ppm) of total VOCs). The container is opened enough to insert the probe but no further to prevent loss of VOC constituents to the atmosphere.
 - e. VOC concentration is recorded on the boring log/field notes.

5. Collect samples for laboratory analysis, as needed based upon the project requirements, using the following procedure:
 - a. Potential laboratory samples are placed into the appropriate sample container(s) required for the specific analyses to be performed immediately after the samples are retrieved.
 - b. Select samples to be submitted to the laboratory based upon organic vapor screening, visual observations, project Sampling and Analysis Plan, etc.
 - c. Handle samples in accordance with standard sample handling, shipping, and chain-of-custody practices as presented in the project Quality Assurance Project Plan and Sampling and Analysis Plan.
6. Upon boring termination at the desired depth or auger refusal (bedrock), the boring is ready for monitor well installation or will be advanced deeper by using other drilling techniques. If the boring is to be abandoned, it must be abandoned in accordance with 12VAC 5-630-450(C)(8). This typically includes sealing the borehole with bentonite grout if terminated below the water table. Otherwise, the boring is backfilled with auger cuttings, natural material, or bentonite.
7. Upon completion of work, any excess soil that cannot be used as backfill in the core holes must be properly managed. Management of this material shall be as directed by the consultants Technical Lead/Project Manager and Client in accordance with Standard Operating Procedure 1.2.

2.3. Direct Push Borings and Soil Profiling/Sampling

Direct push (e.g., Geoprobe™) equipment may be utilized as an alternative to hollow-stem auger borings to characterize soil profiles, determine the presence of organic vapors, and obtain soil samples for subsequent laboratory analysis. Direct push equipment can also be used to collect groundwater samples and/or to install small diameter piezometers/monitoring wells.

1. Decontaminate all down-hole coring/sampling equipment prior to start of work and between locations (i.e., between each boring for push rods and between each use for samplers).
2. Advance direct push soil coring equipment using truck or ATV-mounted direct push equipment. Coring equipment is advanced using a hydraulic hammer and the weight of the direct push rig.
3. Depending on equipment used, either collect continuous soil cores or advance sampler to specific interval to collect soil core(s) based on the Sampling and Analysis Plan. A precleaned, disposable acetate sleeve is placed into the core sampler, which is advanced continuously or advanced and opened at the desired interval depending on the equipment used. The sample is retrieved and the acetate sleeve containing the soil core is removed. The sleeve is opened to reveal the semi-undisturbed soil sample. The following information is recorded on the *Test Boring Log* maintained for each boring (see attached example of an appropriate boring log form in Appendix B):
 - a. The soil type classified according to the Unified Soil Classification System (USCS) Visual-Manual Procedure (ASTM D-2488) or other recognized method (e.g., USDA soil triangle).
 - b. Other pertinent comments including color, odor, moisture content, type and size of rock fragments (if present), and presence of fill materials.
4. Collect sample from each soil core for organic vapor [total volatile organic compounds (VOCs)] screening using the following procedure:
 - a. Place an aliquot of the soil sample in a clean, airtight container (either sealed Zip-Lock® bag, sealed glass jar, or plastic container) as quickly as possible after sample collection.
 - b. Label container with boring number and sample depth.
 - c. Allow samples to sit for approximately 15 minutes to allow for VOC concentration to equilibrate between the soil and the air in the container headspace.
 - d. A flame ionization detector (FID) or photo-ionization detector (PID) instrument probe is then inserted into the container to measure the headspace VOC concentration. (Read the concentration directly from the read-out display in parts-per-million (ppm) of total VOCs.) The container is opened only enough to insert the probe to prevent loss of VOCs to the atmosphere.
 - e. VOC concentration is recorded on the boring log/field notes.

5. Collect samples for laboratory analysis, as needed based upon the project requirements, using the following procedure:
 - a. Potential laboratory samples are placed into the appropriate sample container(s) required for the specific analyses to be performed immediately after the sample is retrieved.
 - b. Select samples to be submitted to the laboratory based upon organic vapor screening, visual observations, etc.
 - c. Handle samples in accordance with standard sample handling, shipping, and chain-of-custody practices (Standard Operating Procedure 2.9).
6. The core hole is abandoned upon coring termination at the desired depth or at direct push refusal. The core hole is filled with bentonite pellets if terminated below the water table. Otherwise, the core hole is filled with recovered core material, natural on-site material, or bentonite pellets.
7. Groundwater samples may be collected from the corehole using a specialized, sealed, discrete interval groundwater sampler such as the Geoprobe™ Screen Point 15 Groundwater Sampler. A sampler with a stainless steel screen is preferred for decontamination purposes. Samples are collected as follows:
 - a. Advance decontaminated sampler on pushrods to desired depth.
 - b. Retract outer sleeve of sampler to expose screen and allow groundwater to enter sampler.
 - c. Use peristaltic pump with precleaned, disposable tubing or small diameter bailer to extract groundwater from the sampler in accordance with Standard Operating Procedure 2.6 or 2.7. (Note: when a sample is collected immediately from such a sampler, there is no stagnant water to be purged. However, standard purging methods should be used when groundwater recharge rates allow to ensure a representative sample is collected. Recharge into the sampler may be slow, particularly in formations with low-permeability, and care should be taken to properly purge the well while allowing for adequate recharge for representative sample collection. If the sampler is left in the formation for greater than 24-hours, the well must be properly purged to remove the stagnant water.)
 - d. Discharge groundwater into the appropriate sample container(s) required for the specific analyses to be performed immediately after the sample is retrieved.
 - e. Handle samples in accordance with standard sample handling, shipping, and chain-of-custody practices as outlined in the Quality Assurance Project Plan.
8. Small diameter piezometers/monitoring wells may be installed in the core hole upon removal of the coring equipment. Screen and casing pipe are lowered into the hole, and the piezometer/monitoring well is constructed following standard practices as described in Standard Operating Procedure 2.4.
9. Upon completion of work, any excess soil that cannot be used as backfill in the core holes must be properly managed. Management of this material shall be as directed by the

consultant's Technical Lead/Project Manager and Client in accordance with Standard Operating Procedure 1.2.

2.4. Shallow Monitoring Well and Piezometer Installation

Shallow monitoring wells and piezometers are installed in unconsolidated material to provide secure sampling points for the uppermost zones of water table (unconfined) aquifers.

Following boring termination (typically borings advanced using hollow-stem augers), the well is constructed. Typically, the well is built within the hollow stem of the augers as this method allows for protection of the well screen against collapse of the borehole before the well filter pack is properly emplaced. The auger flights may be removed from the ground prior to well construction if there is reason to believe that the borehole will not collapse. If a well is constructed within a borehole advanced using air rotary drilling or direct push technology, the drilling equipment must be removed prior to well construction.

The following procedure is used for well construction:

1. Clean, flush-threaded well casing with factory-slotted well screen (typically Schedule 40 polyvinyl chloride (PVC)) is lowered into the borehole. Compatibility of screen material and slot size with site conditions must be considered. Stainless steel well screen may be needed at extremely contaminated sites.
2. Filter sand is then gravity-fed into the annulus between the well screen and the inside of the augers as the augers are slowly pulled from the borehole (or between the well screen and the boring walls if the drilling equipment has been removed). Filter sand is added to a height of approximately one to two feet above the top of the screen.
3. A bentonite seal is emplaced above the sand filter pack (approximately one to two feet thick) to prevent vertical movement of groundwater within the borehole (i.e., to prevent cross contamination from upper to lower zones). Bentonite pellets are placed into the annular space above the sand filter pack and then hydrated with distilled water to create a low permeability barrier.
4. A neat cement grout is then tremied (gravity-fed, if the bentonite seal is within a few feet of the surface) into the remaining annulus to ground surface.
5. The uppermost portion of each well is constructed to protect the well casing from damage.
 - a. The protective cover may be finished above grade with a steel protective outer casing with locking cover. A slip cap is typically placed over the well casing to prevent dirt and debris from entering the well.
 - b. The protective cover may be finished at grade with a steel man way with a bolt-down cover. A locking, watertight expanding cap is placed on the well to prevent dirt, debris, and water from entering the well.
6. The following information is recorded to complete the *Boring Log/Well Completion Record* (see attached example of an appropriate well completion record form in Appendix B):

- a. Depth of borehole
 - b. Length of screen pipe and actual screened interval
 - c. Length of casing pipe
 - d. Screen slot size
7. The top of casing (TOC) of the wells is surveyed for horizontal and vertical control for use in evaluating hydraulic gradients.
 8. Wells should be labeled when constructed (metal tags in or on well protective casing). A description of the well location should be included in the field notes.
 9. If the well is to be used as a temporary (one-time) sampling point, neat cement grout is not placed above the bentonite seal. After sampling, the temporary well can be abandoned by either pulling the casing and screen then filling the borehole with cement grout, or by leaving the casing in place and filling the casing and annular space above the bentonite seal with cement grout.
 10. Piezometers are installed when there is only a need to measure liquid levels (rather than collecting actual groundwater samples). Piezometers are typically constructed with small diameter (1-inch) casing.
 11. Prior to sampling, monitoring wells are developed to reduce the amount of sediment in well annular space. This enhances the flow of groundwater from the formation into the well and helps to ensure that the samples collected are representative of the quality of water in the aquifer. The well may be developed using a bailer or small pump as follows:
 - a. A disposable bailer or decontaminated pump is lowered into the well and allowed to sink to the bottom of the well casing.
 - b. If the well is developed by manual bailing, the bailer is raised using periodic, sharp upward tugs (surges). The surging motion of the bailer causes water to be extracted from the formation, through the screen filter pack into the screen. This also causes fine material that may have been mixed into the filter pack during installation to become suspended in the well water so that it can be removed via bailing.
 - c. If the well is developed using a pump, the pump must be periodically raised with sharp tugs (surges) to facilitate the removal of sediment from the filter pack and well casing.
 - d. Well development continues with water removal and periodic surging until the bailed water becomes as clear as practical.
 - e. In some cases, the well will go dry before the "clear water" endpoint is reached. If this happens, the well should be given time to recharge and the process repeated. If, after several such attempts, the well water remains turbid, the development process can cease. It is possible that, in certain low-yielding geologic units, a well cannot be developed to the clear water condition in a practical length of time. The endpoint for well development should be coordinated with the Technical Lead/Project Manager.

12. Well Abandonment - when a decision is made to abandon a monitoring well, the borehole should be sealed in such a manner that the well can not act as a conduit for migration of contaminants from the ground surface to the water table or between aquifers. To properly abandon a well, the preferred method is to completely remove the well casing and screen from the borehole, clean out the borehole, and backfill with a cement or bentonite grout, neat cement, or concrete.
 - a. As previously stated the preferred method should be to completely remove the well casing and screen from the borehole. For shallow wells this can be accomplished by attaching a drilling rig cable tool to the casing and slowly pulling the casing from the well.
 - i. The clean borehole can then be backfilled with the appropriate bentonite grout material. The backfill material should be placed into the borehole from the bottom to the top by pressure grouting with the positive displacement method (tremie method).
 - ii. The top 2 feet of the borehole should be poured with concrete to insure a secure surface seal (plug).
 - b. If the casing cannot be readily removed the well can be grouted with the casing left in the borehole. The preferred method in this case is as follows:
 - i. Pressure grout the borehole by placing the tremie tube to the bottom of the well casing, which will be the well screen or the bottom sump area below the well screen.
 - ii. The pressurized grout is forced out through the well screen into the filter material and up the inside of the well casing sealing holes and breaks that are present.
 - iii. The tremie tube is retracted slowly as the grout fills the casing.
 - iv. The well casing is cut off even with the ground surface and filled with concrete to a depth of 2 feet below the surface. If the casing has been broken off below the surface, the grout should be tremied to within 2 feet of the surface and then finished to the ground surface with concrete.
 - c. If geologic conditions warrant the complete removal of the well casing, sand pack and other well construction materials, the well must then be over drilled and grouted. After the casing materials have been removed from the borehole, the borehole should be cleaned out and pressure grouted with the approved grouting materials. As previously stated, the borehole should be finished with a concrete surface plug.
13. Temporary Monitoring Well Types - five types of monitoring wells which have been shown to be acceptable are presented in the order of increasing difficulty to install and increasing cost:
 - a. No Filter Pack - this is the most common temporary well and is very effective in many situations. After the borehole is completed, the casing and screen are simply

inserted. This is the most inexpensive and fastest well to install. This type well is extremely sensitive to turbidity fluctuations, because there is no filter pack. Care should be taken to not disturb the casing during purging and sampling.

- b. Inner Filter Pack - this type differs from the "No Pack" only in that a filter pack is placed inside the screen to a level approximately 6 inches above the well screen. This ensures that all water within the casing has passed through the filter pack. For this type well to function properly, the static water level must be 6-12 inches above the filter pack.
- c. Traditional Filter Pack - for this type, the screen and casing are inserted into the borehole, and the sand is poured into the annular space surrounding the screen and casing. Occasionally, it may be difficult to effectively place a filter pack around shallow open boreholes, due to collapse. This method requires more sand than the "inner filter pack" well, increasing material costs. As the filter pack is placed, it mixes with the muddy water in the borehole, which may increase the amount of time needed to purge the well to an acceptable level of turbidity.
- d. Double Filter Pack - the borehole is advanced to the desired depth. As with the "inner filter pack" the well screen is filled with filter pack material and the well screen and casing inserted until the top of the filter pack is at least 6 inches below the water table. Filter pack material is poured into the annular space around the well screen. This type temporary well construction can be very effective in aquifers where fine silts or clays predominate. This construction technique takes longer to implement and uses more filter pack material than others previously discussed.
- e. Well-in-a-Well - the borehole is advanced to the desired depth. At this point, a 1-inch well screen and sufficient riser is inserted into a 2-inch well screen with sufficient riser, and centered. Filter pack material is then placed into the annular space surrounding the 1-inch well screen, to approximately 6 inches above the screen. The well is then inserted into the borehole. This system requires twice as much well screen and casing, with subsequent increase in material cost. The increased amount of well construction materials results in a corresponding increase in decontamination time and costs. If pre-packed wells are used, a higher degree of QA/QC will result in higher overall cost.

2.5. Liquid Level Measurement

Liquid levels (depth to groundwater and free product, as applicable) in groundwater monitoring wells and piezometers are measured (gauged) using an electronic water level indicator or oil/water interface probe as appropriate based on site conditions. Specific steps in the measurement process are as listed below.

Note: Liquid levels shall be measured in all wells prior to sampling so that the measurements are collected over the shortest time period possible. If all wells can be sampled within one day, the groundwater level measurements may be obtained for each well as it is sampled.

1. Remove protective covers, locks, and well caps from all wells to be gauged, and allow the groundwater to equilibrate to atmospheric pressure. Note if any wells are under pressure, under vacuum, or have an odor. Screen well casing for organic vapors using a photoionization detector (PID) or flame ionization detector (FID) if required by the project. Record pertinent observations/measurements in field notes.
2. If the well cap, lock, etc. is damaged or missing, document the condition in the field notes, and replace the material as needed.
3. If a dedicated bailer is contained/stored in the well, remove it, and place it on clean plastic sheeting or aluminum foil to prevent field contamination.
4. Measure liquid levels starting at the background or least impacted well(s) and moving to the most impacted wells.
 - a. Measure depth to groundwater and depth to free product, as appropriate, from the surveyed control point on well top of casing.
 - b. Record measurements in the field notes along with any pertinent comments.
5. Decontaminate the water level indicator and/or oil/water interface probe before use, between each well, and upon completion of measurements.
 - a. Rinse probe and tape with soap solution followed by a distilled water rinse.
 - b. Wash portions exposed to free product with isopropyl alcohol followed by a distilled water rinse.
6. Replace well caps, locks, and bailers, if necessary, and replace protective cover.

Note: High viscosity (thick) oil tends to stick to the oil/water interface probe and can result in exaggerated measurements of free product thickness. To minimize this effect, lower the oil/water interface probe until the probe signals water. Then, slowly raise the probe until the presence of oil is indicated. Record the second measurement as the depth to water in the well. If measurement with the oil/water interface probe is not effective, a bailer may be lowered into the well and the free product thickness in the bailer can then be measured.

2.6. Monitoring Well Sampling Using a Bailer

Bailers can be used to manually collect representative groundwater samples from relatively shallow, small-diameter wells (i.e., 6-inch diameter or smaller). A dedicated Teflon® bailer, decontaminated Teflon® bailer, or disposable polyethylene bailer is used with new nylon cord/rope to purge and then sample the well. Specific steps in the sampling process are as follows:

1. Remove the well cover, lock, and well cap.
2. Record the Photoionization Detector (PID) reading in the well casing as necessary based on project requirements.
3. Make sure all equipment has been thoroughly decontaminated before use.
4. Gauge the depth to water from the top of casing (TOC) mark on the well casing using an electronic water level indicator or oil water interface probe.
5. Using the depth to water measurement, total depth of the well, and well diameter, calculate the required purge volume. (Conversion factors for water column height to volume are as follows: 0.16 gallons per foot for a 2-inch well and 0.61 gallons per foot for a 4-inch well). Record the absence or presence of free phase petroleum hydrocarbons (or free product). The calculation of the required purge volume is as follows:
 - a. Volume of water in well (gallons) = (Total Depth of Well – Depth to Water) * Conversion Factor
 - b. Total Purge Volume (gallons) = 3 * Volume of water in well
6. Water is removed (purged) from the well before sampling in order to remove stagnant water in the well column and to allow "fresh" or representative formation water to enter the well screen.
 - a. Gently lower the bailer to the bottom of well with cord/rope and remove accumulated groundwater.
 - b. Continue the purge process until at least three well volumes have been removed or the well is bailed dry. To determine the volume purged, estimate approximately 0.25 gallons (or 1 liter) as the volume of a 36-inch bailer, or use a graduated bucket.
 - c. A representative water sample shall be collected at a minimum frequency of once after each well volume is purged. These samples shall be checked in the field to assure that the water quality parameters (pH, temperature, and specific conductance) have stabilized (i.e., readings are within 10% of the previous measurement). If water quality parameters have not stabilized, the purge process is continued. The groundwater purge measurements shall be recorded in the field notes or on a separate *Groundwater Purge Data* form (see attached example of an appropriate boring log form in Appendix B).
 - d. Upon completion of purging and prior to sampling, the bailer and cord/rope shall be tied off inside the well casing or removed from the well and placed on clean

- plastic sheeting or aluminum foil to prevent field contamination of the sampling equipment.
- e. Purge water shall be collected and managed as directed by the Technical Lead/Project Manager. In certain circumstances, it may be permissible to discharge purge water to the ground surface if approved by the regulatory agency coordinating the work.
7. Upon satisfactory completion of well purging, groundwater samples are collected for analysis.
- a. Groundwater sampling is performed within 24 hours of purging to minimize the loss of any volatile compounds present (unless insufficient water has re-entered the well).
 - b. The bailer is lowered gently below the water surface (until completely submerged, if possible). It is then retrieved, and the water is gently poured into the appropriate sample containers.
 - c. The sample containers are labeled with well number, date, time, and analysis to be conducted. Samples are collected and contained in order of volatilization sensitivity. The preferred collection order for some common groundwater parameters is as follows:
 - i. Volatile organics
 - ii. Total organic carbon
 - iii. Total petroleum hydrocarbons
 - iv. Semi-volatile organics
 - v. Total metals
 - vi. Phenols
 - vii. Sulfate and chloride
 - viii. Nitrate and ammonia
 - d. All samples are logged on a chain-of-custody form and immediately stored in an ice-filled cooler (maintaining a temperature of approximately 4°C). Samples are transported to the laboratory under EPA approved chain-of-custody procedures.

2.7. Monitoring Well Sampling Using a Pump

Various types of pumps can be used to collect representative groundwater samples from monitoring wells. For the purposes of assessment work performed, it is expected that dedicated groundwater pumps will not typically be installed as it is most likely that Client funds will be used for initial investigations and not long-term monitoring. However, there are times when collecting samples using decontaminated pumps may be applicable, such as collection of samples from deep wells or when low-flow sampling is desired to reduce sample turbidity or potential loss of volatile constituents. Such pumps shall be primarily of stainless steel and Teflon[®] construction (components that will be in contact with the water) for ease of decontamination between locations. Disposable polyethylene or similar inert tubing is used to convey the groundwater to the surface. Specific steps in the sampling process are as follows:

1. Remove the well cover, lock, and well cap.
2. Record the Photoionization Detector (PID) reading in the well casing as necessary based on project requirements.
3. Make sure all equipment has been thoroughly decontaminated before use.
4. Gauge the depth to water from the top of casing (TOC) mark on the well casing using an electronic water level indicator or oil water interface probe.
5. Using the depth to water measurement, total depth of the well, and well diameter, calculate the required purge volume. (Conversion factors for water column height to volume are as follows: 0.16 gallons per foot for a 2-inch well and 0.61 gallons per foot for a 4-inch well). Record the absence or presence of free phase petroleum hydrocarbons (or free product). The calculation of the required purge volume is as follows:
 - a. Volume of water in well (gallons) = (Total Depth of Well – Depth to Water) * Conversion Factor
 - b. Total Purge Volume (gallons) = 3 * Volume of water in well
6. Purging with Pumps –
 - a. When peristaltic pumps or centrifugal pumps are used, only the intake line is placed into the water column.
 - b. When submersible pumps (bladder, turbine, displacement, etc.) are used, the pump itself is lowered into the water column. The pump must be decontaminated prior to use.
 - c. Purging Entire Water Column - the pump/hose assembly used in purging should be lowered into the top of the standing water column and not deep into the column. This is done so that the purging will "pull" water from the formation into the screened area of the well and up through the casing so that the entire static volume can be removed. If the pump is placed deep into the water column, the water above the pump may not be removed, and the subsequent samples, particularly if collected with a bailer, may not be representative of the ground water. (For wells with a low

recharge rate it may be necessary to gradually lower the pump/intake line into the well as the water level drops.) (Careful consideration shall be given to using pumps to purge wells which are excessively contaminated with oily compounds, because it may be difficult to adequately decontaminate severely contaminated pumps under field conditions.)

- d. Low Flow/Low Volume Purging Techniques/Procedures - the low flow/low volume purging is a procedure used to minimize purge water volumes. The pump intake is placed within the screened interval at the zone of sampling, preferably, the zone with the highest flow rate. Low flow rate purging is conducted after hydraulic conditions within the well have re-stabilized. Flow rates should not exceed the recharge rate of the aquifer. This is monitored by measuring the top of the water column with a water level recorder or similar device while pumping. These techniques, however, are only acceptable under certain hydraulic conditions and are not considered standard procedures – specific procedures will be specified in the Sampling and Analysis Plan when used.
 - e. Continue the purge process until at least three well volumes have been removed or the well is pumped dry (unless low flow/low volume purging is used).
 - f. A representative water sample shall be collected at a minimum frequency of once after each well volume is purged. These samples shall be checked in the field to assure that the water quality parameters (pH, temperature, and specific conductance) have stabilized (i.e., readings are within 10% of the previous measurement). If water quality parameters have not stabilized, the purge process is continued. The groundwater purge measurements shall be recorded in the field notes or on a separate *Groundwater Purge Data* form (see attached example of an appropriate groundwater purge data form in Appendix B).
7. Sampling Equipment Available
- a. Peristaltic pump (optional vacuum jug assembly)
 - b. Stainless steel and Teflon[®] bladder pump,
 - c. Stainless steel and Teflon[®], variable speed centrifugal pump (e.g., Grundfos Redi-Flo2[®])
8. Sampling Techniques
- a. Peristaltic pump/vacuum jug
 - i. Precleaned disposable tubing is placed into the pump and from pump to well.
 - ii. Intake is lowered to the appropriate depth.
 - iii. Pump is activated with speed adjusted for appropriate flow rate based on well recharge and types of samples to be collected.
 - iv. Groundwater is discharged into appropriate sample containers.
 - v. The vacuum jug can be used for sample collection as an option because as it allows for sample collection without the sample coming in contact with

the pump tubing. This is accomplished by placing a Teflon[®] transfer cap assembly onto the neck of a standard cleaned 4-liter (1-gallon) glass container. Teflon[®] tubing (¼-inch O.D.) connects the container to both the pump and the sample source. The pump creates a vacuum in the container, thereby drawing the sample into the container without it coming into contact with the pump. Samples for volatile organic compound analysis should be collected using a bailer or by filling intake tube and allowing it to drain into the sample vials.

- b. Submersible bladder Pumps and variable speed centrifugal pumps
 - i. After purging has been accomplished with a bladder pump, the sample is obtained directly from the pump discharge.
 - ii. The pump rate should be reduced during sample collection to minimize sample disturbance, particularly with respect to samples collected for volatile organic compounds analysis.
9. The sample containers are labeled with well number, date, time, and analysis to be conducted. Samples are collected and contained in order of volatilization sensitivity. The preferred collection order for some common groundwater parameters is as follows:
 - a. Volatile organics
 - b. Total organic carbon
 - c. Total petroleum hydrocarbons
 - d. Semi-volatile organics
 - e. Total metals
 - f. Phenols
 - g. Sulfate and chloride
 - h. Nitrate and ammonia
10. All samples are logged on a chain-of-custody form and immediately stored in an ice-filled cooler (maintaining a temperature of approximately 4°C). Samples are transported to the laboratory under EPA approved chain-of-custody procedures.

Appendix B: Soil Boring Logs

Project Location: CVTC
 Building/Location: Boiler Plant (Building 77)
 Boring Location: 77-1



Date(s) Drilled: 9/11/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 7 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1				0-5 ft: 30% recovery; Fill with coal ash/fines; Red-brown clay; No odor, Moist.
2				
3	0.0	0-5	10:00	
4				
5				
6	0.0	5-7	10:10	5-7 ft: 30% recovery; Fill; No odor; Moist; Weathered Saprolite with Mica Schist; Refusal at 7-ft BGS.
7				
8				
9				
10				
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Boiler Plant (Building 77)
 Boring Location: 77-2



Date(s) Drilled: 9/11/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 14 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	10:18	0-5 ft: 40% recovery; Fill with red-brown clay and coal fines; No odor; Moist.
2				
3				
4				
5				
6	0.0	5-10	NA	5-10 ft: 50% recovery; Fill to 7 ft then transition to grey saprolite with mica; No odor; Moist.
7				
8				
9				
10				
11	0.0	10-14	10:25	10-14 ft; 60% recovery; Moist grey saprolite transitioning to very moist brown-red clay; Refusal at 14 ft BGS (coal clast present).
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Boiler Plant (Building 77)
 Boring Location: 77-3



Date(s) Drilled: 9/11/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 7 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1				
2				
3	0.0	0-5	10:35	0-5 ft: 50% recovery; Fill; Red-brown clay; No odor, Low moist.
4				
5				
6	0.0	5-7	10:40	5-7 ft: 40% recovery; Fill; Red-brown clay; No odor, Low moist; Refusal at 7-ft BGS.
7				
8				
9				
10				
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Boiler Plant (Building 77)
 Boring Location: 77-4



Date(s) Drilled: 9/11/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 6 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-6	10:48	0-5 ft: 50% recovery; Fill; Red-brown clay with mica; No odor, Low moist. 5-6 ft: 90% recovery; Increase in clay content; No odor, Moist; Refusal at 6-ft BGS.
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Boiler Plant (Building 77)
 Boring Location: 77-5



Date(s) Drilled: 9/11/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 5 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured: NA	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	10:55	0-5 ft: 30% recovery; 0-1 ft fill with red-brown clay; 2-4 tan sandy clay, very moist; Quartz at 4 ft; Refusal at 5 ft Mica schist; No odor.
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Boiler Plant (Building 77)
 Boring Location: 77-6



Date(s) Drilled: 9/11/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 11 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured: NA	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	11:15	0-5 ft: 30% recovery; Fill: black ash/cinders with quartz clasts; Moist orange clay; No odor.
2				
3				
4				
5				
6	0.0	5-11	11:20	5-6 ft Saprolite, moist
7				
8				
9				
10				
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Boiler Plant (Building 77)
 Boring Location: 77-7



Date(s) Drilled: 9/11/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 6 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-6	11:26	0-1 ft: 50% recovery; Rocky fill with red-brown clay.
2				1-2 ft Fill with ash/cinders
3				2-5 ft Red-brown sandy clay; Moist; No odor
4				
5				
6				5-6 ft: Grey mica; Moist; No odor; Refusal at 6-ft BGS.
7				
8				
9				
10				
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Boiler Plant (Building 77)
 Boring Location: 77-8



Date(s) Drilled: 9/11/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 7 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	11:37	0-5 ft 70% recovery; Brown clay fill with ash/cinders at 0-2 ft; No odor.
2				
3				
4				
5				
6	0.0	5-7	11:40	2-5 ft Silty clay; Moist; No odor
7				
8				
9				
10				
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Boiler Plant (Building 77)
 Boring Location: 77-9



Date(s) Drilled: 9/11/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 12 ft	Screened Interval: NA
DTW Within Soil Boring: 5-9 ft		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	11:53	0-5 ft: 40% recovery; 0-1 Concrete; 1-5 ft Red-brown clay with mica; Low moisture; No odor.
2				
3				
4				
5				
6	0.0	5-10	11:57	5-9 ft Grey saturated sandy clay with Quartz clasts; No odor.
7				
8				
9				
10	0.0	10-12	12:04	9-10 ft Dry brown clay; No odor.
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Building 39 (Grounds)
 Boring Location: 39-21



Date(s) Drilled: 9/12/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 9 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	9:50	0-5 ft; 50% recovery; 0-1 ft Red-brown clay; Moist; No odor. 1-5 ft Tan clay silt with mica; Dry; No odor.
2				
3				
4				
5				
6	0.0	5-9	9:55	5-9 ft; 60% recovery; Tan clay with mica; Very dry; No odor; Refusal at 9 ft BGS.
7				
8				
9				
10				
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Building 39 (Grounds)
 Boring Location: 39-22



Date(s) Drilled: 9/12/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 3.5 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured: NA	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-3.5	10:15	0-3.5 ft; 30% recovery; 0-1 ft Brown clay with possible ash; Moist; No odor. 1-3.5 ft Tan clay with Quartz clasts; Moist; No odor. Refusal at 3.5 ft BGS. Offset once.
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Building 39 (Grounds)
 Boring Location: 39-23



Date(s) Drilled: 9/12/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 13 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	10:25	0-5 ft; 60% recovery; 0-1 ft Brown silty clay; Moist; No odor. 1-2 ft Red-brown clay; Moist; 2-5 ft Grey, hard, fine sandy caly; No odor.
2				
3				
4				
5				
6	0.0	5-10	10:32	5-10 ft Grey, hard, fine sandy clay; Moist; No odor.
7				
8				
9				
10				
11	0.0	10-13	10:50	10-13 ft Grey trending to tan fine sandy clay, hard; No odor. Refusal at 13 ft BGS.
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Building 39 (Grounds)
 Boring Location: 39-24



Date(s) Drilled: 9/12/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 14.5 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	11:05	0-5 ft 3-in of topsoil trending to red clay; Low moisture; No odor.
2				
3				
4				
5				
6	0.0	5-10	11:10	5-6 ft Red clay; Low Moisture; 6-10-ft Red clay with an increase in mica content; Dry; No odor.
7				
8				
9				
10				
11	0.0	10-14.5	11:15	10-14.5 ft Brown silty clay with mica; Dry; No odor. Refusal at 14.5 ft BGS.
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Building 39 (Grounds)
 Boring Location: 39-25



Date(s) Drilled: 9/12/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 14 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured: NA	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	11:20	0-0.5 ft Topsoil/gravel; 0.5-2 ft Red clay; Low Moisture; 2-5 ft Red clay increase in mica trending to silty and brown; No odor.
2				
3				
4				
5				
6	0.0	5-10	11:25	5-6 ft Brown silty clay; No odor. 6-10 ft White light grey clay; Dry; Trending to silty saprolite; No odor.
7				
8				
9				
10				
11	0.0	10-14	11:30	10-14 ft Grey silty saprolite; Very dry; 12-14 ft Strong pungent odor. Refusal at 14 ft BGS.
12				
13				
14				
15				

BGS - Below Ground Surface

Project Location: CVTC
 Building/Location: Building 39 (Grounds)
 Boring Location: 39-26




Date(s) Drilled: 9/12/18	Logged By: Josh Hepler	Well Information:
Drill Rig Type: Geoprobe	Total Depth Drilled: 13 ft	Screened Interval: NA
DTW Within Soil Boring: NA		Cased Interval: NA
Static GW Level: NA	Date GW Measured:	NA


Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	0-5	11:38	0-0.5 ft Topsoil; 0.5-2 ft Red brown clay; Low Moisture; 2-5 ft Increase in silt and lighter tan coloring; No odor.
2				
3				
4				
5				
6	0.0	5-10	11:45	5-10 ft Silty clay with mica and red-white clay intermixed; 9-10 ft Saprolite; Dry; No odor.
7				
8				
9				
10				
11	0.0	10-13	11:50	10-13 ft Silty clay with mica and red-white clay intermixed trending to saprolite; No odor; Refusal at 13 ft BGS.
12				
13				
14				
15				

BGS - Below Ground Surface


Appendix C: Well Logs

Log of Boring: 77-1			 3e EEE Consulting, Inc. Environmental, Engineering and Educational Solutions	
Project Location: Central Virginia Training Center				
Coordinates: 3673832.6117		11302695.7158		
Date(s) Drilled: 9/19/2018	Logged By: Josh Hepler		Well Information:	
Drill Rig Type: Air Rotary	Total Depth Drilled: 60-ft		Screened Interval: 50 - 60-ft	
DTW Within Soil Boring: 52-ft			Cased Interval: 0 - 50-ft	
Static GW Level: 0.0-ft			Date GW Measured: September 25, 2018	
Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
0 - 13	NA	NA	NA	Overburden
13 - 18	NA	NA	NA	Biotite Schist
18 - 19	NA	NA	NA	Soft
19 - 24	NA	NA	NA	Biotite Schist
24 - 25	NA	NA	NA	Soft
25 - 33	NA	NA	NA	Biotite Schist (Wet 25-27-ft BGS)
33- 34	NA	NA	NA	Soft
34 - 38	NA	NA	NA	Biotite Schist
38 - 39	NA	NA	NA	Soft
39 - 44	NA	NA	NA	Biotite Schist
44 - 45	NA	NA	NA	Soft
45 - 51	NA	NA	NA	Biotite Schist
51 - 52	NA	NA	NA	Soft / Fracture
52 - 60	NA	NA	NA	Biotite Schist


Boring terminated at 60 ft BGS

Log of Boring: 77-2		 3e EEE Consulting, Inc. Environmental, Engineering and Educational Solutions			
Project Location: Central Virginia Training Center					
Station Number: 3673784.6471 11302736.3100		Date(s) Drilled: 9/19/2018		Logged By: Josh Hepler	
Drill Rig Type: Air Rotary		Total Depth Drilled: 65-ft		Well Information:	
DTW Within Soil Boring: 59-ft				Screened Interval: 55 - 65-ft	
Static GW Level: 0.0-ft				Cased Interval: 0 - 55-ft	
				Date GW Measured: September 25, 2018	
Depth (feet)	Sample Info			Material Description	
	PID (ppm)	Sample Interval (ft)	Time		
0 - 7	NA	NA	NA	Overburden	
7 - 53	NA	NA	NA	Biotite Schist	
53 - 54	NA	NA	NA	Soft	
54 - 57	NA	NA	NA	Biotite Schist	
57 - 58	NA	NA	NA	Fracture	
58 - 65	NA	NA	NA	Biotite Schist	


Boring terminated at 65 ft BGS

Log of Boring: 77-3		 3e EEE Consulting, Inc. Environmental, Engineering and Educational Solutions		
Project Location: Central Virginia Training Center				
Station Number: 3673707.6544 11302723.1269				
Date(s) Drilled: 9/19/2018	Logged By: Josh Hepler		Well Information:	
Drill Rig Type: Air Rotary	Total Depth Drilled: 70-ft		Screened Interval: 60 - 70-ft	
DTW Within Soil Boring: 59-ft		Cased Interval: 0 - 60-ft		
Static GW Level: 4.05-ft			Date GW Measured: September 25, 2018	
Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
0 - 10	NA	NA	NA	Overburden
10 - 12	NA	NA	NA	Biotite Schist
12 - 13	NA	NA	NA	Dirty
13 - 22	NA	NA	NA	Biotite Schist
22 - 23	NA	NA	NA	Soft
23 - 56	NA	NA	NA	Biotite Schist
56 - 57	NA	NA	NA	Soft
57 - 59	NA	NA	NA	Biotite Schist
59 - 60	NA	NA	NA	Soft (wet)
60 - 70	NA	NA	NA	Biotite Schist


Boring terminated at 70 ft BGS

Log of Boring: 39-1		 3e EEE Consulting, Inc. Environmental, Engineering and Educational Solutions		
Project Location: Central Virginia Training Center				
Station Number: 3674006.3561 11304566.7049				
Date(s) Drilled: 9/20/2018	Logged By: Josh Hepler	<u>Well Information:</u>		
Drill Rig Type: Air Rotary	Total Depth Drilled: 100-ft	Screened Interval: 90 - 100-ft		
DTW Within Soil Boring: 93-ft		Cased Interval: (+ 5 - 90-ft)		
Static GW Level: 43.75-ft		Date GW Measured: September 25, 2018		
Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
0 - 43	NA	NA	NA	Overburden
43 - 75	NA	NA	NA	Biotite Schist
75 - 76	NA	NA	NA	Soft
76 - 78	NA	NA	NA	Biotite Schist
78 - 79	NA	NA	NA	Soft
79 - 89	NA	NA	NA	Biotite Schist
89 - 90	NA	NA	NA	Soft
90 - 92	NA	NA	NA	Biotite Schist
92 - 93	NA	NA	NA	Water
93 - 100	NA	NA	NA	Biotite Schist

Boring terminated at 100 ft BGS

Log of Boring: 39-2				 3e EEE Consulting, Inc. Environmental, Engineering and Educational Solutions
Project Location: Central Virginia Training Center				
Station Number: 3673913.1625 11304545.9400				
Date(s) Drilled: 9/20/2018		Logged By: Josh Hepler		Well Information:
Drill Rig Type: Air Rotary		Total Depth Drilled: 85-ft		Screened Interval: 75 - 85-ft
DTW Within Soil Boring: 82-ft				Cased Interval: 0 - 75-ft
Static GW Level: 36.55-ft			Date GW Measured:	September 25, 2018
Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
0 - 17	NA	NA	NA	Overburden
17 - 19	NA	NA	NA	Biotite Schist
19 - 25	NA	NA	NA	Sandy
25 - 27	NA	NA	NA	Biotite Schist
27 - 30	NA	NA	NA	Sandy
30 - 33	NA	NA	NA	Biotite Schist
33 - 36	NA	NA	NA	Sandy
36 - 42	NA	NA	NA	Biotite Schist
42 - 44	NA	NA	NA	Sandy
44 - 46	NA	NA	NA	Biotite Schist
46 - 49	NA	NA	NA	Sandy
49 - 54	NA	NA	NA	Biotite Schist
54 - 55	NA	NA	NA	Sandy
55 - 67	NA	NA	NA	Biotite Schist
67 - 68	NA	NA	NA	Moisture
68 - 81	NA	NA	NA	Biotite Schist
81 - 82	NA	NA	NA	Sandy
82 - 85	NA	NA	NA	Biotite Schist

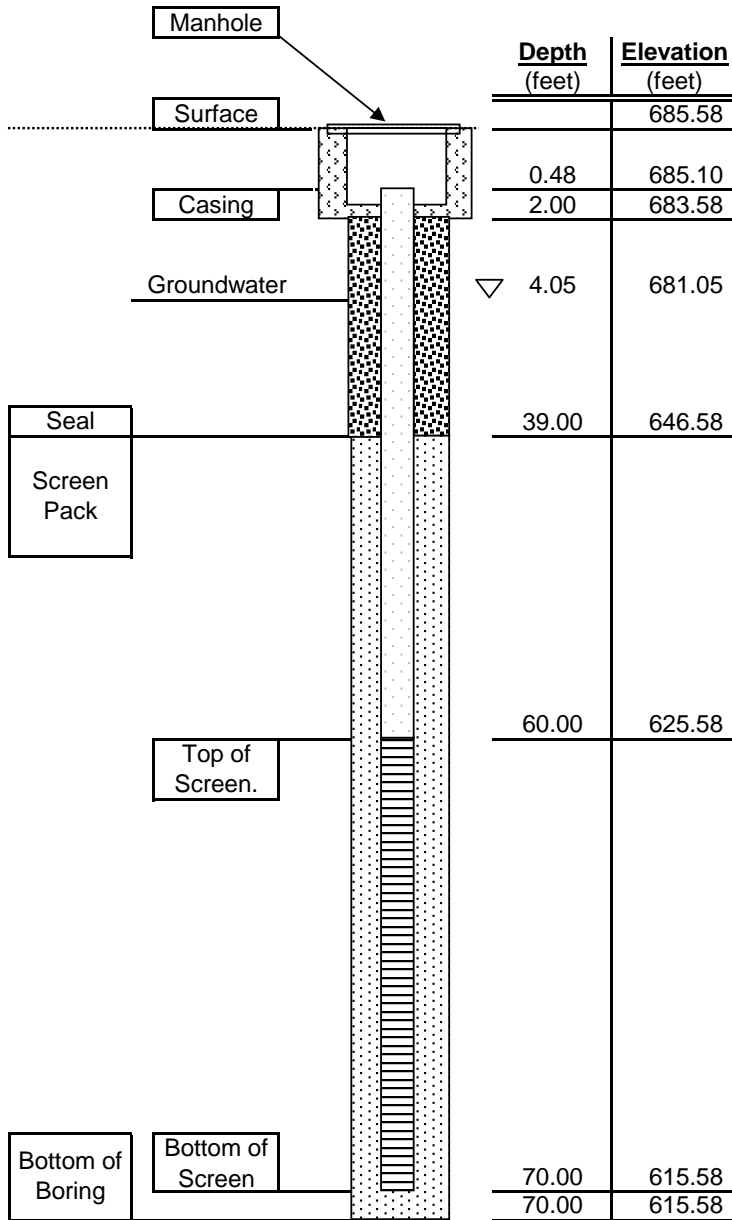
Boring terminated at 85 ft BGS

Log of Boring: 39 - 3		 3e EEE Consulting, Inc. Environmental, Engineering and Educational Solutions		
Project Location: Central Virginia Training Center				
Station Number: 3673959.1496 11304509.8600				
Date(s) Drilled: 9/20/2018	Logged By: Josh Hepler	Well Information:		
Drill Rig Type: Air Rotary	Total Depth Drilled: 110-ft	Screened Interval: 100 - 110-ft		
DTW Within Soil Boring: 110-ft		Cased Interval: 0 - 100-ft		
Static GW Level: 78.28-ft		Date GW Measured: September 25, 2018		
Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
0 - 33	NA	NA	NA	Overburden
33 - 39	NA	NA	NA	Biotite Schist
39 - 42	NA	NA	NA	Sandy
42 - 53	NA	NA	NA	Biotite Schist
53 - 56	NA	NA	NA	Sandy
56 - 57	NA	NA	NA	Biotite Schist
57 - 61	NA	NA	NA	Sandy
61 - 69	NA	NA	NA	Biotite Schist
69 - 70	NA	NA	NA	Sandy
70 - 74	NA	NA	NA	Biotite Schist
74 - 75	NA	NA	NA	Sandy
75 - 81	NA	NA	NA	Biotite Schist
81 - 82	NA	NA	NA	Sandy
82 - 87	NA	NA	NA	Biotite Schist
87 - 88	NA	NA	NA	Moisture
88 - 110	NA	NA	NA	Biotite Schist

Boring terminated at 110 ft BGS

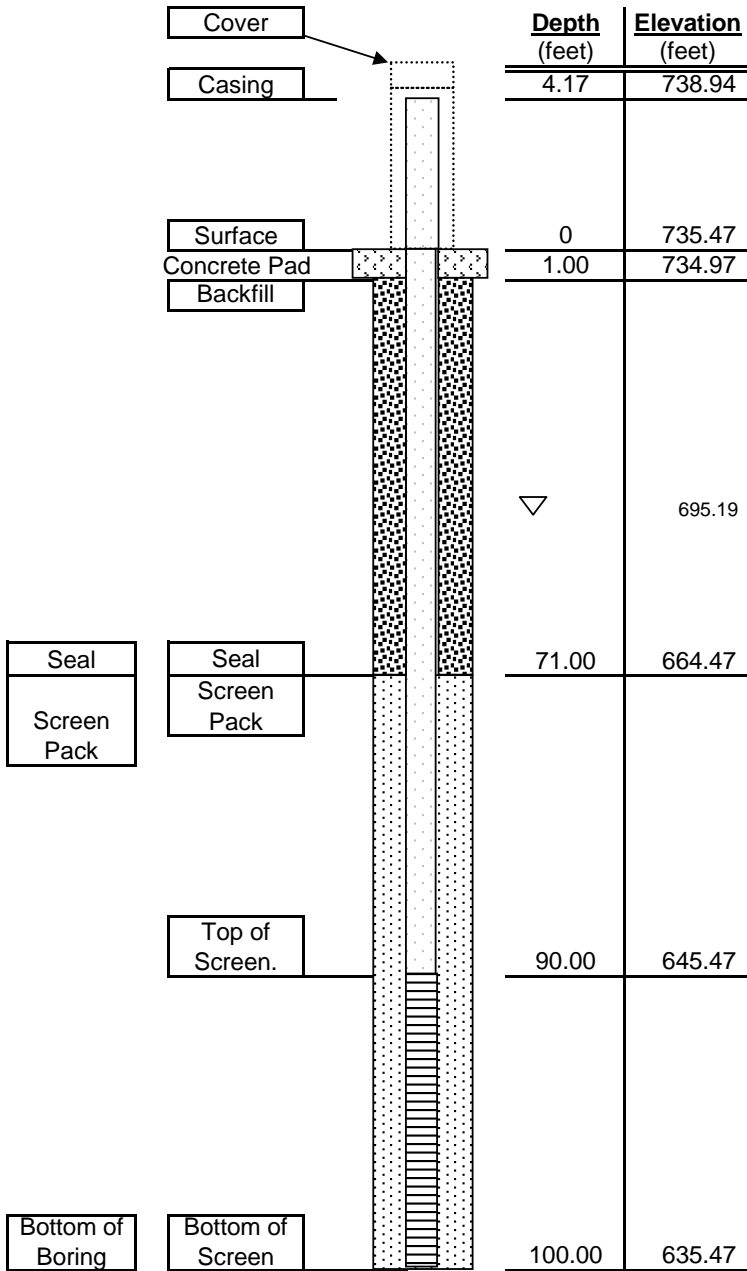
Appendix D: Well Diagrams

WELL CONSTRUCTION DIAGRAM



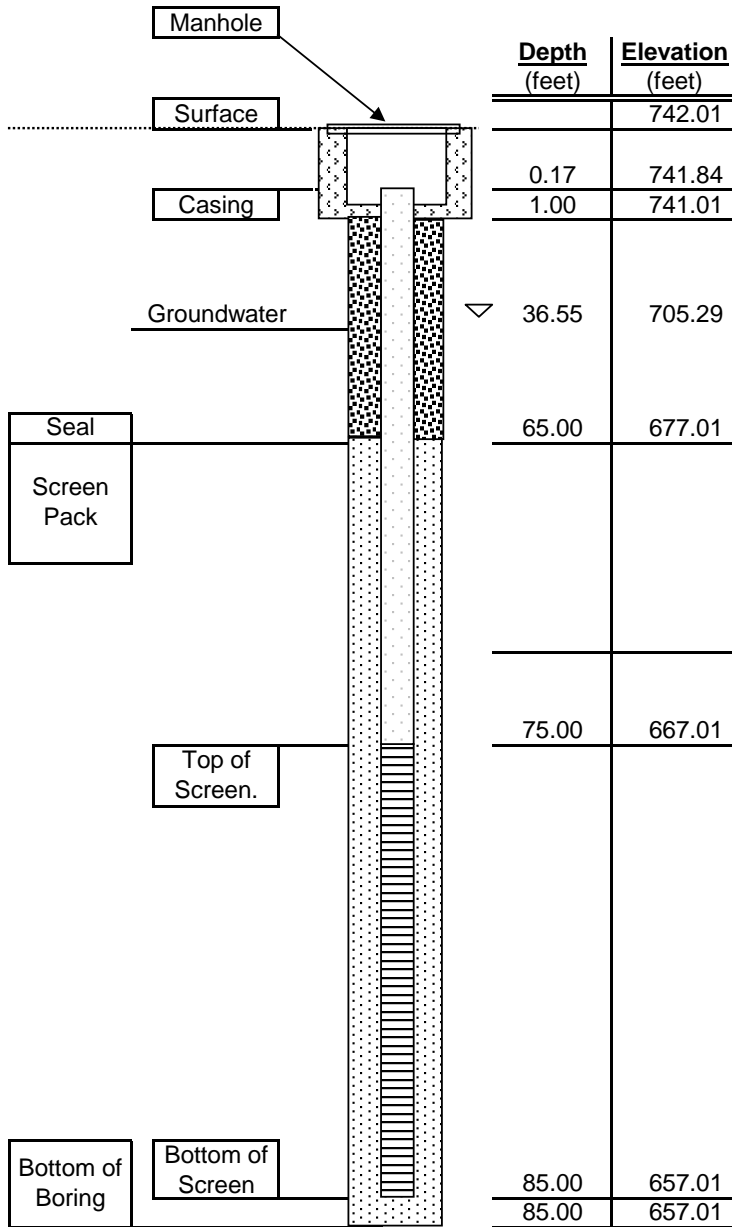
Well No.	<u>77-3</u>
Location	<u>CVTC, Madison Heights, VA</u>
Installation Date	<u>09/19/18</u>
Drilling Method	<u>Air Rotary</u>
Drilling Contractor	<u>Rorrer</u>
Drilling Fluid	<u>water, as needed</u>
Water Removed During Development	<u>30 gallons</u>
Borehole Dia.	<u>6"</u>
Casing Dia.	<u>2"</u>
Casing Type	<u>PVC Schedule 40</u>
Screen Type	<u>PVC, 0.020"</u>
Backfill	<u>Bentonite grout 60/40</u>
Screen Pack	<u>#2 Sand</u>
Water Depth (below TOC)	<u>4.05</u>
Seal	<u>Bentonite, 3/8" granules</u>
Notes	<u>Static water level measured on 9/25/2018</u>

WELL CONSTRUCTION DIAGRAM



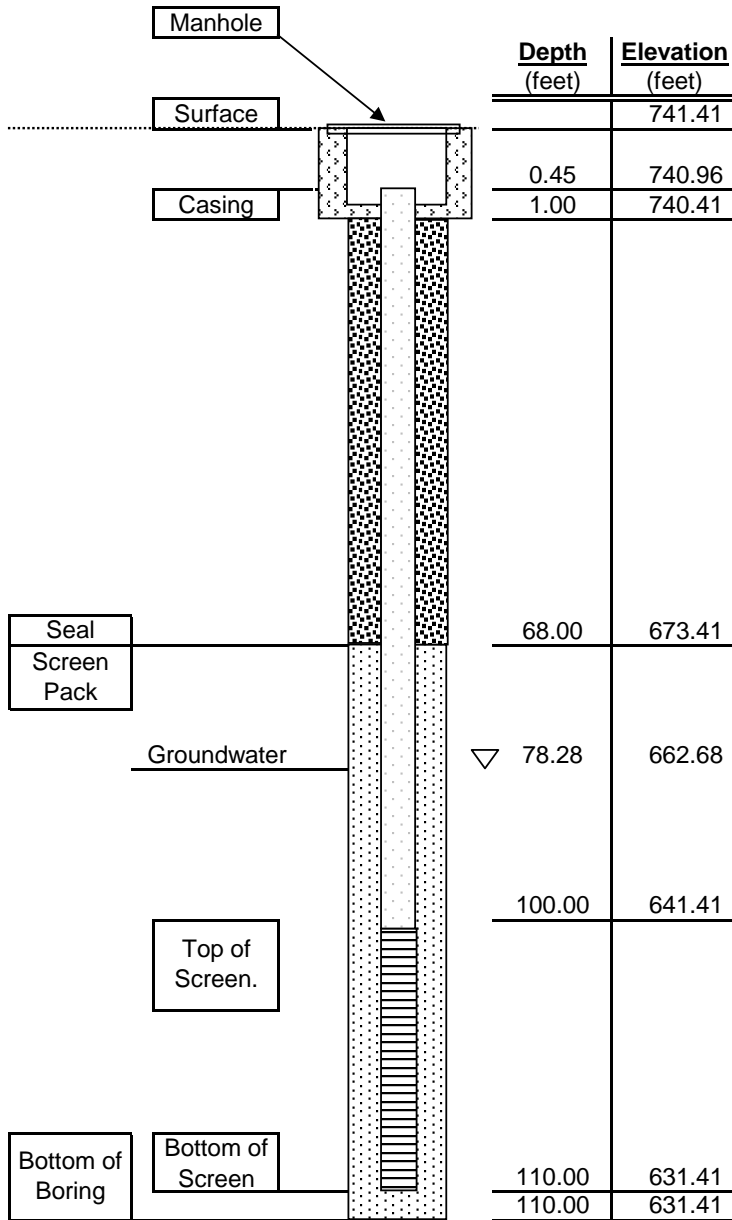
Well No.	39-1
Location	CVTC Madison Heights, VA
Installation Date	09/19/18
Drilling Method	Air Rotary
Drilling Contractor	Rorrer
Drilling Fluid	water, as needed
Water Removed During Development	30 gallons
Borehole Dia.	6"
Casing Dia.	2"
Casing Type	PVC Schedule 40
Screen Type	PVC 0.020"
Backfill	Bentonite grout 60/40
Screen Pack	#2 Sand
Water Depth (below TOC)	43.75
Seal	Bentonite, 3/8" granules
Notes	Static water level measured on 10/2/2017

WELL CONSTRUCTION DIAGRAM



Well No.	<u>39-2</u>
Location	<u>CVTC, Madison Heights, VA</u>
Installation Date	<u>09/20/18</u>
Drilling Method	<u>Air Rotary</u>
Drilling Contractor	<u>Rorrer</u>
Drilling Fluid	<u>water, as needed</u>
Water Removed During Development	<u>25 gallons</u>
Borehole Dia.	<u>6"</u>
Casing Dia.	<u>2"</u>
Casing Type	<u>PVC Schedule 40</u>
Screen Type	<u>PVC, 0.020"</u>
Backfill	<u>Bentonite grout 60/40</u>
Screen Pack	<u>#2 Sand</u>
Water Depth (below TOC)	<u>36.55</u>
Seal	<u>Bentonite, 3/8" granules</u>
Notes	<u>Static water level measured on 9/25/2018</u>

WELL CONSTRUCTION DIAGRAM



Well No.	39-3
Location	CVTC, Madison Heights, VA
Installation Date	09/20/18
Drilling Method	Air Rotary
Drilling Contractor	Rorrer
Drilling Fluid	water, as needed
Water Removed During Development	22 gallons
Borehole Dia.	6"
Casing Dia.	2"
Casing Type	PVC Schedule 40
Screen Type	PVC, 0.020"
Backfill	Bentonite grout 60/40
Screen Pack	#2 Sand
Water Depth (below TOC)	78.28
Seal	Bentonite, 3/8" granules
Notes	Static water level measured on 9/25/2018. *Measured 45.73-ft BGS on 10/1/2018

Appendix E: Laboratory Report and Sample Custody Documentation



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 1810123

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg, VA 24060

Date Received: September 6, 2018 8:35
Date Issued: September 20, 2018 13:47
Project Number: 18-760 Task 2.7
Purchase Order: 18-760

Submitted To: Jeff Fisher

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 09/06/2018 08:35. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/20/2018 13:47
Submitted To:	Jeff Fisher	Project Number:	18-760 Task 2.7
Client Site I.D.:	CVTC	Purchase Order:	18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18I0123

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
41-S1	18I0123-01	Soil	09/05/2018 11:15	09/06/2018 08:35
41-S2	18I0123-02	Soil	09/05/2018 11:18	09/06/2018 08:35
41-S3	18I0123-03	Soil	09/05/2018 11:30	09/06/2018 08:35
41-S4	18I0123-04	Soil	09/05/2018 11:35	09/06/2018 08:35
41-S5	18I0123-05	Soil	09/05/2018 11:40	09/06/2018 08:35
41-S6	18I0123-06	Soil	09/05/2018 11:50	09/06/2018 08:35
41-S7	18I0123-07	Soil	09/05/2018 12:00	09/06/2018 08:35
41-S8	18I0123-08	Soil	09/05/2018 12:05	09/06/2018 08:35

Results have been calculated based on dry weight.



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0123

Analytical Results

Sample I.D. 41-S1	Laboratory Sample ID: 18I0123-01
Grab Date/Time: 09/05/2018 11:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.596 mg/kg dry		0.596	1	09/10/18 10:30	09/11/18 13:30	BG
Aluminum	01RE1	SW6010C	41500 mg/kg dry		298	100	09/10/18 10:30	09/13/18 14:29	BG
Arsenic	01	SW6010C	<1.19 mg/kg dry		1.19	1	09/10/18 10:30	09/11/18 13:30	BG
Barium	01	SW6010C	97.0 mg/kg dry		0.596	1	09/10/18 10:30	09/11/18 13:30	BG
Beryllium	01	SW6010C	2.68 mg/kg dry		0.238	1	09/10/18 10:30	09/11/18 13:30	BG
Calcium	01RE1	SW6010C	4500 mg/kg dry		59.6	10	09/10/18 10:30	09/13/18 14:31	BG
Cadmium	01	SW6010C	3.37 mg/kg dry		0.238	1	09/10/18 10:30	09/11/18 13:30	BG
Cobalt	01	SW6010C	8.76 mg/kg dry		0.238	1	09/10/18 10:30	09/11/18 13:30	BG
Chromium	01	SW6010C	23.3 mg/kg dry		0.596	1	09/10/18 10:30	09/11/18 13:30	BG
Copper	01	SW6010C	6.61 mg/kg dry		2.98	1	09/10/18 10:30	09/11/18 13:30	BG
Iron	01RE1	SW6010C	40100 mg/kg dry		2980	1000	09/10/18 10:30	09/13/18 15:09	BG
Mercury	01	SW7471B	0.071 mg/kg dry		0.010	1	09/07/18 09:06	09/07/18 12:32	MWL
Potassium	01	SW6010C	1290 mg/kg dry		29.8	1	09/10/18 10:30	09/11/18 13:30	BG
Magnesium	01RE1	SW6010C	1760 mg/kg dry		29.8	10	09/10/18 10:30	09/13/18 14:31	BG
Manganese	01	SW6010C	244 mg/kg dry		0.596	1	09/10/18 10:30	09/11/18 13:30	BG
Sodium	01	SW6010C	124 mg/kg dry		29.8	1	09/10/18 10:30	09/11/18 13:30	BG
Nickel	01	SW6010C	6.07 mg/kg dry		0.596	1	09/10/18 10:30	09/11/18 13:30	BG
Lead	01	SW6010C	79.1 mg/kg dry		0.596	1	09/10/18 10:30	09/11/18 13:30	BG
Antimony	01	SW6010C	<5.96 mg/kg dry		5.96	1	09/10/18 10:30	09/11/18 13:30	BG
Selenium	01	SW6010C	<2.98 mg/kg dry		2.98	1	09/10/18 10:30	09/11/18 13:30	BG
Thallium	01	SW6010C	<2.98 mg/kg dry		2.98	1	09/10/18 10:30	09/11/18 13:30	BG
Vanadium	01	SW6010C	258 mg/kg dry		0.596	1	09/10/18 10:30	09/11/18 13:30	BG
Zinc	01	SW6010C	69.7 mg/kg dry		0.596	1	09/10/18 10:30	09/11/18 13:30	BG
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	01	SW8081B	<7.15 ug/kg dry		7.15	1	09/18/18 12:54	09/19/18 12:33	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S1	Laboratory Sample ID: 1810123-01
Grab Date/Time: 09/05/2018 11:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	01RE1	SW8081B	79.5 ug/kg dry		47.7	10	09/18/18 12:54	09/19/18 12:52	HLM
4,4'-DDT	01RE1	SW8081B	238 ug/kg dry		47.7	10	09/18/18 12:54	09/19/18 12:52	HLM
Aldrin	01	SW8081B	<2.38 ug/kg dry		2.38	1	09/18/18 12:54	09/19/18 12:33	HLM
alpha-BHC	01	SW8081B	<2.38 ug/kg dry		2.38	1	09/18/18 12:54	09/19/18 12:33	HLM
beta-BHC	01	SW8081B	<2.38 ug/kg dry		2.38	1	09/18/18 12:54	09/19/18 12:33	HLM
Chlordane	01	SW8081B	<50.1 ug/kg dry		50.1	1	09/18/18 12:54	09/19/18 12:33	HLM
delta-BHC	01	SW8081B	<4.77 ug/kg dry		4.77	1	09/18/18 12:54	09/19/18 12:33	HLM
Dieldrin	01	SW8081B	<4.77 ug/kg dry		4.77	1	09/18/18 12:54	09/19/18 12:33	HLM
Endosulfan I	01	SW8081B	<4.77 ug/kg dry		4.77	1	09/18/18 12:54	09/19/18 12:33	HLM
Endosulfan II	01	SW8081B	<7.15 ug/kg dry		7.15	1	09/18/18 12:54	09/19/18 12:33	HLM
Endosulfan sulfate	01	SW8081B	<2.38 ug/kg dry		2.38	1	09/18/18 12:54	09/19/18 12:33	HLM
Endrin	01	SW8081B	<4.77 ug/kg dry		4.77	1	09/18/18 12:54	09/19/18 12:33	HLM
Endrin aldehyde	01	SW8081B	<9.54 ug/kg dry		9.54	1	09/18/18 12:54	09/19/18 12:33	HLM
Endrin ketone	01	SW8081B	<2.38 ug/kg dry		2.38	1	09/18/18 12:54	09/19/18 12:33	HLM
gamma-BHC (Lindane)	01	SW8081B	<2.38 ug/kg dry		2.38	1	09/18/18 12:54	09/19/18 12:33	HLM
Heptachlor	01	SW8081B	<2.38 ug/kg dry		2.38	1	09/18/18 12:54	09/19/18 12:33	HLM
Heptachlor epoxide	01	SW8081B	<47.7 ug/kg dry		47.7	1	09/18/18 12:54	09/19/18 12:33	HLM
Methoxychlor	01	SW8081B	<47.7 ug/kg dry		47.7	1	09/18/18 12:54	09/19/18 12:33	HLM
Mirex	01	SW8081B	<7.15 ug/kg dry		7.15	1	09/18/18 12:54	09/19/18 12:33	HLM
Toxaphene	01	SW8081B	<50.1 ug/kg dry		50.1	1	09/18/18 12:54	09/19/18 12:33	HLM
Surr: TCMX	01	SW8081B	85.0 %		30-105		09/18/18 12:54	09/19/18 12:33	HLM
Surr: DCB	01	SW8081B	95.0 %		30-105		09/18/18 12:54	09/19/18 12:33	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	01	SW8151A	<188 ug/kg dry		188	1	09/13/18 14:02	09/18/18 18:18	SKS
2,4,5-TP (Silvex)	01	SW8151A	<188 ug/kg dry		188	1	09/13/18 14:02	09/18/18 18:18	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0123

Analytical Results

Sample I.D. 41-S1	Laboratory Sample ID: 18I0123-01
Grab Date/Time: 09/05/2018 11:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Herbicides by GC/ECD									
2,4-D	01	SW8151A	<188 ug/kg dry		188	1	09/13/18 14:02	09/18/18 18:18	SKS
Dinoseb	01	SW8151A	<188 ug/kg dry		188	1	09/13/18 14:02	09/18/18 18:18	SKS
Pentachlorophenol	01	SW8151A	<188 ug/kg dry		188	1	09/13/18 14:02	09/18/18 18:18	SKS
Surr: DCAA (Surr)	01	SW8151A	45.0 %		31-87		09/13/18 14:02	09/18/18 18:18	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	01RE1	SW7196A	<2.49 mg/kg dry		2.49	10	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	01	SM18 2540G	79.4 %		0.10	1	09/11/18 13:02	09/11/18 13:02	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S2 Laboratory Sample ID: 1810123-02

Grab Date/Time: 09/05/2018 11:18

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	2.98 mg/kg dry	0.810	1		09/10/18 10:30	09/11/18 13:38	BG
Aluminum	02RE1	SW6010C	24500 mg/kg dry	405	100		09/10/18 10:30	09/13/18 15:19	BG
Arsenic	02	SW6010C	4.12 mg/kg dry	1.62	1		09/10/18 10:30	09/11/18 13:38	BG
Barium	02	SW6010C	167 mg/kg dry	0.810	1		09/10/18 10:30	09/11/18 13:38	BG
Beryllium	02	SW6010C	1.75 mg/kg dry	0.324	1		09/10/18 10:30	09/11/18 13:38	BG
Calcium	02RE1	SW6010C	3900 mg/kg dry	81.0	10		09/10/18 10:30	09/13/18 15:43	BG
Cadmium	02	SW6010C	26.3 mg/kg dry	0.324	1		09/10/18 10:30	09/11/18 13:38	BG
Cobalt	02	SW6010C	12.1 mg/kg dry	0.324	1		09/10/18 10:30	09/11/18 13:38	BG
Chromium	02	SW6010C	48.4 mg/kg dry	0.810	1		09/10/18 10:30	09/11/18 13:38	BG
Copper	02	SW6010C	101 mg/kg dry	4.05	1		09/10/18 10:30	09/11/18 13:38	BG
Iron	02RE1	SW6010C	47000 mg/kg dry	405	100		09/10/18 10:30	09/13/18 15:19	BG
Mercury	02RE1	SW7471B	0.525 mg/kg dry	0.066	5		09/07/18 09:06	09/07/18 13:49	MWL
Potassium	02	SW6010C	2510 mg/kg dry	40.5	1		09/10/18 10:30	09/11/18 13:38	BG
Magnesium	02RE1	SW6010C	3430 mg/kg dry	40.5	10		09/10/18 10:30	09/13/18 15:43	BG
Manganese	02	SW6010C	520 mg/kg dry	0.810	1		09/10/18 10:30	09/11/18 13:38	BG
Sodium	02	SW6010C	59.8 mg/kg dry	40.5	1		09/10/18 10:30	09/11/18 13:38	BG
Nickel	02	SW6010C	20.2 mg/kg dry	0.810	1		09/10/18 10:30	09/11/18 13:38	BG
Lead	02RE1	SW6010C	4490 mg/kg dry	8.10	10		09/10/18 10:30	09/13/18 15:43	BG
Antimony	02	SW6010C	<8.10 mg/kg dry	8.10	1		09/10/18 10:30	09/11/18 13:38	BG
Selenium	02	SW6010C	<4.05 mg/kg dry	4.05	1		09/10/18 10:30	09/11/18 13:38	BG
Thallium	02	SW6010C	<4.05 mg/kg dry	4.05	1		09/10/18 10:30	09/11/18 13:38	BG
Vanadium	02	SW6010C	45.2 mg/kg dry	0.810	1		09/10/18 10:30	09/11/18 13:38	BG
Zinc	02	SW6010C	706 mg/kg dry	0.810	1		09/10/18 10:30	09/11/18 13:38	BG
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	02	SW8081B	16.4 ug/kg dry	9.85	1		09/18/18 12:54	09/19/18 13:11	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S2	Laboratory Sample ID: 1810123-02
Grab Date/Time: 09/05/2018 11:18	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	02	SW8081B	46.5 ug/kg dry	6.56	1		09/18/18 12:54	09/19/18 13:11	HLM
4,4'-DDT	02	SW8081B	38.3 ug/kg dry	6.56	1		09/18/18 12:54	09/19/18 13:11	HLM
Aldrin	02	SW8081B	<3.28 ug/kg dry	3.28	1		09/18/18 12:54	09/19/18 13:11	HLM
alpha-BHC	02	SW8081B	<3.28 ug/kg dry	3.28	1		09/18/18 12:54	09/19/18 13:11	HLM
beta-BHC	02	SW8081B	<3.28 ug/kg dry	3.28	1		09/18/18 12:54	09/19/18 13:11	HLM
Chlordane	02	SW8081B	<68.9 ug/kg dry	68.9	1		09/18/18 12:54	09/19/18 13:11	HLM
delta-BHC	02	SW8081B	<6.56 ug/kg dry	6.56	1		09/18/18 12:54	09/19/18 13:11	HLM
Dieldrin	02	SW8081B	<6.56 ug/kg dry	6.56	1		09/18/18 12:54	09/19/18 13:11	HLM
Endosulfan I	02	SW8081B	<6.56 ug/kg dry	6.56	1		09/18/18 12:54	09/19/18 13:11	HLM
Endosulfan II	02	SW8081B	<9.85 ug/kg dry	9.85	1		09/18/18 12:54	09/19/18 13:11	HLM
Endosulfan sulfate	02	SW8081B	<3.28 ug/kg dry	3.28	1		09/18/18 12:54	09/19/18 13:11	HLM
Endrin	02	SW8081B	<6.56 ug/kg dry	6.56	1		09/18/18 12:54	09/19/18 13:11	HLM
Endrin aldehyde	02	SW8081B	<13.1 ug/kg dry	13.1	1		09/18/18 12:54	09/19/18 13:11	HLM
Endrin ketone	02	SW8081B	<3.28 ug/kg dry	3.28	1		09/18/18 12:54	09/19/18 13:11	HLM
gamma-BHC (Lindane)	02	SW8081B	<3.28 ug/kg dry	3.28	1		09/18/18 12:54	09/19/18 13:11	HLM
Heptachlor	02	SW8081B	<3.28 ug/kg dry	3.28	1		09/18/18 12:54	09/19/18 13:11	HLM
Heptachlor epoxide	02	SW8081B	<65.6 ug/kg dry	65.6	1		09/18/18 12:54	09/19/18 13:11	HLM
Methoxychlor	02	SW8081B	<65.6 ug/kg dry	65.6	1		09/18/18 12:54	09/19/18 13:11	HLM
Mirex	02	SW8081B	<9.85 ug/kg dry	9.85	1		09/18/18 12:54	09/19/18 13:11	HLM
Toxaphene	02	SW8081B	<68.9 ug/kg dry	68.9	1		09/18/18 12:54	09/19/18 13:11	HLM
Surr: TCMX	02	SW8081B	65.0 %			30-105	09/18/18 12:54	09/19/18 13:11	HLM
Surr: DCB	02	SW8081B	90.0 %			30-105	09/18/18 12:54	09/19/18 13:11	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	02	SW8151A	<234 ug/kg dry	234	1		09/13/18 14:02	09/18/18 18:36	SKS
2,4,5-TP (Silvex)	02	SW8151A	<234 ug/kg dry	234	1		09/13/18 14:02	09/18/18 18:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0123

Analytical Results

Sample I.D. 41-S2	Laboratory Sample ID: 18I0123-02
Grab Date/Time: 09/05/2018 11:18	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Herbicides by GC/ECD									
2,4-D	02	SW8151A	<234 ug/kg dry		234	1	09/13/18 14:02	09/18/18 18:36	SKS
Dinoseb	02	SW8151A	<234 ug/kg dry		234	1	09/13/18 14:02	09/18/18 18:36	SKS
Pentachlorophenol	02	SW8151A	<234 ug/kg dry		234	1	09/13/18 14:02	09/18/18 18:36	SKS
<i>Surr: DCAA (Surr)</i>	02	SW8151A	55.0 %		31-87		09/13/18 14:02	09/18/18 18:36	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	02	SW7196A	<0.34 mg/kg dry		0.34	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	02	SM18 2540G	58.8 %		0.10	1	09/11/18 13:02	09/11/18 13:02	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S3 Laboratory Sample ID: 1810123-03

Grab Date/Time: 09/05/2018 11:30

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03	SW6010C	1.54 mg/kg dry	0.553	1		09/10/18 10:30	09/11/18 13:41	BG
Aluminum	03RE1	SW6010C	26200 mg/kg dry	277	100		09/10/18 10:30	09/13/18 15:21	BG
Arsenic	03	SW6010C	2.35 mg/kg dry	1.11	1		09/10/18 10:30	09/11/18 13:41	BG
Barium	03	SW6010C	149 mg/kg dry	0.553	1		09/10/18 10:30	09/11/18 13:41	BG
Beryllium	03	SW6010C	1.72 mg/kg dry	0.221	1		09/10/18 10:30	09/11/18 13:41	BG
Calcium	03RE1	SW6010C	4420 mg/kg dry	55.3	10		09/10/18 10:30	09/13/18 15:45	BG
Cadmium	03	SW6010C	20.2 mg/kg dry	0.221	1		09/10/18 10:30	09/11/18 13:41	BG
Cobalt	03	SW6010C	12.0 mg/kg dry	0.221	1		09/10/18 10:30	09/11/18 13:41	BG
Chromium	03	SW6010C	36.1 mg/kg dry	0.553	1		09/10/18 10:30	09/11/18 13:41	BG
Copper	03	SW6010C	67.5 mg/kg dry	2.77	1		09/10/18 10:30	09/11/18 13:41	BG
Iron	03RE1	SW6010C	56400 mg/kg dry	277	100		09/10/18 10:30	09/13/18 15:21	BG
Mercury	03RE1	SW7471B	0.275 mg/kg dry	0.044	5		09/07/18 09:06	09/07/18 13:51	MWL
Potassium	03	SW6010C	1980 mg/kg dry	27.7	1		09/10/18 10:30	09/11/18 13:41	BG
Magnesium	03RE1	SW6010C	2820 mg/kg dry	27.7	10		09/10/18 10:30	09/13/18 15:45	BG
Manganese	03	SW6010C	475 mg/kg dry	0.553	1		09/10/18 10:30	09/11/18 13:41	BG
Sodium	03	SW6010C	56.3 mg/kg dry	27.7	1		09/10/18 10:30	09/11/18 13:41	BG
Nickel	03	SW6010C	15.4 mg/kg dry	0.553	1		09/10/18 10:30	09/11/18 13:41	BG
Lead	03RE1	SW6010C	16300 mg/kg dry	55.3	100		09/10/18 10:30	09/13/18 15:21	BG
Antimony	03	SW6010C	<5.53 mg/kg dry	5.53	1		09/10/18 10:30	09/11/18 13:41	BG
Selenium	03	SW6010C	<2.77 mg/kg dry	2.77	1		09/10/18 10:30	09/11/18 13:41	BG
Thallium	03	SW6010C	<2.77 mg/kg dry	2.77	1		09/10/18 10:30	09/11/18 13:41	BG
Vanadium	03	SW6010C	77.3 mg/kg dry	0.553	1		09/10/18 10:30	09/11/18 13:41	BG
Zinc	03	SW6010C	832 mg/kg dry	0.553	1		09/10/18 10:30	09/11/18 13:41	BG

Organochlorine Pesticides and PCBs by GC/ECD

4,4'-DDD	03	SW8081B	12.4 ug/kg dry	6.37	1	09/18/18 12:54	09/19/18 13:30	HLM
----------	----	---------	----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S3	Laboratory Sample ID: 1810123-03
Grab Date/Time: 09/05/2018 11:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	03	SW8081B	12.4 ug/kg dry		4.25	1	09/18/18 12:54	09/19/18 13:30	HLM
4,4'-DDT	03	SW8081B	14.2 ug/kg dry		4.25	1	09/18/18 12:54	09/19/18 13:30	HLM
Aldrin	03	SW8081B	<2.12 ug/kg dry		2.12	1	09/18/18 12:54	09/19/18 13:30	HLM
alpha-BHC	03	SW8081B	<2.12 ug/kg dry		2.12	1	09/18/18 12:54	09/19/18 13:30	HLM
beta-BHC	03	SW8081B	<2.12 ug/kg dry		2.12	1	09/18/18 12:54	09/19/18 13:30	HLM
Chlordane	03	SW8081B	<44.6 ug/kg dry		44.6	1	09/18/18 12:54	09/19/18 13:30	HLM
delta-BHC	03	SW8081B	<4.25 ug/kg dry		4.25	1	09/18/18 12:54	09/19/18 13:30	HLM
Dieldrin	03	SW8081B	<4.25 ug/kg dry		4.25	1	09/18/18 12:54	09/19/18 13:30	HLM
Endosulfan I	03	SW8081B	<4.25 ug/kg dry		4.25	1	09/18/18 12:54	09/19/18 13:30	HLM
Endosulfan II	03	SW8081B	<6.37 ug/kg dry		6.37	1	09/18/18 12:54	09/19/18 13:30	HLM
Endosulfan sulfate	03	SW8081B	<2.12 ug/kg dry		2.12	1	09/18/18 12:54	09/19/18 13:30	HLM
Endrin	03	SW8081B	<4.25 ug/kg dry		4.25	1	09/18/18 12:54	09/19/18 13:30	HLM
Endrin aldehyde	03	SW8081B	<8.50 ug/kg dry		8.50	1	09/18/18 12:54	09/19/18 13:30	HLM
Endrin ketone	03	SW8081B	<2.12 ug/kg dry		2.12	1	09/18/18 12:54	09/19/18 13:30	HLM
gamma-BHC (Lindane)	03	SW8081B	<2.12 ug/kg dry		2.12	1	09/18/18 12:54	09/19/18 13:30	HLM
Heptachlor	03	SW8081B	<2.12 ug/kg dry		2.12	1	09/18/18 12:54	09/19/18 13:30	HLM
Heptachlor epoxide	03	SW8081B	<42.5 ug/kg dry		42.5	1	09/18/18 12:54	09/19/18 13:30	HLM
Methoxychlor	03	SW8081B	<42.5 ug/kg dry		42.5	1	09/18/18 12:54	09/19/18 13:30	HLM
Mirex	03	SW8081B	<6.37 ug/kg dry		6.37	1	09/18/18 12:54	09/19/18 13:30	HLM
Toxaphene	03	SW8081B	<44.6 ug/kg dry		44.6	1	09/18/18 12:54	09/19/18 13:30	HLM
Surr: TCMX	03	SW8081B	75.0 %		30-105		09/18/18 12:54	09/19/18 13:30	HLM
Surr: DCB	03	SW8081B	110 %	S	30-105		09/18/18 12:54	09/19/18 13:30	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	03	SW8151A	<168 ug/kg dry		168	1	09/13/18 14:02	09/18/18 18:53	SKS
2,4,5-TP (Silvex)	03	SW8151A	<168 ug/kg dry		168	1	09/13/18 14:02	09/18/18 18:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0123

Analytical Results

Sample I.D. 41-S3	Laboratory Sample ID: 18I0123-03
Grab Date/Time: 09/05/2018 11:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Herbicides by GC/ECD									
2,4-D	03	SW8151A	<168 ug/kg dry		168	1	09/13/18 14:02	09/18/18 18:53	SKS
Dinoseb	03	SW8151A	<168 ug/kg dry		168	1	09/13/18 14:02	09/18/18 18:53	SKS
Pentachlorophenol	03	SW8151A	<168 ug/kg dry		168	1	09/13/18 14:02	09/18/18 18:53	SKS
Surr: DCAA (Surr)	03	SW8151A	90.0 %	S	31-87		09/13/18 14:02	09/18/18 18:53	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	03	SW7196A	0.36 mg/kg dry		0.22	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	03	SM18 2540G	89.4 %		0.10	1	09/11/18 13:02	09/11/18 13:02	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S4	Laboratory Sample ID: 1810123-04
Grab Date/Time: 09/05/2018 11:35	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04	SW6010C	<0.591 mg/kg dry		0.591	1	09/10/18 10:30	09/11/18 13:44	BG
Aluminum	04RE1	SW6010C	36800 mg/kg dry		295	100	09/10/18 10:30	09/13/18 15:23	BG
Arsenic	04	SW6010C	1.60 mg/kg dry		1.18	1	09/10/18 10:30	09/11/18 13:44	BG
Barium	04	SW6010C	141 mg/kg dry		0.591	1	09/10/18 10:30	09/11/18 13:44	BG
Beryllium	04	SW6010C	2.17 mg/kg dry		0.236	1	09/10/18 10:30	09/11/18 13:44	BG
Calcium	04RE1	SW6010C	20600 mg/kg dry		591	100	09/10/18 10:30	09/13/18 15:23	BG
Cadmium	04	SW6010C	5.84 mg/kg dry		0.236	1	09/10/18 10:30	09/11/18 13:44	BG
Cobalt	04	SW6010C	11.5 mg/kg dry		0.236	1	09/10/18 10:30	09/11/18 13:44	BG
Chromium	04	SW6010C	22.4 mg/kg dry		0.591	1	09/10/18 10:30	09/11/18 13:44	BG
Copper	04	SW6010C	39.3 mg/kg dry		2.95	1	09/10/18 10:30	09/11/18 13:44	BG
Iron	04RE1	SW6010C	98600 mg/kg dry		295	100	09/10/18 10:30	09/13/18 15:23	BG
Mercury	04	SW7471B	0.110 mg/kg dry		0.010	1	09/07/18 09:06	09/07/18 12:44	MWL
Potassium	04	SW6010C	2120 mg/kg dry		29.5	1	09/10/18 10:30	09/11/18 13:44	BG
Magnesium	04RE1	SW6010C	3270 mg/kg dry		29.5	10	09/10/18 10:30	09/13/18 15:47	BG
Manganese	04	SW6010C	352 mg/kg dry		0.591	1	09/10/18 10:30	09/11/18 13:44	BG
Sodium	04	SW6010C	1080 mg/kg dry		29.5	1	09/10/18 10:30	09/11/18 13:44	BG
Nickel	04	SW6010C	17.6 mg/kg dry		0.591	1	09/10/18 10:30	09/11/18 13:44	BG
Lead	04RE1	SW6010C	1690 mg/kg dry		5.91	10	09/10/18 10:30	09/13/18 15:48	BG
Antimony	04	SW6010C	<5.91 mg/kg dry		5.91	1	09/10/18 10:30	09/11/18 13:44	BG
Selenium	04	SW6010C	<2.95 mg/kg dry		2.95	1	09/10/18 10:30	09/11/18 13:44	BG
Thallium	04	SW6010C	<2.95 mg/kg dry		2.95	1	09/10/18 10:30	09/11/18 13:44	BG
Vanadium	04	SW6010C	165 mg/kg dry		0.591	1	09/10/18 10:30	09/11/18 13:44	BG
Zinc	04RE1	SW6010C	1400 mg/kg dry		5.91	10	09/10/18 10:30	09/13/18 15:47	BG
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	04	SW8081B	461 ug/kg dry		151	20	09/18/18 12:54	09/19/18 14:07	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S4	Laboratory Sample ID: 1810123-04
Grab Date/Time: 09/05/2018 11:35	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	04	SW8081B	377 ug/kg dry		101	20	09/18/18 12:54	09/19/18 14:07	HLM
4,4'-DDT	04	SW8081B	700 ug/kg dry		101	20	09/18/18 12:54	09/19/18 14:07	HLM
Aldrin	04	SW8081B	<50.3 ug/kg dry		50.3	20	09/18/18 12:54	09/19/18 14:07	HLM
alpha-BHC	04	SW8081B	<50.3 ug/kg dry		50.3	20	09/18/18 12:54	09/19/18 14:07	HLM
beta-BHC	04	SW8081B	<50.3 ug/kg dry		50.3	20	09/18/18 12:54	09/19/18 14:07	HLM
Chlordane	04	SW8081B	<1060 ug/kg dry		1060	20	09/18/18 12:54	09/19/18 14:07	HLM
delta-BHC	04	SW8081B	<101 ug/kg dry		101	20	09/18/18 12:54	09/19/18 14:07	HLM
Dieldrin	04	SW8081B	<101 ug/kg dry		101	20	09/18/18 12:54	09/19/18 14:07	HLM
Endosulfan I	04	SW8081B	<101 ug/kg dry		101	20	09/18/18 12:54	09/19/18 14:07	HLM
Endosulfan II	04	SW8081B	<151 ug/kg dry		151	20	09/18/18 12:54	09/19/18 14:07	HLM
Endosulfan sulfate	04	SW8081B	<50.3 ug/kg dry		50.3	20	09/18/18 12:54	09/19/18 14:07	HLM
Endrin	04	SW8081B	<101 ug/kg dry		101	20	09/18/18 12:54	09/19/18 14:07	HLM
Endrin aldehyde	04	SW8081B	<201 ug/kg dry		201	20	09/18/18 12:54	09/19/18 14:07	HLM
Endrin ketone	04	SW8081B	<50.3 ug/kg dry		50.3	20	09/18/18 12:54	09/19/18 14:07	HLM
gamma-BHC (Lindane)	04	SW8081B	<50.3 ug/kg dry		50.3	20	09/18/18 12:54	09/19/18 14:07	HLM
Heptachlor	04RE1	SW8081B	1680 ug/kg dry		503	200	09/18/18 12:54	09/19/18 17:15	HLM
Heptachlor epoxide	04RE1	SW8081B	838 ug/kg dry		503	200	09/18/18 12:54	09/19/18 17:15	HLM
Methoxychlor	04	SW8081B	251 ug/kg dry		126	20	09/18/18 12:54	09/19/18 14:07	HLM
Mirex	04	SW8081B	<151 ug/kg dry		151	20	09/18/18 12:54	09/19/18 14:07	HLM
Toxaphene	04	SW8081B	<1060 ug/kg dry		1060	20	09/18/18 12:54	09/19/18 14:07	HLM
Surr: TCMX	04	SW8081B	100 %		30-105		09/18/18 12:54	09/19/18 14:07	HLM
Surr: DCB	04	SW8081B	200 %	DS	30-105		09/18/18 12:54	09/19/18 14:07	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	04	SW8151A	<190 ug/kg dry		190	1	09/13/18 14:02	09/18/18 19:11	SKS
2,4,5-TP (Silvex)	04	SW8151A	<190 ug/kg dry		190	1	09/13/18 14:02	09/18/18 19:11	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0123

Analytical Results

Sample I.D. 41-S4	Laboratory Sample ID: 18I0123-04
Grab Date/Time: 09/05/2018 11:35	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Herbicides by GC/ECD									
2,4-D	04	SW8151A	<190 ug/kg dry		190	1	09/13/18 14:02	09/18/18 19:11	SKS
Dinoseb	04	SW8151A	<190 ug/kg dry		190	1	09/13/18 14:02	09/18/18 19:11	SKS
Pentachlorophenol	04	SW8151A	<190 ug/kg dry		190	1	09/13/18 14:02	09/18/18 19:11	SKS
<i>Surr: DCAA (Surr)</i>	<i>04</i>	<i>SW8151A</i>	<i>80.0 %</i>		<i>31-87</i>		<i>09/13/18 14:02</i>	<i>09/18/18 19:11</i>	<i>SKS</i>
Wet Chemistry Analysis									
Chromium, Hexavalent	04	SW7196A	<0.26 mg/kg dry		0.26	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	04	SM18 2540G	77.7 %		0.10	1	09/11/18 13:02	09/11/18 13:02	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S5 **Laboratory Sample ID:** 1810123-05

Grab Date/Time: 09/05/2018 11:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05	SW6010C	<0.550 mg/kg dry		0.550	1	09/10/18 10:30	09/11/18 13:56	BG
Aluminum	05RE1	SW6010C	25800 mg/kg dry		275	100	09/10/18 10:30	09/13/18 15:25	BG
Arsenic	05	SW6010C	1.49 mg/kg dry		1.10	1	09/10/18 10:30	09/11/18 13:56	BG
Barium	05	SW6010C	105 mg/kg dry		0.550	1	09/10/18 10:30	09/11/18 13:56	BG
Beryllium	05	SW6010C	1.60 mg/kg dry		0.220	1	09/10/18 10:30	09/11/18 13:56	BG
Calcium	05RE1	SW6010C	3980 mg/kg dry		55.0	10	09/10/18 10:30	09/13/18 15:50	BG
Cadmium	05	SW6010C	2.46 mg/kg dry		0.220	1	09/10/18 10:30	09/11/18 13:56	BG
Cobalt	05	SW6010C	9.24 mg/kg dry		0.220	1	09/10/18 10:30	09/11/18 13:56	BG
Chromium	05	SW6010C	24.1 mg/kg dry		0.550	1	09/10/18 10:30	09/11/18 13:56	BG
Copper	05	SW6010C	8.23 mg/kg dry		2.75	1	09/10/18 10:30	09/11/18 13:56	BG
Iron	05RE1	SW6010C	51200 mg/kg dry		275	100	09/10/18 10:30	09/13/18 15:25	BG
Mercury	05	SW7471B	0.048 mg/kg dry		0.009	1	09/07/18 09:06	09/07/18 12:46	MWL
Potassium	05	SW6010C	2120 mg/kg dry		27.5	1	09/10/18 10:30	09/11/18 13:56	BG
Magnesium	05RE1	SW6010C	2470 mg/kg dry		27.5	10	09/10/18 10:30	09/13/18 15:50	BG
Manganese	05	SW6010C	262 mg/kg dry		0.550	1	09/10/18 10:30	09/11/18 13:56	BG
Sodium	05	SW6010C	65.6 mg/kg dry		27.5	1	09/10/18 10:30	09/11/18 13:56	BG
Nickel	05	SW6010C	8.93 mg/kg dry		0.550	1	09/10/18 10:30	09/11/18 13:56	BG
Lead	05RE1	SW6010C	5880 mg/kg dry		5.50	10	09/10/18 10:30	09/13/18 15:50	BG
Antimony	05	SW6010C	<5.50 mg/kg dry		5.50	1	09/10/18 10:30	09/11/18 13:56	BG
Selenium	05	SW6010C	<2.75 mg/kg dry		2.75	1	09/10/18 10:30	09/11/18 13:56	BG
Thallium	05	SW6010C	<2.75 mg/kg dry		2.75	1	09/10/18 10:30	09/11/18 13:56	BG
Vanadium	05	SW6010C	94.5 mg/kg dry		0.550	1	09/10/18 10:30	09/11/18 13:56	BG
Zinc	05	SW6010C	728 mg/kg dry		0.550	1	09/10/18 10:30	09/11/18 13:56	BG
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	05	SW8081B	14.8 ug/kg dry		6.67	1	09/18/18 12:54	09/19/18 14:26	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S5	Laboratory Sample ID: 1810123-05
Grab Date/Time: 09/05/2018 11:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	05	SW8081B	11.1 ug/kg dry	4.45	1		09/18/18 12:54	09/19/18 14:26	HLM
4,4'-DDT	05RE1	SW8081B	<44.5 ug/kg dry	44.5	10		09/18/18 12:54	09/19/18 14:44	HLM
Aldrin	05	SW8081B	<2.22 ug/kg dry	2.22	1		09/18/18 12:54	09/19/18 14:26	HLM
alpha-BHC	05	SW8081B	<2.22 ug/kg dry	2.22	1		09/18/18 12:54	09/19/18 14:26	HLM
beta-BHC	05	SW8081B	<2.22 ug/kg dry	2.22	1		09/18/18 12:54	09/19/18 14:26	HLM
Chlordane	05	SW8081B	<46.7 ug/kg dry	46.7	1		09/18/18 12:54	09/19/18 14:26	HLM
delta-BHC	05	SW8081B	<4.45 ug/kg dry	4.45	1		09/18/18 12:54	09/19/18 14:26	HLM
Dieldrin	05	SW8081B	<4.45 ug/kg dry	4.45	1		09/18/18 12:54	09/19/18 14:26	HLM
Endosulfan I	05	SW8081B	<4.45 ug/kg dry	4.45	1		09/18/18 12:54	09/19/18 14:26	HLM
Endosulfan II	05	SW8081B	<6.67 ug/kg dry	6.67	1		09/18/18 12:54	09/19/18 14:26	HLM
Endosulfan sulfate	05	SW8081B	<2.22 ug/kg dry	2.22	1		09/18/18 12:54	09/19/18 14:26	HLM
Endrin	05	SW8081B	<4.45 ug/kg dry	4.45	1		09/18/18 12:54	09/19/18 14:26	HLM
Endrin aldehyde	05	SW8081B	<8.89 ug/kg dry	8.89	1		09/18/18 12:54	09/19/18 14:26	HLM
Endrin ketone	05	SW8081B	<2.22 ug/kg dry	2.22	1		09/18/18 12:54	09/19/18 14:26	HLM
gamma-BHC (Lindane)	05	SW8081B	<2.22 ug/kg dry	2.22	1		09/18/18 12:54	09/19/18 14:26	HLM
Heptachlor	05	SW8081B	5.56 ug/kg dry	2.22	1		09/18/18 12:54	09/19/18 14:26	HLM
Heptachlor epoxide	05RE1	SW8081B	167 ug/kg dry	55.6	10		09/18/18 12:54	09/19/18 14:44	HLM
Methoxychlor	05	SW8081B	<44.5 ug/kg dry	44.5	1		09/18/18 12:54	09/19/18 14:26	HLM
Mirex	05	SW8081B	<6.67 ug/kg dry	6.67	1		09/18/18 12:54	09/19/18 14:26	HLM
Toxaphene	05	SW8081B	<46.7 ug/kg dry	46.7	1		09/18/18 12:54	09/19/18 14:26	HLM
Surr: TCMX	05	SW8081B	75.0 %	30-105			09/18/18 12:54	09/19/18 14:26	HLM
Surr: DCB	05	SW8081B	95.0 %	30-105			09/18/18 12:54	09/19/18 14:26	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	05	SW8151A	<676 ug/kg dry	676	4		09/13/18 14:02	09/18/18 19:29	SKS
2,4,5-TP (Silvex)	05	SW8151A	<676 ug/kg dry	676	4		09/13/18 14:02	09/18/18 19:29	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0123

Analytical Results

Sample I.D. 41-S5	Laboratory Sample ID: 18I0123-05
Grab Date/Time: 09/05/2018 11:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Herbicides by GC/ECD									
2,4-D	05	SW8151A	<676 ug/kg dry		676	4	09/13/18 14:02	09/18/18 19:29	SKS
Dinoseb	05	SW8151A	<676 ug/kg dry		676	4	09/13/18 14:02	09/18/18 19:29	SKS
Pentachlorophenol	05	SW8151A	<676 ug/kg dry		676	4	09/13/18 14:02	09/18/18 19:29	SKS
<i>Surr: DCAA (Surr)</i>	05	SW8151A	100 %	S	31-87		09/13/18 14:02	09/18/18 19:29	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	05	SW7196A	<0.22 mg/kg dry		0.22	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	05	SM18 2540G	87.4 %		0.10	1	09/11/18 13:02	09/11/18 13:02	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S6 **Laboratory Sample ID:** 1810123-06

Grab Date/Time: 09/05/2018 11:50

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06	SW6010C	<0.673 mg/kg dry		0.673	1	09/10/18 10:30	09/11/18 13:59	BG
Aluminum	06RE1	SW6010C	12000 mg/kg dry		33.6	10	09/10/18 10:30	09/13/18 15:52	BG
Arsenic	06	SW6010C	7.12 mg/kg dry		1.35	1	09/10/18 10:30	09/11/18 13:59	BG
Barium	06	SW6010C	162 mg/kg dry		0.673	1	09/10/18 10:30	09/11/18 13:59	BG
Beryllium	06	SW6010C	1.81 mg/kg dry		0.269	1	09/10/18 10:30	09/11/18 13:59	BG
Calcium	06RE1	SW6010C	2470 mg/kg dry		67.3	10	09/10/18 10:30	09/13/18 15:52	BG
Cadmium	06	SW6010C	3.46 mg/kg dry		0.269	1	09/10/18 10:30	09/11/18 13:59	BG
Cobalt	06	SW6010C	10.6 mg/kg dry		0.269	1	09/10/18 10:30	09/11/18 13:59	BG
Chromium	06	SW6010C	21.6 mg/kg dry		0.673	1	09/10/18 10:30	09/11/18 13:59	BG
Copper	06	SW6010C	26.4 mg/kg dry		3.36	1	09/10/18 10:30	09/11/18 13:59	BG
Iron	06RE1	SW6010C	39000 mg/kg dry		336	100	09/10/18 10:30	09/13/18 15:32	BG
Mercury	06	SW7471B	0.149 mg/kg dry		0.011	1	09/07/18 09:06	09/07/18 12:48	MWL
Potassium	06	SW6010C	1460 mg/kg dry		33.6	1	09/10/18 10:30	09/11/18 13:59	BG
Magnesium	06RE1	SW6010C	2610 mg/kg dry		33.6	10	09/10/18 10:30	09/13/18 15:52	BG
Manganese	06	SW6010C	455 mg/kg dry		0.673	1	09/10/18 10:30	09/11/18 13:59	BG
Sodium	06	SW6010C	55.8 mg/kg dry		33.6	1	09/10/18 10:30	09/11/18 13:59	BG
Nickel	06	SW6010C	14.5 mg/kg dry		0.673	1	09/10/18 10:30	09/11/18 13:59	BG
Lead	06RE1	SW6010C	1730 mg/kg dry		6.73	10	09/10/18 10:30	09/13/18 15:52	BG
Antimony	06	SW6010C	<6.73 mg/kg dry		6.73	1	09/10/18 10:30	09/11/18 13:59	BG
Selenium	06	SW6010C	<3.36 mg/kg dry		3.36	1	09/10/18 10:30	09/11/18 13:59	BG
Thallium	06	SW6010C	<3.36 mg/kg dry		3.36	1	09/10/18 10:30	09/11/18 13:59	BG
Vanadium	06	SW6010C	32.2 mg/kg dry		0.673	1	09/10/18 10:30	09/11/18 13:59	BG
Zinc	06	SW6010C	326 mg/kg dry		0.673	1	09/10/18 10:30	09/11/18 13:59	BG
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	06	SW8081B	8.76 ug/kg dry		7.88	1	09/18/18 12:54	09/19/18 15:03	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S6	Laboratory Sample ID: 1810123-06
Grab Date/Time: 09/05/2018 11:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	06	SW8081B	30.7 ug/kg dry		5.25	1	09/18/18 12:54	09/19/18 15:03	HLM
4,4'-DDT	06	SW8081B	21.9 ug/kg dry		5.25	1	09/18/18 12:54	09/19/18 15:03	HLM
Aldrin	06	SW8081B	<2.63 ug/kg dry		2.63	1	09/18/18 12:54	09/19/18 15:03	HLM
alpha-BHC	06	SW8081B	<2.63 ug/kg dry		2.63	1	09/18/18 12:54	09/19/18 15:03	HLM
beta-BHC	06	SW8081B	<2.63 ug/kg dry		2.63	1	09/18/18 12:54	09/19/18 15:03	HLM
Chlordane	06	SW8081B	<55.2 ug/kg dry		55.2	1	09/18/18 12:54	09/19/18 15:03	HLM
delta-BHC	06	SW8081B	<5.25 ug/kg dry		5.25	1	09/18/18 12:54	09/19/18 15:03	HLM
Dieldrin	06	SW8081B	<5.25 ug/kg dry		5.25	1	09/18/18 12:54	09/19/18 15:03	HLM
Endosulfan I	06	SW8081B	<5.25 ug/kg dry		5.25	1	09/18/18 12:54	09/19/18 15:03	HLM
Endosulfan II	06	SW8081B	<7.88 ug/kg dry		7.88	1	09/18/18 12:54	09/19/18 15:03	HLM
Endosulfan sulfate	06	SW8081B	<2.63 ug/kg dry		2.63	1	09/18/18 12:54	09/19/18 15:03	HLM
Endrin	06	SW8081B	<5.25 ug/kg dry		5.25	1	09/18/18 12:54	09/19/18 15:03	HLM
Endrin aldehyde	06	SW8081B	<10.5 ug/kg dry		10.5	1	09/18/18 12:54	09/19/18 15:03	HLM
Endrin ketone	06	SW8081B	<2.63 ug/kg dry		2.63	1	09/18/18 12:54	09/19/18 15:03	HLM
gamma-BHC (Lindane)	06	SW8081B	<2.63 ug/kg dry		2.63	1	09/18/18 12:54	09/19/18 15:03	HLM
Heptachlor	06	SW8081B	<2.63 ug/kg dry		2.63	1	09/18/18 12:54	09/19/18 15:03	HLM
Heptachlor epoxide	06	SW8081B	<52.5 ug/kg dry		52.5	1	09/18/18 12:54	09/19/18 15:03	HLM
Methoxychlor	06	SW8081B	<52.5 ug/kg dry		52.5	1	09/18/18 12:54	09/19/18 15:03	HLM
Mirex	06	SW8081B	<7.88 ug/kg dry		7.88	1	09/18/18 12:54	09/19/18 15:03	HLM
Toxaphene	06	SW8081B	<55.2 ug/kg dry		55.2	1	09/18/18 12:54	09/19/18 15:03	HLM
Surr: TCMX	06	SW8081B	65.0 %		30-105		09/18/18 12:54	09/19/18 15:03	HLM
Surr: DCB	06	SW8081B	80.0 %		30-105		09/18/18 12:54	09/19/18 15:03	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	06	SW8151A	<827 ug/kg dry		827	4	09/13/18 14:02	09/18/18 19:47	SKS
2,4,5-TP (Silvex)	06	SW8151A	<827 ug/kg dry		827	4	09/13/18 14:02	09/18/18 19:47	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0123

Analytical Results

Sample I.D. 41-S6	Laboratory Sample ID: 18I0123-06
Grab Date/Time: 09/05/2018 11:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Herbicides by GC/ECD									
2,4-D	06	SW8151A	<827 ug/kg dry		827	4	09/13/18 14:02	09/18/18 19:47	SKS
Dinoseb	06	SW8151A	<827 ug/kg dry		827	4	09/13/18 14:02	09/18/18 19:47	SKS
Pentachlorophenol	06	SW8151A	<827 ug/kg dry		827	4	09/13/18 14:02	09/18/18 19:47	SKS
<i>Surr: DCAA (Surr)</i>	06	SW8151A	100 %	S	31-87		09/13/18 14:02	09/18/18 19:47	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	06	SW7196A	0.39 mg/kg dry		0.28	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	06	SM18 2540G	71.1 %		0.10	1	09/11/18 13:02	09/11/18 13:02	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S7	Laboratory Sample ID: 1810123-07
Grab Date/Time: 09/05/2018 12:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	07	SW6010C	<0.549 mg/kg dry		0.549	1	09/10/18 10:30	09/11/18 14:02	BG
Aluminum	07RE1	SW6010C	16300 mg/kg dry		275	100	09/10/18 10:30	09/13/18 15:34	BG
Arsenic	07	SW6010C	7.24 mg/kg dry		1.10	1	09/10/18 10:30	09/11/18 14:02	BG
Barium	07	SW6010C	135 mg/kg dry		0.549	1	09/10/18 10:30	09/11/18 14:02	BG
Beryllium	07	SW6010C	2.78 mg/kg dry		0.220	1	09/10/18 10:30	09/11/18 14:02	BG
Calcium	07RE1	SW6010C	39200 mg/kg dry		549	100	09/10/18 10:30	09/13/18 15:34	BG
Cadmium	07	SW6010C	5.13 mg/kg dry		0.220	1	09/10/18 10:30	09/11/18 14:02	BG
Cobalt	07	SW6010C	9.69 mg/kg dry		0.220	1	09/10/18 10:30	09/11/18 14:02	BG
Chromium	07	SW6010C	19.1 mg/kg dry		0.549	1	09/10/18 10:30	09/11/18 14:02	BG
Copper	07	SW6010C	38.7 mg/kg dry		2.75	1	09/10/18 10:30	09/11/18 14:02	BG
Iron	07RE1	SW6010C	29400 mg/kg dry		275	100	09/10/18 10:30	09/13/18 15:34	BG
Mercury	07	SW7471B	0.119 mg/kg dry		0.009	1	09/07/18 09:06	09/07/18 12:51	MWL
Potassium	07	SW6010C	1650 mg/kg dry		27.5	1	09/10/18 10:30	09/11/18 14:02	BG
Magnesium	07RE1	SW6010C	6160 mg/kg dry		27.5	10	09/10/18 10:30	09/13/18 16:23	BG
Manganese	07	SW6010C	251 mg/kg dry		0.549	1	09/10/18 10:30	09/11/18 14:02	BG
Sodium	07	SW6010C	129 mg/kg dry		27.5	1	09/10/18 10:30	09/11/18 14:02	BG
Nickel	07	SW6010C	23.0 mg/kg dry		0.549	1	09/10/18 10:30	09/11/18 14:02	BG
Lead	07	SW6010C	69.6 mg/kg dry		0.549	1	09/10/18 10:30	09/11/18 14:02	BG
Antimony	07	SW6010C	<5.49 mg/kg dry		5.49	1	09/10/18 10:30	09/11/18 14:02	BG
Selenium	07	SW6010C	<2.75 mg/kg dry		2.75	1	09/10/18 10:30	09/11/18 14:02	BG
Thallium	07	SW6010C	<2.75 mg/kg dry		2.75	1	09/10/18 10:30	09/11/18 14:02	BG
Vanadium	07	SW6010C	39.0 mg/kg dry		0.549	1	09/10/18 10:30	09/11/18 14:02	BG
Zinc	07	SW6010C	139 mg/kg dry		0.549	1	09/10/18 10:30	09/11/18 14:02	BG
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	07	SW8081B	<6.50 ug/kg dry		6.50	1	09/18/18 12:54	09/19/18 15:22	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S7	Laboratory Sample ID: 1810123-07
Grab Date/Time: 09/05/2018 12:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	07	SW8081B	<4.33 ug/kg dry		4.33	1	09/18/18 12:54	09/19/18 15:22	HLM
4,4'-DDT	07	SW8081B	<4.33 ug/kg dry		4.33	1	09/18/18 12:54	09/19/18 15:22	HLM
Aldrin	07	SW8081B	<2.17 ug/kg dry		2.17	1	09/18/18 12:54	09/19/18 15:22	HLM
alpha-BHC	07	SW8081B	<2.17 ug/kg dry		2.17	1	09/18/18 12:54	09/19/18 15:22	HLM
beta-BHC	07	SW8081B	<2.17 ug/kg dry		2.17	1	09/18/18 12:54	09/19/18 15:22	HLM
Chlordane	07	SW8081B	<45.5 ug/kg dry		45.5	1	09/18/18 12:54	09/19/18 15:22	HLM
delta-BHC	07	SW8081B	<4.33 ug/kg dry		4.33	1	09/18/18 12:54	09/19/18 15:22	HLM
Dieldrin	07	SW8081B	<4.33 ug/kg dry		4.33	1	09/18/18 12:54	09/19/18 15:22	HLM
Endosulfan I	07	SW8081B	<4.33 ug/kg dry		4.33	1	09/18/18 12:54	09/19/18 15:22	HLM
Endosulfan II	07	SW8081B	<6.50 ug/kg dry		6.50	1	09/18/18 12:54	09/19/18 15:22	HLM
Endosulfan sulfate	07	SW8081B	<2.17 ug/kg dry		2.17	1	09/18/18 12:54	09/19/18 15:22	HLM
Endrin	07	SW8081B	<4.33 ug/kg dry		4.33	1	09/18/18 12:54	09/19/18 15:22	HLM
Endrin aldehyde	07	SW8081B	<8.66 ug/kg dry		8.66	1	09/18/18 12:54	09/19/18 15:22	HLM
Endrin ketone	07	SW8081B	<2.17 ug/kg dry		2.17	1	09/18/18 12:54	09/19/18 15:22	HLM
gamma-BHC (Lindane)	07	SW8081B	<2.17 ug/kg dry		2.17	1	09/18/18 12:54	09/19/18 15:22	HLM
Heptachlor	07	SW8081B	<2.17 ug/kg dry		2.17	1	09/18/18 12:54	09/19/18 15:22	HLM
Heptachlor epoxide	07	SW8081B	<43.3 ug/kg dry		43.3	1	09/18/18 12:54	09/19/18 15:22	HLM
Methoxychlor	07	SW8081B	<43.3 ug/kg dry		43.3	1	09/18/18 12:54	09/19/18 15:22	HLM
Mirex	07	SW8081B	<6.50 ug/kg dry		6.50	1	09/18/18 12:54	09/19/18 15:22	HLM
Toxaphene	07	SW8081B	<45.5 ug/kg dry		45.5	1	09/18/18 12:54	09/19/18 15:22	HLM
Surr: TCMX	07	SW8081B	80.0 %		30-105		09/18/18 12:54	09/19/18 15:22	HLM
Surr: DCB	07	SW8081B	95.0 %		30-105		09/18/18 12:54	09/19/18 15:22	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	07	SW8151A	<355 ug/kg dry		355	2	09/13/18 14:02	09/18/18 20:05	SKS
2,4,5-TP (Silvex)	07	SW8151A	<355 ug/kg dry		355	2	09/13/18 14:02	09/18/18 20:05	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0123

Analytical Results

Sample I.D. 41-S7	Laboratory Sample ID: 18I0123-07
Grab Date/Time: 09/05/2018 12:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Herbicides by GC/ECD									
2,4-D	07	SW8151A	<355 ug/kg dry		355	2	09/13/18 14:02	09/18/18 20:05	SKS
Dinoseb	07	SW8151A	<355 ug/kg dry		355	2	09/13/18 14:02	09/18/18 20:05	SKS
Pentachlorophenol	07	SW8151A	<355 ug/kg dry		355	2	09/13/18 14:02	09/18/18 20:05	SKS
<i>Surr: DCAA (Surr)</i>	07	SW8151A	60.0 %		31-87		09/13/18 14:02	09/18/18 20:05	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	07	SW7196A	1.12 mg/kg dry		0.23	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	07	SM18 2540G	84.2 %		0.10	1	09/11/18 13:02	09/11/18 13:02	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S8 **Laboratory Sample ID:** 1810123-08

Grab Date/Time: 09/05/2018 12:05

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	08	SW6010C	<0.603 mg/kg dry		0.603	1	09/10/18 10:30	09/11/18 14:04	BG
Aluminum	08RE1	SW6010C	37800 mg/kg dry		301	100	09/10/18 10:30	09/13/18 15:36	BG
Arsenic	08	SW6010C	1.67 mg/kg dry		1.21	1	09/10/18 10:30	09/11/18 14:04	BG
Barium	08	SW6010C	117 mg/kg dry		0.603	1	09/10/18 10:30	09/11/18 14:04	BG
Beryllium	08	SW6010C	1.83 mg/kg dry		0.241	1	09/10/18 10:30	09/11/18 14:04	BG
Calcium	08RE1	SW6010C	2950 mg/kg dry		60.3	10	09/10/18 10:30	09/13/18 16:25	BG
Cadmium	08	SW6010C	4.02 mg/kg dry		0.241	1	09/10/18 10:30	09/11/18 14:04	BG
Cobalt	08	SW6010C	9.71 mg/kg dry		0.241	1	09/10/18 10:30	09/11/18 14:04	BG
Chromium	08	SW6010C	28.1 mg/kg dry		0.603	1	09/10/18 10:30	09/11/18 14:04	BG
Copper	08	SW6010C	13.2 mg/kg dry		3.01	1	09/10/18 10:30	09/11/18 14:04	BG
Iron	08RE1	SW6010C	78100 mg/kg dry		301	100	09/10/18 10:30	09/13/18 15:36	BG
Mercury	08	SW7471B	0.085 mg/kg dry		0.010	1	09/07/18 09:06	09/07/18 12:53	MWL
Potassium	08	SW6010C	2300 mg/kg dry		30.1	1	09/10/18 10:30	09/11/18 14:04	BG
Magnesium	08RE1	SW6010C	2550 mg/kg dry		30.1	10	09/10/18 10:30	09/13/18 16:26	BG
Manganese	08	SW6010C	294 mg/kg dry		0.603	1	09/10/18 10:30	09/11/18 14:04	BG
Sodium	08	SW6010C	79.7 mg/kg dry		30.1	1	09/10/18 10:30	09/11/18 14:04	BG
Nickel	08	SW6010C	8.76 mg/kg dry		0.603	1	09/10/18 10:30	09/11/18 14:04	BG
Lead	08	SW6010C	116 mg/kg dry		0.603	1	09/10/18 10:30	09/11/18 14:04	BG
Antimony	08	SW6010C	<6.03 mg/kg dry		6.03	1	09/10/18 10:30	09/11/18 14:04	BG
Selenium	08	SW6010C	<3.01 mg/kg dry		3.01	1	09/10/18 10:30	09/11/18 14:04	BG
Thallium	08	SW6010C	<3.01 mg/kg dry		3.01	1	09/10/18 10:30	09/11/18 14:04	BG
Vanadium	08	SW6010C	118 mg/kg dry		0.603	1	09/10/18 10:30	09/11/18 14:04	BG
Zinc	08	SW6010C	133 mg/kg dry		0.603	1	09/10/18 10:30	09/11/18 14:04	BG
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	08	SW8081B	<6.94 ug/kg dry		6.94	1	09/18/18 12:54	09/19/18 15:41	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810123

Analytical Results

Sample I.D. 41-S8	Laboratory Sample ID: 1810123-08
Grab Date/Time: 09/05/2018 12:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDE	08	SW8081B	11.6 ug/kg dry	4.63	1		09/18/18 12:54	09/19/18 15:41	HLM
4,4'-DDT	08	SW8081B	9.64 ug/kg dry	4.63	1		09/18/18 12:54	09/19/18 15:41	HLM
Aldrin	08	SW8081B	<2.31 ug/kg dry	2.31	1		09/18/18 12:54	09/19/18 15:41	HLM
alpha-BHC	08	SW8081B	<2.31 ug/kg dry	2.31	1		09/18/18 12:54	09/19/18 15:41	HLM
beta-BHC	08	SW8081B	<2.31 ug/kg dry	2.31	1		09/18/18 12:54	09/19/18 15:41	HLM
Chlordane	08	SW8081B	<48.6 ug/kg dry	48.6	1		09/18/18 12:54	09/19/18 15:41	HLM
delta-BHC	08	SW8081B	<4.63 ug/kg dry	4.63	1		09/18/18 12:54	09/19/18 15:41	HLM
Dieldrin	08	SW8081B	<4.63 ug/kg dry	4.63	1		09/18/18 12:54	09/19/18 15:41	HLM
Endosulfan I	08	SW8081B	<4.63 ug/kg dry	4.63	1		09/18/18 12:54	09/19/18 15:41	HLM
Endosulfan II	08	SW8081B	<6.94 ug/kg dry	6.94	1		09/18/18 12:54	09/19/18 15:41	HLM
Endosulfan sulfate	08	SW8081B	<2.31 ug/kg dry	2.31	1		09/18/18 12:54	09/19/18 15:41	HLM
Endrin	08	SW8081B	<4.63 ug/kg dry	4.63	1		09/18/18 12:54	09/19/18 15:41	HLM
Endrin aldehyde	08	SW8081B	<9.25 ug/kg dry	9.25	1		09/18/18 12:54	09/19/18 15:41	HLM
Endrin ketone	08	SW8081B	<2.31 ug/kg dry	2.31	1		09/18/18 12:54	09/19/18 15:41	HLM
gamma-BHC (Lindane)	08	SW8081B	<2.31 ug/kg dry	2.31	1		09/18/18 12:54	09/19/18 15:41	HLM
Heptachlor	08	SW8081B	<2.31 ug/kg dry	2.31	1		09/18/18 12:54	09/19/18 15:41	HLM
Heptachlor epoxide	08	SW8081B	<46.3 ug/kg dry	46.3	1		09/18/18 12:54	09/19/18 15:41	HLM
Methoxychlor	08	SW8081B	<46.3 ug/kg dry	46.3	1		09/18/18 12:54	09/19/18 15:41	HLM
Mirex	08	SW8081B	<6.94 ug/kg dry	6.94	1		09/18/18 12:54	09/19/18 15:41	HLM
Toxaphene	08	SW8081B	<48.6 ug/kg dry	48.6	1		09/18/18 12:54	09/19/18 15:41	HLM
Surr: TCMX	08	SW8081B	80.0 %			30-105	09/18/18 12:54	09/19/18 15:41	HLM
Surr: DCB	08	SW8081B	105 %			30-105	09/18/18 12:54	09/19/18 15:41	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	08	SW8151A	<359 ug/kg dry	359	2		09/13/18 14:02	09/18/18 20:22	SKS
2,4,5-TP (Silvex)	08	SW8151A	<359 ug/kg dry	359	2		09/13/18 14:02	09/18/18 20:22	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0123

Analytical Results

Sample I.D. 41-S8	Laboratory Sample ID: 18I0123-08
Grab Date/Time: 09/05/2018 12:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Herbicides by GC/ECD									
2,4-D	08	SW8151A	<359 ug/kg dry		359	2	09/13/18 14:02	09/18/18 20:22	SKS
Dinoseb	08	SW8151A	<359 ug/kg dry		359	2	09/13/18 14:02	09/18/18 20:22	SKS
Pentachlorophenol	08	SW8151A	<359 ug/kg dry		359	2	09/13/18 14:02	09/18/18 20:22	SKS
<i>Surr: DCAA (Surr)</i>	08	SW8151A	50.0 %		31-87		09/13/18 14:02	09/18/18 20:22	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	08	SW7196A	0.25 mg/kg dry		0.25	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	08	SM18 2540G	79.8 %		0.10	1	09/11/18 13:02	09/11/18 13:02	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/20/2018 13:47

Submitted To: Jeff Fisher

Project Number: 18-760 Task 2.7

Client Site I.D.: CVTC

Purchase Order: 18-760

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Wet Chemistry Analysis

Preparation Method: No Prep Wet Chem

18I0123-01	1.00 g / 1.00 mL	SM18 2540G	BBI0282	SBI0248	
18I0123-02	1.00 g / 1.00 mL	SM18 2540G	BBI0282	SBI0248	
18I0123-03	1.00 g / 1.00 mL	SM18 2540G	BBI0282	SBI0248	
18I0123-04	1.00 g / 1.00 mL	SM18 2540G	BBI0282	SBI0248	
18I0123-05	1.00 g / 1.00 mL	SM18 2540G	BBI0282	SBI0248	
18I0123-06	1.00 g / 1.00 mL	SM18 2540G	BBI0282	SBI0248	
18I0123-07	1.00 g / 1.00 mL	SM18 2540G	BBI0282	SBI0248	
18I0123-08	1.00 g / 1.00 mL	SM18 2540G	BBI0282	SBI0248	

Wet Chemistry Analysis

Preparation Method: No Prep Wet Chem

18I0123-01	2.53 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0123-01RE1	2.53 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0123-02	2.51 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0123-03	2.51 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0123-04	2.51 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0123-05	2.55 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0123-06	2.56 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0123-07	2.54 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0123-08	2.54 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method: SW3050B

18I0123-01	1.06 g / 50.0 mL	SW6010C	BBI0223	SBI0257	AI80042
18I0123-01RE1	1.06 g / 50.0 mL	SW6010C	BBI0223	SBI0369	AI80057
18I0123-02	1.05 g / 50.0 mL	SW6010C	BBI0223	SBI0257	AI80042
18I0123-02RE1	1.05 g / 50.0 mL	SW6010C	BBI0223	SBI0369	AI80057
18I0123-03	1.01 g / 50.0 mL	SW6010C	BBI0223	SBI0257	AI80042
18I0123-03RE1	1.01 g / 50.0 mL	SW6010C	BBI0223	SBI0369	AI80057
18I0123-04	1.09 g / 50.0 mL	SW6010C	BBI0223	SBI0257	AI80042
18I0123-04RE1	1.09 g / 50.0 mL	SW6010C	BBI0223	SBI0369	AI80057



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0123-05	1.04 g / 50.0 mL	SW6010C	BBI0223	SBI0257	AI80042
18I0123-05RE1	1.04 g / 50.0 mL	SW6010C	BBI0223	SBI0369	AI80057
18I0123-06	1.04 g / 50.0 mL	SW6010C	BBI0223	SBI0257	AI80042
18I0123-06RE1	1.04 g / 50.0 mL	SW6010C	BBI0223	SBI0369	AI80057
18I0123-07	1.08 g / 50.0 mL	SW6010C	BBI0223	SBI0257	AI80042
18I0123-07RE1	1.08 g / 50.0 mL	SW6010C	BBI0223	SBI0369	AI80057
18I0123-08	1.04 g / 50.0 mL	SW6010C	BBI0223	SBI0257	AI80042
18I0123-08RE1	1.04 g / 50.0 mL	SW6010C	BBI0223	SBI0369	AI80057

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Herbicides by GC/ECD		Preparation Method: SW3510C			
18I0123-01	30.2 g / 5.00 mL	SW8151A	BBI0418	SBI0476	AG80138
18I0123-02	32.7 g / 5.00 mL	SW8151A	BBI0418	SBI0476	AG80138
18I0123-03	30.0 g / 5.00 mL	SW8151A	BBI0418	SBI0476	AG80138
18I0123-04	30.5 g / 5.00 mL	SW8151A	BBI0418	SBI0476	AG80138
18I0123-05	30.5 g / 5.00 mL	SW8151A	BBI0418	SBI0476	AG80138
18I0123-06	30.6 g / 5.00 mL	SW8151A	BBI0418	SBI0476	AG80138
18I0123-07	30.1 g / 5.00 mL	SW8151A	BBI0418	SBI0476	AG80138
18I0123-08	31.4 g / 5.00 mL	SW8151A	BBI0418	SBI0476	AG80138

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method: SW3510C			
18I0123-01	31.7 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-01RE1	31.7 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-02	31.1 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-03	31.6 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-04	30.7 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-04RE1	30.7 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-05	30.9 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-05RE1	30.9 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-06	32.1 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-07	32.9 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036
18I0123-08	32.5 g / 5.00 mL	SW8081B	BBI0451	SBI0522	AD80036

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW7471B			
1810123-01	0.505 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027
1810123-02	0.515 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027
1810123-02RE1	0.515 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027
1810123-03	0.506 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027
1810123-03RE1	0.506 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027
1810123-04	0.511 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027
1810123-05	0.509 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027
1810123-06	0.507 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027
1810123-07	0.510 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027
1810123-08	0.500 g / 20.0 mL	SW7471B	BB10172	SBI0182	AI80027



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	--------	-----	-----------	------

Batch BBI0172 - SW7471B

Blank (BBI0172-BLK1)				Prepared & Analyzed: 09/07/2018						
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							
LCS (BBI0172-BS1)				Prepared & Analyzed: 09/07/2018						
Mercury	0.098 mg/kg wet	0.008	mg/kg wet	0.0998	mg/kg wet	97.9	80-120			
LCS Dup (BBI0172-BSD1)				Prepared & Analyzed: 09/07/2018						
Mercury	0.096 mg/kg wet	0.008	mg/kg wet	0.0973	mg/kg wet	99.2	80-120	1.23	20	
Matrix Spike (BBI0172-MS1)				Source: 1810001-01			Prepared & Analyzed: 09/07/2018			
Mercury	0.154 mg/kg dry	0.009	mg/kg dry	0.117	0.022 mg/kg dry	113	80-120			
Matrix Spike Dup (BBI0172-MSD1)				Source: 1810001-01			Prepared & Analyzed: 09/07/2018			
Mercury	0.155 mg/kg dry	0.009	mg/kg dry	0.117	0.022 mg/kg dry	114	80-120	0.765	20	

Batch BBI0223 - SW3050B

Blank (BBI0223-BLK1)				Prepared: 09/10/2018 Analyzed: 09/11/2018						
Manganese	<0.500 mg/kg wet	0.500	mg/kg wet							
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet							
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet							
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet							
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet							
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet							
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet							
Copper	<2.50 mg/kg wet	2.50	mg/kg wet							
Iron	<2.50 mg/kg wet	2.50	mg/kg wet							
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet							
Magnesium	<2.50 mg/kg wet	2.50	mg/kg wet							
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet							
Sodium	<25.0 mg/kg wet	25.0	mg/kg wet							
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet							
Lead	<0.500 mg/kg wet	0.500	mg/kg wet							
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0223 - SW3050B

Blank (BBI0223-BLK1)

Prepared: 09/10/2018 Analyzed: 09/11/2018

Potassium	<25.0 mg/kg wet	25.0	mg/kg wet							
Barium	<0.500 mg/kg wet	0.500	mg/kg wet							
Aluminum	2.89 mg/kg wet	2.50	mg/kg wet							
Silver	<0.500 mg/kg wet	0.500	mg/kg wet							
Calcium	<5.00 mg/kg wet	5.00	mg/kg wet							
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet							

LCS (BBI0223-BS1)

Prepared: 09/10/2018 Analyzed: 09/11/2018

Magnesium	97.9 mg/kg wet	2.50	mg/kg wet	94.3	mg/kg wet	104	80-120			
Selenium	92.0 mg/kg wet	2.50	mg/kg wet	94.3	mg/kg wet	97.5	80-120			
Calcium	103 mg/kg wet	5.00	mg/kg wet	94.3	mg/kg wet	109	80-120			
Nickel	99.1 mg/kg wet	0.500	mg/kg wet	94.3	mg/kg wet	105	80-120			
Arsenic	93.1 mg/kg wet	1.00	mg/kg wet	94.3	mg/kg wet	98.7	80-120			
Thallium	90.6 mg/kg wet	2.50	mg/kg wet	94.3	mg/kg wet	96.0	80-120			
Manganese	100 mg/kg wet	0.500	mg/kg wet	94.3	mg/kg wet	106	80-120			
Iron	100 mg/kg wet	2.50	mg/kg wet	94.3	mg/kg wet	107	80-120			
Zinc	97.1 mg/kg wet	0.500	mg/kg wet	94.3	mg/kg wet	103	80-120			
Potassium	257 mg/kg wet	25.0	mg/kg wet	236	mg/kg wet	109	80-120			
Aluminum	105 mg/kg wet	2.50	mg/kg wet	94.3	mg/kg wet	111	80-120			
Sodium	262 mg/kg wet	25.0	mg/kg wet	236	mg/kg wet	111	80-120			
Copper	96.3 mg/kg wet	2.50	mg/kg wet	94.3	mg/kg wet	102	80-120			
Lead	98.8 mg/kg wet	0.500	mg/kg wet	94.3	mg/kg wet	105	80-120			
Vanadium	99.7 mg/kg wet	0.500	mg/kg wet	94.3	mg/kg wet	106	80-120			
Cadmium	97.8 mg/kg wet	0.200	mg/kg wet	94.3	mg/kg wet	104	80-120			
Cobalt	98.3 mg/kg wet	0.200	mg/kg wet	94.3	mg/kg wet	104	80-120			
Antimony	93.9 mg/kg wet	5.00	mg/kg wet	94.3	mg/kg wet	99.5	80-120			
Beryllium	95.0 mg/kg wet	0.200	mg/kg wet	94.3	mg/kg wet	101	80-120			
Barium	103 mg/kg wet	0.500	mg/kg wet	94.3	mg/kg wet	109	80-120			
Silver	5.10 mg/kg wet	0.500	mg/kg wet	4.72	mg/kg wet	108	80-120			
Chromium	96.5 mg/kg wet	0.500	mg/kg wet	94.3	mg/kg wet	102	80-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0223 - SW3050B

LCS Dup (BBI0223-BSD1)

Prepared: 09/10/2018 Analyzed: 09/11/2018

Manganese	103 mg/kg wet	0.500	mg/kg wet	97.0	mg/kg wet	106	80-120	2.43	20	
Silver	5.27 mg/kg wet	0.500	mg/kg wet	4.85	mg/kg wet	109	80-120	3.12	20	
Antimony	95.8 mg/kg wet	5.00	mg/kg wet	97.0	mg/kg wet	98.8	80-120	2.07	20	
Nickel	102 mg/kg wet	0.500	mg/kg wet	97.0	mg/kg wet	105	80-120	2.96	20	
Sodium	269 mg/kg wet	25.0	mg/kg wet	242	mg/kg wet	111	80-120	2.87	20	
Lead	101 mg/kg wet	0.500	mg/kg wet	97.0	mg/kg wet	105	80-120	2.66	20	
Selenium	94.7 mg/kg wet	2.50	mg/kg wet	97.0	mg/kg wet	97.6	80-120	2.91	20	
Beryllium	97.4 mg/kg wet	0.200	mg/kg wet	97.0	mg/kg wet	100	80-120	2.50	20	
Barium	106 mg/kg wet	0.500	mg/kg wet	97.0	mg/kg wet	110	80-120	2.94	20	
Cobalt	101 mg/kg wet	0.200	mg/kg wet	97.0	mg/kg wet	104	80-120	2.63	20	
Chromium	98.4 mg/kg wet	0.500	mg/kg wet	97.0	mg/kg wet	101	80-120	1.91	20	
Copper	99.0 mg/kg wet	2.50	mg/kg wet	97.0	mg/kg wet	102	80-120	2.81	20	
Thallium	91.4 mg/kg wet	2.50	mg/kg wet	97.0	mg/kg wet	94.2	80-120	0.900	20	
Iron	103 mg/kg wet	2.50	mg/kg wet	97.0	mg/kg wet	106	80-120	2.31	20	
Vanadium	102 mg/kg wet	0.500	mg/kg wet	97.0	mg/kg wet	105	80-120	2.42	20	
Magnesium	99.7 mg/kg wet	2.50	mg/kg wet	97.0	mg/kg wet	103	80-120	1.81	20	
Calcium	103 mg/kg wet	5.00	mg/kg wet	97.0	mg/kg wet	106	80-120	0.0840	20	
Arsenic	95.8 mg/kg wet	1.00	mg/kg wet	97.0	mg/kg wet	98.8	80-120	2.92	20	
Zinc	100 mg/kg wet	0.500	mg/kg wet	97.0	mg/kg wet	103	80-120	3.13	20	
Aluminum	107 mg/kg wet	2.50	mg/kg wet	97.0	mg/kg wet	110	80-120	2.02	20	
Potassium	260 mg/kg wet	25.0	mg/kg wet	242	mg/kg wet	107	80-120	1.23	20	
Cadmium	101 mg/kg wet	0.200	mg/kg wet	97.0	mg/kg wet	104	80-120	3.01	20	

Matrix Spike (BBI0223-MS1)

Source: 1810123-01

Prepared: 09/10/2018 Analyzed: 09/11/2018

Vanadium	324 mg/kg dry	0.585	mg/kg dry	117	258 mg/kg dry	56.8	75-125			M
Nickel	117 mg/kg dry	0.585	mg/kg dry	117	6.07 mg/kg dry	94.8	75-125			
Manganese	502 mg/kg dry	0.585	mg/kg dry	117	244 mg/kg dry	221	75-125			M
Sodium	404 mg/kg dry	29.3	mg/kg dry	293	124 mg/kg dry	95.6	75-125			
Beryllium	118 mg/kg dry	0.234	mg/kg dry	117	2.68 mg/kg dry	98.3	75-125			
Silver	5.06 mg/kg dry	0.585	mg/kg dry	5.85	<0.585 mg/kg dry	86.5	75-125			
Aluminum	38800 mg/kg dry	2.93	mg/kg dry	117	28200 mg/kg dry	9010	75-125			M, E
Arsenic	100 mg/kg dry	1.17	mg/kg dry	117	<1.17 mg/kg dry	85.8	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-----------	--------	-----	-----------	------

Batch BBI0223 - SW3050B

Matrix Spike (BBI0223-MS1)

Source: 18I0123-01

Prepared: 09/10/2018 Analyzed: 09/11/2018

Barium	242 mg/kg dry	0.585	mg/kg dry	117	97.0 mg/kg dry	124	75-125			
Chromium	129 mg/kg dry	0.585	mg/kg dry	117	23.3 mg/kg dry	90.1	75-125			
Copper	124 mg/kg dry	2.93	mg/kg dry	117	6.61 mg/kg dry	100	75-125			
Cobalt	125 mg/kg dry	0.234	mg/kg dry	117	8.76 mg/kg dry	99.6	75-125			
Potassium	1660 mg/kg dry	29.3	mg/kg dry	293	1290 mg/kg dry	127	75-125			M
Selenium	90.1 mg/kg dry	2.93	mg/kg dry	117	<2.93 mg/kg dry	76.9	75-125			
Calcium	3460 mg/kg dry	5.85	mg/kg dry	117	3460 mg/kg dry	-3.57	75-125			M, E
Thallium	93.8 mg/kg dry	2.93	mg/kg dry	117	<2.93 mg/kg dry	80.1	75-125			
Cadmium	111 mg/kg dry	0.234	mg/kg dry	117	3.37 mg/kg dry	91.8	75-125			
Magnesium	1450 mg/kg dry	2.93	mg/kg dry	117	1320 mg/kg dry	108	75-125			E
Lead	206 mg/kg dry	0.585	mg/kg dry	117	79.1 mg/kg dry	108	75-125			
Antimony	36.5 mg/kg dry	5.85	mg/kg dry	117	<5.85 mg/kg dry	31.1	75-125			M
Iron	26000 mg/kg dry	2.93	mg/kg dry	117	27500 mg/kg dry	1230	75-125			M, E
Zinc	184 mg/kg dry	0.585	mg/kg dry	117	69.7 mg/kg dry	97.3	75-125			

Matrix Spike (BBI0223-MS2)

Source: 18I0123-01

Prepared: 09/10/2018 Analyzed: 09/13/2018

Manganese	646 mg/kg dry	5.85	mg/kg dry	117	244 mg/kg dry	344	75-125			M2
Magnesium	2050 mg/kg dry	29.3	mg/kg dry	117	1320 mg/kg dry	623	75-125			M2
Lead	276 mg/kg dry	5.85	mg/kg dry	117	79.1 mg/kg dry	168	75-125			M2
Calcium	4730 mg/kg dry	58.5	mg/kg dry	117	3460 mg/kg dry	1080	75-125			M2
Iron	70100 mg/kg dry	2930	mg/kg dry	117	27500 mg/kg dry	86400	75-125			M2
Aluminum	66600 mg/kg dry	293	mg/kg dry	117	28200 mg/kg dry	82800	75-125			M2
Zinc	244 mg/kg dry	5.85	mg/kg dry	117	69.7 mg/kg dry	149	75-125			M2

Matrix Spike Dup (BBI0223-MSD1)

Source: 18I0123-01

Prepared: 09/10/2018 Analyzed: 09/11/2018

Thallium	97.8 mg/kg dry	3.03	mg/kg dry	121	<3.03 mg/kg dry	80.7	75-125	4.21	20	
Manganese	351 mg/kg dry	0.606	mg/kg dry	121	244 mg/kg dry	88.5	75-125	35.4	20	P
Magnesium	1650 mg/kg dry	3.03	mg/kg dry	121	1320 mg/kg dry	274	75-125	13.3	20	M, E
Silver	5.26 mg/kg dry	0.606	mg/kg dry	6.06	<0.606 mg/kg dry	86.8	75-125	3.83	20	
Potassium	1920 mg/kg dry	30.3	mg/kg dry	303	1290 mg/kg dry	207	75-125	14.3	20	M
Chromium	141 mg/kg dry	0.606	mg/kg dry	121	23.3 mg/kg dry	96.8	75-125	8.81	20	
Selenium	93.5 mg/kg dry	3.03	mg/kg dry	121	<3.03 mg/kg dry	77.1	75-125	3.76	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/20/2018 13:47
Submitted To:	Jeff Fisher	Project Number:	18-760 Task 2.7
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0223 - SW3050B

Matrix Spike Dup (BBI0223-MSD1)

Source: 18I0123-01

Prepared: 09/10/2018 Analyzed: 09/11/2018

Cadmium	117 mg/kg dry	0.243	mg/kg dry	121	3.37 mg/kg dry	94.1	75-125	5.77	20	
Barium	221 mg/kg dry	0.606	mg/kg dry	121	97.0 mg/kg dry	103	75-125	8.88	20	
Vanadium	378 mg/kg dry	0.606	mg/kg dry	121	258 mg/kg dry	99.5	75-125	15.4	20	
Aluminum	46300 mg/kg dry	3.03	mg/kg dry	121	28200 mg/kg dry	4900	75-125	17.7	20	M, E
Copper	130 mg/kg dry	3.03	mg/kg dry	121	6.61 mg/kg dry	102	75-125	4.86	20	
Iron	28100 mg/kg dry	3.03	mg/kg dry	121	27500 mg/kg dry	511	75-125	7.63	20	M, E
Arsenic	107 mg/kg dry	1.21	mg/kg dry	121	<1.21 mg/kg dry	88.3	75-125	6.35	20	
Calcium	3590 mg/kg dry	6.06	mg/kg dry	121	3460 mg/kg dry	102	75-125	3.61	20	E
Beryllium	126 mg/kg dry	0.243	mg/kg dry	121	2.68 mg/kg dry	102	75-125	7.00	20	
Cobalt	123 mg/kg dry	0.243	mg/kg dry	121	8.76 mg/kg dry	94.3	75-125	1.87	20	
Lead	237 mg/kg dry	0.606	mg/kg dry	121	79.1 mg/kg dry	131	75-125	14.1	20	M
Nickel	123 mg/kg dry	0.606	mg/kg dry	121	6.07 mg/kg dry	96.3	75-125	4.73	20	
Antimony	38.4 mg/kg dry	6.06	mg/kg dry	121	<6.06 mg/kg dry	31.6	75-125	5.11	20	M
Sodium	447 mg/kg dry	30.3	mg/kg dry	303	124 mg/kg dry	106	75-125	10.0	20	
Zinc	199 mg/kg dry	0.606	mg/kg dry	121	69.7 mg/kg dry	107	75-125	8.12	20	

Matrix Spike Dup (BBI0223-MSD2)

Source: 18I0123-01

Prepared: 09/10/2018 Analyzed: 09/13/2018

Aluminum	86200 mg/kg dry	303	mg/kg dry	121	28200 mg/kg dry	47800	75-125	25.6	20	M2, P
Calcium	5060 mg/kg dry	60.6	mg/kg dry	121	3460 mg/kg dry	1310	75-125	6.73	20	M2
Lead	330 mg/kg dry	6.06	mg/kg dry	121	79.1 mg/kg dry	207	75-125	17.8	20	M2
Iron	67900 mg/kg dry	3030	mg/kg dry	121	27500 mg/kg dry	33300	75-125	3.21	20	M2
Zinc	274 mg/kg dry	6.06	mg/kg dry	121	69.7 mg/kg dry	168	75-125	11.6	20	M2
Magnesium	2380 mg/kg dry	30.3	mg/kg dry	121	1320 mg/kg dry	876	75-125	15.0	20	M2
Manganese	459 mg/kg dry	6.06	mg/kg dry	121	244 mg/kg dry	177	75-125	33.9	20	M2, P



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0451 - SW3510C

Blank (BBI0451-BLK1)

Prepared: 09/18/2018 Analyzed: 09/19/2018

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet							
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet							
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet							
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet							
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet							
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet							
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet							
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet							
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet							
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet							
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet							
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet							
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet							
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet							
Endrin ketone	<2.00 ug/kg wet	2.00	ug/kg wet							
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet							
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet							
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet							
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet							
Mirex	<6.00 ug/kg wet	6.00	ug/kg wet							
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet							

Surr: TCMX

27.8

ug/kg wet

30.9

90.0 30-105

Surr: DCB

29.3

ug/kg wet

30.9

95.0 30-105

LCS (BBI0451-BS1)

Prepared: 09/18/2018 Analyzed: 09/19/2018

4,4'-DDD	17.1 ug/kg wet	6.00	ug/kg wet	15.5	ug/kg wet	110	23-134			
4,4'-DDE	14.0 ug/kg wet	4.00	ug/kg wet	15.5	ug/kg wet	90.0	23-134			
4,4'-DDT	17.1 ug/kg wet	4.00	ug/kg wet	15.5	ug/kg wet	110	23-134			
Aldrin	15.5 ug/kg wet	2.00	ug/kg wet	15.5	ug/kg wet	100	23-134			
alpha-BHC	15.5 ug/kg wet	2.00	ug/kg wet	15.5	ug/kg wet	100	23-134			
beta-BHC	17.1 ug/kg wet	2.00	ug/kg wet	15.5	ug/kg wet	110	23-134			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/20/2018 13:47
Submitted To:	Jeff Fisher	Project Number:	18-760 Task 2.7
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0451 - SW3510C

LCS (BBI0451-BS1)

Prepared: 09/18/2018 Analyzed: 09/19/2018

delta-BHC	17.1 ug/kg wet	4.00	ug/kg wet	15.5	ug/kg wet	110	23-134			
Dieldrin	15.5 ug/kg wet	4.00	ug/kg wet	15.5	ug/kg wet	100	23-134			
Endosulfan I	15.5 ug/kg wet	4.00	ug/kg wet	15.5	ug/kg wet	100	23-134			
Endosulfan II	17.1 ug/kg wet	6.00	ug/kg wet	15.5	ug/kg wet	110	23-134			
Endosulfan sulfate	15.5 ug/kg wet	2.00	ug/kg wet	15.5	ug/kg wet	100	23-134			
Endrin	17.1 ug/kg wet	4.00	ug/kg wet	15.5	ug/kg wet	110	23-134			
Endrin aldehyde	15.5 ug/kg wet	8.00	ug/kg wet	15.5	ug/kg wet	100	23-134			
Endrin ketone	17.1 ug/kg wet	2.00	ug/kg wet	15.5	ug/kg wet	110	23-134			
gamma-BHC (Lindane)	15.5 ug/kg wet	2.00	ug/kg wet	15.5	ug/kg wet	100	23-134			
Heptachlor	14.0 ug/kg wet	2.00	ug/kg wet	15.5	ug/kg wet	90.0	23-134			
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet	15.5	ug/kg wet	100	23-134			
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet	15.5	ug/kg wet	110	23-134			
Mirex	15.5 ug/kg wet	6.00	ug/kg wet	15.5	ug/kg wet	100	23-134			
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	26.4		ug/kg wet	31.1	ug/kg wet	85.0	30-105			
Surr: DCB	31.1		ug/kg wet	31.1	ug/kg wet	100	30-105			

LCS (BBI0451-BS2)

Prepared: 09/18/2018 Analyzed: 09/19/2018

Toxaphene	320 ug/kg wet	42.0	ug/kg wet	402	ug/kg wet	79.6	23-134			
-----------	---------------	------	-----------	-----	-----------	------	--------	--	--	--

LCS (BBI0451-BS3)

Prepared: 09/18/2018 Analyzed: 09/19/2018

Chlordane	297 ug/kg wet	42.0	ug/kg wet	399	ug/kg wet	74.4	23-134			
-----------	---------------	------	-----------	-----	-----------	------	--------	--	--	--

Matrix Spike (BBI0451-MS1)

Source: 18I0123-03

Prepared: 09/18/2018 Analyzed: 09/19/2018

4,4'-DDD	30.4 ug/kg dry	6.44	ug/kg dry	17.9	12.4 ug/kg dry	101	23-134			
4,4'-DDE	21.5 ug/kg dry	4.29	ug/kg dry	17.9	12.4 ug/kg dry	50.7	23-134			
4,4'-DDT	26.8 ug/kg dry	4.29	ug/kg dry	17.9	14.2 ug/kg dry	70.8	23-134			
Aldrin	10.7 ug/kg dry	2.15	ug/kg dry	17.9	<2.15 ug/kg dry	60.0	23-134			
alpha-BHC	10.7 ug/kg dry	2.15	ug/kg dry	17.9	<2.15 ug/kg dry	60.0	23-134			
beta-BHC	10.7 ug/kg dry	2.15	ug/kg dry	17.9	<2.15 ug/kg dry	60.0	23-134			
delta-BHC	12.5 ug/kg dry	4.29	ug/kg dry	17.9	<4.29 ug/kg dry	70.0	23-134			
Dieldrin	16.1 ug/kg dry	4.29	ug/kg dry	17.9	<4.29 ug/kg dry	90.0	23-134			
Endosulfan I	14.3 ug/kg dry	4.29	ug/kg dry	17.9	<4.29 ug/kg dry	80.0	23-134			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0451 - SW3510C

Matrix Spike (BBI0451-MS1)

Source: 1810123-03

Prepared: 09/18/2018 Analyzed: 09/19/2018

Endosulfan II	12.5 ug/kg dry	6.44	ug/kg dry	17.9	<6.44 ug/kg dry	70.0	23-134			
Endosulfan sulfate	14.3 ug/kg dry	2.15	ug/kg dry	17.9	<2.15 ug/kg dry	80.0	23-134			
Endrin	14.3 ug/kg dry	4.29	ug/kg dry	17.9	<4.29 ug/kg dry	80.0	23-134			
Endrin aldehyde	12.5 ug/kg dry	8.58	ug/kg dry	17.9	<8.58 ug/kg dry	70.0	23-134			
Endrin ketone	16.1 ug/kg dry	2.15	ug/kg dry	17.9	<2.15 ug/kg dry	90.0	23-134			
gamma-BHC (Lindane)	12.5 ug/kg dry	2.15	ug/kg dry	17.9	<2.15 ug/kg dry	70.0	23-134			
Heptachlor	8.94 ug/kg dry	2.15	ug/kg dry	17.9	<2.15 ug/kg dry	50.0	23-134			
Heptachlor epoxide	<42.9 ug/kg dry	42.9	ug/kg dry	17.9	<42.9 ug/kg dry	70.0	23-134			
Methoxychlor	<42.9 ug/kg dry	42.9	ug/kg dry	17.9	<42.9 ug/kg dry	40.0	23-134			
Mirex	10.7 ug/kg dry	6.44	ug/kg dry	17.9	<6.44 ug/kg dry	60.0	23-134			
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	19.7		ug/kg dry	35.8	ug/kg dry	55.0	30-105			
Surr: DCB	30.4		ug/kg dry	35.8	ug/kg dry	85.0	30-105			

Matrix Spike Dup (BBI0451-MSD1)

Source: 1810123-03

Prepared: 09/18/2018 Analyzed: 09/19/2018

4,4'-DDD	32.0 ug/kg dry	6.39	ug/kg dry	17.8	12.4 ug/kg dry	110	23-134	5.08	20	
4,4'-DDE	23.1 ug/kg dry	4.26	ug/kg dry	17.8	12.4 ug/kg dry	60.2	23-134	7.36	20	
4,4'-DDT	12.4 ug/kg dry	4.26	ug/kg dry	17.8	14.2 ug/kg dry	-9.75	23-134	73.3	20	M, P
Aldrin	12.4 ug/kg dry	2.13	ug/kg dry	17.8	<2.13 ug/kg dry	70.0	23-134	14.8	20	
alpha-BHC	14.2 ug/kg dry	2.13	ug/kg dry	17.8	<2.13 ug/kg dry	80.0	23-134	27.9	20	P
beta-BHC	16.0 ug/kg dry	2.13	ug/kg dry	17.8	<2.13 ug/kg dry	90.0	23-134	39.4	20	P
delta-BHC	16.0 ug/kg dry	4.26	ug/kg dry	17.8	<4.26 ug/kg dry	90.0	23-134	24.4	20	P
Dieldrin	16.0 ug/kg dry	4.26	ug/kg dry	17.8	<4.26 ug/kg dry	90.0	23-134	0.637	20	
Endosulfan I	14.2 ug/kg dry	4.26	ug/kg dry	17.8	<4.26 ug/kg dry	80.0	23-134	0.637	20	
Endosulfan II	14.2 ug/kg dry	6.39	ug/kg dry	17.8	<6.39 ug/kg dry	80.0	23-134	12.7	20	
Endosulfan sulfate	16.0 ug/kg dry	2.13	ug/kg dry	17.8	<2.13 ug/kg dry	90.0	23-134	11.1	20	
Endrin	16.0 ug/kg dry	4.26	ug/kg dry	17.8	<4.26 ug/kg dry	90.0	23-134	11.1	20	
Endrin aldehyde	14.2 ug/kg dry	8.53	ug/kg dry	17.8	<8.53 ug/kg dry	80.0	23-134	12.7	20	
Endrin ketone	12.4 ug/kg dry	2.13	ug/kg dry	17.8	<2.13 ug/kg dry	70.0	23-134	25.6	20	P
gamma-BHC (Lindane)	16.0 ug/kg dry	2.13	ug/kg dry	17.8	<2.13 ug/kg dry	90.0	23-134	24.4	20	P
Heptachlor	10.7 ug/kg dry	2.13	ug/kg dry	17.8	<2.13 ug/kg dry	60.0	23-134	17.6	20	
Heptachlor epoxide	<42.6 ug/kg dry	42.6	ug/kg dry	17.8	<42.6 ug/kg dry	90.0	23-134	24.4	20	P



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/20/2018 13:47
Submitted To:	Jeff Fisher	Project Number:	18-760 Task 2.7
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0451 - SW3510C

Matrix Spike Dup (BBI0451-MSD1)

Source: 18I0123-03

Prepared: 09/18/2018 Analyzed: 09/19/2018

Methoxychlor	<42.6 ug/kg dry	42.6	ug/kg dry	17.8	<42.6 ug/kg dry	40.0	23-134	0.637	20	
Mirex	14.2 ug/kg dry	6.39	ug/kg dry	17.8	<6.39 ug/kg dry	80.0	23-134	27.9	20	P
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	23.1		ug/kg dry	35.5	ug/kg dry	65.0	30-105			
Surr: DCB	30.2		ug/kg dry	35.5	ug/kg dry	85.0	30-105			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Herbicides by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0418 - SW3510C

Blank (BBI0418-BLK1)

Prepared: 09/13/2018 Analyzed: 09/18/2018

2,4,5-T	<150 ug/kg wet	150	ug/kg wet							
2,4,5-TP (Silvex)	<150 ug/kg wet	150	ug/kg wet							
2,4-D	<150 ug/kg wet	150	ug/kg wet							
Dinoseb	<150 ug/kg wet	150	ug/kg wet							
Pentachlorophenol	<150 ug/kg wet	150	ug/kg wet							
Surr: DCAA (Surr)	13.3		ug/kg wet	33.3		40.0	31-87			

LCS (BBI0418-BS1)

Prepared: 09/13/2018 Analyzed: 09/18/2018

2,4,5-T	<150 ug/kg wet	150	ug/kg wet	16.6	ug/kg wet	60.0	62-98			L
2,4,5-TP (Silvex)	<150 ug/kg wet	150	ug/kg wet	16.6	ug/kg wet	80.0	55-106			
2,4-D	<150 ug/kg wet	150	ug/kg wet	16.6	ug/kg wet	80.0	57-114			
Dinoseb	<150 ug/kg wet	150	ug/kg wet	16.6	ug/kg wet	40.0	53-111			L
Pentachlorophenol	<150 ug/kg wet	150	ug/kg wet	16.6	ug/kg wet	50.0	50-96			L
Surr: DCAA (Surr)	15.0		ug/kg wet	33.2	ug/kg wet	45.0	31-87			

Matrix Spike (BBI0418-MS1)

Source: 18I0123-07

Prepared: 09/13/2018 Analyzed: 09/18/2018

2,4,5-T	<355 ug/kg dry	355	ug/kg dry	19.7	<355 ug/kg dry	60.0	50-130			
2,4,5-TP (Silvex)	<355 ug/kg dry	355	ug/kg dry	19.7	<355 ug/kg dry	60.0	55-106			
2,4-D	<355 ug/kg dry	355	ug/kg dry	19.7	<355 ug/kg dry	100	57-114			
Dinoseb	<355 ug/kg dry	355	ug/kg dry	19.7	<355 ug/kg dry	80.0	60-130			
Pentachlorophenol	<355 ug/kg dry	355	ug/kg dry	19.7	<355 ug/kg dry	60.0	50-96			
Surr: DCAA (Surr)	47.3		ug/kg dry	39.5	ug/kg dry	120	31-87			S

Matrix Spike Dup (BBI0418-MSD1)

Source: 18I0123-07

Prepared: 09/13/2018 Analyzed: 09/18/2018

2,4,5-T	<356 ug/kg dry	356	ug/kg dry	19.8	<356 ug/kg dry	40.0	50-130	39.7	20	M, P
2,4,5-TP (Silvex)	<356 ug/kg dry	356	ug/kg dry	19.8	<356 ug/kg dry	60.0	55-106	0.333	20	
2,4-D	<356 ug/kg dry	356	ug/kg dry	19.8	<356 ug/kg dry	100	57-114	0.333	20	
Dinoseb	<356 ug/kg dry	356	ug/kg dry	19.8	<356 ug/kg dry	40.0	60-130	66.4	20	M, P
Pentachlorophenol	<356 ug/kg dry	356	ug/kg dry	19.8	<356 ug/kg dry	40.0	50-96	39.7	20	M, P
Surr: DCAA (Surr)	23.8		ug/kg dry	39.6	ug/kg dry	60.0	31-87			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0282 - No Prep Wet Chem

Blank (BBI0282-BLK1)		Prepared & Analyzed: 09/11/2018							
Percent Solids	100 %	0.10	%						
Duplicate (BBI0282-DUP1)		Source: 18I0242-02		Prepared & Analyzed: 09/11/2018					
Percent Solids	76.8 %	0.10	%	75.8 %			1.31	20	

Batch BBI0580 - No Prep Wet Chem

Blank (BBI0580-BLK1)		Prepared: 09/17/2018 Analyzed: 09/20/2018							
Chromium, Hexavalent	<0.20 mg/kg wet	0.20	mg/kg wet						
LCS (BBI0580-BS1)		Prepared: 09/17/2018 Analyzed: 09/20/2018							
Chromium, Hexavalent	3.80 mg/kg wet	0.20	mg/kg wet	3.92	mg/kg wet	97.0	80-120		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Aluminum	VELAP
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Calcium	VELAP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Magnesium	VELAP
Manganese	VELAP
Nickel	VELAP
Potassium	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7196A in Solids	
Chromium, Hexavalent	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8081B in Solids	
alpha-BHC	NC,VELAP
beta-BHC	NC,VELAP
Chlordane	NC,VELAP
delta-BHC	NC,VELAP
Dieldrin	NC,VELAP
Endosulfan I	NC,VELAP
Endosulfan II	NC,VELAP
Endosulfan sulfate	NC,VELAP
Endrin	NC,VELAP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/20/2018 13:47
Submitted To: Jeff Fisher	Project Number: 18-760 Task 2.7
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Endrin aldehyde	NC,VELAP
Endrin ketone	NC,VELAP
gamma-BHC (Lindane)	NC,VELAP
Heptachlor	NC,VELAP
Heptachlor epoxide	NC,VELAP
Methoxychlor	NC,VELAP
Mirex	NC,VELAP
Toxaphene	NC,VELAP
SW8151A in Solids	
2,4,5-T	NC,VELAP
2,4,5-TP (Silvex)	NC,VELAP
2,4-D	NC,VELAP
Dinoseb	NC,VELAP
Pentachlorophenol	NC,VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/20/2018 13:47
Submitted To:	Jeff Fisher	Project Number:	18-760 Task 2.7
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

DS Surrogate concentration reflects a dilution factor.

E Estimated concentration, outside calibration range

L LCS recovery is outside of established acceptance limits

M Matrix spike recovery is outside established acceptance limits

M2 Sample was diluted due to matrix interference.

P Duplicate analysis does not meet the acceptance criteria for precision

S Surrogate recovery was outside acceptance criteria

RPD Relative Percent Difference

Qual Qualifiers

-RE Denotes sample was re-analyzed

D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.



1941 REYMET ROAD
 RICHMOND, VIRGINIA 23237
 (804) 358-8295 PHONE
 (804)358-8297 FAX

Chain of Custody
 Form #: F1331
 Rev. 3.0
 Effective: Aug 24, 2017

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: <u>3e</u>	INVOICE TO: <u>Same</u>	PROJECT NAME/Quote #: <u>CVTC</u>
CONTACT: <u>Jeff Fisher</u>	INVOICE CONTACT:	SITE NAME: <u>CVTC</u>
ADDRESS: <u>201 Church St.</u>	INVOICE ADDRESS:	PROJECT NUMBER: <u>18-760 Task 2.7</u>
PHONE #: <u>540-953-0170 x 314</u>	INVOICE PHONE #:	P.O. #: <u>18-760</u>
FAX #:	EMAIL: <u>JFISHER@EEE-CONSULTING.COM</u>	Pretreatment Program:
Is sample for compliance reporting? YES <u>NO</u>	Is sample from a chlorinated supply? YES <u>NO</u>	PWS I.D. #:
SAMPLER NAME (PRINT): <u>Jeff Fisher</u>	SAMPLER SIGNATURE: <u>[Signature]</u>	Turn Around Time: Circle: <u>10</u> 5 Days or ___ Day(s)

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)				COMMENTS
											Cr VI	TAL Metals	Pesticides	Herbicides	
1) <u>41-S1</u>	X					<u>9-5-18</u>	<u>1115</u>		<u>S</u>	<u>1</u>	X	X	X	X	Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)
2) <u>41-S2</u>	X						<u>1118</u>			<u>1</u>					
3) <u>41-S3</u>	X						<u>1130</u>			<u>1</u>					
4) <u>41-S4</u>	X						<u>1135</u>			<u>1</u>					
5) <u>41-S5</u>	X						<u>1140</u>			<u>1</u>					
6) <u>41-S6</u>	X						<u>1150</u>			<u>1</u>					
7) <u>41-S7</u>	X						<u>1200</u>			<u>1</u>					
8) <u>41-S8</u>	X						<u>1205</u>			<u>1</u>					
9)															
10)															

RECEIVED: <u>[Signature]</u> DATE / TIME: <u>9-5-18 1708</u> RECEIVED: <u>Michael Folland</u> DATE / TIME: _____ RECEIVED: <u>[Signature]</u> DATE / TIME: _____ RECEIVED: <u>[Signature]</u> DATE / TIME: <u>9/6/18 835</u>	QC Data Package Level III <input type="checkbox"/> Level IV <input type="checkbox"/>	LAB USE ONLY Custody Seals used and intact? (Y/N): <u>(Y)</u> COOLER TEMP Received on ice? (Y/N) <u>28</u> °C EEE-Blacksburg 1810123 CVTC Recd: 09/06/2018 Due: 09/20/2018
---	--	--

Page 44 of 45



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/20/2018 13:47
Submitted To:	Jeff Fisher	Project Number:	18-760 Task 2.7
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	2.80°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 1810501

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg, VA 24060

Date Received: September 13, 2018 8:00

Date Issued: September 28, 2018 14:03

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 09/13/2018 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 9/28/2018 14:03
201 Church Street
Blacksburg VA, 24060

Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18I0501

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Task 2.1 77-7 0-6'	18I0501-01	Solids	09/11/2018 11:26	09/13/2018 08:00
Task 2.1 77-8 0-5'	18I0501-02	Solids	09/11/2018 11:37	09/13/2018 08:00
Task 2.1 77-8 5-7'	18I0501-03	Solids	09/11/2018 11:40	09/13/2018 08:00
Task 2.1 77-9 0-5'	18I0501-04	Solids	09/11/2018 11:53	09/13/2018 08:00
Task 2.1 77-9 5-10'	18I0501-05	Solids	09/11/2018 11:57	09/13/2018 08:00
Task 2.1 77-9 10-12'	18I0501-06	Solids	09/11/2018 12:04	09/13/2018 08:00

Results have been calculated based on dry weight.



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-7 0-6' **Laboratory Sample ID:** 1810501-01

Grab Date/Time: 09/11/2018 11:26

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01RE1	SW6010C	<0.552 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:13	BG
Aluminum	01RE2	SW6010C	15700 mg/kg dry		552	200	09/14/18 13:00	09/19/18 14:58	BG
Arsenic	01RE1	SW6010C	2.61 mg/kg dry		1.10	1	09/14/18 13:00	09/18/18 15:13	BG
Barium	01RE1	SW6010C	98.9 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:13	BG
Beryllium	01RE1	SW6010C	1.95 mg/kg dry		0.221	1	09/14/18 13:00	09/18/18 15:13	BG
Calcium	01RE2	SW6010C	22700 mg/kg dry		1100	200	09/14/18 13:00	09/19/18 14:58	BG
Cadmium	01RE1	SW6010C	0.295 mg/kg dry		0.221	1	09/14/18 13:00	09/18/18 15:13	BG
Cobalt	01RE1	SW6010C	12.4 mg/kg dry		0.221	1	09/14/18 13:00	09/18/18 15:13	BG
Chromium	01RE1	SW6010C	20.6 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:13	BG
Copper	01RE1	SW6010C	26.0 mg/kg dry		2.76	1	09/14/18 13:00	09/18/18 15:13	BG
Iron	01RE2	SW6010C	25400 mg/kg dry		552	200	09/14/18 13:00	09/19/18 14:58	BG
Mercury	01RE1	SW7471B	0.141 mg/kg dry		0.009	1	09/27/18 17:02	09/28/18 09:21	MWL
Potassium	01RE1	SW6010C	4910 mg/kg dry		27.6	1	09/14/18 13:00	09/18/18 15:13	BG
Magnesium	01	SW6010C	8770 mg/kg dry		55.2	20	09/14/18 13:00	09/18/18 13:03	BG
Manganese	01RE1	SW6010C	296 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:13	BG
Sodium	01RE1	SW6010C	88.6 mg/kg dry		27.6	1	09/14/18 13:00	09/18/18 15:13	BG
Nickel	01RE1	SW6010C	16.4 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:13	BG
Lead	01RE1	SW6010C	24.8 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:13	BG
Antimony	01RE1	SW6010C	<5.52 mg/kg dry		5.52	1	09/14/18 13:00	09/18/18 15:13	BG
Selenium	01RE1	SW6010C	<2.76 mg/kg dry		2.76	1	09/14/18 13:00	09/18/18 15:13	BG
Thallium	01RE1	SW6010C	<2.76 mg/kg dry		2.76	1	09/14/18 13:00	09/18/18 15:13	BG
Vanadium	01RE1	SW6010C	35.4 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:13	BG
Zinc	01RE1	SW6010C	79.6 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:13	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	01	SW8270D SIM	Not Detected	1	09/18/18 09:10	09/18/18 13:12	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 9/28/2018 14:03
 201 Church Street
 Blacksburg VA, 24060
 Submitted To: Jeff Fisher Project Number: 18-760
 Client Site I.D.: CVTC Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-7 0-6'

Laboratory Sample ID: 1810501-01

Grab Date/Time: 09/11/2018 11:26

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
1,2,4-Trichlorobenzene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
1,2-Dichlorobenzene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
1,2-Diphenylhydrazine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
1,3-Dichlorobenzene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
1,4-Dichlorobenzene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
1-Chloronaphthalene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
1-Naphthylamine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2,3,4,6-Tetrachlorophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2,4,5-Trichlorophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2,4,6-Trichlorophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2,4-Dichlorophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2,4-Dimethylphenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2,4-Dinitrophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2,4-Dinitrotoluene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2,6-Dichlorophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2,6-Dinitrotoluene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2-Chloronaphthalene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2-Chlorophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2-Methylnaphthalene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2-Naphthylamine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2-Nitroaniline	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
2-Nitrophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
3,3'-Dichlorobenzidine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
3-Methylcholanthrene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/28/2018 14:03

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-7 0-6'

Laboratory Sample ID: 1810501-01

Grab Date/Time: 09/11/2018 11:26

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
4,6-Dinitro-2-methylphenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
4-Aminobiphenyl	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
4-Bromophenyl phenyl ether	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
4-Chloroaniline	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
4-Chlorophenyl phenyl ether	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
4-Nitroaniline	01	SW8270D	<96.6 ug/kg dry	C	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
4-Nitrophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
7,12-Dimethylbenz (a) anthracene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Acenaphthene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Acenaphthylene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Acetophenone	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Aniline	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Anthracene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Benzidine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Benzo (a) anthracene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Benzo (a) pyrene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Benzo (b) fluoranthene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Benzo (g,h,i) perylene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Benzo (k) fluoranthene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Benzoic acid	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Benzyl alcohol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-7 0-6' **Laboratory Sample ID:** 1810501-01

Grab Date/Time: 09/11/2018 11:26

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
bis (2-Ethylhexyl) phthalate	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Butyl benzyl phthalate	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Chrysene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Dibenz (a,h) anthracene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Dibenz (a,j) acridine	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Dibenzofuran	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Diethyl phthalate	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Dimethyl phthalate	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Di-n-butyl phthalate	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Di-n-octyl phthalate	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Diphenylamine	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Ethyl methanesulfonate	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Fluoranthene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Fluorene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Hexachlorobenzene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Hexachlorobutadiene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Hexachlorocyclopentadiene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Hexachloroethane	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Indeno (1,2,3-cd) pyrene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Isophorone	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
m+p-Cresols	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Methyl methanesulfonate	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Naphthalene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	
Nitrobenzene	01	SW8270D	<96.6 ug/kg dry	96.6	1	09/18/18 09:10	09/18/18 13:12	SKS	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-7 0-6' **Laboratory Sample ID:** 1810501-01

Grab Date/Time: 09/11/2018 11:26

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
n-Nitrosodi-n-butylamine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
n-Nitrosodiphenylamine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
n-Nitrosopiperidine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
o+m+p-Cresols	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
o-Cresol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
p-(Dimethylamino) azobenzene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
p-Chloro-m-cresol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Pentachloronitrobenzene (quintozene)	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Pentachlorophenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Phenacetin	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Phenanthrene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Phenol	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Pronamide	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Pyrene	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Pyridine	01	SW8270D	<96.6 ug/kg dry		96.6	1	09/18/18 09:10	09/18/18 13:12	SKS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270D	49.1 %		35-125		09/18/18 09:10	09/18/18 13:12	SKS
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270D	50.4 %		45-105		09/18/18 09:10	09/18/18 13:12	SKS
Surr: 2-Fluorophenol (Surr)	01	SW8270D	65.1 %		35-105		09/18/18 09:10	09/18/18 13:12	SKS
Surr: Nitrobenzene-d5 (Surr)	01	SW8270D	49.1 %		35-100		09/18/18 09:10	09/18/18 13:12	SKS
Surr: Phenol-d5 (Surr)	01	SW8270D	47.6 %		40-100		09/18/18 09:10	09/18/18 13:12	SKS
Surr: p-Terphenyl-d14 (Surr)	01	SW8270D	77.2 %		30-125		09/18/18 09:10	09/18/18 13:12	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-7 0-6'	Laboratory Sample ID: 1810501-01
Grab Date/Time: 09/11/2018 11:26	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	36.8 mg/kg dry		11.3	1	09/24/18 17:00	09/25/18 13:09	HLM
<i>Surr: Pentacosane (Surr)</i>	01	SW8015C	65.2 %		40-160		09/24/18 17:00	09/25/18 13:09	HLM
TPH-Semi-Volatiles (ORO)	01	SW8015C	44.3 mg/kg dry		11.6	1	09/19/18 14:15	09/20/18 12:57	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.111 mg/kg dry		0.111	1	09/19/18 09:02	09/21/18 13:43	HLM
PCB as Aroclor 1221	01	SW8082A	<0.111 mg/kg dry		0.111	1	09/19/18 09:02	09/21/18 13:43	HLM
PCB as Aroclor 1232	01	SW8082A	<0.111 mg/kg dry		0.111	1	09/19/18 09:02	09/21/18 13:43	HLM
PCB as Aroclor 1242	01	SW8082A	<0.111 mg/kg dry		0.111	1	09/19/18 09:02	09/21/18 13:43	HLM
PCB as Aroclor 1248	01	SW8082A	<0.111 mg/kg dry		0.111	1	09/19/18 09:02	09/21/18 13:43	HLM
PCB as Aroclor 1254	01	SW8082A	<0.111 mg/kg dry		0.111	1	09/19/18 09:02	09/21/18 13:43	HLM
PCB as Aroclor 1260	01	SW8082A	<0.111 mg/kg dry		0.111	1	09/19/18 09:02	09/21/18 13:43	HLM
<i>Surr: DCB</i>	01	SW8082A	65.0 %		30-105		09/19/18 09:02	09/21/18 13:43	HLM
<i>Surr: TCMX</i>	01	SW8082A	75.0 %		30-105		09/19/18 09:02	09/21/18 13:43	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	01	SW7196A	<0.24 mg/kg dry		0.24	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	01	SM18 2540G	83.7 %		0.10	1	09/14/18 09:19	09/14/18 09:19	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 0-5' **Laboratory Sample ID:** 1810501-02

Grab Date/Time: 09/11/2018 11:37

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02RE1	SW6010C	<0.548 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 15:18	BG
Aluminum	02RE2	SW6010C	18400 mg/kg dry		548	200	09/14/18 13:00	09/19/18 15:00	BG
Arsenic	02RE1	SW6010C	1.60 mg/kg dry		1.10	1	09/14/18 13:00	09/18/18 15:18	BG
Barium	02RE1	SW6010C	130 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 15:18	BG
Beryllium	02RE1	SW6010C	1.56 mg/kg dry		0.219	1	09/14/18 13:00	09/18/18 15:18	BG
Calcium	02	SW6010C	5670 mg/kg dry		110	20	09/14/18 13:00	09/18/18 13:06	BG
Cadmium	02RE1	SW6010C	<0.219 mg/kg dry		0.219	1	09/14/18 13:00	09/18/18 15:18	BG
Cobalt	02RE1	SW6010C	12.8 mg/kg dry		0.219	1	09/14/18 13:00	09/18/18 15:18	BG
Chromium	02RE1	SW6010C	17.3 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 15:18	BG
Copper	02RE1	SW6010C	10.2 mg/kg dry		2.74	1	09/14/18 13:00	09/18/18 15:18	BG
Iron	02RE2	SW6010C	22200 mg/kg dry		548	200	09/14/18 13:00	09/19/18 15:00	BG
Mercury	02	SW7471B	0.017 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 14:53	MWL
Potassium	02RE1	SW6010C	5490 mg/kg dry		27.4	1	09/14/18 13:00	09/18/18 15:18	BG
Magnesium	02	SW6010C	6430 mg/kg dry		54.8	20	09/14/18 13:00	09/18/18 13:06	BG
Manganese	02RE1	SW6010C	298 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 15:18	BG
Sodium	02RE1	SW6010C	57.8 mg/kg dry		27.4	1	09/14/18 13:00	09/18/18 15:18	BG
Nickel	02RE1	SW6010C	13.0 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 15:18	BG
Lead	02RE1	SW6010C	9.54 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 15:18	BG
Antimony	02RE1	SW6010C	<5.48 mg/kg dry		5.48	1	09/14/18 13:00	09/18/18 15:18	BG
Selenium	02RE1	SW6010C	<2.74 mg/kg dry		2.74	1	09/14/18 13:00	09/18/18 15:18	BG
Thallium	02RE1	SW6010C	<2.74 mg/kg dry		2.74	1	09/14/18 13:00	09/18/18 15:18	BG
Vanadium	02RE1	SW6010C	25.5 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 15:18	BG
Zinc	02RE1	SW6010C	71.5 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 15:18	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	02 SW8270D SIM	Not Detected	1	09/18/18 09:10	09/18/18 13:44	SKS
--------------------	----------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 0-5' **Laboratory Sample ID:** 1810501-02

Grab Date/Time: 09/11/2018 11:37

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
1,2,4-Trichlorobenzene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
1,2-Dichlorobenzene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
1,2-Diphenylhydrazine	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
1,3-Dichlorobenzene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
1,4-Dichlorobenzene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
1-Chloronaphthalene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
1-Naphthylamine	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2,3,4,6-Tetrachlorophenol	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2,4,5-Trichlorophenol	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2,4,6-Trichlorophenol	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2,4-Dichlorophenol	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2,4-Dimethylphenol	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2,4-Dinitrophenol	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2,4-Dinitrotoluene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2,6-Dichlorophenol	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2,6-Dinitrotoluene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2-Chloronaphthalene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2-Chlorophenol	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2-Methylnaphthalene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2-Naphthylamine	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2-Nitroaniline	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
2-Nitrophenol	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS
3-Methylcholanthrene	02	SW8270D	<96.2 ug/kg dry	96.2	1		09/18/18 09:10	09/18/18 13:44	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 0-5' **Laboratory Sample ID:** 1810501-02

Grab Date/Time: 09/11/2018 11:37

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
4,6-Dinitro-2-methylphenol	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
4-Aminobiphenyl	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
4-Bromophenyl phenyl ether	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
4-Chloroaniline	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
4-Chlorophenyl phenyl ether	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
4-Nitroaniline	02	SW8270D	<96.2 ug/kg dry	C	96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
4-Nitrophenol	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
7,12-Dimethylbenz (a) anthracene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Acenaphthene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Acenaphthylene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Acetophenone	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Aniline	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Anthracene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Benzidine	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Benzo (a) anthracene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Benzo (a) pyrene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Benzo (b) fluoranthene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Benzo (g,h,i) perylene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Benzo (k) fluoranthene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Benzoic acid	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Benzyl alcohol	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 0-5' **Laboratory Sample ID:** 1810501-02

Grab Date/Time: 09/11/2018 11:37

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Butyl benzyl phthalate	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Chrysene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Dibenz (a,h) anthracene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Dibenz (a,j) acridine	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Dibenzofuran	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Diethyl phthalate	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Dimethyl phthalate	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Di-n-butyl phthalate	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Di-n-octyl phthalate	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Diphenylamine	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Ethyl methanesulfonate	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Fluoranthene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Fluorene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Hexachlorobenzene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Hexachlorobutadiene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Hexachlorocyclopentadiene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Hexachloroethane	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Isophorone	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
m+p-Cresols	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Methyl methanesulfonate	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Naphthalene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Nitrobenzene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 0-5'	Laboratory Sample ID: 1810501-02
Grab Date/Time: 09/11/2018 11:37	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
n-Nitrosodi-n-butylamine	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
n-Nitrosodiphenylamine	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
n-Nitrosopiperidine	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
o+m+p-Cresols	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
o-Cresol	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
p-(Dimethylamino) azobenzene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
p-Chloro-m-cresol	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Pentachloronitrobenzene (quintozene)	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Pentachlorophenol	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Phenacetin	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Phenanthrene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Phenol	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Pronamide	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Pyrene	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Pyridine	02	SW8270D	<96.2 ug/kg dry		96.2	1	09/18/18 09:10	09/18/18 13:44	SKS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270D	59.1 %		35-125		09/18/18 09:10	09/18/18 13:44	SKS
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270D	62.7 %		45-105		09/18/18 09:10	09/18/18 13:44	SKS
Surr: 2-Fluorophenol (Surr)	02	SW8270D	82.5 %		35-105		09/18/18 09:10	09/18/18 13:44	SKS
Surr: Nitrobenzene-d5 (Surr)	02	SW8270D	62.5 %		35-100		09/18/18 09:10	09/18/18 13:44	SKS
Surr: Phenol-d5 (Surr)	02	SW8270D	60.4 %		40-100		09/18/18 09:10	09/18/18 13:44	SKS
Surr: p-Terphenyl-d14 (Surr)	02	SW8270D	89.5 %		30-125		09/18/18 09:10	09/18/18 13:44	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 0-5'	Laboratory Sample ID: 1810501-02
Grab Date/Time: 09/11/2018 11:37	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<11.2 mg/kg dry		11.2	1	09/24/18 17:00	09/25/18 13:34	HLM
<i>Surr: Pentacosane (Surr)</i>	02	SW8015C	63.8 %		40-160		09/24/18 17:00	09/25/18 13:34	HLM
TPH-Semi-Volatiles (ORO)	02	SW8015C	<11.2 mg/kg dry		11.2	1	09/19/18 14:15	09/20/18 13:21	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.113 mg/kg dry		0.113	1	09/19/18 09:02	09/21/18 14:05	HLM
PCB as Aroclor 1221	02	SW8082A	<0.113 mg/kg dry		0.113	1	09/19/18 09:02	09/21/18 14:05	HLM
PCB as Aroclor 1232	02	SW8082A	<0.113 mg/kg dry		0.113	1	09/19/18 09:02	09/21/18 14:05	HLM
PCB as Aroclor 1242	02	SW8082A	<0.113 mg/kg dry		0.113	1	09/19/18 09:02	09/21/18 14:05	HLM
PCB as Aroclor 1248	02	SW8082A	<0.113 mg/kg dry		0.113	1	09/19/18 09:02	09/21/18 14:05	HLM
PCB as Aroclor 1254	02	SW8082A	<0.113 mg/kg dry		0.113	1	09/19/18 09:02	09/21/18 14:05	HLM
PCB as Aroclor 1260	02	SW8082A	<0.113 mg/kg dry		0.113	1	09/19/18 09:02	09/21/18 14:05	HLM
<i>Surr: DCB</i>	02	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 14:05	HLM
<i>Surr: TCMX</i>	02	SW8082A	80.0 %		30-105		09/19/18 09:02	09/21/18 14:05	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	02	SW7196A	<0.23 mg/kg dry		0.23	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	02	SM18 2540G	86.5 %		0.10	1	09/14/18 09:19	09/14/18 09:19	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 5-7' **Laboratory Sample ID:** 1810501-03

Grab Date/Time: 09/11/2018 11:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03RE1	SW6010C	<0.522 mg/kg dry		0.522	1	09/14/18 13:00	09/18/18 15:20	BG
Aluminum	03RE2	SW6010C	16500 mg/kg dry		522	200	09/14/18 13:00	09/19/18 15:02	BG
Arsenic	03RE1	SW6010C	<1.04 mg/kg dry		1.04	1	09/14/18 13:00	09/18/18 15:20	BG
Barium	03RE1	SW6010C	148 mg/kg dry		0.522	1	09/14/18 13:00	09/18/18 15:20	BG
Beryllium	03RE1	SW6010C	1.17 mg/kg dry		0.209	1	09/14/18 13:00	09/18/18 15:20	BG
Calcium	03	SW6010C	1960 mg/kg dry		104	20	09/14/18 13:00	09/18/18 13:08	BG
Cadmium	03RE1	SW6010C	0.298 mg/kg dry		0.209	1	09/14/18 13:00	09/18/18 15:20	BG
Cobalt	03RE1	SW6010C	16.6 mg/kg dry		0.209	1	09/14/18 13:00	09/18/18 15:20	BG
Chromium	03RE1	SW6010C	27.2 mg/kg dry		0.522	1	09/14/18 13:00	09/18/18 15:20	BG
Copper	03RE1	SW6010C	10.9 mg/kg dry		2.61	1	09/14/18 13:00	09/18/18 15:20	BG
Iron	03RE2	SW6010C	26100 mg/kg dry		522	200	09/14/18 13:00	09/19/18 15:02	BG
Mercury	03	SW7471B	<0.009 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 14:56	MWL
Potassium	03	SW6010C	12600 mg/kg dry		522	20	09/14/18 13:00	09/18/18 13:08	BG
Magnesium	03	SW6010C	9780 mg/kg dry		52.2	20	09/14/18 13:00	09/18/18 13:08	BG
Manganese	03RE1	SW6010C	551 mg/kg dry		0.522	1	09/14/18 13:00	09/18/18 15:20	BG
Sodium	03RE1	SW6010C	64.9 mg/kg dry		26.1	1	09/14/18 13:00	09/18/18 15:20	BG
Nickel	03RE1	SW6010C	14.2 mg/kg dry		0.522	1	09/14/18 13:00	09/18/18 15:20	BG
Lead	03RE1	SW6010C	1.80 mg/kg dry		0.522	1	09/14/18 13:00	09/18/18 15:20	BG
Antimony	03RE1	SW6010C	<5.22 mg/kg dry		5.22	1	09/14/18 13:00	09/18/18 15:20	BG
Selenium	03RE1	SW6010C	<2.61 mg/kg dry		2.61	1	09/14/18 13:00	09/18/18 15:20	BG
Thallium	03RE1	SW6010C	<2.61 mg/kg dry		2.61	1	09/14/18 13:00	09/18/18 15:20	BG
Vanadium	03RE1	SW6010C	31.5 mg/kg dry		0.522	1	09/14/18 13:00	09/18/18 15:20	BG
Zinc	03RE1	SW6010C	91.8 mg/kg dry		0.522	1	09/14/18 13:00	09/18/18 15:20	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	03	SW8270D SIM	Not Detected	1	09/18/18 09:10	09/18/18 14:16	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 5-7' **Laboratory Sample ID:** 1810501-03

Grab Date/Time: 09/11/2018 11:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
1,2,4-Trichlorobenzene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
1,2-Dichlorobenzene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
1,2-Diphenylhydrazine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
1,3-Dichlorobenzene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
1,4-Dichlorobenzene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
1-Chloronaphthalene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
1-Naphthylamine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2,3,4,6-Tetrachlorophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2,4,5-Trichlorophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2,4,6-Trichlorophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2,4-Dichlorophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2,4-Dimethylphenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2,4-Dinitrophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2,4-Dinitrotoluene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2,6-Dichlorophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2,6-Dinitrotoluene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2-Chloronaphthalene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2-Chlorophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2-Methylnaphthalene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2-Naphthylamine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2-Nitroaniline	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
2-Nitrophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
3,3'-Dichlorobenzidine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
3-Methylcholanthrene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/28/2018 14:03

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 5-7'

Laboratory Sample ID: 1810501-03

Grab Date/Time: 09/11/2018 11:40

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
4,6-Dinitro-2-methylphenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
4-Aminobiphenyl	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
4-Bromophenyl phenyl ether	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
4-Chloroaniline	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
4-Chlorophenyl phenyl ether	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
4-Nitroaniline	03	SW8270D	<83.3 ug/kg dry	C	83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
4-Nitrophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
7,12-Dimethylbenz (a) anthracene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Acenaphthene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Acenaphthylene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Acetophenone	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Aniline	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Anthracene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Benzidine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Benzo (a) anthracene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Benzo (a) pyrene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Benzo (b) fluoranthene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Benzo (g,h,i) perylene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Benzo (k) fluoranthene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Benzoic acid	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Benzyl alcohol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
bis (2-Chloroethoxy) methane	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
bis (2-Chloroethyl) ether	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 5-7' **Laboratory Sample ID:** 1810501-03

Grab Date/Time: 09/11/2018 11:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
bis (2-Ethylhexyl) phthalate	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Butyl benzyl phthalate	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Chrysene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Dibenz (a,h) anthracene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Dibenz (a,j) acridine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Dibenzofuran	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Diethyl phthalate	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Dimethyl phthalate	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Di-n-butyl phthalate	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Di-n-octyl phthalate	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Diphenylamine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Ethyl methanesulfonate	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Fluoranthene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Fluorene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Hexachlorobenzene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Hexachlorobutadiene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Hexachlorocyclopentadiene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Hexachloroethane	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Indeno (1,2,3-cd) pyrene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Isophorone	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
m+p-Cresols	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Methyl methanesulfonate	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Naphthalene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Nitrobenzene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 5-7' **Laboratory Sample ID:** 1810501-03

Grab Date/Time: 09/11/2018 11:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
n-Nitrosodi-n-butylamine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
n-Nitrosodi-n-propylamine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
n-Nitrosodiphenylamine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
n-Nitrosopiperidine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
o+m+p-Cresols	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
o-Cresol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
p-(Dimethylamino) azobenzene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
p-Chloro-m-cresol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Pentachloronitrobenzene (quintozene)	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Pentachlorophenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Phenacetin	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Phenanthrene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Phenol	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Pronamide	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Pyrene	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Pyridine	03	SW8270D	<83.3 ug/kg dry		83.3	1	09/18/18 09:10	09/18/18 14:16	SKS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270D	57.2 %		35-125		09/18/18 09:10	09/18/18 14:16	SKS
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270D	61.4 %		45-105		09/18/18 09:10	09/18/18 14:16	SKS
Surr: 2-Fluorophenol (Surr)	03	SW8270D	80.6 %		35-105		09/18/18 09:10	09/18/18 14:16	SKS
Surr: Nitrobenzene-d5 (Surr)	03	SW8270D	61.4 %		35-100		09/18/18 09:10	09/18/18 14:16	SKS
Surr: Phenol-d5 (Surr)	03	SW8270D	59.2 %		40-100		09/18/18 09:10	09/18/18 14:16	SKS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270D	89.3 %		30-125		09/18/18 09:10	09/18/18 14:16	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-8 5-7'	Laboratory Sample ID: 1810501-03
Grab Date/Time: 09/11/2018 11:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03	SW8015C	<10.9 mg/kg dry		10.9	1	09/24/18 17:00	09/25/18 14:00	HLM
<i>Surr: Pentacosane (Surr)</i>	03	SW8015C	62.7 %		40-160		09/24/18 17:00	09/25/18 14:00	HLM
TPH-Semi-Volatiles (ORO)	03	SW8015C	<10.6 mg/kg dry		10.6	1	09/19/18 14:15	09/20/18 13:46	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 14:26	HLM
PCB as Aroclor 1221	03	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 14:26	HLM
PCB as Aroclor 1232	03	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 14:26	HLM
PCB as Aroclor 1242	03	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 14:26	HLM
PCB as Aroclor 1248	03	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 14:26	HLM
PCB as Aroclor 1254	03	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 14:26	HLM
PCB as Aroclor 1260	03	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 14:26	HLM
<i>Surr: DCB</i>	03	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 14:26	HLM
<i>Surr: TCMX</i>	03	SW8082A	75.0 %		30-105		09/19/18 09:02	09/21/18 14:26	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	03	SW7196A	<0.22 mg/kg dry		0.22	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	03	SM18 2540G	89.1 %		0.10	1	09/14/18 09:19	09/14/18 09:19	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 0-5' **Laboratory Sample ID:** 1810501-04

Grab Date/Time: 09/11/2018 11:53

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04RE1	SW6010C	<0.543 mg/kg dry		0.543	1	09/14/18 13:00	09/18/18 15:23	BG
Aluminum	04RE2	SW6010C	27600 mg/kg dry		543	200	09/14/18 13:00	09/19/18 15:04	BG
Arsenic	04RE1	SW6010C	<1.09 mg/kg dry		1.09	1	09/14/18 13:00	09/18/18 15:23	BG
Barium	04RE1	SW6010C	127 mg/kg dry		0.543	1	09/14/18 13:00	09/18/18 15:23	BG
Beryllium	04RE1	SW6010C	2.60 mg/kg dry		0.217	1	09/14/18 13:00	09/18/18 15:23	BG
Calcium	04	SW6010C	7530 mg/kg dry		109	20	09/14/18 13:00	09/18/18 13:14	BG
Cadmium	04RE1	SW6010C	0.461 mg/kg dry		0.217	1	09/14/18 13:00	09/18/18 15:23	BG
Cobalt	04RE1	SW6010C	16.6 mg/kg dry		0.217	1	09/14/18 13:00	09/18/18 15:23	BG
Chromium	04RE1	SW6010C	25.2 mg/kg dry		0.543	1	09/14/18 13:00	09/18/18 15:23	BG
Copper	04RE1	SW6010C	10.8 mg/kg dry		2.71	1	09/14/18 13:00	09/18/18 15:23	BG
Iron	04RE2	SW6010C	33000 mg/kg dry		543	200	09/14/18 13:00	09/19/18 15:04	BG
Mercury	04	SW7471B	0.045 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 15:03	MWL
Potassium	04	SW6010C	11900 mg/kg dry		543	20	09/14/18 13:00	09/18/18 13:14	BG
Magnesium	04	SW6010C	10400 mg/kg dry		54.3	20	09/14/18 13:00	09/18/18 13:14	BG
Manganese	04RE1	SW6010C	358 mg/kg dry		0.543	1	09/14/18 13:00	09/18/18 15:23	BG
Sodium	04RE1	SW6010C	90.2 mg/kg dry		27.1	1	09/14/18 13:00	09/18/18 15:23	BG
Nickel	04RE1	SW6010C	15.6 mg/kg dry		0.543	1	09/14/18 13:00	09/18/18 15:23	BG
Lead	04RE1	SW6010C	5.89 mg/kg dry		0.543	1	09/14/18 13:00	09/18/18 15:23	BG
Antimony	04RE1	SW6010C	<5.43 mg/kg dry		5.43	1	09/14/18 13:00	09/18/18 15:23	BG
Selenium	04RE1	SW6010C	<2.71 mg/kg dry		2.71	1	09/14/18 13:00	09/18/18 15:23	BG
Thallium	04RE1	SW6010C	<2.71 mg/kg dry		2.71	1	09/14/18 13:00	09/18/18 15:23	BG
Vanadium	04RE1	SW6010C	41.6 mg/kg dry		0.543	1	09/14/18 13:00	09/18/18 15:23	BG
Zinc	04RE1	SW6010C	95.2 mg/kg dry		0.543	1	09/14/18 13:00	09/18/18 15:23	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	04	SW8270D SIM	Not Detected	1	09/18/18 09:10	09/18/18 14:48	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 0-5' **Laboratory Sample ID:** 1810501-04

Grab Date/Time: 09/11/2018 11:53

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
1,2,4-Trichlorobenzene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
1,2-Dichlorobenzene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
1,2-Diphenylhydrazine	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
1,3-Dichlorobenzene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
1,4-Dichlorobenzene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
1-Chloronaphthalene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
1-Naphthylamine	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2,3,4,6-Tetrachlorophenol	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2,4,5-Trichlorophenol	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2,4,6-Trichlorophenol	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2,4-Dichlorophenol	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2,4-Dimethylphenol	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2,4-Dinitrophenol	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2,4-Dinitrotoluene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2,6-Dichlorophenol	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2,6-Dinitrotoluene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2-Chloronaphthalene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2-Chlorophenol	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2-Methylnaphthalene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2-Naphthylamine	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2-Nitroaniline	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
2-Nitrophenol	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
3,3'-Dichlorobenzidine	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
3-Methylcholanthrene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/28/2018 14:03

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 0-5'

Laboratory Sample ID: 1810501-04

Grab Date/Time: 09/11/2018 11:53

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
4,6-Dinitro-2-methylphenol	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
4-Aminobiphenyl	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
4-Bromophenyl phenyl ether	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
4-Chloroaniline	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
4-Chlorophenyl phenyl ether	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
4-Nitroaniline	04	SW8270D	<93.2 ug/kg dry	C	93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
4-Nitrophenol	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
7,12-Dimethylbenz (a) anthracene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Acenaphthene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Acenaphthylene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Acetophenone	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Aniline	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Anthracene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Benzidine	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Benzo (a) anthracene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Benzo (a) pyrene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Benzo (b) fluoranthene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Benzo (g,h,i) perylene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Benzo (k) fluoranthene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Benzoic acid	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Benzyl alcohol	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
bis (2-Chloroethoxy) methane	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
bis (2-Chloroethyl) ether	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 0-5' **Laboratory Sample ID:** 1810501-04

Grab Date/Time: 09/11/2018 11:53

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
bis (2-Ethylhexyl) phthalate	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Butyl benzyl phthalate	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Chrysene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Dibenz (a,h) anthracene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Dibenz (a,j) acridine	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Dibenzofuran	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Diethyl phthalate	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Dimethyl phthalate	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Di-n-butyl phthalate	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Di-n-octyl phthalate	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Diphenylamine	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Ethyl methanesulfonate	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Fluoranthene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Fluorene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Hexachlorobenzene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Hexachlorobutadiene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Hexachlorocyclopentadiene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Hexachloroethane	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Indeno (1,2,3-cd) pyrene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Isophorone	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
m+p-Cresols	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Methyl methanesulfonate	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Naphthalene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS
Nitrobenzene	04	SW8270D	<93.2 ug/kg dry	93.2	1		09/18/18 09:10	09/18/18 14:48	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 0-5' **Laboratory Sample ID:** 1810501-04

Grab Date/Time: 09/11/2018 11:53

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
n-Nitrosodi-n-butylamine	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
n-Nitrosodi-n-propylamine	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
n-Nitrosodiphenylamine	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
n-Nitrosopiperidine	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
o+m+p-Cresols	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
o-Cresol	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
p-(Dimethylamino) azobenzene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
p-Chloro-m-cresol	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Pentachloronitrobenzene (quintozene)	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Pentachlorophenol	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Phenacetin	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Phenanthrene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Phenol	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Pronamide	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Pyrene	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Pyridine	04	SW8270D	<93.2 ug/kg dry		93.2	1	09/18/18 09:10	09/18/18 14:48	SKS
Surr: 2,4,6-Tribromophenol (Surr)	04	SW8270D	51.3 %		35-125		09/18/18 09:10	09/18/18 14:48	SKS
Surr: 2-Fluorobiphenyl (Surr)	04	SW8270D	60.1 %		45-105		09/18/18 09:10	09/18/18 14:48	SKS
Surr: 2-Fluorophenol (Surr)	04	SW8270D	77.0 %		35-105		09/18/18 09:10	09/18/18 14:48	SKS
Surr: Nitrobenzene-d5 (Surr)	04	SW8270D	59.5 %		35-100		09/18/18 09:10	09/18/18 14:48	SKS
Surr: Phenol-d5 (Surr)	04	SW8270D	55.5 %		40-100		09/18/18 09:10	09/18/18 14:48	SKS
Surr: p-Terphenyl-d14 (Surr)	04	SW8270D	85.5 %		30-125		09/18/18 09:10	09/18/18 14:48	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 0-5' **Laboratory Sample ID:** 1810501-04

Grab Date/Time: 09/11/2018 11:53

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04	SW8015C	<10.9 mg/kg dry		10.9	1	09/24/18 17:00	09/25/18 14:26	HLM
<i>Surr: Pentacosane (Surr)</i>	04	SW8015C	67.2 %		40-160		09/24/18 17:00	09/25/18 14:26	HLM
TPH-Semi-Volatiles (ORO)	04	SW8015C	<11.4 mg/kg dry		11.4	1	09/19/18 14:15	09/20/18 14:11	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	04	SW8082A	<0.114 mg/kg dry		0.114	1	09/19/18 09:02	09/21/18 14:48	HLM
PCB as Aroclor 1221	04	SW8082A	<0.114 mg/kg dry		0.114	1	09/19/18 09:02	09/21/18 14:48	HLM
PCB as Aroclor 1232	04	SW8082A	<0.114 mg/kg dry		0.114	1	09/19/18 09:02	09/21/18 14:48	HLM
PCB as Aroclor 1242	04	SW8082A	<0.114 mg/kg dry		0.114	1	09/19/18 09:02	09/21/18 14:48	HLM
PCB as Aroclor 1248	04	SW8082A	<0.114 mg/kg dry		0.114	1	09/19/18 09:02	09/21/18 14:48	HLM
PCB as Aroclor 1254	04	SW8082A	<0.114 mg/kg dry		0.114	1	09/19/18 09:02	09/21/18 14:48	HLM
PCB as Aroclor 1260	04	SW8082A	<0.114 mg/kg dry		0.114	1	09/19/18 09:02	09/21/18 14:48	HLM
<i>Surr: DCB</i>	04	SW8082A	75.0 %		30-105		09/19/18 09:02	09/21/18 14:48	HLM
<i>Surr: TCMX</i>	04	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 14:48	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	04	SW7196A	<0.23 mg/kg dry		0.23	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	04	SM18 2540G	85.6 %		0.10	1	09/14/18 09:19	09/14/18 09:19	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 5-10' **Laboratory Sample ID:** 1810501-05

Grab Date/Time: 09/11/2018 11:57

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05RE1	SW6010C	<0.653 mg/kg dry		0.653	1	09/14/18 13:00	09/18/18 15:26	BG
Aluminum	05RE2	SW6010C	35900 mg/kg dry		653	200	09/14/18 13:00	09/19/18 15:06	BG
Arsenic	05RE1	SW6010C	<1.31 mg/kg dry		1.31	1	09/14/18 13:00	09/18/18 15:26	BG
Barium	05RE1	SW6010C	124 mg/kg dry		0.653	1	09/14/18 13:00	09/18/18 15:26	BG
Beryllium	05RE1	SW6010C	2.00 mg/kg dry		0.261	1	09/14/18 13:00	09/18/18 15:26	BG
Calcium	05	SW6010C	2410 mg/kg dry		131	20	09/14/18 13:00	09/18/18 13:16	BG
Cadmium	05RE1	SW6010C	0.391 mg/kg dry		0.261	1	09/14/18 13:00	09/18/18 15:26	BG
Cobalt	05RE1	SW6010C	15.6 mg/kg dry		0.261	1	09/14/18 13:00	09/18/18 15:26	BG
Chromium	05RE1	SW6010C	27.0 mg/kg dry		0.653	1	09/14/18 13:00	09/18/18 15:26	BG
Copper	05RE1	SW6010C	5.47 mg/kg dry		3.26	1	09/14/18 13:00	09/18/18 15:26	BG
Iron	05RE2	SW6010C	36700 mg/kg dry		653	200	09/14/18 13:00	09/19/18 15:06	BG
Mercury	05	SW7471B	0.017 mg/kg dry		0.010	1	09/14/18 13:12	09/17/18 15:05	MWL
Potassium	05RE1	SW6010C	5510 mg/kg dry		32.6	1	09/14/18 13:00	09/18/18 15:26	BG
Magnesium	05	SW6010C	6600 mg/kg dry		65.3	20	09/14/18 13:00	09/18/18 13:16	BG
Manganese	05RE1	SW6010C	358 mg/kg dry		0.653	1	09/14/18 13:00	09/18/18 15:26	BG
Sodium	05RE1	SW6010C	153 mg/kg dry		32.6	1	09/14/18 13:00	09/18/18 15:26	BG
Nickel	05RE1	SW6010C	13.7 mg/kg dry		0.653	1	09/14/18 13:00	09/18/18 15:26	BG
Lead	05RE1	SW6010C	9.81 mg/kg dry		0.653	1	09/14/18 13:00	09/18/18 15:26	BG
Antimony	05RE1	SW6010C	<6.53 mg/kg dry		6.53	1	09/14/18 13:00	09/18/18 15:26	BG
Selenium	05RE1	SW6010C	<3.26 mg/kg dry		3.26	1	09/14/18 13:00	09/18/18 15:26	BG
Thallium	05RE1	SW6010C	<3.26 mg/kg dry		3.26	1	09/14/18 13:00	09/18/18 15:26	BG
Vanadium	05RE1	SW6010C	57.9 mg/kg dry		0.653	1	09/14/18 13:00	09/18/18 15:26	BG
Zinc	05RE1	SW6010C	79.8 mg/kg dry		0.653	1	09/14/18 13:00	09/18/18 15:26	BG
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	05	SW8270D SIM	Not Detected			1	09/18/18 09:10	09/18/18 15:20	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 5-10' **Laboratory Sample ID:** 1810501-05

Grab Date/Time: 09/11/2018 11:57

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
1,2,4-Trichlorobenzene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
1,2-Dichlorobenzene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
1,2-Diphenylhydrazine	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
1,3-Dichlorobenzene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
1,4-Dichlorobenzene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
1-Chloronaphthalene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
1-Naphthylamine	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2,3,4,6-Tetrachlorophenol	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2,4,5-Trichlorophenol	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2,4,6-Trichlorophenol	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2,4-Dichlorophenol	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2,4-Dimethylphenol	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2,4-Dinitrophenol	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2,4-Dinitrotoluene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2,6-Dichlorophenol	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2,6-Dinitrotoluene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2-Chloronaphthalene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2-Chlorophenol	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2-Methylnaphthalene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2-Naphthylamine	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2-Nitroaniline	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
2-Nitrophenol	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
3,3'-Dichlorobenzidine	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS
3-Methylcholanthrene	05	SW8270D	<96.1 ug/kg dry	96.1	1		09/18/18 09:10	09/18/18 15:20	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 5-10' **Laboratory Sample ID:** 1810501-05

Grab Date/Time: 09/11/2018 11:57

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
4,6-Dinitro-2-methylphenol	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
4-Aminobiphenyl	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
4-Bromophenyl phenyl ether	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
4-Chloroaniline	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
4-Chlorophenyl phenyl ether	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
4-Nitroaniline	05	SW8270D	<96.1 ug/kg dry	C	96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
4-Nitrophenol	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
7,12-Dimethylbenz (a) anthracene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Acenaphthene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Acenaphthylene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Acetophenone	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Aniline	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Anthracene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Benzidine	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Benzo (a) anthracene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Benzo (a) pyrene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Benzo (b) fluoranthene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Benzo (g,h,i) perylene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Benzo (k) fluoranthene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Benzoic acid	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Benzyl alcohol	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
bis (2-Chloroethoxy) methane	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
bis (2-Chloroethyl) ether	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/28/2018 14:03

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 5-10'

Laboratory Sample ID: 1810501-05

Grab Date/Time: 09/11/2018 11:57

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
bis (2-Ethylhexyl) phthalate	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Butyl benzyl phthalate	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Chrysene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Dibenz (a,h) anthracene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Dibenz (a,j) acridine	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Dibenzofuran	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Diethyl phthalate	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Dimethyl phthalate	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Di-n-butyl phthalate	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Di-n-octyl phthalate	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Diphenylamine	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Ethyl methanesulfonate	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Fluoranthene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Fluorene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Hexachlorobenzene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Hexachlorobutadiene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Hexachlorocyclopentadiene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Hexachloroethane	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Indeno (1,2,3-cd) pyrene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Isophorone	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
m+p-Cresols	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Methyl methanesulfonate	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Naphthalene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Nitrobenzene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/28/2018 14:03

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 5-10'

Laboratory Sample ID: 1810501-05

Grab Date/Time: 09/11/2018 11:57

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
n-Nitrosodi-n-butylamine	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
n-Nitrosodi-n-propylamine	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
n-Nitrosodiphenylamine	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
n-Nitrosopiperidine	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
o+m+p-Cresols	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
o-Cresol	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
p-(Dimethylamino) azobenzene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
p-Chloro-m-cresol	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Pentachloronitrobenzene (quintozene)	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Pentachlorophenol	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Phenacetin	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Phenanthrene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Phenol	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Pronamide	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Pyrene	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Pyridine	05	SW8270D	<96.1 ug/kg dry		96.1	1	09/18/18 09:10	09/18/18 15:20	SKS
Surr: 2,4,6-Tribromophenol (Surr)	05	SW8270D	54.9 %		35-125		09/18/18 09:10	09/18/18 15:20	SKS
Surr: 2-Fluorobiphenyl (Surr)	05	SW8270D	56.8 %		45-105		09/18/18 09:10	09/18/18 15:20	SKS
Surr: 2-Fluorophenol (Surr)	05	SW8270D	72.3 %		35-105		09/18/18 09:10	09/18/18 15:20	SKS
Surr: Nitrobenzene-d5 (Surr)	05	SW8270D	56.0 %		35-100		09/18/18 09:10	09/18/18 15:20	SKS
Surr: Phenol-d5 (Surr)	05	SW8270D	53.3 %		40-100		09/18/18 09:10	09/18/18 15:20	SKS
Surr: p-Terphenyl-d14 (Surr)	05	SW8270D	85.4 %		30-125		09/18/18 09:10	09/18/18 15:20	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 5-10'	Laboratory Sample ID: 1810501-05
Grab Date/Time: 09/11/2018 11:57	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05	SW8015C	<12.2 mg/kg dry		12.2	1	09/24/18 17:00	09/25/18 14:52	HLM
<i>Surr: Pentacosane (Surr)</i>	05	SW8015C	70.6 %		40-160		09/24/18 17:00	09/25/18 14:52	HLM
TPH-Semi-Volatiles (ORO)	05	SW8015C	<12.7 mg/kg dry		12.7	1	09/19/18 14:15	09/20/18 14:36	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	05	SW8082A	<0.123 mg/kg dry		0.123	1	09/19/18 09:02	09/21/18 15:09	HLM
PCB as Aroclor 1221	05	SW8082A	<0.123 mg/kg dry		0.123	1	09/19/18 09:02	09/21/18 15:09	HLM
PCB as Aroclor 1232	05	SW8082A	<0.123 mg/kg dry		0.123	1	09/19/18 09:02	09/21/18 15:09	HLM
PCB as Aroclor 1242	05	SW8082A	<0.123 mg/kg dry		0.123	1	09/19/18 09:02	09/21/18 15:09	HLM
PCB as Aroclor 1248	05	SW8082A	<0.123 mg/kg dry		0.123	1	09/19/18 09:02	09/21/18 15:09	HLM
PCB as Aroclor 1254	05	SW8082A	<0.123 mg/kg dry		0.123	1	09/19/18 09:02	09/21/18 15:09	HLM
PCB as Aroclor 1260	05	SW8082A	<0.123 mg/kg dry		0.123	1	09/19/18 09:02	09/21/18 15:09	HLM
<i>Surr: DCB</i>	05	SW8082A	75.0 %		30-105		09/19/18 09:02	09/21/18 15:09	HLM
<i>Surr: TCMX</i>	05	SW8082A	95.0 %		30-105		09/19/18 09:02	09/21/18 15:09	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	05	SW7196A	0.57 mg/kg dry		0.26	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	05	SM18 2540G	76.5 %		0.10	1	09/14/18 09:19	09/14/18 09:19	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 10-12' **Laboratory Sample ID:** 1810501-06

Grab Date/Time: 09/11/2018 12:04

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06RE1	SW6010C	<0.536 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 15:39	BG
Aluminum	06RE2	SW6010C	16100 mg/kg dry		536	200	09/14/18 13:00	09/19/18 15:08	BG
Arsenic	06RE1	SW6010C	<1.07 mg/kg dry		1.07	1	09/14/18 13:00	09/18/18 15:39	BG
Barium	06RE1	SW6010C	269 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 15:39	BG
Beryllium	06RE1	SW6010C	1.84 mg/kg dry		0.214	1	09/14/18 13:00	09/18/18 15:39	BG
Calcium	06	SW6010C	9740 mg/kg dry		107	20	09/14/18 13:00	09/18/18 13:19	BG
Cadmium	06RE1	SW6010C	0.797 mg/kg dry		0.214	1	09/14/18 13:00	09/18/18 15:39	BG
Cobalt	06RE1	SW6010C	29.8 mg/kg dry		0.214	1	09/14/18 13:00	09/18/18 15:39	BG
Chromium	06RE1	SW6010C	9.12 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 15:39	BG
Copper	06RE1	SW6010C	27.3 mg/kg dry		2.68	1	09/14/18 13:00	09/18/18 15:39	BG
Iron	06RE2	SW6010C	38900 mg/kg dry		536	200	09/14/18 13:00	09/19/18 15:08	BG
Mercury	06	SW7471B	<0.008 mg/kg dry		0.008	1	09/14/18 13:12	09/17/18 15:07	MWL
Potassium	06RE1	SW6010C	8770 mg/kg dry		26.8	1	09/14/18 13:00	09/18/18 15:39	BG
Magnesium	06	SW6010C	11100 mg/kg dry		53.6	20	09/14/18 13:00	09/18/18 13:19	BG
Manganese	06RE1	SW6010C	963 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 15:39	BG
Sodium	06RE1	SW6010C	666 mg/kg dry		26.8	1	09/14/18 13:00	09/18/18 15:39	BG
Nickel	06RE1	SW6010C	6.85 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 15:39	BG
Lead	06RE1	SW6010C	<0.536 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 15:39	BG
Antimony	06RE1	SW6010C	<5.36 mg/kg dry		5.36	1	09/14/18 13:00	09/18/18 15:39	BG
Selenium	06RE1	SW6010C	<2.68 mg/kg dry		2.68	1	09/14/18 13:00	09/18/18 15:39	BG
Thallium	06RE1	SW6010C	<2.68 mg/kg dry		2.68	1	09/14/18 13:00	09/18/18 15:39	BG
Vanadium	06RE1	SW6010C	97.6 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 15:39	BG
Zinc	06RE1	SW6010C	63.4 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 15:39	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	06	SW8270D SIM	Not Detected	1	09/18/18 09:10	09/18/18 15:51	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 10-12' **Laboratory Sample ID:** 1810501-06

Grab Date/Time: 09/11/2018 12:04

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
1,2,4-Trichlorobenzene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
1,2-Dichlorobenzene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
1,2-Diphenylhydrazine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
1,3-Dichlorobenzene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
1,4-Dichlorobenzene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
1-Chloronaphthalene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
1-Naphthylamine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2,3,4,6-Tetrachlorophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2,4,5-Trichlorophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2,4,6-Trichlorophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2,4-Dichlorophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2,4-Dimethylphenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2,4-Dinitrophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2,4-Dinitrotoluene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2,6-Dichlorophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2,6-Dinitrotoluene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2-Chloronaphthalene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2-Chlorophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2-Methylnaphthalene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2-Naphthylamine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2-Nitroaniline	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
2-Nitrophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
3,3'-Dichlorobenzidine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
3-Methylcholanthrene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 10-12' **Laboratory Sample ID:** 1810501-06

Grab Date/Time: 09/11/2018 12:04

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
4,6-Dinitro-2-methylphenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
4-Aminobiphenyl	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
4-Bromophenyl phenyl ether	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
4-Chloroaniline	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
4-Chlorophenyl phenyl ether	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
4-Nitroaniline	06	SW8270D	<89.9 ug/kg dry	C	89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
4-Nitrophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
7,12-Dimethylbenz (a) anthracene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Acenaphthene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Acenaphthylene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Acetophenone	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Aniline	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Anthracene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Benzidine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Benzo (a) anthracene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Benzo (a) pyrene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Benzo (b) fluoranthene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Benzo (g,h,i) perylene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Benzo (k) fluoranthene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Benzoic acid	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Benzyl alcohol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
bis (2-Chloroethoxy) methane	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
bis (2-Chloroethyl) ether	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 10-12' **Laboratory Sample ID:** 1810501-06

Grab Date/Time: 09/11/2018 12:04

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
bis (2-Ethylhexyl) phthalate	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Butyl benzyl phthalate	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Chrysene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Dibenz (a,h) anthracene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Dibenz (a,j) acridine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Dibenzofuran	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Diethyl phthalate	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Dimethyl phthalate	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Di-n-butyl phthalate	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Di-n-octyl phthalate	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Diphenylamine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Ethyl methanesulfonate	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Fluoranthene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Fluorene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Hexachlorobenzene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Hexachlorobutadiene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Hexachlorocyclopentadiene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Hexachloroethane	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Indeno (1,2,3-cd) pyrene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Isophorone	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
m+p-Cresols	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Methyl methanesulfonate	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Naphthalene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Nitrobenzene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 10-12' **Laboratory Sample ID:** 1810501-06

Grab Date/Time: 09/11/2018 12:04

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
n-Nitrosodi-n-butylamine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
n-Nitrosodi-n-propylamine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
n-Nitrosodiphenylamine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
n-Nitrosopiperidine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
o+m+p-Cresols	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
o-Cresol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
p-(Dimethylamino) azobenzene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
p-Chloro-m-cresol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Pentachloronitrobenzene (quintozene)	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Pentachlorophenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Phenacetin	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Phenanthrene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Phenol	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Pronamide	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Pyrene	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Pyridine	06	SW8270D	<89.9 ug/kg dry		89.9	1	09/18/18 09:10	09/18/18 15:51	SKS
Surr: 2,4,6-Tribromophenol (Surr)	06	SW8270D	50.8 %		35-125		09/18/18 09:10	09/18/18 15:51	SKS
Surr: 2-Fluorobiphenyl (Surr)	06	SW8270D	57.5 %		45-105		09/18/18 09:10	09/18/18 15:51	SKS
Surr: 2-Fluorophenol (Surr)	06	SW8270D	78.8 %		35-105		09/18/18 09:10	09/18/18 15:51	SKS
Surr: Nitrobenzene-d5 (Surr)	06	SW8270D	57.5 %		35-100		09/18/18 09:10	09/18/18 15:51	SKS
Surr: Phenol-d5 (Surr)	06	SW8270D	56.3 %		40-100		09/18/18 09:10	09/18/18 15:51	SKS
Surr: p-Terphenyl-d14 (Surr)	06	SW8270D	83.4 %		30-125		09/18/18 09:10	09/18/18 15:51	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810501

Analytical Results

Sample I.D. Task 2.1 77-9 10-12'	Laboratory Sample ID: 1810501-06
Grab Date/Time: 09/11/2018 12:04	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	06	SW8015C	<11.1 mg/kg dry		11.1	1	09/24/18 17:00	09/25/18 15:18	HLM
<i>Surr: Pentacosane (Surr)</i>	06	SW8015C	63.2 %		40-160		09/24/18 17:00	09/25/18 15:18	HLM
TPH-Semi-Volatiles (ORO)	06	SW8015C	<10.7 mg/kg dry		10.7	1	09/19/18 14:15	09/20/18 15:01	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	06	SW8082A	<0.105 mg/kg dry		0.105	1	09/19/18 09:02	09/21/18 15:31	HLM
PCB as Aroclor 1221	06	SW8082A	<0.105 mg/kg dry		0.105	1	09/19/18 09:02	09/21/18 15:31	HLM
PCB as Aroclor 1232	06	SW8082A	<0.105 mg/kg dry		0.105	1	09/19/18 09:02	09/21/18 15:31	HLM
PCB as Aroclor 1242	06	SW8082A	<0.105 mg/kg dry		0.105	1	09/19/18 09:02	09/21/18 15:31	HLM
PCB as Aroclor 1248	06	SW8082A	<0.105 mg/kg dry		0.105	1	09/19/18 09:02	09/21/18 15:31	HLM
PCB as Aroclor 1254	06	SW8082A	<0.105 mg/kg dry		0.105	1	09/19/18 09:02	09/21/18 15:31	HLM
PCB as Aroclor 1260	06	SW8082A	<0.105 mg/kg dry		0.105	1	09/19/18 09:02	09/21/18 15:31	HLM
<i>Surr: DCB</i>	06	SW8082A	75.0 %		30-105		09/19/18 09:02	09/21/18 15:31	HLM
<i>Surr: TCMX</i>	06	SW8082A	75.0 %		30-105		09/19/18 09:02	09/21/18 15:31	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	06	SW7196A	<0.21 mg/kg dry		0.21	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	06	SM18 2540G	90.0 %		0.10	1	09/14/18 09:19	09/14/18 09:19	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/28/2018 14:03

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Wet Chemistry Analysis

Preparation Method: No Prep Wet Chem

18I0501-01	1.00 g / 1.00 mL	SM18 2540G	BBI0419	SBI0367	
18I0501-02	1.00 g / 1.00 mL	SM18 2540G	BBI0419	SBI0367	
18I0501-03	1.00 g / 1.00 mL	SM18 2540G	BBI0419	SBI0367	
18I0501-04	1.00 g / 1.00 mL	SM18 2540G	BBI0419	SBI0367	
18I0501-05	1.00 g / 1.00 mL	SM18 2540G	BBI0419	SBI0367	
18I0501-06	1.00 g / 1.00 mL	SM18 2540G	BBI0419	SBI0367	

Wet Chemistry Analysis

Preparation Method: No Prep Wet Chem

18I0501-01	2.53 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0501-02	2.51 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0501-03	2.52 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0501-04	2.53 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0501-05	2.52 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0501-06	2.59 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method: SW3050B

18I0501-01	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0501-01RE1	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0501-01RE2	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0501-02	1.05 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0501-02RE1	1.05 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0501-02RE2	1.05 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0501-03	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0501-03RE1	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0501-03RE2	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0501-04	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0501-04RE1	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0501-04RE2	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0501-05	1.00 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
1810501-05RE1	1.00 g / 50.0 mL	SW6010C	BB10436	SBI0496	AI80075
1810501-05RE2	1.00 g / 50.0 mL	SW6010C	BB10436	SBI0524	AI80083
1810501-06	1.04 g / 50.0 mL	SW6010C	BB10436	SBI0487	AI80075
1810501-06RE1	1.04 g / 50.0 mL	SW6010C	BB10436	SBI0496	AI80075
1810501-06RE2	1.04 g / 50.0 mL	SW6010C	BB10436	SBI0524	AI80083

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method: SW3550B			
1810501-01	32.4 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810501-02	30.7 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810501-03	30.8 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810501-04	30.6 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810501-05	31.9 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810501-06	31.8 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS		Preparation Method: SW3550C			
1810501-01	30.9 g / 1.00 mL	SW8270D	BB10510	SBI0481	AF80101
1810501-02	30.0 g / 1.00 mL	SW8270D	BB10510	SBI0481	AF80101
1810501-03	34.6 g / 1.00 mL	SW8270D	BB10510	SBI0481	AF80101
1810501-04	31.3 g / 1.00 mL	SW8270D	BB10510	SBI0481	AF80101
1810501-05	34.0 g / 1.00 mL	SW8270D	BB10510	SBI0481	AF80101
1810501-06	30.9 g / 1.00 mL	SW8270D	BB10510	SBI0481	AF80101
1810501-01	30.9 g / 1.00 mL	SW8270D SIM	BB10510	SBI0481	AF80101
1810501-02	30.0 g / 1.00 mL	SW8270D SIM	BB10510	SBI0481	AF80101
1810501-03	34.6 g / 1.00 mL	SW8270D SIM	BB10510	SBI0481	AF80101
1810501-04	31.3 g / 1.00 mL	SW8270D SIM	BB10510	SBI0481	AF80101
1810501-05	34.0 g / 1.00 mL	SW8270D SIM	BB10510	SBI0481	AF80101
1810501-06	30.9 g / 1.00 mL	SW8270D SIM	BB10510	SBI0481	AF80101

Semivolatile Hydrocarbons by GC		Preparation Method: SW3550C			
1810501-01	51.6 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810501-02	51.5 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810501-03	53.1 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0501-04	51.2 g / 1.00 mL	SW8015C	BBI0573	SBI0575	AH80136
18I0501-05	51.5 g / 1.00 mL	SW8015C	BBI0573	SBI0575	AH80136
18I0501-06	51.7 g / 1.00 mL	SW8015C	BBI0573	SBI0575	AH80136

Semivolatile Hydrocarbons by GC		Preparation Method:	SW3550C		
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0501-01	53.0 g / 1.00 mL	SW8015C	BBI0708	SBI0692	AH80058
18I0501-02	51.5 g / 1.00 mL	SW8015C	BBI0708	SBI0692	AH80058
18I0501-03	51.3 g / 1.00 mL	SW8015C	BBI0708	SBI0692	AH80058
18I0501-04	53.5 g / 1.00 mL	SW8015C	BBI0708	SBI0692	AH80058
18I0501-05	53.6 g / 1.00 mL	SW8015C	BBI0708	SBI0692	AH80058
18I0501-06	50.0 g / 1.00 mL	SW8015C	BBI0708	SBI0692	AH80058

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method:	SW7471B		
18I0501-01	0.528 g / 20.0 mL	SW7471B	BBI0440	SBI0421	AI80052
18I0501-02	0.538 g / 20.0 mL	SW7471B	BBI0440	SBI0421	AI80052
18I0501-03	0.508 g / 20.0 mL	SW7471B	BBI0440	SBI0421	AI80052
18I0501-04	0.544 g / 20.0 mL	SW7471B	BBI0440	SBI0421	AI80052
18I0501-05	0.522 g / 20.0 mL	SW7471B	BBI0440	SBI0421	AI80052
18I0501-06	0.549 g / 20.0 mL	SW7471B	BBI0440	SBI0421	AI80052

Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method:	SW7471B		
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0501-01RE1	0.511 g / 20.0 mL	SW7471B	BBI0830	SBI0781	AI80121
18I0501-01RE2	0.254 g / 20.0 mL	SW7471B	BBI0830	SBI0781	AI80121



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0436 - SW3050B

Blank (BBI0436-BLK1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Selenium	<2.50 mg/kg wet	2.50	mg/kg wet						
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet						
Calcium	<5.00 mg/kg wet	5.00	mg/kg wet						
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet						
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet						
Potassium	<25.0 mg/kg wet	25.0	mg/kg wet						
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet						
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet						
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet						
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet						
Barium	<0.500 mg/kg wet	0.500	mg/kg wet						
Lead	<0.500 mg/kg wet	0.500	mg/kg wet						
Copper	<2.50 mg/kg wet	2.50	mg/kg wet						
Magnesium	<2.50 mg/kg wet	2.50	mg/kg wet						
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet						
Iron	<2.50 mg/kg wet	2.50	mg/kg wet						
Sodium	<25.0 mg/kg wet	25.0	mg/kg wet						
Silver	<0.500 mg/kg wet	0.500	mg/kg wet						
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet						
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet						
Manganese	<0.500 mg/kg wet	0.500	mg/kg wet						
Aluminum	2.94 mg/kg wet	2.50	mg/kg wet						B

LCS (BBI0436-BS1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Magnesium	103 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	109	80-120
Manganese	104 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	111	80-120
Sodium	274 mg/kg wet	25.0	mg/kg wet	236	mg/kg wet	116	80-120
Copper	109 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	115	80-120
Cobalt	106 mg/kg wet	0.200	mg/kg wet	94.5	mg/kg wet	112	80-120
Iron	103 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	109	80-120
Nickel	102 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	108	80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0436 - SW3050B

LCS (BBI0436-BS1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Cadmium	100 mg/kg wet	0.200	mg/kg wet	94.5	mg/kg wet	106	80-120			
Chromium	103 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	109	80-120			
Antimony	99.7 mg/kg wet	5.00	mg/kg wet	94.5	mg/kg wet	105	80-120			
Zinc	101 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	107	80-120			
Silver	5.16 mg/kg wet	0.500	mg/kg wet	4.73	mg/kg wet	109	80-120			
Vanadium	103 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	109	80-120			
Thallium	90.8 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	96.1	80-120			
Aluminum	110 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	117	80-120			
Selenium	96.2 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	102	80-120			
Lead	102 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	108	80-120			
Barium	107 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	113	80-120			
Arsenic	101 mg/kg wet	1.00	mg/kg wet	94.5	mg/kg wet	107	80-120			
Beryllium	99.8 mg/kg wet	0.200	mg/kg wet	94.5	mg/kg wet	106	80-120			
Potassium	259 mg/kg wet	25.0	mg/kg wet	236	mg/kg wet	109	80-120			
Calcium	103 mg/kg wet	5.00	mg/kg wet	94.5	mg/kg wet	109	80-120			

LCS Dup (BBI0436-BSD1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Chromium	109 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	110	80-120	5.51	20	
Calcium	108 mg/kg wet	5.00	mg/kg wet	99.1	mg/kg wet	109	80-120	4.60	20	
Beryllium	105 mg/kg wet	0.200	mg/kg wet	99.1	mg/kg wet	106	80-120	4.79	20	
Cobalt	112 mg/kg wet	0.200	mg/kg wet	99.1	mg/kg wet	113	80-120	5.48	20	
Thallium	96.2 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	97.1	80-120	5.72	20	
Copper	114 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	115	80-120	5.25	20	
Cadmium	106 mg/kg wet	0.200	mg/kg wet	99.1	mg/kg wet	107	80-120	5.28	20	
Vanadium	107 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	108	80-120	4.19	20	
Iron	108 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	109	80-120	5.01	20	
Barium	111 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	112	80-120	3.86	20	
Manganese	110 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	111	80-120	5.03	20	
Antimony	104 mg/kg wet	5.00	mg/kg wet	99.1	mg/kg wet	105	80-120	4.64	20	
Arsenic	107 mg/kg wet	1.00	mg/kg wet	99.1	mg/kg wet	108	80-120	5.38	20	
Potassium	269 mg/kg wet	25.0	mg/kg wet	248	mg/kg wet	108	80-120	3.76	20	
Silver	5.38 mg/kg wet	0.500	mg/kg wet	4.96	mg/kg wet	109	80-120	4.26	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0436 - SW3050B

LCS Dup (BBI0436-BSD1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Lead	108 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	109	80-120	5.35	20	
Magnesium	109 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	110	80-120	5.11	20	
Selenium	101 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	102	80-120	5.16	20	
Zinc	105 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	106	80-120	3.96	20	
Sodium	284 mg/kg wet	25.0	mg/kg wet	248	mg/kg wet	115	80-120	3.43	20	
Aluminum	115 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	116	80-120	4.39	20	
Nickel	107 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	108	80-120	4.92	20	

Matrix Spike (BBI0436-MS1)

Source: 1810505-10

Prepared: 09/14/2018 Analyzed: 09/18/2018

Arsenic	113 mg/kg dry	22.2	mg/kg dry	111	<22.2 mg/kg dry	102	75-125			
Lead	121 mg/kg dry	11.1	mg/kg dry	111	<11.1 mg/kg dry	109	75-125			
Potassium	9520 mg/kg dry	556	mg/kg dry	278	7600 mg/kg dry	692	75-125			M2
Nickel	132 mg/kg dry	11.1	mg/kg dry	111	11.6 mg/kg dry	108	75-125			
Beryllium	123 mg/kg dry	4.45	mg/kg dry	111	<4.45 mg/kg dry	111	75-125			
Barium	276 mg/kg dry	11.1	mg/kg dry	111	148 mg/kg dry	115	75-125			
Aluminum	26000 mg/kg dry	55.6	mg/kg dry	111	21200 mg/kg dry	4330	75-125			M2, E
Selenium	96.3 mg/kg dry	55.6	mg/kg dry	111	<55.6 mg/kg dry	86.6	75-125			
Thallium	105 mg/kg dry	55.6	mg/kg dry	111	<55.6 mg/kg dry	94.8	75-125			
Silver	<11.1 mg/kg dry	11.1	mg/kg dry	5.56	<11.1 mg/kg dry		75-125			M2
Vanadium	163 mg/kg dry	11.1	mg/kg dry	111	34.6 mg/kg dry	115	75-125			
Zinc	217 mg/kg dry	11.1	mg/kg dry	111	88.8 mg/kg dry	115	75-125			
Antimony	<111 mg/kg dry	111	mg/kg dry	111	<111 mg/kg dry		75-125			M2
Cadmium	118 mg/kg dry	4.45	mg/kg dry	111	<4.45 mg/kg dry	106	75-125			
Chromium	147 mg/kg dry	11.1	mg/kg dry	111	24.2 mg/kg dry	111	75-125			
Magnesium	7790 mg/kg dry	55.6	mg/kg dry	111	6900 mg/kg dry	804	75-125			M2
Cobalt	137 mg/kg dry	4.45	mg/kg dry	111	15.4 mg/kg dry	109	75-125			
Copper	136 mg/kg dry	55.6	mg/kg dry	111	<55.6 mg/kg dry	122	75-125			
Manganese	649 mg/kg dry	11.1	mg/kg dry	111	473 mg/kg dry	158	75-125			M2
Sodium	<556 mg/kg dry	556	mg/kg dry	278	<556 mg/kg dry		75-125			M2
Calcium	2100 mg/kg dry	111	mg/kg dry	111	1680 mg/kg dry	380	75-125			M2
Iron	27400 mg/kg dry	55.6	mg/kg dry	111	25300 mg/kg dry	1830	75-125			M2, E



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0436 - SW3050B

Matrix Spike (BBI0436-MS2)		Source: 18I0510-01RE1		Prepared: 09/14/2018 Analyzed: 09/18/2018						
Vanadium	118 mg/kg wet	0.500	mg/kg wet	96.1	<0.500 mg/kg wet	123	75-125			
Lead	88.1 mg/kg wet	0.500	mg/kg wet	96.1	<0.500 mg/kg wet	117	75-125			
Thallium	71.9 mg/kg wet	2.50	mg/kg wet	96.1	<2.50 mg/kg wet	74.9	75-125			M
Iron	13400 mg/kg wet	2.50	mg/kg wet	96.1	47.9 mg/kg wet	13900	75-125			M, E
Selenium	72.9 mg/kg wet	2.50	mg/kg wet	96.1	<2.50 mg/kg wet	75.9	75-125			
Zinc	153 mg/kg wet	0.500	mg/kg wet	96.1	6.80 mg/kg wet	153	75-125			M
Potassium	7120 mg/kg wet	25.0	mg/kg wet	240	71.0 mg/kg wet	2940	75-125			M
Sodium	311 mg/kg wet	25.0	mg/kg wet	240	75.2 mg/kg wet	98.2	75-125			
Antimony	19.0 mg/kg wet	5.00	mg/kg wet	96.1	<5.00 mg/kg wet	19.8	75-125			M
Chromium	110 mg/kg wet	0.500	mg/kg wet	96.1	<0.500 mg/kg wet	115	75-125			
Cobalt	99.9 mg/kg wet	0.200	mg/kg wet	96.1	<0.200 mg/kg wet	104	75-125			
Barium	199 mg/kg wet	0.500	mg/kg wet	96.1	0.982 mg/kg wet	206	75-125			M
Manganese	456 mg/kg wet	0.500	mg/kg wet	96.1	13.1 mg/kg wet	461	75-125			M
Cadmium	86.0 mg/kg wet	0.200	mg/kg wet	96.1	<0.200 mg/kg wet	89.5	75-125			
Calcium	1430 mg/kg wet	5.00	mg/kg wet	96.1	184 mg/kg wet	1300	75-125			M, E
Nickel	94.4 mg/kg wet	0.500	mg/kg wet	96.1	<0.500 mg/kg wet	98.3	75-125			
Beryllium	92.8 mg/kg wet	0.200	mg/kg wet	96.1	<0.200 mg/kg wet	96.6	75-125			
Copper	102 mg/kg wet	2.50	mg/kg wet	96.1	3.33 mg/kg wet	103	75-125			
Magnesium	4850 mg/kg wet	2.50	mg/kg wet	96.1	46.9 mg/kg wet	5000	75-125			M, E
Aluminum	17600 mg/kg wet	2.50	mg/kg wet	96.1	691 mg/kg wet	17600	75-125			M, E
Arsenic	88.5 mg/kg wet	1.00	mg/kg wet	96.1	<1.00 mg/kg wet	92.1	75-125			
Silver	<0.500 mg/kg wet	0.500	mg/kg wet	4.80	<0.500 mg/kg wet		75-125			M

Matrix Spike (BBI0436-MS3)		Source: 18I0505-10RE2		Prepared: 09/14/2018 Analyzed: 09/19/2018						
Iron	26000 mg/kg dry	556	mg/kg dry	111	24000 mg/kg dry	1770	75-125			M2
Arsenic	<222 mg/kg dry	222	mg/kg dry	111	<222 mg/kg dry		75-125			M2
Calcium	1940 mg/kg dry	1110	mg/kg dry	111	1680 mg/kg dry	237	75-125			M2
Aluminum	23100 mg/kg dry	556	mg/kg dry	111	19000 mg/kg dry	3760	75-125			M2



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0436 - SW3050B

Matrix Spike Dup (BBI0436-MSD1)		Source: 18I0505-10			Prepared: 09/14/2018 Analyzed: 09/18/2018					
Beryllium	126 mg/kg dry	4.49	mg/kg dry	112	<4.49 mg/kg dry	112	75-125	2.06	20	
Arsenic	120 mg/kg dry	22.4	mg/kg dry	112	<22.4 mg/kg dry	107	75-125	6.14	20	
Barium	287 mg/kg dry	11.2	mg/kg dry	112	148 mg/kg dry	124	75-125	4.02	20	
Iron	26400 mg/kg dry	56.1	mg/kg dry	112	25300 mg/kg dry	948	75-125	3.63	20	M2, E
Calcium	2130 mg/kg dry	112	mg/kg dry	112	1680 mg/kg dry	402	75-125	1.37	20	M2
Copper	139 mg/kg dry	56.1	mg/kg dry	112	<56.1 mg/kg dry	124	75-125	2.71	20	
Chromium	150 mg/kg dry	11.2	mg/kg dry	112	24.2 mg/kg dry	112	75-125	1.77	20	
Cobalt	139 mg/kg dry	4.49	mg/kg dry	112	15.4 mg/kg dry	110	75-125	2.01	20	
Sodium	<561 mg/kg dry	561	mg/kg dry	280	<561 mg/kg dry		75-125		20	M2
Nickel	135 mg/kg dry	11.2	mg/kg dry	112	11.6 mg/kg dry	110	75-125	2.16	20	
Potassium	8410 mg/kg dry	561	mg/kg dry	280	7600 mg/kg dry	289	75-125	12.4	20	M2
Cadmium	122 mg/kg dry	4.49	mg/kg dry	112	<4.49 mg/kg dry	108	75-125	2.98	20	
Manganese	611 mg/kg dry	11.2	mg/kg dry	112	473 mg/kg dry	123	75-125	6.12	20	
Lead	133 mg/kg dry	11.2	mg/kg dry	112	<11.2 mg/kg dry	118	75-125	8.98	20	
Aluminum	27500 mg/kg dry	56.1	mg/kg dry	112	21200 mg/kg dry	5670	75-125	5.75	20	M2, E
Antimony	<112 mg/kg dry	112	mg/kg dry	112	<112 mg/kg dry		75-125		20	M2
Silver	<11.2 mg/kg dry	11.2	mg/kg dry	5.61	<11.2 mg/kg dry		75-125		20	M2
Selenium	109 mg/kg dry	56.1	mg/kg dry	112	<56.1 mg/kg dry	96.8	75-125	11.9	20	
Thallium	106 mg/kg dry	56.1	mg/kg dry	112	<56.1 mg/kg dry	94.8	75-125	0.835	20	
Vanadium	164 mg/kg dry	11.2	mg/kg dry	112	34.6 mg/kg dry	115	75-125	0.652	20	
Zinc	217 mg/kg dry	11.2	mg/kg dry	112	88.8 mg/kg dry	114	75-125	0.0330	20	
Magnesium	7060 mg/kg dry	56.1	mg/kg dry	112	6900 mg/kg dry	146	75-125	9.84	20	M2

Matrix Spike Dup (BBI0436-MSD2)		Source: 18I0510-01RE1			Prepared: 09/14/2018 Analyzed: 09/18/2018					
Potassium	5990 mg/kg wet	25.0	mg/kg wet	242	71.0 mg/kg wet	2440	75-125	17.2	20	M
Silver	<0.500 mg/kg wet	0.500	mg/kg wet	4.84	<0.500 mg/kg wet		75-125		20	M
Cadmium	83.8 mg/kg wet	0.200	mg/kg wet	96.9	<0.200 mg/kg wet	86.5	75-125	2.57	20	
Cobalt	96.9 mg/kg wet	0.200	mg/kg wet	96.9	<0.200 mg/kg wet	100	75-125	3.12	20	
Aluminum	17800 mg/kg wet	2.50	mg/kg wet	96.9	691 mg/kg wet	17700	75-125	1.13	20	M, E
Arsenic	85.9 mg/kg wet	1.00	mg/kg wet	96.9	<1.00 mg/kg wet	88.6	75-125	2.95	20	
Beryllium	89.9 mg/kg wet	0.200	mg/kg wet	96.9	<0.200 mg/kg wet	82.8	75-125	3.11	20	
Calcium	1400 mg/kg wet	5.00	mg/kg wet	96.9	184 mg/kg wet	1250	75-125	2.21	20	M, E



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-----------	--------	-----	-----------	------

Batch BBI0436 - SW3050B

Matrix Spike Dup (BBI0436-MSD2)		Source: 18I0510-01RE1		Prepared: 09/14/2018		Analyzed: 09/18/2018				
Magnesium	4250 mg/kg wet	2.50	mg/kg wet	96.9	46.9 mg/kg wet	4330	75-125	13.2	20	M, E
Barium	201 mg/kg wet	0.500	mg/kg wet	96.9	0.982 mg/kg wet	206	75-125	1.00	20	M
Iron	12600 mg/kg wet	2.50	mg/kg wet	96.9	47.9 mg/kg wet	13000	75-125	5.80	20	M, E
Copper	99.4 mg/kg wet	2.50	mg/kg wet	96.9	3.33 mg/kg wet	99.2	75-125	2.63	20	
Chromium	106 mg/kg wet	0.500	mg/kg wet	96.9	<0.500 mg/kg wet	110	75-125	3.91	20	
Nickel	91.8 mg/kg wet	0.500	mg/kg wet	96.9	<0.500 mg/kg wet	4.8	75-125	2.77	20	
Zinc	148 mg/kg wet	0.500	mg/kg wet	96.9	6.80 mg/kg wet	146	75-125	3.27	20	M
Sodium	297 mg/kg wet	25.0	mg/kg wet	242	75.2 mg/kg wet	91.5	75-125	4.67	20	
Manganese	408 mg/kg wet	0.500	mg/kg wet	96.9	13.1 mg/kg wet	407	75-125	11.2	20	M
Lead	86.3 mg/kg wet	0.500	mg/kg wet	96.9	<0.500 mg/kg wet	89.0	75-125	2.15	20	
Vanadium	117 mg/kg wet	0.500	mg/kg wet	96.9	<0.500 mg/kg wet	121	75-125	1.31	20	
Selenium	71.6 mg/kg wet	2.50	mg/kg wet	96.9	<2.50 mg/kg wet	73.9	75-125	1.84	20	M
Antimony	18.1 mg/kg wet	5.00	mg/kg wet	96.9	<5.00 mg/kg wet	18.7	75-125	4.58	20	M
Thallium	71.2 mg/kg wet	2.50	mg/kg wet	96.9	<2.50 mg/kg wet	73.5	75-125	1.01	20	M

Matrix Spike Dup (BBI0436-MSD3)		Source: 18I0505-10RE2		Prepared: 09/14/2018		Analyzed: 09/19/2018				
Calcium	1790 mg/kg dry	1120	mg/kg dry	112	1680 mg/kg dry	97.1	75-125	8.29	20	
Iron	24300 mg/kg dry	561	mg/kg dry	112	24000 mg/kg dry	291	75-125	6.53	20	M2
Arsenic	<224 mg/kg dry	224	mg/kg dry	112	<224 mg/kg dry		75-125		20	M2
Aluminum	21700 mg/kg dry	561	mg/kg dry	112	19000 mg/kg dry	2440	75-125	6.41	20	M2

Batch BBI0440 - SW7471B

Blank (BBI0440-BLK1)		Prepared: 09/14/2018		Analyzed: 09/17/2018	
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet		

LCS (BBI0440-BS1)		Prepared: 09/14/2018		Analyzed: 09/17/2018	
Mercury	0.102 mg/kg wet	0.008	mg/kg wet	0.0992	mg/kg wet 103 80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0440 - SW7471B

LCS Dup (BBI0440-BSD1)				Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.100 mg/kg wet	0.008	mg/kg wet	0.100	mg/kg wet	99.5	80-120	2.95	20	
Matrix Spike (BBI0440-MS1)				Source: 18I0505-10 Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.108 mg/kg dry	0.009	mg/kg dry	0.111	0.013 mg/kg dry	86.3	80-120			
Matrix Spike Dup (BBI0440-MSD1)				Source: 18I0505-10 Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.123 mg/kg dry	0.009	mg/kg dry	0.113	0.013 mg/kg dry	97.7	80-120	12.7	20	

Batch BBI0830 - SW7471B

Blank (BBI0830-BLK1)				Prepared: 09/27/2018 Analyzed: 09/28/2018						
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							
LCS (BBI0830-BS1)				Prepared: 09/27/2018 Analyzed: 09/28/2018						
Mercury	0.091 mg/kg wet	0.008	mg/kg wet	0.0958	mg/kg wet	95.3	80-120			
LCS Dup (BBI0830-BSD1)				Prepared: 09/27/2018 Analyzed: 09/28/2018						
Mercury	0.092 mg/kg wet	0.008	mg/kg wet	0.0978	mg/kg wet	93.7	80-120	0.415	20	
Matrix Spike (BBI0830-MS1)				Source: 18I0501-01RE2 Prepared: 09/27/2018 Analyzed: 09/28/2018						
Mercury	0.137 mg/kg dry	0.019	mg/kg dry	0.241	0.158 mg/kg dry	-8.64	80-120			M
Matrix Spike Dup (BBI0830-MSD1)				Source: 18I0501-01RE2 Prepared: 09/27/2018 Analyzed: 09/28/2018						
Mercury	0.171 mg/kg dry	0.019	mg/kg dry	0.238	0.158 mg/kg dry	5.65	80-120	22.2	20	M, P



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------------------	---------	-------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

2,3,7,8-TCDD (SIM)	Not Detected - wet		- wet						
1,2,4,5-Tetrachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,2,4-Trichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,2-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,2-Diphenylhydrazine	<83.3 ug/kg wet	83.3	ug/kg wet						
1,3-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,4-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
1-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
2,3,4,6-Tetrachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4,5-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4,6-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dimethylphenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dinitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet						
2,6-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,6-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Chlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Methylnaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
3,3'-Dichlorobenzidine	<83.3 ug/kg wet	83.3	ug/kg wet						
3-Methylcholanthrene	<83.3 ug/kg wet	83.3	ug/kg wet						
3-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4,6-Dinitro-2-methylphenol	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Aminobiphenyl	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Bromophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Chloroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

4-Chlorophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
7,12-Dimethylbenz (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acetophenone	<83.3 ug/kg wet	83.3	ug/kg wet						
Aniline	<83.3 ug/kg wet	83.3	ug/kg wet						
Anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzidine	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (b) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (g,h,i) perylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (k) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzoic acid	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzyl alcohol	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethoxy) methane	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethyl) ether	<83.3 ug/kg wet	83.3	ug/kg wet						
2,2'-Oxybis (1-chloropropane)	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Ethylhexyl) phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Butyl benzyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Chrysene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,h) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,j) acridine	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenzofuran	<83.3 ug/kg wet	83.3	ug/kg wet						
Diethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Dimethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-butyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-octyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Diphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/28/2018 14:03
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	--------------	---------------	--------------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

Ethyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluorene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobutadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorocyclopentadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachloroethane	<83.3 ug/kg wet	83.3	ug/kg wet						
Indeno (1,2,3-cd) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Isophorone	<83.3 ug/kg wet	83.3	ug/kg wet						
m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet						
Methyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet						
Naphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
Nitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodimethylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodi-n-butylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodi-n-propylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodiphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosopiperidine	<83.3 ug/kg wet	83.3	ug/kg wet						
o+m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet						
o-Cresol	<83.3 ug/kg wet	83.3	ug/kg wet						
p-(Dimethylamino) azobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
p-Chloro-m-cresol	<83.3 ug/kg wet	83.3	ug/kg wet						
Pentachloronitrobenzene (quintozene)	<83.3 ug/kg wet	83.3	ug/kg wet						
Pentachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenacetin	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenanthrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenol	<83.3 ug/kg wet	83.3	ug/kg wet						
Pronamide	<83.3 ug/kg wet	83.3	ug/kg wet						
Pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Pyridine	<83.3 ug/kg wet	83.3	ug/kg wet						

Surr: 2,4,6-Tribromophenol (Surr)

1640

ug/kg wet

3070

53.5

35-125



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

Surr: 2-Fluorobiphenyl (Surr)	888		ug/kg wet	1530		57.9	45-105			
Surr: 2-Fluorophenol (Surr)	2380		ug/kg wet	3070		77.6	35-105			
Surr: Nitrobenzene-d5 (Surr)	875		ug/kg wet	1530		57.1	35-100			
Surr: Phenol-d5 (Surr)	1730		ug/kg wet	3070		56.3	40-100			
Surr: p-Terphenyl-d14 (Surr)	1240		ug/kg wet	1530		81.0	30-125			

LCS (BBI0510-BS1)

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	845 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	55.6	21.8-66.7
1,2-Dichlorobenzene	838 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	55.1	22-60
1,3-Dichlorobenzene	809 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.2	22-60
1,4-Dichlorobenzene	888 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.4	13-68
1-Chloronaphthalene	912 ug/kg wet	76.0	ug/kg wet		ug/kg wet		0-200
2,4,6-Trichlorophenol	949 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.4	50-115
2,4-Dichlorophenol	870 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.2	50-105
2,4-Dimethylphenol	901 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.3	30-110
2,4-Dinitrophenol	1530 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	101	15-140
2,4-Dinitrotoluene	959 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	63.1	21-99
2,6-Dinitrotoluene	890 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	15-140
2-Chloronaphthalene	877 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.7	45-105
2-Chlorophenol	810 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.3	15-74
2-Nitrophenol	901 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.3	40-115
3,3'-Dichlorobenzidine	653 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	43.0	20-110
4,6-Dinitro-2-methylphenol	1380 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	90.5	40-130
4-Bromophenyl phenyl ether	826 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	54.4	15-110
4-Chlorophenyl phenyl ether	799 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	52.6	15-110
4-Nitrophenol	780 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	51.3	0-125
Acenaphthene	914 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	60.1	27.7-85.5
Acenaphthylene	1010 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	66.5	50-105
Acetophenone	866 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.0	0-200
Anthracene	944 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.1	55-110
Benzo (a) anthracene	983 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.7	55-110



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

LCS (BBI0510-BS1)

Prepared & Analyzed: 09/18/2018

Benzo (a) pyrene	930 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.2	55-110			
Benzo (b) fluoranthene	1110 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	72.9	45-120			
Benzo (g,h,i) perylene	902 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.4	40-125			
Benzo (k) fluoranthene	996 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	65.5	45-125			
bis (2-Chloroethoxy) methane	855 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.2	40-125			
bis (2-Chloroethyl) ether	766 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.4	40-125			
2,2'-Oxybis (1-chloropropane)	771 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.8	40-125			
bis (2-Ethylhexyl) phthalate	1260 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	83.0	40-125			
Butyl benzyl phthalate	1320 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	86.6	45-115			
Chrysene	1030 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	67.5	55-110			
Dibenz (a,h) anthracene	892 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.7	40-125			
Diethyl phthalate	939 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.8	40-120			
Dimethyl phthalate	867 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.0	25-125			
Di-n-butyl phthalate	1070 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	70.6	55-115			
Di-n-octyl phthalate	1420 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	93.3	35-135			
Fluoranthene	982 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.6	55-115			
Fluorene	948 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.4	50-110			
Hexachlorobenzene	830 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	54.6	25-125			
Hexachlorobutadiene	985 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.8	25-125			
Hexachlorocyclopentadiene	742 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	48.8	25-125			
Hexachloroethane	890 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	25-125			
Indeno (1,2,3-cd) pyrene	891 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	45-125			
Isophorone	857 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.4	10-110			
Naphthalene	957 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.9	40-100			
Nitrobenzene	928 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.0	40-100			
n-Nitrosodimethylamine	910 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.9	25-110			
n-Nitrosodi-n-propylamine	926 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	60.9	12-97			
n-Nitrosodiphenylamine	715 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	47.1	12-97			
p-Chloro-m-cresol	900 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.2	10-91			
Pentachlorophenol	902 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.4	30-109			
Phenanthrene	1020 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	66.9	50-115			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

LCS (BBI0510-BS1)

Prepared & Analyzed: 09/18/2018

Phenol	928 ug/kg wet	76.0	ug/kg wet	1530	ug/kg wet	60.4	0-115			
Pyrene	1270 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	83.7	27-110			
Pyridine	762 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.2	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1870		ug/kg wet	3040	ug/kg wet	61.6	35-125			
Surr: 2-Fluorobiphenyl (Surr)	959		ug/kg wet	1520	ug/kg wet	63.1	45-105			
Surr: 2-Fluorophenol (Surr)	2670		ug/kg wet	3040	ug/kg wet	87.7	35-105			
Surr: Nitrobenzene-d5 (Surr)	957		ug/kg wet	1520	ug/kg wet	63.0	35-100			
Surr: Phenol-d5 (Surr)	1900		ug/kg wet	3040	ug/kg wet	62.7	40-100			
Surr: p-Terphenyl-d14 (Surr)	1220		ug/kg wet	1520	ug/kg wet	80.1	30-125			

Matrix Spike (BBI0510-MS1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	743 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	41.9	21.8-66.7			
1,2-Dichlorobenzene	731 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	41.2	22-60			
1,3-Dichlorobenzene	692 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	39.0	22-60			
1,4-Dichlorobenzene	770 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	43.4	22-60			
1-Chloronaphthalene	855 ug/kg dry	88.7	ug/kg dry		<88.7 ug/kg dry		0-200			
2,4,6-Trichlorophenol	913 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	51.4	50-115			
2,4-Dichlorophenol	788 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.4	50-105			M
2,4-Dimethylphenol	768 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	43.3	30-110			
2,4-Dinitrophenol	1440 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	81.0	15-140			
2,4-Dinitrotoluene	985 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.5	17-111			
2,6-Dinitrotoluene	858 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.3	15-140			
2-Chloronaphthalene	828 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	46.6	45-105			
2-Chlorophenol	720 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	40.5	19-64			
2-Nitrophenol	820 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	46.2	40-115			
3,3'-Dichlorobenzidine	669 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	37.7	20-110			
4,6-Dinitro-2-methylphenol	1320 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	74.2	40-130			
4-Bromophenyl phenyl ether	784 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.2	15-110			
4-Chlorophenyl phenyl ether	746 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	42.0	15-110			
4-Nitrophenol	874 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	49.2	0-125			
Acenaphthene	866 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.8	24-90			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike (BBI0510-MS1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

Acenaphthylene	955 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	53.8	50-105			
Acetophenone	787 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.3	0-200			
Anthracene	898 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	50.6	55-110			M
Benzo (a) anthracene	988 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.6	55-110			
Benzo (a) pyrene	989 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.7	55-110			
Benzo (b) fluoranthene	1080 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	60.6	45-120			
Benzo (g,h,i) perylene	967 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	54.5	40-125			
Benzo (k) fluoranthene	1120 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	63.1	45-125			
bis (2-Chloroethoxy) methane	793 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.6	40-125			
bis (2-Chloroethyl) ether	673 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	37.9	40-125			M
2,2'-Oxybis (1-chloropropane)	702 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	39.5	40-125			M
bis (2-Ethylhexyl) phthalate	1370 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	77.2	40-125			
Butyl benzyl phthalate	1350 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	76.2	45-115			
Chrysene	1020 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	57.2	55-110			
Dibenz (a,h) anthracene	991 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.8	40-125			
Diethyl phthalate	923 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	52.0	40-120			
Dimethyl phthalate	842 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.4	25-125			
Di-n-butyl phthalate	1080 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	61.0	55-115			
Di-n-octyl phthalate	1600 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	90.0	35-135			
Fluoranthene	964 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	54.3	55-115			M
Fluorene	894 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	50.3	50-110			
Hexachlorobenzene	801 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	45.1	25-125			
Hexachlorobutadiene	865 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.7	25-125			
Hexachlorocyclopentadiene	493 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	27.7	25-125			
Hexachloroethane	784 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.1	25-125			
Indeno (1,2,3-cd) pyrene	979 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.1	45-125			
Isophorone	785 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.2	10-110			
Naphthalene	854 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.1	40-100			
Nitrobenzene	836 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.1	40-100			
n-Nitrosodimethylamine	844 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.6	25-110			
n-Nitrosodi-n-propylamine	877 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	49.4	12-97			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike (BBI0510-MS1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

n-Nitrosodiphenylamine	686 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	38.6	12-97			
p-Chloro-m-cresol	840 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.3	10-91			
Pentachlorophenol	880 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	49.6	27-109			
Phenanthrene	994 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	56.0	50-115			
Phenol	831 ug/kg dry	88.7	ug/kg dry	1790	<88.7 ug/kg dry	46.4	0-115			
Pyrene	1250 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	70.6	23-110			
Pyridine	860 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.4	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1790		ug/kg dry	3550	ug/kg dry	50.4	35-125			
Surr: 2-Fluorobiphenyl (Surr)	875		ug/kg dry	1780	ug/kg dry	49.3	45-105			
Surr: 2-Fluorophenol (Surr)	2250		ug/kg dry	3550	ug/kg dry	63.2	35-105			
Surr: Nitrobenzene-d5 (Surr)	855		ug/kg dry	1780	ug/kg dry	48.2	35-100			
Surr: Phenol-d5 (Surr)	1660		ug/kg dry	3550	ug/kg dry	46.7	40-100			
Surr: p-Terphenyl-d14 (Surr)	1180		ug/kg dry	1780	ug/kg dry	66.6	30-125			

Matrix Spike Dup (BBI0510-MSD1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	695 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	41.4	21.8-66.7	6.74	20	
1,2-Dichlorobenzene	685 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	40.8	22-60	6.52	20	
1,3-Dichlorobenzene	663 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	39.5	22-60	4.32	20	
1,4-Dichlorobenzene	723 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.0	22-60	6.38	20	
1-Chloronaphthalene	763 ug/kg dry	83.9	ug/kg dry		<83.9 ug/kg dry		0-200	11.4	20	
2,4,6-Trichlorophenol	798 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.5	50-115	13.4	20	M
2,4-Dichlorophenol	725 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.2	50-105	8.28	20	M
2,4-Dimethylphenol	629 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	37.4	30-110	20.0	20	
2,4-Dinitrophenol	1260 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	75.0	15-140	13.2	20	
2,4-Dinitrotoluene	850 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	50.6	17-111	14.7	20	
2,6-Dinitrotoluene	770 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.9	15-140	10.8	20	
2-Chloronaphthalene	740 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.1	45-105	11.2	20	M
2-Chlorophenol	669 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	39.8	19-64	7.33	20	
2-Nitrophenol	773 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	46.0	40-115	5.98	20	
3,3'-Dichlorobenzidine	517 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	30.8	20-110	25.5	20	P
4,6-Dinitro-2-methylphenol	1130 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	67.2	40-130	15.4	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike Dup (BBI0510-MSD1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

4-Bromophenyl phenyl ether	685 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	40.8	15-110	13.4	20	
4-Chlorophenyl phenyl ether	655 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	39.0	15-110	12.9	20	
4-Nitrophenol	731 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.5	0-125	17.8	20	
Acenaphthene	759 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.2	24-90	13.2	20	
Acenaphthylene	833 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.6	50-105	13.7	20	M
Acetophenone	717 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	42.7	0-200	9.36	20	
Anthracene	753 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.9	55-110	17.6	20	M
Benzo (a) anthracene	826 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.2	55-110	17.8	20	M
Benzo (a) pyrene	831 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.5	55-110	17.3	20	M
Benzo (b) fluoranthene	921 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	54.9	45-120	15.4	20	
Benzo (g,h,i) perylene	789 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.0	40-125	20.3	20	P
Benzo (k) fluoranthene	919 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	54.7	45-125	19.7	20	
bis (2-Chloroethoxy) methane	714 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	42.5	40-125	10.5	20	
bis (2-Chloroethyl) ether	642 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	38.2	40-125	4.64	20	M
2,2'-Oxybis (1-chloropropane)	644 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	38.4	40-125	8.56	20	M
bis (2-Ethylhexyl) phthalate	1150 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	68.5	40-125	17.6	20	
Butyl benzyl phthalate	1160 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	69.1	45-115	15.4	20	
Chrysene	826 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.2	55-110	20.6	20	M, P
Dibenz (a,h) anthracene	812 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	48.4	40-125	19.9	20	
Diethyl phthalate	790 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.1	40-120	15.5	20	
Dimethyl phthalate	729 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.4	25-125	14.5	20	
Di-n-butyl phthalate	882 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	52.5	55-115	20.4	20	M, P
Di-n-octyl phthalate	1370 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	81.3	35-135	15.7	20	
Fluoranthene	783 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	46.6	55-115	20.8	20	M, P
Fluorene	781 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	46.5	50-110	13.4	20	M
Hexachlorobenzene	695 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	41.4	25-125	14.1	20	
Hexachlorobutadiene	790 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.1	25-125	9.05	20	
Hexachlorocyclopentadiene	448 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	26.7	25-125	9.48	20	
Hexachloroethane	743 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.3	25-125	5.27	20	
Indeno (1,2,3-cd) pyrene	817 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	48.7	45-125	18.0	20	
Isophorone	720 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	42.9	10-110	8.71	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike Dup (BBI0510-MSD1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

Naphthalene	792 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.2	40-100	7.56	20	
Nitrobenzene	755 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.9	40-100	10.2	20	
n-Nitrosodimethylamine	770 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.9	25-110	9.18	20	
n-Nitrosodi-n-propylamine	758 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.1	12-97	14.6	20	
n-Nitrosodiphenylamine	586 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	34.9	12-97	15.7	20	
p-Chloro-m-cresol	730 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.5	10-91	14.0	20	
Pentachlorophenol	749 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.6	27-109	16.1	20	
Phenanthrene	853 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	50.8	50-115	15.3	20	
Phenol	759 ug/kg dry	83.9	ug/kg dry	1700	<83.9 ug/kg dry	44.8	0-115	9.06	20	
Pyrene	1080 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	64.4	23-110	14.7	20	
Pyridine	813 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	48.4	0-200	5.55	20	
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1570		ug/kg dry	3360	ug/kg dry	46.9	35-125			
Surr: 2-Fluorobiphenyl (Surr)	780		ug/kg dry	1680	ug/kg dry	46.4	45-105			
Surr: 2-Fluorophenol (Surr)	2150		ug/kg dry	3360	ug/kg dry	64.1	35-105			
Surr: Nitrobenzene-d5 (Surr)	782		ug/kg dry	1680	ug/kg dry	46.6	35-100			
Surr: Phenol-d5 (Surr)	1540		ug/kg dry	3360	ug/kg dry	45.9	40-100			
Surr: p-Terphenyl-d14 (Surr)	1010		ug/kg dry	1680	ug/kg dry	60.2	30-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0573 - SW3550C

Blank (BBI0573-BLK1)						Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg wet	10.0	mg/kg wet							
LCS (BBI0573-BS1)						Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	48.1 mg/kg wet	10.0	mg/kg wet	98.6	mg/kg wet	48.8	40-160			
Matrix Spike (BBI0573-MS1)						Source: 18I0505-10 Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	56.9 mg/kg dry	11.3	mg/kg dry	113	<11.3 mg/kg dry	50.4	40-160			
Matrix Spike Dup (BBI0573-MSD1)						Source: 18I0505-10 Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	55.6 mg/kg dry	11.4	mg/kg dry	114	<11.4 mg/kg dry	48.6	40-160	2.18	20	

Batch BBI0708 - SW3550C

Blank (BBI0708-BLK1)						Prepared: 09/24/2017 Analyzed: 09/25/2018				
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
<i>Surr: Pentacosane (Surr)</i>	3.08		mg/kg wet	4.90		62.8	40-160			
LCS (BBI0708-BS1)						Prepared: 09/24/2017 Analyzed: 09/25/2018				
TPH-Semi-Volatiles (DRO)	84.4 mg/kg wet	10.0	mg/kg wet	99.6	mg/kg wet	84.8	40-160			
<i>Surr: Pentacosane (Surr)</i>	3.38		mg/kg wet	4.98	mg/kg wet	67.9	40-160			
Matrix Spike (BBI0708-MS1)						Source: 18I0501-06 Prepared: 09/24/2017 Analyzed: 09/25/2018				
TPH-Semi-Volatiles (DRO)	86.5 mg/kg dry	10.6	mg/kg dry	106	<10.6 mg/kg dry	81.5	40-160			
<i>Surr: Pentacosane (Surr)</i>	3.50		mg/kg dry	5.30	mg/kg dry	66.0	40-160			
Matrix Spike Dup (BBI0708-MSD1)						Source: 18I0501-06 Prepared: 09/24/2017 Analyzed: 09/25/2018				
TPH-Semi-Volatiles (DRO)	72.4 mg/kg dry	10.3	mg/kg dry	103	<10.3 mg/kg dry	70.5	40-160	17.7	20	
<i>Surr: Pentacosane (Surr)</i>	2.94		mg/kg dry	5.14	mg/kg dry	57.3	40-160			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0546 - SW3550B

Blank (BBI0546-BLK1)

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet						

Surr: DCB	0.0224		mg/kg wet	0.0319		70.0	30-105		
Surr: TCMX	0.0208		mg/kg wet	0.0319		65.0	30-105		

LCS (BBI0546-BS1)

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	0.183 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	114	60-140		
PCB as Aroclor 1260	0.123 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	77.0	60-140		
Surr: DCB	0.0208		mg/kg wet	0.0321	mg/kg wet	65.0	30-105		
Surr: TCMX	0.0240		mg/kg wet	0.0321	mg/kg wet	75.0	30-105		

Matrix Spike (BBI0546-MS1)

Source: 18I0501-06

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	0.191 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	107	60-140		
PCB as Aroclor 1260	0.153 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	86.0	60-140		
Surr: DCB	0.0249		mg/kg dry	0.0356	mg/kg dry	70.0	30-105		
Surr: TCMX	0.0232		mg/kg dry	0.0356	mg/kg dry	65.0	30-105		

Matrix Spike Dup (BBI0546-MSD1)

Source: 18I0501-06

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	0.195 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	110	60-140	2.45	20
PCB as Aroclor 1260	0.138 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	78.0	60-140	10.1	20
Surr: DCB	0.0266		mg/kg dry	0.0355	mg/kg dry	75.0	30-105		
Surr: TCMX	0.0249		mg/kg dry	0.0355	mg/kg dry	70.0	30-105		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/28/2018 14:03
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0419 - No Prep Wet Chem

Blank (BBI0419-BLK1)	Prepared & Analyzed: 09/14/2018
Percent Solids	100 % 0.10 %

Duplicate (BBI0419-DUP1)	Prepared & Analyzed: 09/14/2018
Percent Solids	92.7 % 0.10 % 93.7 % 1.09 20

Batch BBI0580 - No Prep Wet Chem

Blank (BBI0580-BLK1)	Prepared: 09/17/2018 Analyzed: 09/20/2018
Chromium, Hexavalent	<0.20 mg/kg wet 0.20 mg/kg wet

LCS (BBI0580-BS1)	Prepared: 09/17/2018 Analyzed: 09/20/2018
Chromium, Hexavalent	3.80 mg/kg wet 0.20 mg/kg wet 3.92 mg/kg wet 97.0 80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Aluminum	VELAP
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Calcium	VELAP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Magnesium	VELAP
Manganese	VELAP
Nickel	VELAP
Potassium	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7196A in Solids	
Chromium, Hexavalent	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8015C in Solids	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,NC
PCB as Aroclor 1221	VELAP,NC
PCB as Aroclor 1232	VELAP,NC
PCB as Aroclor 1242	VELAP,NC
PCB as Aroclor 1248	VELAP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/28/2018 14:03
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
PCB as Aroclor 1254	VELAP,NC
PCB as Aroclor 1260	VELAP,NC
SW8270D in Solids	
1,2,4,5-Tetrachlorobenzene	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,2-Diphenylhydrazine	NC,VELAP,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
1-Chloronaphthalene	NC,VELAP,WVDEP
1-Naphthylamine	NC,VELAP,WVDEP
2,3,4,6-Tetrachlorophenol	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dichlorophenol	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Chloronaphthalene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
2-Naphthylamine	NC,VELAP,WVDEP
2-Nitroaniline	NC,VELAP,WVDEP
2-Nitrophenol	NC,VELAP,WVDEP
3-Methylcholanthrene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4,6-Dinitro-2-methylphenol	NC,VELAP,WVDEP
4-Aminobiphenyl	NC,VELAP,WVDEP
4-Bromophenyl phenyl ether	NC,VELAP,WVDEP
4-Chloroaniline	NC,VELAP,WVDEP
4-Chlorophenyl phenyl ether	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
4-Nitrophenol	NC,VELAP,WVDEP
7,12-Dimethylbenz (a) anthracene	NC,VELAP,WVDEP
Acenaphthene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Acenaphthylene	NC,VELAP,WVDEP
Acetophenone	NC,VELAP,WVDEP
Aniline	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzidine	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (g,h,i) perylene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
Benzoic acid	NC,VELAP,WVDEP
Benzyl alcohol	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Dibenz (a,j) acridine	NC,VELAP,WVDEP
Dibenzofuran	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP
Di-n-octyl phthalate	NC,VELAP,WVDEP
Diphenylamine	NC,VELAP,WVDEP
Ethyl methanesulfonate	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP
Hexachloroethane	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Methyl methanesulfonate	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/28/2018 14:03
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodimethylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-butylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
n-Nitrosopiperidine	NC,VELAP,WVDEP
o+m+p-Cresols	NC,VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
p-(Dimethylamino) azobenzene	NC,VELAP,WVDEP
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachloronitrobenzene (quintozene)	NC,WVDEP
Pentachlorophenol	NC,VELAP,WVDEP
Phenacetin	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Pronamide	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
Pyridine	NC,VELAP,WVDEP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/28/2018 14:03
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

- B Blank contamination. The recorded result is associated with a contaminated blank.
 - C Continuing calibration verification response for this analyte is outside specifications.
 - DND Not Detected
 - E Estimated concentration, outside calibration range
 - M Matrix spike recovery is outside established acceptance limits
 - M2 Sample was diluted due to matrix interference.
 - P Duplicate analysis does not meet the acceptance criteria for precision
 - RPD Relative Percent Difference
 - Qual Qualifiers
 - RE Denotes sample was re-analyzed
 - D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
 - TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
- PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: <u>EEE Consulting</u>	INVOICE TO: <u>Same</u>	PROJECT NAME/Quote #: <u>CUTC</u>
CONTACT: <u>Jeff Fisher</u>	INVOICE CONTACT:	SITE NAME: <u>CUTC</u>
ADDRESS: <u>201 Church St. 24060</u>	INVOICE ADDRESS:	PROJECT NUMBER: <u>18-760</u>
PHONE #: <u>540-983-0170 x 314</u>	INVOICE PHONE #:	P.O. #: <u>18-760</u>
FAX #:	EMAIL: <u>JFISHER@EEE-CONSULTING.COM</u>	Pretreatment Program:

Is sample for compliance reporting? YES NO Is sample from a chlorinated supply? YES NO PWS I.D. #:

SAMPLER NAME (PRINT): Jeff Fisher SAMPLER SIGNATURE: [Signature] Turn Around Time: Circle: 10 5 Days or ___ Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other _____

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)							COMMENTS		
											TPH-DRO/DRU 8015	2,3,7,8-TCDD SIM	SUX 8270	PCB 8082	TOTAL TAL-METH	Hex Chrome 7186A				
1) Task 2.1 77-7 0-6'	6					9-11-18	1126		S	1	X	X	X	X	X					
2)							1137			1										
3)							1140			1										
4)							1152			1										
5)							1157			1										
6)							1204			1										
7)																				
8)																				
9)																				
10)																				

RELINQUISHED: <u>[Signature]</u> 9-12-18 1355	DATE / TIME	RECEIVED: <u>M. [Signature]</u> 9-17-18 1355	DATE / TIME	QC Data Package	LAB USE ONLY Custody Seals used and intact? (Y/N) <u>(N)</u>	COOLER TEMP Received on ice? (Y/N) <u>(N)</u>
RELINQUISHED: <u>COURIER</u>	DATE / TIME	RECEIVED: <u>[Signature]</u> 13 Sept 2018 8:00	DATE / TIME	Level III <input type="checkbox"/>	EEE-Blacksburg 1810501 CVTC	1.6°C
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	Level IV <input type="checkbox"/>		

Recd: 09/13/2018 Due: 09/27/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/28/2018 14:03
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	1.60°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

As per Jeff Fisher, certification for 2,3,7,8 TCDD SIM is not necessary. MMR 9/13/18 15:17



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 1810505

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg, VA 24060

Date Received: September 13, 2018 8:00

Date Issued: September 27, 2018 17:25

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 09/13/2018 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 9/27/2018 17:25
201 Church Street
Blacksburg VA, 24060

Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18I0505

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Task 2.1 77-1 0-5'	18I0505-01	Solids	09/11/2018 10:00	09/13/2018 08:00
Task 2.1 77-1 5-7'	18I0505-02	Solids	09/11/2018 10:10	09/13/2018 08:00
Task 2.1 77-2 0-5'	18I0505-03	Solids	09/11/2018 10:18	09/13/2018 08:00
Task 2.1 77-2 10-14'	18I0505-04	Solids	09/11/2018 10:25	09/13/2018 08:00
Task 2.1 77-3 0-5'	18I0505-05	Solids	09/11/2018 10:35	09/13/2018 08:00
Task 2.1 77-3 5-7'	18I0505-06	Solids	09/11/2018 10:40	09/13/2018 08:00
Task 2.1 77-4 0-6'	18I0505-07	Solids	09/11/2018 10:48	09/13/2018 08:00
Task 2.1 77-5 0-5'	18I0505-08	Solids	09/11/2018 10:55	09/13/2018 08:00
Task 2.1 77-6 0-5'	18I0505-09	Solids	09/11/2018 11:15	09/13/2018 08:00
Task 2.1 77-6 5-11'	18I0505-10	Solids	09/11/2018 11:20	09/13/2018 08:00

Results have been calculated based on dry weight.



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 0-5' **Laboratory Sample ID:** 1810505-01

Grab Date/Time: 09/11/2018 10:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01RE1	SW6010C	<0.552 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:42	BG
Aluminum	01RE2	SW6010C	28600 mg/kg dry		552	200	09/14/18 13:00	09/19/18 15:10	BG
Arsenic	01RE1	SW6010C	4.23 mg/kg dry		1.10	1	09/14/18 13:00	09/18/18 15:42	BG
Barium	01RE1	SW6010C	191 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:42	BG
Beryllium	01RE1	SW6010C	1.99 mg/kg dry		0.221	1	09/14/18 13:00	09/18/18 15:42	BG
Calcium	01	SW6010C	2110 mg/kg dry		110	20	09/14/18 13:00	09/18/18 13:21	BG
Cadmium	01RE1	SW6010C	0.613 mg/kg dry		0.221	1	09/14/18 13:00	09/18/18 15:42	BG
Cobalt	01RE1	SW6010C	13.0 mg/kg dry		0.221	1	09/14/18 13:00	09/18/18 15:42	BG
Chromium	01RE1	SW6010C	25.2 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:42	BG
Copper	01RE1	SW6010C	16.3 mg/kg dry		2.76	1	09/14/18 13:00	09/18/18 15:42	BG
Iron	01RE2	SW6010C	37000 mg/kg dry		552	200	09/14/18 13:00	09/19/18 15:10	BG
Mercury	01	SW7471B	0.036 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 15:09	MWL
Potassium	01RE1	SW6010C	7010 mg/kg dry		27.6	1	09/14/18 13:00	09/18/18 15:42	BG
Magnesium	01	SW6010C	7050 mg/kg dry		55.2	20	09/14/18 13:00	09/18/18 13:21	BG
Manganese	01RE1	SW6010C	363 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:42	BG
Sodium	01RE1	SW6010C	69.4 mg/kg dry		27.6	1	09/14/18 13:00	09/18/18 15:42	BG
Nickel	01RE1	SW6010C	13.2 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:42	BG
Lead	01RE1	SW6010C	38.4 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:42	BG
Antimony	01RE1	SW6010C	<5.52 mg/kg dry		5.52	1	09/14/18 13:00	09/18/18 15:42	BG
Selenium	01RE1	SW6010C	<2.76 mg/kg dry		2.76	1	09/14/18 13:00	09/18/18 15:42	BG
Thallium	01RE1	SW6010C	<2.76 mg/kg dry		2.76	1	09/14/18 13:00	09/18/18 15:42	BG
Vanadium	01RE1	SW6010C	45.5 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:42	BG
Zinc	01RE1	SW6010C	89.0 mg/kg dry		0.552	1	09/14/18 13:00	09/18/18 15:42	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	01	SW8270D SIM	Not Detected	4	09/18/18 09:10	09/18/18 12:29	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 0-5' **Laboratory Sample ID:** 1810505-01

Grab Date/Time: 09/11/2018 10:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
1,2,4-Trichlorobenzene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
1,2-Dichlorobenzene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
1,2-Diphenylhydrazine	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
1,3-Dichlorobenzene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
1,4-Dichlorobenzene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
1-Chloronaphthalene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
1-Naphthylamine	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2,3,4,6-Tetrachlorophenol	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2,4,5-Trichlorophenol	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2,4,6-Trichlorophenol	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2,4-Dichlorophenol	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2,4-Dimethylphenol	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2,4-Dinitrophenol	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2,4-Dinitrotoluene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2,6-Dichlorophenol	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2,6-Dinitrotoluene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2-Chloronaphthalene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2-Chlorophenol	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2-Methylnaphthalene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2-Naphthylamine	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2-Nitroaniline	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
2-Nitrophenol	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
3,3'-Dichlorobenzidine	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	
3-Methylcholanthrene	01	SW8270D	<364 ug/kg dry	364	4	09/18/18 09:10	09/18/18 12:29	SKS	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 0-5' **Laboratory Sample ID:** 1810505-01

Grab Date/Time: 09/11/2018 10:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
4,6-Dinitro-2-methylphenol	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
4-Aminobiphenyl	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
4-Bromophenyl phenyl ether	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
4-Chloroaniline	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
4-Chlorophenyl phenyl ether	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
4-Nitroaniline	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
4-Nitrophenol	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
7,12-Dimethylbenz (a) anthracene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Acenaphthene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Acenaphthylene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Acetophenone	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Aniline	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Anthracene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Benzidine	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Benzo (a) anthracene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Benzo (a) pyrene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Benzo (b) fluoranthene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Benzo (g,h,i) perylene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Benzo (k) fluoranthene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Benzoic acid	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Benzyl alcohol	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 0-5' **Laboratory Sample ID:** 1810505-01

Grab Date/Time: 09/11/2018 10:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<364 ug/kg dry	C	364	4	09/18/18 09:10	09/18/18 12:29	SKS
Butyl benzyl phthalate	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Chrysene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Dibenz (a,h) anthracene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Dibenz (a,j) acridine	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Dibenzofuran	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Diethyl phthalate	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Dimethyl phthalate	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Di-n-butyl phthalate	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Di-n-octyl phthalate	01	SW8270D	<364 ug/kg dry	C	364	4	09/18/18 09:10	09/18/18 12:29	SKS
Diphenylamine	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Ethyl methanesulfonate	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Fluoranthene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Fluorene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Hexachlorobenzene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Hexachlorobutadiene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Hexachlorocyclopentadiene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Hexachloroethane	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Isophorone	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
m+p-Cresols	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Methyl methanesulfonate	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Naphthalene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Nitrobenzene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 0-5' **Laboratory Sample ID:** 1810505-01

Grab Date/Time: 09/11/2018 10:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
n-Nitrosodi-n-butylamine	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
n-Nitrosodiphenylamine	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
n-Nitrosopiperidine	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
o+m+p-Cresols	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
o-Cresol	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
p-(Dimethylamino) azobenzene	01	SW8270D	<364 ug/kg dry	C	364	4	09/18/18 09:10	09/18/18 12:29	SKS
p-Chloro-m-cresol	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Pentachloronitrobenzene (quintozene)	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Pentachlorophenol	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Phenacetin	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Phenanthrene	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Phenol	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Pronamide	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Pyrene	01	SW8270D	<364 ug/kg dry	C	364	4	09/18/18 09:10	09/18/18 12:29	SKS
Pyridine	01	SW8270D	<364 ug/kg dry		364	4	09/18/18 09:10	09/18/18 12:29	SKS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270D	74.8 %		35-125		09/18/18 09:10	09/18/18 12:29	SKS
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270D	70.3 %		45-105		09/18/18 09:10	09/18/18 12:29	SKS
Surr: 2-Fluorophenol (Surr)	01	SW8270D	56.1 %		35-105		09/18/18 09:10	09/18/18 12:29	SKS
Surr: Nitrobenzene-d5 (Surr)	01	SW8270D	74.9 %		35-100		09/18/18 09:10	09/18/18 12:29	SKS
Surr: Phenol-d5 (Surr)	01	SW8270D	70.3 %		40-100		09/18/18 09:10	09/18/18 12:29	SKS
Surr: p-Terphenyl-d14 (Surr)	01	SW8270D	71.0 %		30-125		09/18/18 09:10	09/18/18 12:29	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 0-5'	Laboratory Sample ID: 1810505-01
Grab Date/Time: 09/11/2018 10:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	16.5 mg/kg dry		11.2	1	09/24/18 17:00	09/25/18 15:43	HLM
<i>Surr: Pentacosane (Surr)</i>	01	SW8015C	69.0 %		40-160		09/24/18 17:00	09/25/18 15:43	HLM
TPH-Semi-Volatiles (ORO)	01	SW8015C	<11.5 mg/kg dry		11.5	1	09/19/18 14:15	09/20/18 19:07	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 15:52	HLM
PCB as Aroclor 1221	01	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 15:52	HLM
PCB as Aroclor 1232	01	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 15:52	HLM
PCB as Aroclor 1242	01	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 15:52	HLM
PCB as Aroclor 1248	01	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 15:52	HLM
PCB as Aroclor 1254	01	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 15:52	HLM
PCB as Aroclor 1260	01	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 15:52	HLM
<i>Surr: DCB</i>	01	SW8082A	75.0 %		30-105		09/19/18 09:02	09/21/18 15:52	HLM
<i>Surr: TCMX</i>	01	SW8082A	85.0 %		30-105		09/19/18 09:02	09/21/18 15:52	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	01	SW7196A	0.37 mg/kg dry		0.23	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	01	SM18 2540G	86.7 %		0.10	1	09/14/18 09:19	09/14/18 09:19	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 5-7' **Laboratory Sample ID:** 1810505-02

Grab Date/Time: 09/11/2018 10:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02RE1	SW6010C	<0.562 mg/kg dry		0.562	1	09/14/18 13:00	09/18/18 15:44	BG
Aluminum	02RE2	SW6010C	33700 mg/kg dry		562	200	09/14/18 13:00	09/19/18 15:12	BG
Arsenic	02RE1	SW6010C	<1.12 mg/kg dry		1.12	1	09/14/18 13:00	09/18/18 15:44	BG
Barium	02RE1	SW6010C	146 mg/kg dry		0.562	1	09/14/18 13:00	09/18/18 15:44	BG
Beryllium	02RE1	SW6010C	2.27 mg/kg dry		0.225	1	09/14/18 13:00	09/18/18 15:44	BG
Calcium	02	SW6010C	2330 mg/kg dry		112	20	09/14/18 13:00	09/18/18 13:24	BG
Cadmium	02RE1	SW6010C	0.627 mg/kg dry		0.225	1	09/14/18 13:00	09/18/18 15:44	BG
Cobalt	02RE1	SW6010C	22.7 mg/kg dry		0.225	1	09/14/18 13:00	09/18/18 15:44	BG
Chromium	02RE1	SW6010C	28.9 mg/kg dry		0.562	1	09/14/18 13:00	09/18/18 15:44	BG
Copper	02RE1	SW6010C	11.1 mg/kg dry		2.81	1	09/14/18 13:00	09/18/18 15:44	BG
Iron	02RE2	SW6010C	38700 mg/kg dry		562	200	09/14/18 13:00	09/19/18 15:12	BG
Mercury	02	SW7471B	0.012 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 15:11	MWL
Potassium	02	SW6010C	14100 mg/kg dry		562	20	09/14/18 13:00	09/18/18 13:24	BG
Magnesium	02	SW6010C	11800 mg/kg dry		56.2	20	09/14/18 13:00	09/18/18 13:24	BG
Manganese	02RE1	SW6010C	645 mg/kg dry		0.562	1	09/14/18 13:00	09/18/18 15:44	BG
Sodium	02RE1	SW6010C	76.3 mg/kg dry		28.1	1	09/14/18 13:00	09/18/18 15:44	BG
Nickel	02RE1	SW6010C	20.2 mg/kg dry		0.562	1	09/14/18 13:00	09/18/18 15:44	BG
Lead	02RE1	SW6010C	5.34 mg/kg dry		0.562	1	09/14/18 13:00	09/18/18 15:44	BG
Antimony	02RE1	SW6010C	<5.62 mg/kg dry		5.62	1	09/14/18 13:00	09/18/18 15:44	BG
Selenium	02RE1	SW6010C	<2.81 mg/kg dry		2.81	1	09/14/18 13:00	09/18/18 15:44	BG
Thallium	02RE1	SW6010C	<2.81 mg/kg dry		2.81	1	09/14/18 13:00	09/18/18 15:44	BG
Vanadium	02RE1	SW6010C	43.8 mg/kg dry		0.562	1	09/14/18 13:00	09/18/18 15:44	BG
Zinc	02RE1	SW6010C	119 mg/kg dry		0.562	1	09/14/18 13:00	09/18/18 15:44	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	02	SW8270D SIM	Not Detected	1	09/18/18 09:10	09/18/18 13:01	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 5-7' **Laboratory Sample ID:** 1810505-02

Grab Date/Time: 09/11/2018 10:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
1,2,4-Trichlorobenzene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
1,2-Dichlorobenzene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
1,2-Diphenylhydrazine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
1,3-Dichlorobenzene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
1,4-Dichlorobenzene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
1-Chloronaphthalene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
1-Naphthylamine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2,3,4,6-Tetrachlorophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2,4,5-Trichlorophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2,4,6-Trichlorophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2,4-Dichlorophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2,4-Dimethylphenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2,4-Dinitrophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2,4-Dinitrotoluene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2,6-Dichlorophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2,6-Dinitrotoluene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2-Chloronaphthalene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2-Chlorophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2-Methylnaphthalene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2-Naphthylamine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2-Nitroaniline	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
2-Nitrophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
3-Methylcholanthrene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 5-7' **Laboratory Sample ID:** 1810505-02

Grab Date/Time: 09/11/2018 10:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
4,6-Dinitro-2-methylphenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
4-Aminobiphenyl	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
4-Bromophenyl phenyl ether	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
4-Chloroaniline	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
4-Chlorophenyl phenyl ether	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
4-Nitroaniline	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
4-Nitrophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
7,12-Dimethylbenz (a) anthracene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Acenaphthene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Acenaphthylene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Acetophenone	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Aniline	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Anthracene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Benzidine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Benzo (a) anthracene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Benzo (a) pyrene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Benzo (b) fluoranthene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Benzo (g,h,i) perylene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Benzo (k) fluoranthene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Benzoic acid	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Benzyl alcohol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 5-7'

Laboratory Sample ID: 1810505-02

Grab Date/Time: 09/11/2018 10:10

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<91.5 ug/kg dry	C	91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Butyl benzyl phthalate	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Chrysene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Dibenz (a,h) anthracene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Dibenz (a,j) acridine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Dibenzofuran	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Diethyl phthalate	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Dimethyl phthalate	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Di-n-butyl phthalate	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Di-n-octyl phthalate	02	SW8270D	<91.5 ug/kg dry	C	91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Diphenylamine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Ethyl methanesulfonate	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Fluoranthene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Fluorene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Hexachlorobenzene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Hexachlorobutadiene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Hexachlorocyclopentadiene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Hexachloroethane	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Isophorone	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
m+p-Cresols	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Methyl methanesulfonate	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Naphthalene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Nitrobenzene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 5-7' **Laboratory Sample ID:** 1810505-02

Grab Date/Time: 09/11/2018 10:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
n-Nitrosodi-n-butylamine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
n-Nitrosodiphenylamine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
n-Nitrosopiperidine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
o+m+p-Cresols	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
o-Cresol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
p-(Dimethylamino) azobenzene	02	SW8270D	<91.5 ug/kg dry	C	91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
p-Chloro-m-cresol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Pentachloronitrobenzene (quintozene)	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Pentachlorophenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Phenacetin	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Phenanthrene	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Phenol	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Pronamide	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Pyrene	02	SW8270D	<91.5 ug/kg dry	C	91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Pyridine	02	SW8270D	<91.5 ug/kg dry		91.5	1	09/18/18 09:10	09/18/18 13:01	SKS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270D	62.5 %		35-125		09/18/18 09:10	09/18/18 13:01	SKS
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270D	60.0 %		45-105		09/18/18 09:10	09/18/18 13:01	SKS
Surr: 2-Fluorophenol (Surr)	02	SW8270D	49.4 %		35-105		09/18/18 09:10	09/18/18 13:01	SKS
Surr: Nitrobenzene-d5 (Surr)	02	SW8270D	52.3 %		35-100		09/18/18 09:10	09/18/18 13:01	SKS
Surr: Phenol-d5 (Surr)	02	SW8270D	47.7 %		40-100		09/18/18 09:10	09/18/18 13:01	SKS
Surr: p-Terphenyl-d14 (Surr)	02	SW8270D	56.0 %		30-125		09/18/18 09:10	09/18/18 13:01	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-1 5-7'	Laboratory Sample ID: 1810505-02
Grab Date/Time: 09/11/2018 10:10	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<10.5 mg/kg dry		10.5	1	09/24/18 17:00	09/25/18 16:09	HLM
<i>Surr: Pentacosane (Surr)</i>	02	SW8015C	59.7 %		40-160		09/24/18 17:00	09/25/18 16:09	HLM
TPH-Semi-Volatiles (ORO)	02	SW8015C	<11.2 mg/kg dry		11.2	1	09/19/18 14:15	09/20/18 15:50	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 16:14	HLM
PCB as Aroclor 1221	02	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 16:14	HLM
PCB as Aroclor 1232	02	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 16:14	HLM
PCB as Aroclor 1242	02	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 16:14	HLM
PCB as Aroclor 1248	02	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 16:14	HLM
PCB as Aroclor 1254	02	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 16:14	HLM
PCB as Aroclor 1260	02	SW8082A	<0.107 mg/kg dry		0.107	1	09/19/18 09:02	09/21/18 16:14	HLM
<i>Surr: DCB</i>	02	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 16:14	HLM
<i>Surr: TCMX</i>	02	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 16:14	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	02	SW7196A	<0.22 mg/kg dry		0.22	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	02	SM18 2540G	88.4 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 0-5' **Laboratory Sample ID:** 1810505-03

Grab Date/Time: 09/11/2018 10:18

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03RE1	SW6010C	<0.632 mg/kg dry		0.632	1	09/14/18 13:00	09/18/18 15:47	BG
Aluminum	03RE2	SW6010C	33900 mg/kg dry		632	200	09/14/18 13:00	09/19/18 15:14	BG
Arsenic	03RE1	SW6010C	<1.26 mg/kg dry		1.26	1	09/14/18 13:00	09/18/18 15:47	BG
Barium	03RE1	SW6010C	262 mg/kg dry		0.632	1	09/14/18 13:00	09/18/18 15:47	BG
Beryllium	03RE1	SW6010C	2.10 mg/kg dry		0.253	1	09/14/18 13:00	09/18/18 15:47	BG
Calcium	03	SW6010C	5360 mg/kg dry		126	20	09/14/18 13:00	09/18/18 13:36	BG
Cadmium	03RE1	SW6010C	1.06 mg/kg dry		0.253	1	09/14/18 13:00	09/18/18 15:47	BG
Cobalt	03RE1	SW6010C	6.69 mg/kg dry		0.253	1	09/14/18 13:00	09/18/18 15:47	BG
Chromium	03RE1	SW6010C	42.2 mg/kg dry		0.632	1	09/14/18 13:00	09/18/18 15:47	BG
Copper	03RE1	SW6010C	17.5 mg/kg dry		3.16	1	09/14/18 13:00	09/18/18 15:47	BG
Iron	03RE2	SW6010C	52000 mg/kg dry		632	200	09/14/18 13:00	09/19/18 15:14	BG
Mercury	03	SW7471B	0.078 mg/kg dry		0.010	1	09/14/18 13:12	09/17/18 15:14	MWL
Potassium	03RE1	SW6010C	2240 mg/kg dry		31.6	1	09/14/18 13:00	09/18/18 15:47	BG
Magnesium	03	SW6010C	2590 mg/kg dry		63.2	20	09/14/18 13:00	09/18/18 13:36	BG
Manganese	03RE1	SW6010C	718 mg/kg dry		0.632	1	09/14/18 13:00	09/18/18 15:47	BG
Sodium	03RE1	SW6010C	57.7 mg/kg dry		31.6	1	09/14/18 13:00	09/18/18 15:47	BG
Nickel	03RE1	SW6010C	8.44 mg/kg dry		0.632	1	09/14/18 13:00	09/18/18 15:47	BG
Lead	03RE1	SW6010C	31.0 mg/kg dry		0.632	1	09/14/18 13:00	09/18/18 15:47	BG
Antimony	03RE1	SW6010C	<6.32 mg/kg dry		6.32	1	09/14/18 13:00	09/18/18 15:47	BG
Selenium	03RE1	SW6010C	<3.16 mg/kg dry		3.16	1	09/14/18 13:00	09/18/18 15:47	BG
Thallium	03RE1	SW6010C	<3.16 mg/kg dry		3.16	1	09/14/18 13:00	09/18/18 15:47	BG
Vanadium	03RE1	SW6010C	102 mg/kg dry		0.632	1	09/14/18 13:00	09/18/18 15:47	BG
Zinc	03RE1	SW6010C	48.4 mg/kg dry		0.632	1	09/14/18 13:00	09/18/18 15:47	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	03	SW8270D SIM	Not Detected	4	09/18/18 09:10	09/18/18 13:32	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 0-5' **Laboratory Sample ID:** 1810505-03

Grab Date/Time: 09/11/2018 10:18

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
1,2,4-Trichlorobenzene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
1,2-Dichlorobenzene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
1,2-Diphenylhydrazine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
1,3-Dichlorobenzene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
1,4-Dichlorobenzene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
1-Chloronaphthalene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
1-Naphthylamine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2,3,4,6-Tetrachlorophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2,4,5-Trichlorophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2,4,6-Trichlorophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2,4-Dichlorophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2,4-Dimethylphenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2,4-Dinitrophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2,4-Dinitrotoluene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2,6-Dichlorophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2,6-Dinitrotoluene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2-Chloronaphthalene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2-Chlorophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2-Methylnaphthalene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2-Naphthylamine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2-Nitroaniline	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
2-Nitrophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
3,3'-Dichlorobenzidine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
3-Methylcholanthrene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 0-5' **Laboratory Sample ID:** 1810505-03

Grab Date/Time: 09/11/2018 10:18

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
4,6-Dinitro-2-methylphenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
4-Aminobiphenyl	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
4-Bromophenyl phenyl ether	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
4-Chloroaniline	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
4-Chlorophenyl phenyl ether	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
4-Nitroaniline	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
4-Nitrophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
7,12-Dimethylbenz (a) anthracene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Acenaphthene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Acenaphthylene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Acetophenone	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Aniline	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Anthracene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Benzidine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Benzo (a) anthracene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Benzo (a) pyrene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Benzo (b) fluoranthene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Benzo (g,h,i) perylene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Benzo (k) fluoranthene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Benzoic acid	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Benzyl alcohol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
bis (2-Chloroethoxy) methane	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
bis (2-Chloroethyl) ether	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 0-5' **Laboratory Sample ID:** 1810505-03

Grab Date/Time: 09/11/2018 10:18

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
bis (2-Ethylhexyl) phthalate	03	SW8270D	<424 ug/kg dry	C	424	4	09/18/18 09:10	09/18/18 13:32	SKS
Butyl benzyl phthalate	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Chrysene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Dibenz (a,h) anthracene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Dibenz (a,j) acridine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Dibenzofuran	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Diethyl phthalate	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Dimethyl phthalate	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Di-n-butyl phthalate	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Di-n-octyl phthalate	03	SW8270D	<424 ug/kg dry	C	424	4	09/18/18 09:10	09/18/18 13:32	SKS
Diphenylamine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Ethyl methanesulfonate	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Fluoranthene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Fluorene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Hexachlorobenzene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Hexachlorobutadiene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Hexachlorocyclopentadiene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Hexachloroethane	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Indeno (1,2,3-cd) pyrene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Isophorone	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
m+p-Cresols	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Methyl methanesulfonate	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Naphthalene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Nitrobenzene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 0-5'

Laboratory Sample ID: 1810505-03

Grab Date/Time: 09/11/2018 10:18

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
n-Nitrosodi-n-butylamine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
n-Nitrosodi-n-propylamine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
n-Nitrosodiphenylamine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
n-Nitrosopiperidine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
o+m+p-Cresols	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
o-Cresol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
p-(Dimethylamino) azobenzene	03	SW8270D	<424 ug/kg dry	C	424	4	09/18/18 09:10	09/18/18 13:32	SKS
p-Chloro-m-cresol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Pentachloronitrobenzene (quintozene)	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Pentachlorophenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Phenacetin	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Phenanthrene	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Phenol	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Pronamide	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Pyrene	03	SW8270D	<424 ug/kg dry	C	424	4	09/18/18 09:10	09/18/18 13:32	SKS
Pyridine	03	SW8270D	<424 ug/kg dry		424	4	09/18/18 09:10	09/18/18 13:32	SKS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270D	69.8 %		35-125		09/18/18 09:10	09/18/18 13:32	SKS
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270D	60.4 %		45-105		09/18/18 09:10	09/18/18 13:32	SKS
Surr: 2-Fluorophenol (Surr)	03	SW8270D	50.8 %		35-105		09/18/18 09:10	09/18/18 13:32	SKS
Surr: Nitrobenzene-d5 (Surr)	03	SW8270D	67.0 %		35-100		09/18/18 09:10	09/18/18 13:32	SKS
Surr: Phenol-d5 (Surr)	03	SW8270D	62.2 %		40-100		09/18/18 09:10	09/18/18 13:32	SKS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270D	67.8 %		30-125		09/18/18 09:10	09/18/18 13:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 0-5' **Laboratory Sample ID:** 1810505-03

Grab Date/Time: 09/11/2018 10:18

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03	SW8015C	<12.0 mg/kg dry		12.0	1	09/24/18 17:00	09/25/18 16:35	HLM
<i>Surr: Pentacosane (Surr)</i>	03	SW8015C	77.4 %		40-160		09/24/18 17:00	09/25/18 16:35	HLM
TPH-Semi-Volatiles (ORO)	03	SW8015C	<12.9 mg/kg dry		12.9	1	09/19/18 14:15	09/20/18 16:15	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.127 mg/kg dry		0.127	1	09/19/18 09:02	09/21/18 16:35	HLM
PCB as Aroclor 1221	03	SW8082A	<0.127 mg/kg dry		0.127	1	09/19/18 09:02	09/21/18 16:35	HLM
PCB as Aroclor 1232	03	SW8082A	<0.127 mg/kg dry		0.127	1	09/19/18 09:02	09/21/18 16:35	HLM
PCB as Aroclor 1242	03	SW8082A	<0.127 mg/kg dry		0.127	1	09/19/18 09:02	09/21/18 16:35	HLM
PCB as Aroclor 1248	03	SW8082A	<0.127 mg/kg dry		0.127	1	09/19/18 09:02	09/21/18 16:35	HLM
PCB as Aroclor 1254	03	SW8082A	<0.127 mg/kg dry		0.127	1	09/19/18 09:02	09/21/18 16:35	HLM
PCB as Aroclor 1260	03	SW8082A	<0.127 mg/kg dry		0.127	1	09/19/18 09:02	09/21/18 16:35	HLM
<i>Surr: DCB</i>	03	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 16:35	HLM
<i>Surr: TCMX</i>	03	SW8082A	90.0 %		30-105		09/19/18 09:02	09/21/18 16:35	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	03	SW7196A	0.30 mg/kg dry		0.25	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	03	SM18 2540G	77.5 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 10-14' **Laboratory Sample ID:** 1810505-04

Grab Date/Time: 09/11/2018 10:25

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04RE1	SW6010C	<0.538 mg/kg dry		0.538	1	09/14/18 13:00	09/18/18 15:50	BG
Aluminum	04RE2	SW6010C	25600 mg/kg dry		538	200	09/14/18 13:00	09/19/18 15:16	BG
Arsenic	04RE1	SW6010C	<1.08 mg/kg dry		1.08	1	09/14/18 13:00	09/18/18 15:50	BG
Barium	04RE1	SW6010C	165 mg/kg dry		0.538	1	09/14/18 13:00	09/18/18 15:50	BG
Beryllium	04RE1	SW6010C	1.99 mg/kg dry		0.215	1	09/14/18 13:00	09/18/18 15:50	BG
Calcium	04	SW6010C	2300 mg/kg dry		108	20	09/14/18 13:00	09/18/18 13:39	BG
Cadmium	04RE1	SW6010C	0.713 mg/kg dry		0.215	1	09/14/18 13:00	09/18/18 15:50	BG
Cobalt	04RE1	SW6010C	22.1 mg/kg dry		0.215	1	09/14/18 13:00	09/18/18 15:50	BG
Chromium	04RE1	SW6010C	36.9 mg/kg dry		0.538	1	09/14/18 13:00	09/18/18 15:50	BG
Copper	04RE1	SW6010C	23.4 mg/kg dry		2.69	1	09/14/18 13:00	09/18/18 15:50	BG
Iron	04RE2	SW6010C	41400 mg/kg dry		538	200	09/14/18 13:00	09/19/18 15:16	BG
Mercury	04	SW7471B	0.016 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 15:16	MWL
Potassium	04	SW6010C	15700 mg/kg dry		538	20	09/14/18 13:00	09/18/18 13:39	BG
Magnesium	04	SW6010C	12000 mg/kg dry		53.8	20	09/14/18 13:00	09/18/18 13:39	BG
Manganese	04RE1	SW6010C	553 mg/kg dry		0.538	1	09/14/18 13:00	09/18/18 15:50	BG
Sodium	04RE1	SW6010C	101 mg/kg dry		26.9	1	09/14/18 13:00	09/18/18 15:50	BG
Nickel	04RE1	SW6010C	19.3 mg/kg dry		0.538	1	09/14/18 13:00	09/18/18 15:50	BG
Lead	04RE1	SW6010C	6.07 mg/kg dry		0.538	1	09/14/18 13:00	09/18/18 15:50	BG
Antimony	04RE1	SW6010C	<5.38 mg/kg dry		5.38	1	09/14/18 13:00	09/18/18 15:50	BG
Selenium	04RE1	SW6010C	<2.69 mg/kg dry		2.69	1	09/14/18 13:00	09/18/18 15:50	BG
Thallium	04RE1	SW6010C	<2.69 mg/kg dry		2.69	1	09/14/18 13:00	09/18/18 15:50	BG
Vanadium	04RE1	SW6010C	60.8 mg/kg dry		0.538	1	09/14/18 13:00	09/18/18 15:50	BG
Zinc	04RE1	SW6010C	110 mg/kg dry		0.538	1	09/14/18 13:00	09/18/18 15:50	BG
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	04	SW8270D SIM	Not Detected			4	09/18/18 09:10	09/18/18 14:05	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 10-14' **Laboratory Sample ID:** 1810505-04

Grab Date/Time: 09/11/2018 10:25

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
1,2,4-Trichlorobenzene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
1,2-Dichlorobenzene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
1,2-Diphenylhydrazine	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
1,3-Dichlorobenzene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
1,4-Dichlorobenzene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
1-Chloronaphthalene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
1-Naphthylamine	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2,3,4,6-Tetrachlorophenol	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2,4,5-Trichlorophenol	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2,4,6-Trichlorophenol	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2,4-Dichlorophenol	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2,4-Dimethylphenol	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2,4-Dinitrophenol	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2,4-Dinitrotoluene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2,6-Dichlorophenol	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2,6-Dinitrotoluene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2-Chloronaphthalene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2-Chlorophenol	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2-Methylnaphthalene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2-Naphthylamine	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2-Nitroaniline	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
2-Nitrophenol	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
3,3'-Dichlorobenzidine	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	
3-Methylcholanthrene	04	SW8270D	<375 ug/kg dry	375	4	09/18/18 09:10	09/18/18 14:05	SKS	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 10-14'

Laboratory Sample ID: 1810505-04

Grab Date/Time: 09/11/2018 10:25

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
4,6-Dinitro-2-methylphenol	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
4-Aminobiphenyl	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
4-Bromophenyl phenyl ether	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
4-Chloroaniline	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
4-Chlorophenyl phenyl ether	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
4-Nitroaniline	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
4-Nitrophenol	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
7,12-Dimethylbenz (a) anthracene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Acenaphthene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Acenaphthylene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Acetophenone	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Aniline	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Anthracene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Benzidine	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Benzo (a) anthracene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Benzo (a) pyrene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Benzo (b) fluoranthene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Benzo (g,h,i) perylene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Benzo (k) fluoranthene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Benzoic acid	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Benzyl alcohol	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
bis (2-Chloroethoxy) methane	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
bis (2-Chloroethyl) ether	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 10-14' **Laboratory Sample ID:** 1810505-04

Grab Date/Time: 09/11/2018 10:25

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
bis (2-Ethylhexyl) phthalate	04	SW8270D	<375 ug/kg dry	C	375	4	09/18/18 09:10	09/18/18 14:05	SKS
Butyl benzyl phthalate	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Chrysene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Dibenz (a,h) anthracene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Dibenz (a,j) acridine	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Dibenzofuran	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Diethyl phthalate	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Dimethyl phthalate	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Di-n-butyl phthalate	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Di-n-octyl phthalate	04	SW8270D	<375 ug/kg dry	C	375	4	09/18/18 09:10	09/18/18 14:05	SKS
Diphenylamine	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Ethyl methanesulfonate	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Fluoranthene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Fluorene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Hexachlorobenzene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Hexachlorobutadiene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Hexachlorocyclopentadiene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Hexachloroethane	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Indeno (1,2,3-cd) pyrene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Isophorone	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
m+p-Cresols	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Methyl methanesulfonate	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Naphthalene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Nitrobenzene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 10-14'	Laboratory Sample ID: 1810505-04
Grab Date/Time: 09/11/2018 10:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
n-Nitrosodi-n-butylamine	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
n-Nitrosodi-n-propylamine	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
n-Nitrosodiphenylamine	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
n-Nitrosopiperidine	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
o+m+p-Cresols	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
o-Cresol	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
p-(Dimethylamino) azobenzene	04	SW8270D	<375 ug/kg dry	C	375	4	09/18/18 09:10	09/18/18 14:05	SKS
p-Chloro-m-cresol	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Pentachloronitrobenzene (quintozene)	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Pentachlorophenol	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Phenacetin	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Phenanthrene	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Phenol	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Pronamide	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Pyrene	04	SW8270D	<375 ug/kg dry	C	375	4	09/18/18 09:10	09/18/18 14:05	SKS
Pyridine	04	SW8270D	<375 ug/kg dry		375	4	09/18/18 09:10	09/18/18 14:05	SKS
Surr: 2,4,6-Tribromophenol (Surr)	04	SW8270D	73.4 %		35-125		09/18/18 09:10	09/18/18 14:05	SKS
Surr: 2-Fluorobiphenyl (Surr)	04	SW8270D	59.8 %		45-105		09/18/18 09:10	09/18/18 14:05	SKS
Surr: 2-Fluorophenol (Surr)	04	SW8270D	65.0 %		35-105		09/18/18 09:10	09/18/18 14:05	SKS
Surr: Nitrobenzene-d5 (Surr)	04	SW8270D	69.8 %		35-100		09/18/18 09:10	09/18/18 14:05	SKS
Surr: Phenol-d5 (Surr)	04	SW8270D	63.7 %		40-100		09/18/18 09:10	09/18/18 14:05	SKS
Surr: p-Terphenyl-d14 (Surr)	04	SW8270D	68.8 %		30-125		09/18/18 09:10	09/18/18 14:05	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-2 10-14'	Laboratory Sample ID: 1810505-04
Grab Date/Time: 09/11/2018 10:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04	SW8015C	34.8 mg/kg dry		11.0	1	09/24/18 17:00	09/25/18 17:01	HLM
<i>Surr: Pentacosane (Surr)</i>	04	SW8015C	77.9 %		40-160		09/24/18 17:00	09/25/18 17:01	HLM
TPH-Semi-Volatiles (ORO)	04	SW8015C	25.5 mg/kg dry		11.7	1	09/19/18 14:15	09/20/18 16:39	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	04	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 16:57	HLM
PCB as Aroclor 1221	04	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 16:57	HLM
PCB as Aroclor 1232	04	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 16:57	HLM
PCB as Aroclor 1242	04	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 16:57	HLM
PCB as Aroclor 1248	04	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 16:57	HLM
PCB as Aroclor 1254	04	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 16:57	HLM
PCB as Aroclor 1260	04	SW8082A	<0.109 mg/kg dry		0.109	1	09/19/18 09:02	09/21/18 16:57	HLM
<i>Surr: DCB</i>	04	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 16:57	HLM
<i>Surr: TCMX</i>	04	SW8082A	80.0 %		30-105		09/19/18 09:02	09/21/18 16:57	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	04	SW7196A	<0.23 mg/kg dry		0.23	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	04	SM18 2540G	84.8 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 0-5' **Laboratory Sample ID:** 1810505-05

Grab Date/Time: 09/11/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05RE1	SW6010C	<0.607 mg/kg dry		0.607	1	09/14/18 13:00	09/18/18 15:55	BG
Aluminum	05RE2	SW6010C	20000 mg/kg dry		607	200	09/14/18 13:00	09/19/18 15:24	BG
Arsenic	05RE1	SW6010C	<1.21 mg/kg dry		1.21	1	09/14/18 13:00	09/18/18 15:55	BG
Barium	05RE1	SW6010C	106 mg/kg dry		0.607	1	09/14/18 13:00	09/18/18 15:55	BG
Beryllium	05RE1	SW6010C	1.39 mg/kg dry		0.243	1	09/14/18 13:00	09/18/18 15:55	BG
Calcium	05RE2	SW6010C	93800 mg/kg dry		1210	200	09/14/18 13:00	09/19/18 15:24	BG
Cadmium	05RE1	SW6010C	0.246 mg/kg dry		0.243	1	09/14/18 13:00	09/18/18 15:55	BG
Cobalt	05RE1	SW6010C	7.31 mg/kg dry		0.243	1	09/14/18 13:00	09/18/18 15:55	BG
Chromium	05RE1	SW6010C	21.4 mg/kg dry		0.607	1	09/14/18 13:00	09/18/18 15:55	BG
Copper	05RE1	SW6010C	11.4 mg/kg dry		3.03	1	09/14/18 13:00	09/18/18 15:55	BG
Iron	05RE2	SW6010C	26700 mg/kg dry		607	200	09/14/18 13:00	09/19/18 15:24	BG
Mercury	05	SW7471B	0.025 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 15:18	MWL
Potassium	05RE1	SW6010C	4770 mg/kg dry		30.3	1	09/14/18 13:00	09/18/18 15:55	BG
Magnesium	05	SW6010C	11800 mg/kg dry		60.7	20	09/14/18 13:00	09/18/18 13:41	BG
Manganese	05RE1	SW6010C	232 mg/kg dry		0.607	1	09/14/18 13:00	09/18/18 15:55	BG
Sodium	05RE1	SW6010C	442 mg/kg dry		30.3	1	09/14/18 13:00	09/18/18 15:55	BG
Nickel	05RE1	SW6010C	11.7 mg/kg dry		0.607	1	09/14/18 13:00	09/18/18 15:55	BG
Lead	05RE1	SW6010C	15.9 mg/kg dry		0.607	1	09/14/18 13:00	09/18/18 15:55	BG
Antimony	05RE1	SW6010C	<6.07 mg/kg dry		6.07	1	09/14/18 13:00	09/18/18 15:55	BG
Selenium	05RE1	SW6010C	<3.03 mg/kg dry		3.03	1	09/14/18 13:00	09/18/18 15:55	BG
Thallium	05RE1	SW6010C	<3.03 mg/kg dry		3.03	1	09/14/18 13:00	09/18/18 15:55	BG
Vanadium	05RE1	SW6010C	32.9 mg/kg dry		0.607	1	09/14/18 13:00	09/18/18 15:55	BG
Zinc	05RE1	SW6010C	46.0 mg/kg dry		0.607	1	09/14/18 13:00	09/18/18 15:55	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	05	SW8270D SIM	Not Detected	4	09/18/18 09:10	09/18/18 14:36	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 0-5' **Laboratory Sample ID:** 1810505-05

Grab Date/Time: 09/11/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
1,2,4-Trichlorobenzene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
1,2-Dichlorobenzene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
1,2-Diphenylhydrazine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
1,3-Dichlorobenzene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
1,4-Dichlorobenzene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
1-Chloronaphthalene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
1-Naphthylamine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2,3,4,6-Tetrachlorophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2,4,5-Trichlorophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2,4,6-Trichlorophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2,4-Dichlorophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2,4-Dimethylphenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2,4-Dinitrophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2,4-Dinitrotoluene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2,6-Dichlorophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2,6-Dinitrotoluene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2-Chloronaphthalene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2-Chlorophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2-Methylnaphthalene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2-Naphthylamine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2-Nitroaniline	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
2-Nitrophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
3,3'-Dichlorobenzidine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
3-Methylcholanthrene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 0-5'

Laboratory Sample ID: 1810505-05

Grab Date/Time: 09/11/2018 10:35

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
4,6-Dinitro-2-methylphenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
4-Aminobiphenyl	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
4-Bromophenyl phenyl ether	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
4-Chloroaniline	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
4-Chlorophenyl phenyl ether	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
4-Nitroaniline	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
4-Nitrophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
7,12-Dimethylbenz (a) anthracene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Acenaphthene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Acenaphthylene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Acetophenone	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Aniline	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Anthracene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Benzidine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Benzo (a) anthracene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Benzo (a) pyrene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Benzo (b) fluoranthene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Benzo (g,h,i) perylene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Benzo (k) fluoranthene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Benzoic acid	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Benzyl alcohol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
bis (2-Chloroethoxy) methane	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
bis (2-Chloroethyl) ether	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 0-5' **Laboratory Sample ID:** 1810505-05

Grab Date/Time: 09/11/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
bis (2-Ethylhexyl) phthalate	05	SW8270D	<392 ug/kg dry	C	392	4	09/18/18 09:10	09/18/18 14:36	SKS
Butyl benzyl phthalate	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Chrysene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Dibenz (a,h) anthracene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Dibenz (a,j) acridine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Dibenzofuran	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Diethyl phthalate	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Dimethyl phthalate	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Di-n-butyl phthalate	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Di-n-octyl phthalate	05	SW8270D	<392 ug/kg dry	C	392	4	09/18/18 09:10	09/18/18 14:36	SKS
Diphenylamine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Ethyl methanesulfonate	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Fluoranthene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Fluorene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Hexachlorobenzene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Hexachlorobutadiene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Hexachlorocyclopentadiene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Hexachloroethane	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Indeno (1,2,3-cd) pyrene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Isophorone	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
m+p-Cresols	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Methyl methanesulfonate	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Naphthalene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Nitrobenzene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 0-5' **Laboratory Sample ID:** 1810505-05

Grab Date/Time: 09/11/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
n-Nitrosodi-n-butylamine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
n-Nitrosodi-n-propylamine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
n-Nitrosodiphenylamine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
n-Nitrosopiperidine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
o+m+p-Cresols	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
o-Cresol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
p-(Dimethylamino) azobenzene	05	SW8270D	<392 ug/kg dry	C	392	4	09/18/18 09:10	09/18/18 14:36	SKS
p-Chloro-m-cresol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Pentachloronitrobenzene (quintozene)	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Pentachlorophenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Phenacetin	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Phenanthrene	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Phenol	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Pronamide	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Pyrene	05	SW8270D	<392 ug/kg dry	C	392	4	09/18/18 09:10	09/18/18 14:36	SKS
Pyridine	05	SW8270D	<392 ug/kg dry		392	4	09/18/18 09:10	09/18/18 14:36	SKS
Surr: 2,4,6-Tribromophenol (Surr)	05	SW8270D	66.0 %		35-125		09/18/18 09:10	09/18/18 14:36	SKS
Surr: 2-Fluorobiphenyl (Surr)	05	SW8270D	60.5 %		45-105		09/18/18 09:10	09/18/18 14:36	SKS
Surr: 2-Fluorophenol (Surr)	05	SW8270D	67.7 %		35-105		09/18/18 09:10	09/18/18 14:36	SKS
Surr: Nitrobenzene-d5 (Surr)	05	SW8270D	70.2 %		35-100		09/18/18 09:10	09/18/18 14:36	SKS
Surr: Phenol-d5 (Surr)	05	SW8270D	65.7 %		40-100		09/18/18 09:10	09/18/18 14:36	SKS
Surr: p-Terphenyl-d14 (Surr)	05	SW8270D	64.5 %		30-125		09/18/18 09:10	09/18/18 14:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 0-5'	Laboratory Sample ID: 1810505-05
Grab Date/Time: 09/11/2018 10:35	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05	SW8015C	<11.4 mg/kg dry		11.4	1	09/24/18 17:00	09/25/18 17:27	HLM
<i>Surr: Pentacosane (Surr)</i>	05	SW8015C	66.2 %		40-160		09/24/18 17:00	09/25/18 17:27	HLM
TPH-Semi-Volatiles (ORO)	05	SW8015C	<11.8 mg/kg dry		11.8	1	09/19/18 14:15	09/20/18 17:04	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	05	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 17:18	HLM
PCB as Aroclor 1221	05	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 17:18	HLM
PCB as Aroclor 1232	05	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 17:18	HLM
PCB as Aroclor 1242	05	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 17:18	HLM
PCB as Aroclor 1248	05	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 17:18	HLM
PCB as Aroclor 1254	05	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 17:18	HLM
PCB as Aroclor 1260	05	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 17:18	HLM
<i>Surr: DCB</i>	05	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 17:18	HLM
<i>Surr: TCMX</i>	05	SW8082A	60.0 %		30-105		09/19/18 09:02	09/21/18 17:18	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	05	SW7196A	0.29 mg/kg dry		0.24	1	09/17/18 09:00	09/20/18 10:36	MWL
Percent Solids	05	SM18 2540G	82.1 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 5-7' **Laboratory Sample ID:** 1810505-06

Grab Date/Time: 09/11/2018 10:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06RE1	SW6010C	<0.612 mg/kg dry		0.612	1	09/14/18 13:00	09/18/18 15:58	BG
Aluminum	06RE2	SW6010C	38500 mg/kg dry		612	200	09/14/18 13:00	09/19/18 15:26	BG
Arsenic	06RE1	SW6010C	<1.22 mg/kg dry		1.22	1	09/14/18 13:00	09/18/18 15:58	BG
Barium	06RE1	SW6010C	165 mg/kg dry		0.612	1	09/14/18 13:00	09/18/18 15:58	BG
Beryllium	06RE1	SW6010C	3.15 mg/kg dry		0.245	1	09/14/18 13:00	09/18/18 15:58	BG
Calcium	06	SW6010C	2040 mg/kg dry		122	20	09/14/18 13:00	09/18/18 13:44	BG
Cadmium	06RE1	SW6010C	1.10 mg/kg dry		0.245	1	09/14/18 13:00	09/18/18 15:58	BG
Cobalt	06RE1	SW6010C	22.3 mg/kg dry		0.245	1	09/14/18 13:00	09/18/18 15:58	BG
Chromium	06RE1	SW6010C	32.4 mg/kg dry		0.612	1	09/14/18 13:00	09/18/18 15:58	BG
Copper	06RE1	SW6010C	17.1 mg/kg dry		3.06	1	09/14/18 13:00	09/18/18 15:58	BG
Iron	06RE2	SW6010C	56700 mg/kg dry		612	200	09/14/18 13:00	09/19/18 15:26	BG
Mercury	06	SW7471B	0.041 mg/kg dry		0.010	1	09/14/18 13:12	09/17/18 15:21	MWL
Potassium	06RE1	SW6010C	10900 mg/kg dry		30.6	1	09/14/18 13:00	09/18/18 15:58	BG
Magnesium	06	SW6010C	10700 mg/kg dry		61.2	20	09/14/18 13:00	09/18/18 13:44	BG
Manganese	06RE1	SW6010C	490 mg/kg dry		0.612	1	09/14/18 13:00	09/18/18 15:58	BG
Sodium	06RE1	SW6010C	73.0 mg/kg dry		30.6	1	09/14/18 13:00	09/18/18 15:58	BG
Nickel	06RE1	SW6010C	17.1 mg/kg dry		0.612	1	09/14/18 13:00	09/18/18 15:58	BG
Lead	06RE1	SW6010C	18.8 mg/kg dry		0.612	1	09/14/18 13:00	09/18/18 15:58	BG
Antimony	06RE1	SW6010C	<6.12 mg/kg dry		6.12	1	09/14/18 13:00	09/18/18 15:58	BG
Selenium	06RE1	SW6010C	<3.06 mg/kg dry		3.06	1	09/14/18 13:00	09/18/18 15:58	BG
Thallium	06RE1	SW6010C	<3.06 mg/kg dry		3.06	1	09/14/18 13:00	09/18/18 15:58	BG
Vanadium	06RE1	SW6010C	99.8 mg/kg dry		0.612	1	09/14/18 13:00	09/18/18 15:58	BG
Zinc	06RE1	SW6010C	112 mg/kg dry		0.612	1	09/14/18 13:00	09/18/18 15:58	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	06 SW8270D SIM	Not Detected	1	09/18/18 09:10	09/18/18 15:08	SKS
--------------------	----------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 5-7' **Laboratory Sample ID:** 1810505-06

Grab Date/Time: 09/11/2018 10:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
1,2,4-Trichlorobenzene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
1,2-Dichlorobenzene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
1,2-Diphenylhydrazine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
1,3-Dichlorobenzene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
1,4-Dichlorobenzene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
1-Chloronaphthalene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
1-Naphthylamine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2,3,4,6-Tetrachlorophenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2,4,5-Trichlorophenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2,4,6-Trichlorophenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2,4-Dichlorophenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2,4-Dimethylphenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2,4-Dinitrophenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2,4-Dinitrotoluene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2,6-Dichlorophenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2,6-Dinitrotoluene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2-Chloronaphthalene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2-Chlorophenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2-Methylnaphthalene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2-Naphthylamine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2-Nitroaniline	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
2-Nitrophenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
3,3'-Dichlorobenzidine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
3-Methylcholanthrene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 5-7'

Laboratory Sample ID: 1810505-06

Grab Date/Time: 09/11/2018 10:40

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
4,6-Dinitro-2-methylphenol	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
4-Aminobiphenyl	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
4-Bromophenyl phenyl ether	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
4-Chloroaniline	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
4-Chlorophenyl phenyl ether	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
4-Nitroaniline	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
4-Nitrophenol	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
7,12-Dimethylbenz (a) anthracene	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Acenaphthene	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Acenaphthylene	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Acetophenone	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Aniline	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Anthracene	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Benzidine	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Benzo (a) anthracene	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Benzo (a) pyrene	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Benzo (b) fluoranthene	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Benzo (g,h,i) perylene	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Benzo (k) fluoranthene	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Benzoic acid	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
Benzyl alcohol	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
bis (2-Chloroethoxy) methane	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	
bis (2-Chloroethyl) ether	06	SW8270D	<99.8 ug/kg dry	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 5-7' **Laboratory Sample ID:** 1810505-06

Grab Date/Time: 09/11/2018 10:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
bis (2-Ethylhexyl) phthalate	06	SW8270D	<99.8 ug/kg dry	C	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Butyl benzyl phthalate	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Chrysene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Dibenz (a,h) anthracene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Dibenz (a,j) acridine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Dibenzofuran	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Diethyl phthalate	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Dimethyl phthalate	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Di-n-butyl phthalate	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Di-n-octyl phthalate	06	SW8270D	<99.8 ug/kg dry	C	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Diphenylamine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Ethyl methanesulfonate	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Fluoranthene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Fluorene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Hexachlorobenzene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Hexachlorobutadiene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Hexachlorocyclopentadiene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Hexachloroethane	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Indeno (1,2,3-cd) pyrene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Isophorone	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
m+p-Cresols	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Methyl methanesulfonate	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Naphthalene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Nitrobenzene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 5-7' **Laboratory Sample ID:** 1810505-06

Grab Date/Time: 09/11/2018 10:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
n-Nitrosodi-n-butylamine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
n-Nitrosodi-n-propylamine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
n-Nitrosodiphenylamine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
n-Nitrosopiperidine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
o+m+p-Cresols	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
o-Cresol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
p-(Dimethylamino) azobenzene	06	SW8270D	<99.8 ug/kg dry	C	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
p-Chloro-m-cresol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Pentachloronitrobenzene (quintozene)	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Pentachlorophenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Phenacetin	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Phenanthrene	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Phenol	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Pronamide	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Pyrene	06	SW8270D	<99.8 ug/kg dry	C	99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Pyridine	06	SW8270D	<99.8 ug/kg dry		99.8	1	09/18/18 09:10	09/18/18 15:08	SKS
Surr: 2,4,6-Tribromophenol (Surr)	06	SW8270D	63.1 %		35-125		09/18/18 09:10	09/18/18 15:08	SKS
Surr: 2-Fluorobiphenyl (Surr)	06	SW8270D	64.5 %		45-105		09/18/18 09:10	09/18/18 15:08	SKS
Surr: 2-Fluorophenol (Surr)	06	SW8270D	53.6 %		35-105		09/18/18 09:10	09/18/18 15:08	SKS
Surr: Nitrobenzene-d5 (Surr)	06	SW8270D	55.4 %		35-100		09/18/18 09:10	09/18/18 15:08	SKS
Surr: Phenol-d5 (Surr)	06	SW8270D	52.1 %		40-100		09/18/18 09:10	09/18/18 15:08	SKS
Surr: p-Terphenyl-d14 (Surr)	06	SW8270D	52.0 %		30-125		09/18/18 09:10	09/18/18 15:08	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-3 5-7' **Laboratory Sample ID:** 1810505-06

Grab Date/Time: 09/11/2018 10:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	06	SW8015C	<12.0 mg/kg dry		12.0	1	09/20/18 15:48	09/21/18 16:23	CVH
<i>Surr: Pentacosane (Surr)</i>	06	SW8015C	54.6 %		40-160		09/20/18 15:48	09/21/18 16:23	CVH
TPH-Semi-Volatiles (ORO)	06	SW8015C	<12.7 mg/kg dry		12.7	1	09/19/18 14:15	09/20/18 17:29	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	06	SW8082A	<0.124 mg/kg dry		0.124	1	09/19/18 09:02	09/21/18 17:40	HLM
PCB as Aroclor 1221	06	SW8082A	<0.124 mg/kg dry		0.124	1	09/19/18 09:02	09/21/18 17:40	HLM
PCB as Aroclor 1232	06	SW8082A	<0.124 mg/kg dry		0.124	1	09/19/18 09:02	09/21/18 17:40	HLM
PCB as Aroclor 1242	06	SW8082A	<0.124 mg/kg dry		0.124	1	09/19/18 09:02	09/21/18 17:40	HLM
PCB as Aroclor 1248	06	SW8082A	<0.124 mg/kg dry		0.124	1	09/19/18 09:02	09/21/18 17:40	HLM
PCB as Aroclor 1254	06	SW8082A	<0.124 mg/kg dry		0.124	1	09/19/18 09:02	09/21/18 17:40	HLM
PCB as Aroclor 1260	06	SW8082A	<0.124 mg/kg dry		0.124	1	09/19/18 09:02	09/21/18 17:40	HLM
<i>Surr: DCB</i>	06	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 17:40	HLM
<i>Surr: TCMX</i>	06	SW8082A	80.0 %		30-105		09/19/18 09:02	09/21/18 17:40	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	06	SW7196A	<0.26 mg/kg dry		0.26	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	06	SM18 2540G	77.0 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-4 0-6' **Laboratory Sample ID:** 1810505-07

Grab Date/Time: 09/11/2018 10:48

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	07RE1	SW6010C	<0.575 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 16:01	BG
Aluminum	07RE2	SW6010C	35900 mg/kg dry		575	200	09/14/18 13:00	09/19/18 15:28	BG
Arsenic	07RE1	SW6010C	1.21 mg/kg dry		1.15	1	09/14/18 13:00	09/18/18 16:01	BG
Barium	07RE1	SW6010C	151 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 16:01	BG
Beryllium	07RE1	SW6010C	2.28 mg/kg dry		0.230	1	09/14/18 13:00	09/18/18 16:01	BG
Calcium	07	SW6010C	1790 mg/kg dry		115	20	09/14/18 13:00	09/18/18 13:47	BG
Cadmium	07RE1	SW6010C	0.428 mg/kg dry		0.230	1	09/14/18 13:00	09/18/18 16:01	BG
Cobalt	07RE1	SW6010C	20.7 mg/kg dry		0.230	1	09/14/18 13:00	09/18/18 16:01	BG
Chromium	07RE1	SW6010C	27.5 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 16:01	BG
Copper	07RE1	SW6010C	16.5 mg/kg dry		2.87	1	09/14/18 13:00	09/18/18 16:01	BG
Iron	07RE2	SW6010C	35700 mg/kg dry		575	200	09/14/18 13:00	09/19/18 15:28	BG
Mercury	07	SW7471B	0.047 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 15:23	MWL
Potassium	07RE1	SW6010C	7730 mg/kg dry		28.7	1	09/14/18 13:00	09/18/18 16:01	BG
Magnesium	07	SW6010C	8570 mg/kg dry		57.5	20	09/14/18 13:00	09/18/18 13:47	BG
Manganese	07RE1	SW6010C	476 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 16:01	BG
Sodium	07RE1	SW6010C	57.4 mg/kg dry		28.7	1	09/14/18 13:00	09/18/18 16:01	BG
Nickel	07RE1	SW6010C	15.0 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 16:01	BG
Lead	07RE1	SW6010C	10.9 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 16:01	BG
Antimony	07RE1	SW6010C	<5.75 mg/kg dry		5.75	1	09/14/18 13:00	09/18/18 16:01	BG
Selenium	07RE1	SW6010C	<2.87 mg/kg dry		2.87	1	09/14/18 13:00	09/18/18 16:01	BG
Thallium	07RE1	SW6010C	<2.87 mg/kg dry		2.87	1	09/14/18 13:00	09/18/18 16:01	BG
Vanadium	07RE1	SW6010C	44.4 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 16:01	BG
Zinc	07RE1	SW6010C	98.5 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 16:01	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	07	SW8270D SIM	Not Detected	4	09/18/18 09:10	09/18/18 15:40	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-4 0-6' **Laboratory Sample ID:** 1810505-07

Grab Date/Time: 09/11/2018 10:48

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
1,2,4-Trichlorobenzene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
1,2-Dichlorobenzene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
1,2-Diphenylhydrazine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
1,3-Dichlorobenzene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
1,4-Dichlorobenzene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
1-Chloronaphthalene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
1-Naphthylamine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2,3,4,6-Tetrachlorophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2,4,5-Trichlorophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2,4,6-Trichlorophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2,4-Dichlorophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2,4-Dimethylphenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2,4-Dinitrophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2,4-Dinitrotoluene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2,6-Dichlorophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2,6-Dinitrotoluene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2-Chloronaphthalene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2-Chlorophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2-Methylnaphthalene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2-Naphthylamine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2-Nitroaniline	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
2-Nitrophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
3,3'-Dichlorobenzidine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
3-Methylcholanthrene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-4 0-6'

Laboratory Sample ID: 1810505-07

Grab Date/Time: 09/11/2018 10:48

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
4,6-Dinitro-2-methylphenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
4-Aminobiphenyl	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
4-Bromophenyl phenyl ether	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
4-Chloroaniline	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
4-Chlorophenyl phenyl ether	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
4-Nitroaniline	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
4-Nitrophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
7,12-Dimethylbenz (a) anthracene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Acenaphthene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Acenaphthylene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Acetophenone	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Aniline	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Anthracene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Benzidine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Benzo (a) anthracene	07	SW8270D	947 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Benzo (a) pyrene	07	SW8270D	694 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Benzo (b) fluoranthene	07	SW8270D	1570 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Benzo (g,h,i) perylene	07	SW8270D	422 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Benzo (k) fluoranthene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Benzoic acid	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Benzyl alcohol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
bis (2-Chloroethoxy) methane	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
bis (2-Chloroethyl) ether	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-4 0-6' **Laboratory Sample ID:** 1810505-07

Grab Date/Time: 09/11/2018 10:48

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
bis (2-Ethylhexyl) phthalate	07	SW8270D	<373 ug/kg dry	C	373	4	09/18/18 09:10	09/18/18 15:40	SKS
Butyl benzyl phthalate	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Chrysene	07	SW8270D	985 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Dibenz (a,h) anthracene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Dibenz (a,j) acridine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Dibenzofuran	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Diethyl phthalate	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Dimethyl phthalate	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Di-n-butyl phthalate	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Di-n-octyl phthalate	07	SW8270D	<373 ug/kg dry	C	373	4	09/18/18 09:10	09/18/18 15:40	SKS
Diphenylamine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Ethyl methanesulfonate	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Fluoranthene	07	SW8270D	2220 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Fluorene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Hexachlorobenzene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Hexachlorobutadiene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Hexachlorocyclopentadiene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Hexachloroethane	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Indeno (1,2,3-cd) pyrene	07	SW8270D	413 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Isophorone	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
m+p-Cresols	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Methyl methanesulfonate	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Naphthalene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Nitrobenzene	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-4 0-6' **Laboratory Sample ID:** 1810505-07

Grab Date/Time: 09/11/2018 10:48

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
n-Nitrosodi-n-butylamine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
n-Nitrosodi-n-propylamine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
n-Nitrosodiphenylamine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
n-Nitrosopiperidine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
o+m+p-Cresols	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
o-Cresol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
p-(Dimethylamino) azobenzene	07	SW8270D	<373 ug/kg dry	C	373	4	09/18/18 09:10	09/18/18 15:40	SKS
p-Chloro-m-cresol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Pentachloronitrobenzene (quintozene)	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Pentachlorophenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Phenacetin	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Phenanthrene	07	SW8270D	1490 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Phenol	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Pronamide	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Pyrene	07	SW8270D	1290 ug/kg dry	C	373	4	09/18/18 09:10	09/18/18 15:40	SKS
Pyridine	07	SW8270D	<373 ug/kg dry		373	4	09/18/18 09:10	09/18/18 15:40	SKS
Surr: 2,4,6-Tribromophenol (Surr)	07	SW8270D	72.1 %		35-125		09/18/18 09:10	09/18/18 15:40	SKS
Surr: 2-Fluorobiphenyl (Surr)	07	SW8270D	66.3 %		45-105		09/18/18 09:10	09/18/18 15:40	SKS
Surr: 2-Fluorophenol (Surr)	07	SW8270D	73.2 %		35-105		09/18/18 09:10	09/18/18 15:40	SKS
Surr: Nitrobenzene-d5 (Surr)	07	SW8270D	77.3 %		35-100		09/18/18 09:10	09/18/18 15:40	SKS
Surr: Phenol-d5 (Surr)	07	SW8270D	71.7 %		40-100		09/18/18 09:10	09/18/18 15:40	SKS
Surr: p-Terphenyl-d14 (Surr)	07	SW8270D	69.3 %		30-125		09/18/18 09:10	09/18/18 15:40	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-4 0-6'	Laboratory Sample ID: 1810505-07
Grab Date/Time: 09/11/2018 10:48	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	07	SW8015C	<11.2 mg/kg dry		11.2	1	09/20/18 15:48	09/21/18 16:49	CVH
<i>Surr: Pentacosane (Surr)</i>	07	SW8015C	53.3 %		40-160		09/20/18 15:48	09/21/18 16:49	CVH
TPH-Semi-Volatiles (ORO)	07	SW8015C	49.5 mg/kg dry		11.8	1	09/19/18 14:15	09/20/18 17:53	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	07	SW8082A	<0.112 mg/kg dry		0.112	1	09/19/18 09:02	09/21/18 18:01	HLM
PCB as Aroclor 1221	07	SW8082A	<0.112 mg/kg dry		0.112	1	09/19/18 09:02	09/21/18 18:01	HLM
PCB as Aroclor 1232	07	SW8082A	<0.112 mg/kg dry		0.112	1	09/19/18 09:02	09/21/18 18:01	HLM
PCB as Aroclor 1242	07	SW8082A	<0.112 mg/kg dry		0.112	1	09/19/18 09:02	09/21/18 18:01	HLM
PCB as Aroclor 1248	07	SW8082A	<0.112 mg/kg dry		0.112	1	09/19/18 09:02	09/21/18 18:01	HLM
PCB as Aroclor 1254	07	SW8082A	<0.112 mg/kg dry		0.112	1	09/19/18 09:02	09/21/18 18:01	HLM
PCB as Aroclor 1260	07	SW8082A	<0.112 mg/kg dry		0.112	1	09/19/18 09:02	09/21/18 18:01	HLM
<i>Surr: DCB</i>	07	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 18:01	HLM
<i>Surr: TCMX</i>	07	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 18:01	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	07	SW7196A	<0.24 mg/kg dry		0.24	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	07	SM18 2540G	82.2 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-5 0-5' **Laboratory Sample ID:** 1810505-08

Grab Date/Time: 09/11/2018 10:55

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	08RE1	SW6010C	<0.574 mg/kg dry		0.574	1	09/14/18 13:00	09/18/18 16:03	BG
Aluminum	08RE2	SW6010C	22300 mg/kg dry		574	200	09/14/18 13:00	09/19/18 15:30	BG
Arsenic	08RE1	SW6010C	1.28 mg/kg dry		1.15	1	09/14/18 13:00	09/18/18 16:03	BG
Barium	08RE1	SW6010C	136 mg/kg dry		0.574	1	09/14/18 13:00	09/18/18 16:03	BG
Beryllium	08RE1	SW6010C	1.51 mg/kg dry		0.229	1	09/14/18 13:00	09/18/18 16:03	BG
Calcium	08	SW6010C	1120 mg/kg dry		115	20	09/14/18 13:00	09/18/18 13:52	BG
Cadmium	08RE1	SW6010C	<0.229 mg/kg dry		0.229	1	09/14/18 13:00	09/18/18 16:03	BG
Cobalt	08RE1	SW6010C	15.4 mg/kg dry		0.229	1	09/14/18 13:00	09/18/18 16:03	BG
Chromium	08RE1	SW6010C	22.1 mg/kg dry		0.574	1	09/14/18 13:00	09/18/18 16:03	BG
Copper	08RE1	SW6010C	4.57 mg/kg dry		2.87	1	09/14/18 13:00	09/18/18 16:03	BG
Iron	08RE2	SW6010C	26400 mg/kg dry		574	200	09/14/18 13:00	09/19/18 15:30	BG
Mercury	08	SW7471B	0.013 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 15:30	MWL
Potassium	08RE1	SW6010C	7040 mg/kg dry		28.7	1	09/14/18 13:00	09/18/18 16:03	BG
Magnesium	08	SW6010C	7770 mg/kg dry		57.4	20	09/14/18 13:00	09/18/18 13:52	BG
Manganese	08RE1	SW6010C	444 mg/kg dry		0.574	1	09/14/18 13:00	09/18/18 16:03	BG
Sodium	08RE1	SW6010C	55.1 mg/kg dry		28.7	1	09/14/18 13:00	09/18/18 16:03	BG
Nickel	08RE1	SW6010C	11.9 mg/kg dry		0.574	1	09/14/18 13:00	09/18/18 16:03	BG
Lead	08RE1	SW6010C	5.05 mg/kg dry		0.574	1	09/14/18 13:00	09/18/18 16:03	BG
Antimony	08RE1	SW6010C	<5.74 mg/kg dry		5.74	1	09/14/18 13:00	09/18/18 16:03	BG
Selenium	08RE1	SW6010C	<2.87 mg/kg dry		2.87	1	09/14/18 13:00	09/18/18 16:03	BG
Thallium	08RE1	SW6010C	<2.87 mg/kg dry		2.87	1	09/14/18 13:00	09/18/18 16:03	BG
Vanadium	08RE1	SW6010C	33.3 mg/kg dry		0.574	1	09/14/18 13:00	09/18/18 16:03	BG
Zinc	08RE1	SW6010C	83.9 mg/kg dry		0.574	1	09/14/18 13:00	09/18/18 16:03	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	08	SW8270D SIM	Not Detected	1	09/18/18 09:10	09/18/18 16:12	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-5 0-5' **Laboratory Sample ID:** 1810505-08

Grab Date/Time: 09/11/2018 10:55

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
1,2,4-Trichlorobenzene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
1,2-Dichlorobenzene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
1,2-Diphenylhydrazine	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
1,3-Dichlorobenzene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
1,4-Dichlorobenzene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
1-Chloronaphthalene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
1-Naphthylamine	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2,3,4,6-Tetrachlorophenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2,4,5-Trichlorophenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2,4,6-Trichlorophenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2,4-Dichlorophenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2,4-Dimethylphenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2,4-Dinitrophenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2,4-Dinitrotoluene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2,6-Dichlorophenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2,6-Dinitrotoluene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2-Chloronaphthalene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2-Chlorophenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2-Methylnaphthalene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2-Naphthylamine	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2-Nitroaniline	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
2-Nitrophenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
3,3'-Dichlorobenzidine	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
3-Methylcholanthrene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-5 0-5' **Laboratory Sample ID:** 1810505-08

Grab Date/Time: 09/11/2018 10:55

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
4,6-Dinitro-2-methylphenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
4-Aminobiphenyl	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
4-Bromophenyl phenyl ether	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
4-Chloroaniline	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
4-Chlorophenyl phenyl ether	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
4-Nitroaniline	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
4-Nitrophenol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
7,12-Dimethylbenz (a) anthracene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Acenaphthene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Acenaphthylene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Acetophenone	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Aniline	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Anthracene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Benzidine	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Benzo (a) anthracene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Benzo (a) pyrene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Benzo (b) fluoranthene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Benzo (g,h,i) perylene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Benzo (k) fluoranthene	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Benzoic acid	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
Benzyl alcohol	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
bis (2-Chloroethoxy) methane	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS
bis (2-Chloroethyl) ether	08	SW8270D	<95.1 ug/kg dry	95.1	1		09/18/18 09:10	09/18/18 16:12	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-5 0-5'

Laboratory Sample ID: 1810505-08

Grab Date/Time: 09/11/2018 10:55

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
bis (2-Ethylhexyl) phthalate	08	SW8270D	<95.1 ug/kg dry	C	95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Butyl benzyl phthalate	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Chrysene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Dibenz (a,h) anthracene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Dibenz (a,j) acridine	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Dibenzofuran	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Diethyl phthalate	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Dimethyl phthalate	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Di-n-butyl phthalate	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Di-n-octyl phthalate	08	SW8270D	<95.1 ug/kg dry	C	95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Diphenylamine	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Ethyl methanesulfonate	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Fluoranthene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Fluorene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Hexachlorobenzene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Hexachlorobutadiene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Hexachlorocyclopentadiene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Hexachloroethane	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Indeno (1,2,3-cd) pyrene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Isophorone	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
m+p-Cresols	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Methyl methanesulfonate	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Naphthalene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Nitrobenzene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-5 0-5' **Laboratory Sample ID:** 1810505-08

Grab Date/Time: 09/11/2018 10:55

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
n-Nitrosodi-n-butylamine	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
n-Nitrosodi-n-propylamine	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
n-Nitrosodiphenylamine	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
n-Nitrosopiperidine	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
o+m+p-Cresols	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
o-Cresol	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
p-(Dimethylamino) azobenzene	08	SW8270D	<95.1 ug/kg dry	C	95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
p-Chloro-m-cresol	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Pentachloronitrobenzene (quintozene)	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Pentachlorophenol	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Phenacetin	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Phenanthrene	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Phenol	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Pronamide	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Pyrene	08	SW8270D	<95.1 ug/kg dry	C	95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Pyridine	08	SW8270D	<95.1 ug/kg dry		95.1	1	09/18/18 09:10	09/18/18 16:12	SKS
Surr: 2,4,6-Tribromophenol (Surr)	08	SW8270D	65.0 %		35-125		09/18/18 09:10	09/18/18 16:12	SKS
Surr: 2-Fluorobiphenyl (Surr)	08	SW8270D	61.7 %		45-105		09/18/18 09:10	09/18/18 16:12	SKS
Surr: 2-Fluorophenol (Surr)	08	SW8270D	49.5 %		35-105		09/18/18 09:10	09/18/18 16:12	SKS
Surr: Nitrobenzene-d5 (Surr)	08	SW8270D	54.4 %		35-100		09/18/18 09:10	09/18/18 16:12	SKS
Surr: Phenol-d5 (Surr)	08	SW8270D	48.8 %		40-100		09/18/18 09:10	09/18/18 16:12	SKS
Surr: p-Terphenyl-d14 (Surr)	08	SW8270D	51.7 %		30-125		09/18/18 09:10	09/18/18 16:12	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-5 0-5'	Laboratory Sample ID: 1810505-08
Grab Date/Time: 09/11/2018 10:55	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	08	SW8015C	<11.4 mg/kg dry		11.4	1	09/20/18 15:48	09/21/18 17:14	CVH
<i>Surr: Pentacosane (Surr)</i>	<i>08</i>	<i>SW8015C</i>	<i>52.3 %</i>		<i>40-160</i>		<i>09/20/18 15:48</i>	<i>09/21/18 17:14</i>	<i>CVH</i>
TPH-Semi-Volatiles (ORO)	08	SW8015C	<11.4 mg/kg dry		11.4	1	09/19/18 14:15	09/20/18 18:18	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	08	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:23	HLM
PCB as Aroclor 1221	08	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:23	HLM
PCB as Aroclor 1232	08	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:23	HLM
PCB as Aroclor 1242	08	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:23	HLM
PCB as Aroclor 1248	08	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:23	HLM
PCB as Aroclor 1254	08	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:23	HLM
PCB as Aroclor 1260	08	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:23	HLM
<i>Surr: DCB</i>	<i>08</i>	<i>SW8082A</i>	<i>70.0 %</i>		<i>30-105</i>		<i>09/19/18 09:02</i>	<i>09/21/18 18:23</i>	<i>HLM</i>
<i>Surr: TCMX</i>	<i>08</i>	<i>SW8082A</i>	<i>65.0 %</i>		<i>30-105</i>		<i>09/19/18 09:02</i>	<i>09/21/18 18:23</i>	<i>HLM</i>
Wet Chemistry Analysis									
Chromium, Hexavalent	08	SW7196A	<0.24 mg/kg dry		0.24	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	08	SM18 2540G	84.0 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 0-5' **Laboratory Sample ID:** 1810505-09

Grab Date/Time: 09/11/2018 11:15

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	09RE1	SW6010C	<0.592 mg/kg dry		0.592	1	09/14/18 13:00	09/18/18 16:06	BG
Aluminum	09	SW6010C	18900 mg/kg dry		59.2	20	09/14/18 13:00	09/18/18 13:54	BG
Arsenic	09RE1	SW6010C	15.2 mg/kg dry		1.18	1	09/14/18 13:00	09/18/18 16:06	BG
Barium	09RE1	SW6010C	145 mg/kg dry		0.592	1	09/14/18 13:00	09/18/18 16:06	BG
Beryllium	09RE1	SW6010C	2.40 mg/kg dry		0.237	1	09/14/18 13:00	09/18/18 16:06	BG
Calcium	09RE2	SW6010C	36900 mg/kg dry		1180	200	09/14/18 13:00	09/19/18 15:32	BG
Cadmium	09RE1	SW6010C	0.257 mg/kg dry		0.237	1	09/14/18 13:00	09/18/18 16:06	BG
Cobalt	09RE1	SW6010C	15.6 mg/kg dry		0.237	1	09/14/18 13:00	09/18/18 16:06	BG
Chromium	09RE1	SW6010C	19.5 mg/kg dry		0.592	1	09/14/18 13:00	09/18/18 16:06	BG
Copper	09RE1	SW6010C	36.2 mg/kg dry		2.96	1	09/14/18 13:00	09/18/18 16:06	BG
Iron	09RE2	SW6010C	22200 mg/kg dry		592	200	09/14/18 13:00	09/19/18 15:32	BG
Mercury	09	SW7471B	0.137 mg/kg dry		0.010	1	09/14/18 13:12	09/17/18 15:32	MWL
Potassium	09RE1	SW6010C	3960 mg/kg dry		29.6	1	09/14/18 13:00	09/18/18 16:06	BG
Magnesium	09	SW6010C	8840 mg/kg dry		59.2	20	09/14/18 13:00	09/18/18 13:54	BG
Manganese	09RE1	SW6010C	244 mg/kg dry		0.592	1	09/14/18 13:00	09/18/18 16:06	BG
Sodium	09RE1	SW6010C	205 mg/kg dry		29.6	1	09/14/18 13:00	09/18/18 16:06	BG
Nickel	09RE1	SW6010C	14.4 mg/kg dry		0.592	1	09/14/18 13:00	09/18/18 16:06	BG
Lead	09RE1	SW6010C	17.2 mg/kg dry		0.592	1	09/14/18 13:00	09/18/18 16:06	BG
Antimony	09RE1	SW6010C	<5.92 mg/kg dry		5.92	1	09/14/18 13:00	09/18/18 16:06	BG
Selenium	09RE1	SW6010C	<2.96 mg/kg dry		2.96	1	09/14/18 13:00	09/18/18 16:06	BG
Thallium	09RE1	SW6010C	<2.96 mg/kg dry		2.96	1	09/14/18 13:00	09/18/18 16:06	BG
Vanadium	09RE1	SW6010C	40.9 mg/kg dry		0.592	1	09/14/18 13:00	09/18/18 16:06	BG
Zinc	09RE1	SW6010C	70.1 mg/kg dry		0.592	1	09/14/18 13:00	09/18/18 16:06	BG

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	09	SW8270D SIM	Not Detected	4	09/18/18 09:10	09/18/18 16:44	SKS
--------------------	----	-------------	--------------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 0-5' **Laboratory Sample ID:** 1810505-09

Grab Date/Time: 09/11/2018 11:15

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
1,2,4-Trichlorobenzene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
1,2-Dichlorobenzene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
1,2-Diphenylhydrazine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
1,3-Dichlorobenzene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
1,4-Dichlorobenzene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
1-Chloronaphthalene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
1-Naphthylamine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2,3,4,6-Tetrachlorophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2,4,5-Trichlorophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2,4,6-Trichlorophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2,4-Dichlorophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2,4-Dimethylphenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2,4-Dinitrophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2,4-Dinitrotoluene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2,6-Dichlorophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2,6-Dinitrotoluene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2-Chloronaphthalene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2-Chlorophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2-Methylnaphthalene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2-Naphthylamine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2-Nitroaniline	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
2-Nitrophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
3,3'-Dichlorobenzidine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
3-Methylcholanthrene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 0-5' **Laboratory Sample ID:** 1810505-09

Grab Date/Time: 09/11/2018 11:15

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
4,6-Dinitro-2-methylphenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
4-Aminobiphenyl	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
4-Bromophenyl phenyl ether	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
4-Chloroaniline	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
4-Chlorophenyl phenyl ether	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
4-Nitroaniline	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
4-Nitrophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
7,12-Dimethylbenz (a) anthracene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Acenaphthene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Acenaphthylene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Acetophenone	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Aniline	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Anthracene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Benzidine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Benzo (a) anthracene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Benzo (a) pyrene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Benzo (b) fluoranthene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Benzo (g,h,i) perylene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Benzo (k) fluoranthene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Benzoic acid	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Benzyl alcohol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
bis (2-Chloroethoxy) methane	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
bis (2-Chloroethyl) ether	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 0-5' **Laboratory Sample ID:** 1810505-09

Grab Date/Time: 09/11/2018 11:15

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
bis (2-Ethylhexyl) phthalate	09	SW8270D	<390 ug/kg dry	C	390	4	09/18/18 09:10	09/18/18 16:44	SKS
Butyl benzyl phthalate	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Chrysene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Dibenz (a,h) anthracene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Dibenz (a,j) acridine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Dibenzofuran	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Diethyl phthalate	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Dimethyl phthalate	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Di-n-butyl phthalate	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Di-n-octyl phthalate	09	SW8270D	<390 ug/kg dry	C	390	4	09/18/18 09:10	09/18/18 16:44	SKS
Diphenylamine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Ethyl methanesulfonate	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Fluoranthene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Fluorene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Hexachlorobenzene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Hexachlorobutadiene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Hexachlorocyclopentadiene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Hexachloroethane	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Indeno (1,2,3-cd) pyrene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Isophorone	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
m+p-Cresols	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Methyl methanesulfonate	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Naphthalene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Nitrobenzene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 0-5'

Laboratory Sample ID: 1810505-09

Grab Date/Time: 09/11/2018 11:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
n-Nitrosodi-n-butylamine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
n-Nitrosodi-n-propylamine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
n-Nitrosodiphenylamine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
n-Nitrosopiperidine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
o+m+p-Cresols	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
o-Cresol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
p-(Dimethylamino) azobenzene	09	SW8270D	<390 ug/kg dry	C	390	4	09/18/18 09:10	09/18/18 16:44	SKS
p-Chloro-m-cresol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Pentachloronitrobenzene (quintozene)	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Pentachlorophenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Phenacetin	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Phenanthrene	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Phenol	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Pronamide	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Pyrene	09	SW8270D	<390 ug/kg dry	C	390	4	09/18/18 09:10	09/18/18 16:44	SKS
Pyridine	09	SW8270D	<390 ug/kg dry		390	4	09/18/18 09:10	09/18/18 16:44	SKS
Surr: 2,4,6-Tribromophenol (Surr)	09	SW8270D	33.2 %	DS	35-125		09/18/18 09:10	09/18/18 16:44	SKS
Surr: 2-Fluorobiphenyl (Surr)	09	SW8270D	62.7 %		45-105		09/18/18 09:10	09/18/18 16:44	SKS
Surr: 2-Fluorophenol (Surr)	09	SW8270D	49.5 %		35-105		09/18/18 09:10	09/18/18 16:44	SKS
Surr: Nitrobenzene-d5 (Surr)	09	SW8270D	69.4 %		35-100		09/18/18 09:10	09/18/18 16:44	SKS
Surr: Phenol-d5 (Surr)	09	SW8270D	60.6 %		40-100		09/18/18 09:10	09/18/18 16:44	SKS
Surr: p-Terphenyl-d14 (Surr)	09	SW8270D	71.3 %		30-125		09/18/18 09:10	09/18/18 16:44	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 0-5'	Laboratory Sample ID: 1810505-09
Grab Date/Time: 09/11/2018 11:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	09	SW8015C	33.5 mg/kg dry		12.2	1	09/20/18 15:48	09/21/18 17:40	CVH
<i>Surr: Pentacosane (Surr)</i>	09	SW8015C	59.8 %		40-160		09/20/18 15:48	09/21/18 17:40	CVH
TPH-Semi-Volatiles (ORO)	09	SW8015C	34.7 mg/kg dry		12.4	1	09/19/18 14:15	09/20/18 18:43	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	09	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:44	HLM
PCB as Aroclor 1221	09	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:44	HLM
PCB as Aroclor 1232	09	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:44	HLM
PCB as Aroclor 1242	09	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:44	HLM
PCB as Aroclor 1248	09	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:44	HLM
PCB as Aroclor 1254	09	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:44	HLM
PCB as Aroclor 1260	09	SW8082A	<0.116 mg/kg dry		0.116	1	09/19/18 09:02	09/21/18 18:44	HLM
<i>Surr: DCB</i>	09	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 18:44	HLM
<i>Surr: TCMX</i>	09	SW8082A	80.0 %		30-105		09/19/18 09:02	09/21/18 18:44	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	09	SW7196A	<0.25 mg/kg dry		0.25	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	09	SM18 2540G	79.9 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 5-11' **Laboratory Sample ID:** 1810505-10

Grab Date/Time: 09/11/2018 11:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	10RE1	SW6010C	<0.536 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 16:19	BG
Aluminum	10RE2	SW6010C	19000 mg/kg dry		536	200	09/14/18 13:00	09/19/18 15:34	BG
Arsenic	10RE1	SW6010C	<1.07 mg/kg dry		1.07	1	09/14/18 13:00	09/18/18 16:19	BG
Barium	10RE1	SW6010C	126 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 16:19	BG
Beryllium	10RE1	SW6010C	1.51 mg/kg dry		0.215	1	09/14/18 13:00	09/18/18 16:19	BG
Calcium	10	SW6010C	1680 mg/kg dry		107	20	09/14/18 13:00	09/18/18 13:57	BG
Cadmium	10RE1	SW6010C	<0.215 mg/kg dry		0.215	1	09/14/18 13:00	09/18/18 16:19	BG
Cobalt	10RE1	SW6010C	13.1 mg/kg dry		0.215	1	09/14/18 13:00	09/18/18 16:19	BG
Chromium	10RE1	SW6010C	22.0 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 16:19	BG
Copper	10RE1	SW6010C	7.16 mg/kg dry		2.68	1	09/14/18 13:00	09/18/18 16:19	BG
Iron	10RE2	SW6010C	24000 mg/kg dry		536	200	09/14/18 13:00	09/19/18 15:34	BG
Mercury	10	SW7471B	0.013 mg/kg dry		0.009	1	09/14/18 13:12	09/17/18 15:34	MWL
Potassium	10RE1	SW6010C	6850 mg/kg dry		26.8	1	09/14/18 13:00	09/18/18 16:19	BG
Magnesium	10	SW6010C	6900 mg/kg dry		53.6	20	09/14/18 13:00	09/18/18 13:57	BG
Manganese	10RE1	SW6010C	394 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 16:19	BG
Sodium	10RE1	SW6010C	84.6 mg/kg dry		26.8	1	09/14/18 13:00	09/18/18 16:19	BG
Nickel	10RE1	SW6010C	10.3 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 16:19	BG
Lead	10RE1	SW6010C	3.69 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 16:19	BG
Antimony	10RE1	SW6010C	<5.36 mg/kg dry		5.36	1	09/14/18 13:00	09/18/18 16:19	BG
Selenium	10RE1	SW6010C	<2.68 mg/kg dry		2.68	1	09/14/18 13:00	09/18/18 16:19	BG
Thallium	10RE1	SW6010C	<2.68 mg/kg dry		2.68	1	09/14/18 13:00	09/18/18 16:19	BG
Vanadium	10RE1	SW6010C	31.2 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 16:19	BG
Zinc	10RE1	SW6010C	74.7 mg/kg dry		0.536	1	09/14/18 13:00	09/18/18 16:19	BG
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	10	SW8270D SIM	Not Detected			1	09/18/18 09:10	09/18/18 17:16	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 5-11' **Laboratory Sample ID:** 1810505-10

Grab Date/Time: 09/11/2018 11:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
1,2,4-Trichlorobenzene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
1,2-Dichlorobenzene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
1,2-Diphenylhydrazine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
1,3-Dichlorobenzene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
1,4-Dichlorobenzene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
1-Chloronaphthalene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
1-Naphthylamine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2,3,4,6-Tetrachlorophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2,4,5-Trichlorophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2,4,6-Trichlorophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2,4-Dichlorophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2,4-Dimethylphenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2,4-Dinitrophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2,4-Dinitrotoluene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2,6-Dichlorophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2,6-Dinitrotoluene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2-Chloronaphthalene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2-Chlorophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2-Methylnaphthalene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2-Naphthylamine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2-Nitroaniline	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
2-Nitrophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
3,3'-Dichlorobenzidine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
3-Methylcholanthrene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 5-11'

Laboratory Sample ID: 1810505-10

Grab Date/Time: 09/11/2018 11:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
3-Nitroaniline	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
4,6-Dinitro-2-methylphenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
4-Aminobiphenyl	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
4-Bromophenyl phenyl ether	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
4-Chloroaniline	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
4-Chlorophenyl phenyl ether	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
4-Nitroaniline	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
4-Nitrophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
7,12-Dimethylbenz (a) anthracene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Acenaphthene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Acenaphthylene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Acetophenone	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Aniline	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Anthracene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Benzidine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Benzo (a) anthracene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Benzo (a) pyrene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Benzo (b) fluoranthene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Benzo (g,h,i) perylene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Benzo (k) fluoranthene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Benzoic acid	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Benzyl alcohol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
bis (2-Chloroethoxy) methane	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
bis (2-Chloroethyl) ether	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 5-11' **Laboratory Sample ID:** 1810505-10

Grab Date/Time: 09/11/2018 11:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,2'-Oxybis (1-chloropropane)	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
bis (2-Ethylhexyl) phthalate	10	SW8270D	94.0 ug/kg dry	C	90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Butyl benzyl phthalate	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Chrysene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Dibenz (a,h) anthracene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Dibenz (a,j) acridine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Dibenzofuran	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Diethyl phthalate	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Dimethyl phthalate	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Di-n-butyl phthalate	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Di-n-octyl phthalate	10	SW8270D	<90.7 ug/kg dry	C	90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Diphenylamine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Ethyl methanesulfonate	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Fluoranthene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Fluorene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Hexachlorobenzene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Hexachlorobutadiene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Hexachlorocyclopentadiene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Hexachloroethane	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Indeno (1,2,3-cd) pyrene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Isophorone	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
m+p-Cresols	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Methyl methanesulfonate	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Naphthalene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Nitrobenzene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 5-11'	Laboratory Sample ID: 1810505-10
Grab Date/Time: 09/11/2018 11:20	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodimethylamine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
n-Nitrosodi-n-butylamine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
n-Nitrosodi-n-propylamine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
n-Nitrosodiphenylamine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
n-Nitrosopiperidine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
o+m+p-Cresols	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
o-Cresol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
p-(Dimethylamino) azobenzene	10	SW8270D	<90.7 ug/kg dry	C	90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
p-Chloro-m-cresol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Pentachloronitrobenzene (quintozene)	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Pentachlorophenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Phenacetin	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Phenanthrene	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Phenol	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Pronamide	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Pyrene	10	SW8270D	<90.7 ug/kg dry	C	90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Pyridine	10	SW8270D	<90.7 ug/kg dry		90.7	1	09/18/18 09:10	09/18/18 17:16	SKS
Surr: 2,4,6-Tribromophenol (Surr)	10	SW8270D	64.7 %		35-125		09/18/18 09:10	09/18/18 17:16	SKS
Surr: 2-Fluorobiphenyl (Surr)	10	SW8270D	62.2 %		45-105		09/18/18 09:10	09/18/18 17:16	SKS
Surr: 2-Fluorophenol (Surr)	10	SW8270D	51.9 %		35-105		09/18/18 09:10	09/18/18 17:16	SKS
Surr: Nitrobenzene-d5 (Surr)	10	SW8270D	55.5 %		35-100		09/18/18 09:10	09/18/18 17:16	SKS
Surr: Phenol-d5 (Surr)	10	SW8270D	50.6 %		40-100		09/18/18 09:10	09/18/18 17:16	SKS
Surr: p-Terphenyl-d14 (Surr)	10	SW8270D	55.7 %		30-125		09/18/18 09:10	09/18/18 17:16	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810505

Analytical Results

Sample I.D. Task 2.1 77-6 5-11' **Laboratory Sample ID:** 1810505-10

Grab Date/Time: 09/11/2018 11:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	10	SW8015C	<10.8 mg/kg dry		10.8	1	09/20/18 15:48	09/21/18 18:06	CVH
<i>Surr: Pentacosane (Surr)</i>	10	SW8015C	54.2 %		40-160		09/20/18 15:48	09/21/18 18:06	CVH
TPH-Semi-Volatiles (ORO)	10	SW8015C	<10.9 mg/kg dry		10.9	1	09/19/18 14:15	09/20/18 15:25	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	10	SW8082A	<0.115 mg/kg dry		0.115	1	09/19/18 09:02	09/21/18 19:05	HLM
PCB as Aroclor 1221	10	SW8082A	<0.115 mg/kg dry		0.115	1	09/19/18 09:02	09/21/18 19:05	HLM
PCB as Aroclor 1232	10	SW8082A	<0.115 mg/kg dry		0.115	1	09/19/18 09:02	09/21/18 19:05	HLM
PCB as Aroclor 1242	10	SW8082A	<0.115 mg/kg dry		0.115	1	09/19/18 09:02	09/21/18 19:05	HLM
PCB as Aroclor 1248	10	SW8082A	<0.115 mg/kg dry		0.115	1	09/19/18 09:02	09/21/18 19:05	HLM
PCB as Aroclor 1254	10	SW8082A	<0.115 mg/kg dry		0.115	1	09/19/18 09:02	09/21/18 19:05	HLM
PCB as Aroclor 1260	10	SW8082A	<0.115 mg/kg dry		0.115	1	09/19/18 09:02	09/21/18 19:05	HLM
<i>Surr: DCB</i>	10	SW8082A	80.0 %		30-105		09/19/18 09:02	09/21/18 19:05	HLM
<i>Surr: TCMX</i>	10	SW8082A	85.0 %		30-105		09/19/18 09:02	09/21/18 19:05	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	10	SW7196A	<0.23 mg/kg dry		0.23	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	10	SM18 2540G	86.4 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
 Client Site I.D.: CVTC

Project Number: 18-760
 Purchase Order: 18-760

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I0505-01	1.00 g / 1.00 mL	SM18 2540G	BBI0419	SBI0367	
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I0505-02	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
18I0505-03	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
18I0505-04	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
18I0505-05	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
18I0505-06	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
18I0505-07	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
18I0505-08	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
18I0505-09	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
18I0505-10	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I0505-01	2.50 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0505-02	2.52 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0505-03	2.54 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0505-04	2.51 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
18I0505-05	2.50 g / 100 mL	SW7196A	BBI0580	SBI0535	AI80085
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I0505-06	2.53 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0505-07	2.56 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0505-08	2.50 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0505-09	2.54 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0505-10	2.51 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method:		SW3050B	
18I0505-01	1.04 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-01RE1	1.04 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0505-01RE2	1.04 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0505-02	1.01 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-02RE1	1.01 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0505-02RE2	1.01 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0505-03	1.02 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-03RE1	1.02 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0505-03RE2	1.02 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0505-04	1.10 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-04RE1	1.10 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0505-04RE2	1.10 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0505-05	1.00 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-05RE1	1.00 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0505-05RE2	1.00 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0505-06	1.06 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-06RE1	1.06 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0505-06RE2	1.06 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0505-07	1.06 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-07RE1	1.06 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0505-07RE2	1.06 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0505-08	1.04 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-08RE1	1.04 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0505-08RE2	1.04 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0505-09	1.06 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-09RE1	1.06 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0505-09RE2	1.06 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083
18I0505-10	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0487	AI80075
18I0505-10RE1	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0496	AI80075
18I0505-10RE2	1.08 g / 50.0 mL	SW6010C	BBI0436	SBI0524	AI80083

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method: SW3550B			
18I0505-01	32.4 g / 5.00 mL	SW8082A	BBI0546	SBI0614	AH80049
18I0505-02	31.8 g / 5.00 mL	SW8082A	BBI0546	SBI0614	AH80049
18I0505-03	30.5 g / 5.00 mL	SW8082A	BBI0546	SBI0614	AH80049
18I0505-04	32.4 g / 5.00 mL	SW8082A	BBI0546	SBI0614	AH80049



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 9/27/2018 17:25

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
1810505-05	31.6 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810505-06	31.5 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810505-07	32.6 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810505-08	30.8 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810505-09	32.3 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049
1810505-10	30.1 g / 5.00 mL	SW8082A	BB10546	SBI0614	AH80049

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS		Preparation Method: SW3550C			
1810505-01	31.7 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-02	30.9 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-03	30.4 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-04	31.4 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-05	31.1 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-06	32.5 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-07	32.6 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-08	31.3 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-09	32.1 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-10	31.9 g / 1.00 mL	SW8270D	BB10510	SBI0479	AF80080
1810505-01	31.7 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080
1810505-02	30.9 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080
1810505-03	30.4 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080
1810505-04	31.4 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080
1810505-05	31.1 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080
1810505-06	32.5 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080
1810505-07	32.6 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080
1810505-08	31.3 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080
1810505-09	32.1 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080
1810505-10	31.9 g / 1.00 mL	SW8270D SIM	BB10510	SBI0479	AF80080

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Hydrocarbons by GC		Preparation Method: SW3550C			
1810505-01	50.3 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810505-02	50.4 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810505-03	50.2 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810505-04	50.6 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810505-05	51.5 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
1810505-06	51.0 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810505-07	51.5 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810505-08	52.3 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810505-09	50.6 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136
1810505-10	53.0 g / 1.00 mL	SW8015C	BB10573	SBI0575	AH80136

Semivolatile Hydrocarbons by GC		Preparation Method:	SW3550C		
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
1810505-06	53.9 g / 1.00 mL	SW8015C	BB10633	SBI0618	AH80058
1810505-07	54.1 g / 1.00 mL	SW8015C	BB10633	SBI0618	AH80058
1810505-08	52.4 g / 1.00 mL	SW8015C	BB10633	SBI0618	AH80058
1810505-09	51.1 g / 1.00 mL	SW8015C	BB10633	SBI0618	AH80058
1810505-10	53.6 g / 1.00 mL	SW8015C	BB10633	SBI0618	AH80058

Semivolatile Hydrocarbons by GC		Preparation Method:	SW3550C		
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
1810505-01	51.6 g / 1.00 mL	SW8015C	BB10708	SBI0692	AH80058
1810505-02	53.9 g / 1.00 mL	SW8015C	BB10708	SBI0692	AH80058
1810505-03	53.8 g / 1.00 mL	SW8015C	BB10708	SBI0692	AH80058
1810505-04	53.5 g / 1.00 mL	SW8015C	BB10708	SBI0692	AH80058
1810505-05	53.6 g / 1.00 mL	SW8015C	BB10708	SBI0692	AH80058

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method:	SW7471B		
1810505-01	0.508 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052
1810505-02	0.515 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052
1810505-03	0.542 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052
1810505-04	0.536 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052
1810505-05	0.548 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052
1810505-06	0.518 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052
1810505-07	0.540 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052
1810505-08	0.549 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052
1810505-09	0.514 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052
1810505-10	0.532 g / 20.0 mL	SW7471B	BB10440	SBI0421	AI80052



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0436 - SW3050B

Blank (BBI0436-BLK1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Magnesium	<2.50 mg/kg wet	2.50	mg/kg wet						
Silver	<0.500 mg/kg wet	0.500	mg/kg wet						
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet						
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet						
Aluminum	2.94 mg/kg wet	2.50	mg/kg wet						B
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet						
Copper	<2.50 mg/kg wet	2.50	mg/kg wet						
Barium	<0.500 mg/kg wet	0.500	mg/kg wet						
Iron	<2.50 mg/kg wet	2.50	mg/kg wet						
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet						
Calcium	<5.00 mg/kg wet	5.00	mg/kg wet						
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet						
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet						
Manganese	<0.500 mg/kg wet	0.500	mg/kg wet						
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet						
Sodium	<25.0 mg/kg wet	25.0	mg/kg wet						
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet						
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet						
Lead	<0.500 mg/kg wet	0.500	mg/kg wet						
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet						
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet						
Potassium	<25.0 mg/kg wet	25.0	mg/kg wet						

LCS (BBI0436-BS1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Selenium	96.2 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	102	80-120
Thallium	90.8 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	96.1	80-120
Barium	107 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	113	80-120
Vanadium	103 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	109	80-120
Beryllium	99.8 mg/kg wet	0.200	mg/kg wet	94.5	mg/kg wet	106	80-120
Calcium	103 mg/kg wet	5.00	mg/kg wet	94.5	mg/kg wet	109	80-120
Cadmium	100 mg/kg wet	0.200	mg/kg wet	94.5	mg/kg wet	106	80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0436 - SW3050B

LCS (BBI0436-BS1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Zinc	101 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	107	80-120			
Chromium	103 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	109	80-120			
Copper	109 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	115	80-120			
Iron	103 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	109	80-120			
Potassium	259 mg/kg wet	25.0	mg/kg wet	236	mg/kg wet	109	80-120			
Magnesium	103 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	109	80-120			
Manganese	104 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	111	80-120			
Sodium	274 mg/kg wet	25.0	mg/kg wet	236	mg/kg wet	116	80-120			
Nickel	102 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	108	80-120			
Lead	102 mg/kg wet	0.500	mg/kg wet	94.5	mg/kg wet	108	80-120			
Antimony	99.7 mg/kg wet	5.00	mg/kg wet	94.5	mg/kg wet	105	80-120			
Cobalt	106 mg/kg wet	0.200	mg/kg wet	94.5	mg/kg wet	112	80-120			
Arsenic	101 mg/kg wet	1.00	mg/kg wet	94.5	mg/kg wet	107	80-120			
Aluminum	110 mg/kg wet	2.50	mg/kg wet	94.5	mg/kg wet	117	80-120			
Silver	5.16 mg/kg wet	0.500	mg/kg wet	4.73	mg/kg wet	109	80-120			

LCS Dup (BBI0436-BSD1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Lead	108 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	109	80-120	5.35	20	
Nickel	107 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	108	80-120	4.92	20	
Iron	108 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	109	80-120	5.01	20	
Potassium	269 mg/kg wet	25.0	mg/kg wet	248	mg/kg wet	108	80-120	3.76	20	
Sodium	284 mg/kg wet	25.0	mg/kg wet	248	mg/kg wet	115	80-120	3.43	20	
Cadmium	106 mg/kg wet	0.200	mg/kg wet	99.1	mg/kg wet	107	80-120	5.28	20	
Aluminum	115 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	116	80-120	4.39	20	
Magnesium	109 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	110	80-120	5.11	20	
Copper	114 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	115	80-120	5.25	20	
Cobalt	112 mg/kg wet	0.200	mg/kg wet	99.1	mg/kg wet	113	80-120	5.48	20	
Calcium	108 mg/kg wet	5.00	mg/kg wet	99.1	mg/kg wet	109	80-120	4.60	20	
Chromium	109 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	110	80-120	5.51	20	
Silver	5.38 mg/kg wet	0.500	mg/kg wet	4.96	mg/kg wet	109	80-120	4.26	20	
Beryllium	105 mg/kg wet	0.200	mg/kg wet	99.1	mg/kg wet	106	80-120	4.79	20	
Antimony	104 mg/kg wet	5.00	mg/kg wet	99.1	mg/kg wet	105	80-120	4.64	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0436 - SW3050B

LCS Dup (BBI0436-BSD1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Barium	111 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	112	80-120	3.86	20	
Selenium	101 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	102	80-120	5.16	20	
Arsenic	107 mg/kg wet	1.00	mg/kg wet	99.1	mg/kg wet	108	80-120	5.38	20	
Thallium	96.2 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	97.1	80-120	5.72	20	
Vanadium	107 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	108	80-120	4.19	20	
Zinc	105 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	106	80-120	3.96	20	
Manganese	110 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	111	80-120	5.03	20	

Matrix Spike (BBI0436-MS1)

Source: 18I0505-10

Prepared: 09/14/2018 Analyzed: 09/18/2018

Manganese	649 mg/kg dry	11.1	mg/kg dry	111	473 mg/kg dry	158	75-125			M2
Potassium	9520 mg/kg dry	556	mg/kg dry	278	7600 mg/kg dry	692	75-125			M2
Magnesium	7790 mg/kg dry	55.6	mg/kg dry	111	6900 mg/kg dry	804	75-125			M2
Sodium	<556 mg/kg dry	556	mg/kg dry	278	<556 mg/kg dry		75-125			M2
Nickel	132 mg/kg dry	11.1	mg/kg dry	111	11.6 mg/kg dry	108	75-125			
Antimony	<111 mg/kg dry	111	mg/kg dry	111	<111 mg/kg dry		75-125			M2
Selenium	96.3 mg/kg dry	55.6	mg/kg dry	111	<55.6 mg/kg dry	86.6	75-125			
Iron	27400 mg/kg dry	55.6	mg/kg dry	111	25300 mg/kg dry	1830	75-125			M2, E
Vanadium	163 mg/kg dry	11.1	mg/kg dry	111	34.6 mg/kg dry	115	75-125			
Zinc	217 mg/kg dry	11.1	mg/kg dry	111	88.8 mg/kg dry	115	75-125			
Thallium	105 mg/kg dry	55.6	mg/kg dry	111	<55.6 mg/kg dry	94.8	75-125			
Calcium	2100 mg/kg dry	111	mg/kg dry	111	1680 mg/kg dry	380	75-125			M2
Lead	121 mg/kg dry	11.1	mg/kg dry	111	<11.1 mg/kg dry	109	75-125			
Chromium	147 mg/kg dry	11.1	mg/kg dry	111	24.2 mg/kg dry	111	75-125			
Cobalt	137 mg/kg dry	4.45	mg/kg dry	111	15.4 mg/kg dry	109	75-125			
Barium	276 mg/kg dry	11.1	mg/kg dry	111	148 mg/kg dry	115	75-125			
Copper	136 mg/kg dry	55.6	mg/kg dry	111	<55.6 mg/kg dry	122	75-125			
Cadmium	118 mg/kg dry	4.45	mg/kg dry	111	<4.45 mg/kg dry	106	75-125			
Silver	<11.1 mg/kg dry	11.1	mg/kg dry	5.56	<11.1 mg/kg dry		75-125			M2
Beryllium	123 mg/kg dry	4.45	mg/kg dry	111	<4.45 mg/kg dry	111	75-125			
Arsenic	113 mg/kg dry	22.2	mg/kg dry	111	<22.2 mg/kg dry	102	75-125			
Aluminum	26000 mg/kg dry	55.6	mg/kg dry	111	21200 mg/kg dry	4330	75-125			M2, E



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0436 - SW3050B

Matrix Spike (BBI0436-MS2)

Source: 1810510-01RE1 Prepared: 09/14/2018 Analyzed: 09/18/2018

Antimony	19.0 mg/kg wet	5.00	mg/kg wet	96.1	<5.00 mg/kg wet	19.8	75-125			M
Cadmium	86.0 mg/kg wet	0.200	mg/kg wet	96.1	<0.200 mg/kg wet	89.5	75-125			
Silver	<0.500 mg/kg wet	0.500	mg/kg wet	4.80	<0.500 mg/kg wet		75-125			M
Calcium	1430 mg/kg wet	5.00	mg/kg wet	96.1	184 mg/kg wet	1300	75-125			M, E
Iron	13400 mg/kg wet	2.50	mg/kg wet	96.1	47.9 mg/kg wet	13900	75-125			M, E
Barium	199 mg/kg wet	0.500	mg/kg wet	96.1	0.982 mg/kg wet	206	75-125			M
Aluminum	17600 mg/kg wet	2.50	mg/kg wet	96.1	691 mg/kg wet	17600	75-125			M, E
Lead	88.1 mg/kg wet	0.500	mg/kg wet	96.1	<0.500 mg/kg wet	1.7	75-125			
Beryllium	92.8 mg/kg wet	0.200	mg/kg wet	96.1	<0.200 mg/kg wet	0.6	75-125			
Magnesium	4850 mg/kg wet	2.50	mg/kg wet	96.1	46.9 mg/kg wet	5000	75-125			M, E
Manganese	456 mg/kg wet	0.500	mg/kg wet	96.1	13.1 mg/kg wet	461	75-125			M
Potassium	7120 mg/kg wet	25.0	mg/kg wet	240	71.0 mg/kg wet	2940	75-125			M
Cobalt	99.9 mg/kg wet	0.200	mg/kg wet	96.1	<0.200 mg/kg wet	1.04	75-125			
Nickel	94.4 mg/kg wet	0.500	mg/kg wet	96.1	<0.500 mg/kg wet	0.83	75-125			
Chromium	110 mg/kg wet	0.500	mg/kg wet	96.1	<0.500 mg/kg wet	1.15	75-125			
Vanadium	118 mg/kg wet	0.500	mg/kg wet	96.1	<0.500 mg/kg wet	1.23	75-125			
Zinc	153 mg/kg wet	0.500	mg/kg wet	96.1	6.80 mg/kg wet	153	75-125			M
Copper	102 mg/kg wet	2.50	mg/kg wet	96.1	3.33 mg/kg wet	103	75-125			
Thallium	71.9 mg/kg wet	2.50	mg/kg wet	96.1	<2.50 mg/kg wet	74.9	75-125			M
Selenium	72.9 mg/kg wet	2.50	mg/kg wet	96.1	<2.50 mg/kg wet	75.9	75-125			
Arsenic	88.5 mg/kg wet	1.00	mg/kg wet	96.1	<1.00 mg/kg wet	92.1	75-125			
Sodium	311 mg/kg wet	25.0	mg/kg wet	240	75.2 mg/kg wet	98.2	75-125			

Matrix Spike (BBI0436-MS3)

Source: 1810505-10RE2 Prepared: 09/14/2018 Analyzed: 09/19/2018

Iron	26000 mg/kg dry	556	mg/kg dry	111	24000 mg/kg dry	1770	75-125			M2
Aluminum	23100 mg/kg dry	556	mg/kg dry	111	19000 mg/kg dry	3760	75-125			M2
Arsenic	<222 mg/kg dry	222	mg/kg dry	111	<222 mg/kg dry		75-125			M2
Calcium	1940 mg/kg dry	1110	mg/kg dry	111	1680 mg/kg dry	237	75-125			M2



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0436 - SW3050B

Matrix Spike Dup (BBI0436-MSD1)

Source: 18I0505-10

Prepared: 09/14/2018 Analyzed: 09/18/2018

Silver	<11.2 mg/kg dry	11.2	mg/kg dry	5.61	<11.2 mg/kg dry	75-125		20		M2
Zinc	217 mg/kg dry	11.2	mg/kg dry	112	88.8 mg/kg dry	114	75-125	0.0330	20	
Nickel	135 mg/kg dry	11.2	mg/kg dry	112	11.6 mg/kg dry	110	75-125		20	
Vanadium	164 mg/kg dry	11.2	mg/kg dry	112	34.6 mg/kg dry	115	75-125	0.652	20	
Copper	139 mg/kg dry	56.1	mg/kg dry	112	<56.1 mg/kg dry	124	75-125	2.71	20	
Thallium	106 mg/kg dry	56.1	mg/kg dry	112	<56.1 mg/kg dry	94.8	75-125	0.835	20	
Selenium	109 mg/kg dry	56.1	mg/kg dry	112	<56.1 mg/kg dry	96.8	75-125	11.9	20	
Chromium	150 mg/kg dry	11.2	mg/kg dry	112	24.2 mg/kg dry	112	75-125	1.77	20	
Cobalt	139 mg/kg dry	4.49	mg/kg dry	112	15.4 mg/kg dry	110	75-125	2.01	20	
Antimony	<112 mg/kg dry	112	mg/kg dry	112	<112 mg/kg dry		75-125		20	M2
Arsenic	120 mg/kg dry	22.4	mg/kg dry	112	<22.4 mg/kg dry	107	75-125	6.14	20	
Cadmium	122 mg/kg dry	4.49	mg/kg dry	112	<4.49 mg/kg dry	108	75-125	2.98	20	
Magnesium	7060 mg/kg dry	56.1	mg/kg dry	112	6900 mg/kg dry	146	75-125	9.84	20	M2
Calcium	2130 mg/kg dry	112	mg/kg dry	112	1680 mg/kg dry	402	75-125	1.37	20	M2
Beryllium	126 mg/kg dry	4.49	mg/kg dry	112	<4.49 mg/kg dry	112	75-125	2.06	20	
Barium	287 mg/kg dry	11.2	mg/kg dry	112	148 mg/kg dry	124	75-125	4.02	20	
Aluminum	27500 mg/kg dry	56.1	mg/kg dry	112	21200 mg/kg dry	5670	75-125	5.75	20	M2, E
Iron	26400 mg/kg dry	56.1	mg/kg dry	112	25300 mg/kg dry	948	75-125	3.63	20	M2, E
Potassium	8410 mg/kg dry	561	mg/kg dry	280	7600 mg/kg dry	289	75-125	12.4	20	M2
Sodium	<561 mg/kg dry	561	mg/kg dry	280	<561 mg/kg dry		75-125		20	M2
Manganese	611 mg/kg dry	11.2	mg/kg dry	112	473 mg/kg dry	123	75-125	6.12	20	
Lead	133 mg/kg dry	11.2	mg/kg dry	112	<11.2 mg/kg dry	118	75-125	8.98	20	

Matrix Spike Dup (BBI0436-MSD2)

Source: 18I0510-01RE1

Prepared: 09/14/2018 Analyzed: 09/18/2018

Beryllium	89.9 mg/kg wet	0.200	mg/kg wet	96.9	<0.200 mg/kg wet	92.8	75-125	3.11	20	
Aluminum	17800 mg/kg wet	2.50	mg/kg wet	96.9	691 mg/kg wet	17700	75-125	1.13	20	M, E
Arsenic	85.9 mg/kg wet	1.00	mg/kg wet	96.9	<1.00 mg/kg wet	88.6	75-125	2.95	20	
Barium	201 mg/kg wet	0.500	mg/kg wet	96.9	0.982 mg/kg wet	206	75-125	1.00	20	M
Silver	<0.500 mg/kg wet	0.500	mg/kg wet	4.84	<0.500 mg/kg wet		75-125		20	M
Calcium	1400 mg/kg wet	5.00	mg/kg wet	96.9	184 mg/kg wet	1250	75-125	2.21	20	M, E
Cadmium	83.8 mg/kg wet	0.200	mg/kg wet	96.9	<0.200 mg/kg wet	86.5	75-125	2.57	20	
Cobalt	96.9 mg/kg wet	0.200	mg/kg wet	96.9	<0.200 mg/kg wet	100	75-125	3.12	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0436 - SW3050B

Matrix Spike Dup (BBI0436-MSD2)

Source: 18I0510-01RE1 Prepared: 09/14/2018 Analyzed: 09/18/2018

Chromium	106 mg/kg wet	0.500	mg/kg wet	96.9	<0.500 mg/kg wet	110	75-125	3.91	20	
Nickel	91.8 mg/kg wet	0.500	mg/kg wet	96.9	<0.500 mg/kg wet	104.8	75-125	2.77	20	
Copper	99.4 mg/kg wet	2.50	mg/kg wet	96.9	3.33 mg/kg wet	99.2	75-125	2.63	20	
Iron	12600 mg/kg wet	2.50	mg/kg wet	96.9	47.9 mg/kg wet	13000	75-125	5.80	20	M, E
Potassium	5990 mg/kg wet	25.0	mg/kg wet	242	71.0 mg/kg wet	2440	75-125	17.2	20	M
Magnesium	4250 mg/kg wet	2.50	mg/kg wet	96.9	46.9 mg/kg wet	4330	75-125	13.2	20	M, E
Manganese	408 mg/kg wet	0.500	mg/kg wet	96.9	13.1 mg/kg wet	407	75-125	11.2	20	M
Sodium	297 mg/kg wet	25.0	mg/kg wet	242	75.2 mg/kg wet	91.5	75-125	4.67	20	
Lead	86.3 mg/kg wet	0.500	mg/kg wet	96.9	<0.500 mg/kg wet	89.0	75-125	2.15	20	
Antimony	18.1 mg/kg wet	5.00	mg/kg wet	96.9	<5.00 mg/kg wet	18.7	75-125	4.58	20	M
Selenium	71.6 mg/kg wet	2.50	mg/kg wet	96.9	<2.50 mg/kg wet	73.9	75-125	1.84	20	M
Thallium	71.2 mg/kg wet	2.50	mg/kg wet	96.9	<2.50 mg/kg wet	73.5	75-125	1.01	20	M
Vanadium	117 mg/kg wet	0.500	mg/kg wet	96.9	<0.500 mg/kg wet	121	75-125	1.31	20	
Zinc	148 mg/kg wet	0.500	mg/kg wet	96.9	6.80 mg/kg wet	146	75-125	3.27	20	M

Matrix Spike Dup (BBI0436-MSD3)

Source: 18I0505-10RE2 Prepared: 09/14/2018 Analyzed: 09/19/2018

Calcium	1790 mg/kg dry	1120	mg/kg dry	112	1680 mg/kg dry	97.1	75-125	8.29	20	
Iron	24300 mg/kg dry	561	mg/kg dry	112	24000 mg/kg dry	291	75-125	6.53	20	M2
Arsenic	<224 mg/kg dry	224	mg/kg dry	112	<224 mg/kg dry		75-125		20	M2
Aluminum	21700 mg/kg dry	561	mg/kg dry	112	19000 mg/kg dry	2440	75-125	6.41	20	M2

Batch BBI0440 - SW7471B

Blank (BBI0440-BLK1)

Prepared: 09/14/2018 Analyzed: 09/17/2018

Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							
---------	------------------	-------	-----------	--	--	--	--	--	--	--

LCS (BBI0440-BS1)

Prepared: 09/14/2018 Analyzed: 09/17/2018

Mercury	0.102 mg/kg wet	0.008	mg/kg wet	0.0992	mg/kg wet	103	80-120			
---------	-----------------	-------	-----------	--------	-----------	-----	--------	--	--	--



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/27/2018 17:25
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0440 - SW7471B

LCS Dup (BBI0440-BSD1)				Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.100 mg/kg wet	0.008	mg/kg wet	0.100	mg/kg wet	99.5	80-120	2.95	20	
Matrix Spike (BBI0440-MS1)				Source: 18I0505-10 Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.108 mg/kg dry	0.009	mg/kg dry	0.111	0.013 mg/kg dry	86.3	80-120			
Matrix Spike Dup (BBI0440-MSD1)				Source: 18I0505-10 Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.123 mg/kg dry	0.009	mg/kg dry	0.113	0.013 mg/kg dry	97.7	80-120	12.7	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

2,3,7,8-TCDD (SIM)	Not Detected - wet		- wet						
1,2,4,5-Tetrachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,2,4-Trichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,2-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,2-Diphenylhydrazine	<83.3 ug/kg wet	83.3	ug/kg wet						
1,3-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,4-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
1-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
2,3,4,6-Tetrachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4,5-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4,6-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dimethylphenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dinitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet						
2,6-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,6-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Chlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Methylnaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
3,3'-Dichlorobenzidine	<83.3 ug/kg wet	83.3	ug/kg wet						
3-Methylcholanthrene	<83.3 ug/kg wet	83.3	ug/kg wet						
3-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4,6-Dinitro-2-methylphenol	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Aminobiphenyl	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Bromophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Chloroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

4-Chlorophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
7,12-Dimethylbenz (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acetophenone	<83.3 ug/kg wet	83.3	ug/kg wet						
Aniline	<83.3 ug/kg wet	83.3	ug/kg wet						
Anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzidine	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (b) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (g,h,i) perylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (k) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzoic acid	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzyl alcohol	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethoxy) methane	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethyl) ether	<83.3 ug/kg wet	83.3	ug/kg wet						
2,2'-Oxybis (1-chloropropane)	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Ethylhexyl) phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Butyl benzyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Chrysene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,h) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,j) acridine	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenzofuran	<83.3 ug/kg wet	83.3	ug/kg wet						
Diethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Dimethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-butyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-octyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Diphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/27/2018 17:25
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

Ethyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet							
Fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet							
Fluorene	<83.3 ug/kg wet	83.3	ug/kg wet							
Hexachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
Hexachlorobutadiene	<83.3 ug/kg wet	83.3	ug/kg wet							
Hexachlorocyclopentadiene	<83.3 ug/kg wet	83.3	ug/kg wet							
Hexachloroethane	<83.3 ug/kg wet	83.3	ug/kg wet							
Indeno (1,2,3-cd) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet							
Isophorone	<83.3 ug/kg wet	83.3	ug/kg wet							
m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet							
Methyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet							
Naphthalene	<83.3 ug/kg wet	83.3	ug/kg wet							
Nitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
n-Nitrosodimethylamine	<83.3 ug/kg wet	83.3	ug/kg wet							
n-Nitrosodi-n-butylamine	<83.3 ug/kg wet	83.3	ug/kg wet							
n-Nitrosodi-n-propylamine	<83.3 ug/kg wet	83.3	ug/kg wet							
n-Nitrosodiphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet							
n-Nitrosopiperidine	<83.3 ug/kg wet	83.3	ug/kg wet							
o+m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet							
o-Cresol	<83.3 ug/kg wet	83.3	ug/kg wet							
p-(Dimethylamino) azobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
p-Chloro-m-cresol	<83.3 ug/kg wet	83.3	ug/kg wet							
Pentachloronitrobenzene (quintozene)	<83.3 ug/kg wet	83.3	ug/kg wet							
Pentachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
Phenacetin	<83.3 ug/kg wet	83.3	ug/kg wet							
Phenanthrene	<83.3 ug/kg wet	83.3	ug/kg wet							
Phenol	<83.3 ug/kg wet	83.3	ug/kg wet							
Pronamide	<83.3 ug/kg wet	83.3	ug/kg wet							
Pyrene	<83.3 ug/kg wet	83.3	ug/kg wet							
Pyridine	<83.3 ug/kg wet	83.3	ug/kg wet							

Surr: 2,4,6-Tribromophenol (Surr)

1640

ug/kg wet

3070

53.5

35-125



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

Surr: 2-Fluorobiphenyl (Surr)	888		ug/kg wet	1530		57.9	45-105			
Surr: 2-Fluorophenol (Surr)	2380		ug/kg wet	3070		77.6	35-105			
Surr: Nitrobenzene-d5 (Surr)	875		ug/kg wet	1530		57.1	35-100			
Surr: Phenol-d5 (Surr)	1730		ug/kg wet	3070		56.3	40-100			
Surr: p-Terphenyl-d14 (Surr)	1240		ug/kg wet	1530		81.0	30-125			

LCS (BBI0510-BS1)

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	845 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	55.6	21.8-66.7			
1,2-Dichlorobenzene	838 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	55.1	22-60			
1,3-Dichlorobenzene	809 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.2	22-60			
1,4-Dichlorobenzene	888 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.4	13-68			
1-Chloronaphthalene	912 ug/kg wet	76.0	ug/kg wet		ug/kg wet		0-200			
2,4,6-Trichlorophenol	949 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.4	50-115			
2,4-Dichlorophenol	870 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.2	50-105			
2,4-Dimethylphenol	901 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.3	30-110			
2,4-Dinitrophenol	1530 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	101	15-140			
2,4-Dinitrotoluene	959 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	63.1	21-99			
2,6-Dinitrotoluene	890 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	15-140			
2-Chloronaphthalene	877 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.7	45-105			
2-Chlorophenol	810 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.3	15-74			
2-Nitrophenol	901 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.3	40-115			
3,3'-Dichlorobenzidine	653 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	43.0	20-110			
4,6-Dinitro-2-methylphenol	1380 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	90.5	40-130			
4-Bromophenyl phenyl ether	826 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	54.4	15-110			
4-Chlorophenyl phenyl ether	799 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	52.6	15-110			
4-Nitrophenol	780 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	51.3	0-125			
Acenaphthene	914 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	60.1	27.7-85.5			
Acenaphthylene	1010 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	66.5	50-105			
Acetophenone	866 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.0	0-200			
Anthracene	944 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.1	55-110			
Benzo (a) anthracene	983 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.7	55-110			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/27/2018 17:25
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

LCS (BBI0510-BS1)

Prepared & Analyzed: 09/18/2018

Benzo (a) pyrene	930 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.2	55-110			
Benzo (b) fluoranthene	1110 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	72.9	45-120			
Benzo (g,h,i) perylene	902 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.4	40-125			
Benzo (k) fluoranthene	996 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	65.5	45-125			
bis (2-Chloroethoxy) methane	855 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.2	40-125			
bis (2-Chloroethyl) ether	766 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.4	40-125			
2,2'-Oxybis (1-chloropropane)	771 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.8	40-125			
bis (2-Ethylhexyl) phthalate	1260 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	83.0	40-125			
Butyl benzyl phthalate	1320 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	86.6	45-115			
Chrysene	1030 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	67.5	55-110			
Dibenz (a,h) anthracene	892 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.7	40-125			
Diethyl phthalate	939 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.8	40-120			
Dimethyl phthalate	867 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.0	25-125			
Di-n-butyl phthalate	1070 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	70.6	55-115			
Di-n-octyl phthalate	1420 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	93.3	35-135			
Fluoranthene	982 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.6	55-115			
Fluorene	948 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.4	50-110			
Hexachlorobenzene	830 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	54.6	25-125			
Hexachlorobutadiene	985 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.8	25-125			
Hexachlorocyclopentadiene	742 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	48.8	25-125			
Hexachloroethane	890 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	25-125			
Indeno (1,2,3-cd) pyrene	891 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	45-125			
Isophorone	857 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.4	10-110			
Naphthalene	957 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.9	40-100			
Nitrobenzene	928 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.0	40-100			
n-Nitrosodimethylamine	910 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.9	25-110			
n-Nitrosodi-n-propylamine	926 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	60.9	12-97			
n-Nitrosodiphenylamine	715 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	47.1	12-97			
p-Chloro-m-cresol	900 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.2	10-91			
Pentachlorophenol	902 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.4	30-109			
Phenanthrene	1020 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	66.9	50-115			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

LCS (BBI0510-BS1)

Prepared & Analyzed: 09/18/2018

Phenol	928 ug/kg wet	76.0	ug/kg wet	1530	ug/kg wet	60.4	0-115			
Pyrene	1270 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	83.7	27-110			
Pyridine	762 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.2	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1870		ug/kg wet	3040	ug/kg wet	61.6	35-125			
Surr: 2-Fluorobiphenyl (Surr)	959		ug/kg wet	1520	ug/kg wet	63.1	45-105			
Surr: 2-Fluorophenol (Surr)	2670		ug/kg wet	3040	ug/kg wet	87.7	35-105			
Surr: Nitrobenzene-d5 (Surr)	957		ug/kg wet	1520	ug/kg wet	63.0	35-100			
Surr: Phenol-d5 (Surr)	1900		ug/kg wet	3040	ug/kg wet	62.7	40-100			
Surr: p-Terphenyl-d14 (Surr)	1220		ug/kg wet	1520	ug/kg wet	80.1	30-125			

Matrix Spike (BBI0510-MS1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	743 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	41.9	21.8-66.7			
1,2-Dichlorobenzene	731 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	41.2	22-60			
1,3-Dichlorobenzene	692 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	39.0	22-60			
1,4-Dichlorobenzene	770 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	43.4	22-60			
1-Chloronaphthalene	855 ug/kg dry	88.7	ug/kg dry		<88.7 ug/kg dry		0-200			
2,4,6-Trichlorophenol	913 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	51.4	50-115			
2,4-Dichlorophenol	788 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.4	50-105			M
2,4-Dimethylphenol	768 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	43.3	30-110			
2,4-Dinitrophenol	1440 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	81.0	15-140			
2,4-Dinitrotoluene	985 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.5	17-111			
2,6-Dinitrotoluene	858 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.3	15-140			
2-Chloronaphthalene	828 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	46.6	45-105			
2-Chlorophenol	720 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	40.5	19-64			
2-Nitrophenol	820 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	46.2	40-115			
3,3'-Dichlorobenzidine	669 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	37.7	20-110			
4,6-Dinitro-2-methylphenol	1320 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	74.2	40-130			
4-Bromophenyl phenyl ether	784 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.2	15-110			
4-Chlorophenyl phenyl ether	746 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	42.0	15-110			
4-Nitrophenol	874 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	49.2	0-125			
Acenaphthene	866 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.8	24-90			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike (BBI0510-MS1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

Acenaphthylene	955 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	53.8	50-105			
Acetophenone	787 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.3	0-200			
Anthracene	898 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	50.6	55-110			M
Benzo (a) anthracene	988 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.6	55-110			
Benzo (a) pyrene	989 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.7	55-110			
Benzo (b) fluoranthene	1080 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	60.6	45-120			
Benzo (g,h,i) perylene	967 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	54.5	40-125			
Benzo (k) fluoranthene	1120 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	63.1	45-125			
bis (2-Chloroethoxy) methane	793 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.6	40-125			
bis (2-Chloroethyl) ether	673 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	37.9	40-125			M
2,2'-Oxybis (1-chloropropane)	702 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	39.5	40-125			M
bis (2-Ethylhexyl) phthalate	1370 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	77.2	40-125			
Butyl benzyl phthalate	1350 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	76.2	45-115			
Chrysene	1020 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	57.2	55-110			
Dibenz (a,h) anthracene	991 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.8	40-125			
Diethyl phthalate	923 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	52.0	40-120			
Dimethyl phthalate	842 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.4	25-125			
Di-n-butyl phthalate	1080 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	61.0	55-115			
Di-n-octyl phthalate	1600 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	90.0	35-135			
Fluoranthene	964 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	54.3	55-115			M
Fluorene	894 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	50.3	50-110			
Hexachlorobenzene	801 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	45.1	25-125			
Hexachlorobutadiene	865 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.7	25-125			
Hexachlorocyclopentadiene	493 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	27.7	25-125			
Hexachloroethane	784 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.1	25-125			
Indeno (1,2,3-cd) pyrene	979 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.1	45-125			
Isophorone	785 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.2	10-110			
Naphthalene	854 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.1	40-100			
Nitrobenzene	836 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.1	40-100			
n-Nitrosodimethylamine	844 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.6	25-110			
n-Nitrosodi-n-propylamine	877 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	49.4	12-97			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike (BBI0510-MS1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

n-Nitrosodiphenylamine	686 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	38.6	12-97			
p-Chloro-m-cresol	840 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.3	10-91			
Pentachlorophenol	880 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	49.6	27-109			
Phenanthrene	994 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	56.0	50-115			
Phenol	831 ug/kg dry	88.7	ug/kg dry	1790	<88.7 ug/kg dry	46.4	0-115			
Pyrene	1250 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	70.6	23-110			
Pyridine	860 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.4	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1790		ug/kg dry	3550	ug/kg dry	50.4	35-125			
Surr: 2-Fluorobiphenyl (Surr)	875		ug/kg dry	1780	ug/kg dry	49.3	45-105			
Surr: 2-Fluorophenol (Surr)	2250		ug/kg dry	3550	ug/kg dry	63.2	35-105			
Surr: Nitrobenzene-d5 (Surr)	855		ug/kg dry	1780	ug/kg dry	48.2	35-100			
Surr: Phenol-d5 (Surr)	1660		ug/kg dry	3550	ug/kg dry	46.7	40-100			
Surr: p-Terphenyl-d14 (Surr)	1180		ug/kg dry	1780	ug/kg dry	66.6	30-125			

Matrix Spike Dup (BBI0510-MSD1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	695 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	41.4	21.8-66.7	6.74	20	
1,2-Dichlorobenzene	685 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	40.8	22-60	6.52	20	
1,3-Dichlorobenzene	663 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	39.5	22-60	4.32	20	
1,4-Dichlorobenzene	723 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.0	22-60	6.38	20	
1-Chloronaphthalene	763 ug/kg dry	83.9	ug/kg dry		<83.9 ug/kg dry		0-200	11.4	20	
2,4,6-Trichlorophenol	798 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.5	50-115	13.4	20	M
2,4-Dichlorophenol	725 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.2	50-105	8.28	20	M
2,4-Dimethylphenol	629 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	37.4	30-110	20.0	20	
2,4-Dinitrophenol	1260 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	75.0	15-140	13.2	20	
2,4-Dinitrotoluene	850 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	50.6	17-111	14.7	20	
2,6-Dinitrotoluene	770 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.9	15-140	10.8	20	
2-Chloronaphthalene	740 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.1	45-105	11.2	20	M
2-Chlorophenol	669 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	39.8	19-64	7.33	20	
2-Nitrophenol	773 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	46.0	40-115	5.98	20	
3,3'-Dichlorobenzidine	517 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	30.8	20-110	25.5	20	P
4,6-Dinitro-2-methylphenol	1130 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	67.2	40-130	15.4	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike Dup (BBI0510-MSD1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

4-Bromophenyl phenyl ether	685 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	40.8	15-110	13.4	20	
4-Chlorophenyl phenyl ether	655 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	39.0	15-110	12.9	20	
4-Nitrophenol	731 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.5	0-125	17.8	20	
Acenaphthene	759 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.2	24-90	13.2	20	
Acenaphthylene	833 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.6	50-105	13.7	20	M
Acetophenone	717 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	42.7	0-200	9.36	20	
Anthracene	753 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.9	55-110	17.6	20	M
Benzo (a) anthracene	826 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.2	55-110	17.8	20	M
Benzo (a) pyrene	831 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.5	55-110	17.3	20	M
Benzo (b) fluoranthene	921 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	54.9	45-120	15.4	20	
Benzo (g,h,i) perylene	789 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.0	40-125	20.3	20	P
Benzo (k) fluoranthene	919 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	54.7	45-125	19.7	20	
bis (2-Chloroethoxy) methane	714 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	42.5	40-125	10.5	20	
bis (2-Chloroethyl) ether	642 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	38.2	40-125	4.64	20	M
2,2'-Oxybis (1-chloropropane)	644 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	38.4	40-125	8.56	20	M
bis (2-Ethylhexyl) phthalate	1150 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	68.5	40-125	17.6	20	
Butyl benzyl phthalate	1160 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	69.1	45-115	15.4	20	
Chrysene	826 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.2	55-110	20.6	20	M, P
Dibenz (a,h) anthracene	812 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	48.4	40-125	19.9	20	
Diethyl phthalate	790 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.1	40-120	15.5	20	
Dimethyl phthalate	729 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.4	25-125	14.5	20	
Di-n-butyl phthalate	882 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	52.5	55-115	20.4	20	M, P
Di-n-octyl phthalate	1370 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	81.3	35-135	15.7	20	
Fluoranthene	783 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	46.6	55-115	20.8	20	P, M
Fluorene	781 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	46.5	50-110	13.4	20	M
Hexachlorobenzene	695 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	41.4	25-125	14.1	20	
Hexachlorobutadiene	790 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.1	25-125	9.05	20	
Hexachlorocyclopentadiene	448 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	26.7	25-125	9.48	20	
Hexachloroethane	743 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.3	25-125	5.27	20	
Indeno (1,2,3-cd) pyrene	817 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	48.7	45-125	18.0	20	
Isophorone	720 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	42.9	10-110	8.71	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike Dup (BBI0510-MSD1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

Naphthalene	792 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.2	40-100	7.56	20	
Nitrobenzene	755 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.9	40-100	10.2	20	
n-Nitrosodimethylamine	770 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.9	25-110	9.18	20	
n-Nitrosodi-n-propylamine	758 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.1	12-97	14.6	20	
n-Nitrosodiphenylamine	586 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	34.9	12-97	15.7	20	
p-Chloro-m-cresol	730 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.5	10-91	14.0	20	
Pentachlorophenol	749 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.6	27-109	16.1	20	
Phenanthrene	853 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	50.8	50-115	15.3	20	
Phenol	759 ug/kg dry	83.9	ug/kg dry	1700	<83.9 ug/kg dry	44.8	0-115	9.06	20	
Pyrene	1080 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	64.4	23-110	14.7	20	
Pyridine	813 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	48.4	0-200	5.55	20	
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1570		ug/kg dry	3360	ug/kg dry	46.9	35-125			
Surr: 2-Fluorobiphenyl (Surr)	780		ug/kg dry	1680	ug/kg dry	46.4	45-105			
Surr: 2-Fluorophenol (Surr)	2150		ug/kg dry	3360	ug/kg dry	64.1	35-105			
Surr: Nitrobenzene-d5 (Surr)	782		ug/kg dry	1680	ug/kg dry	46.6	35-100			
Surr: Phenol-d5 (Surr)	1540		ug/kg dry	3360	ug/kg dry	45.9	40-100			
Surr: p-Terphenyl-d14 (Surr)	1010		ug/kg dry	1680	ug/kg dry	60.2	30-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/27/2018 17:25
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BBI0573 - SW3550C										
Blank (BBI0573-BLK1) Prepared: 09/19/2018 Analyzed: 09/20/2018										
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg wet	10.0	mg/kg wet							
LCS (BBI0573-BS1) Prepared: 09/19/2018 Analyzed: 09/20/2018										
TPH-Semi-Volatiles (ORO)	48.1 mg/kg wet	10.0	mg/kg wet	98.6	mg/kg wet	48.8	40-160			
Matrix Spike (BBI0573-MS1) Source: 18I0505-10 Prepared: 09/19/2018 Analyzed: 09/20/2018										
TPH-Semi-Volatiles (ORO)	56.9 mg/kg dry	11.3	mg/kg dry	113	<11.3 mg/kg dry	50.4	40-160			
Matrix Spike Dup (BBI0573-MSD1) Source: 18I0505-10 Prepared: 09/19/2018 Analyzed: 09/20/2018										
TPH-Semi-Volatiles (ORO)	55.6 mg/kg dry	11.4	mg/kg dry	114	<11.4 mg/kg dry	48.6	40-160	2.18	20	
Batch BBI0633 - SW3550C										
Blank (BBI0633-BLK1) Prepared: 09/20/2018 Analyzed: 09/21/2018										
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
Surr: Pentacosane (Surr)	2.44		mg/kg wet	4.95		49.3	40-160			
LCS (BBI0633-BS1) Prepared: 09/20/2018 Analyzed: 09/21/2018										
TPH-Semi-Volatiles (DRO)	62.0 mg/kg wet	10.0	mg/kg wet	99.6	mg/kg wet	62.2	40-160			
Surr: Pentacosane (Surr)	2.53		mg/kg wet	4.98	mg/kg wet	50.7	40-160			
Matrix Spike (BBI0633-MS1) Source: 18I0508-08 Prepared: 09/20/2018 Analyzed: 09/22/2018										
TPH-Semi-Volatiles (DRO)	55.8 mg/kg dry	12.2	mg/kg dry	122	<12.2 mg/kg dry	45.6	40-160			
Surr: Pentacosane (Surr)	2.65		mg/kg dry	6.12	mg/kg dry	43.4	40-160			
Matrix Spike Dup (BBI0633-MSD1) Source: 18I0508-08 Prepared: 09/20/2018 Analyzed: 09/22/2018										
TPH-Semi-Volatiles (DRO)	67.5 mg/kg dry	12.4	mg/kg dry	124	<12.4 mg/kg dry	54.3	40-160	19.0	20	
Surr: Pentacosane (Surr)	2.95		mg/kg dry	6.22	mg/kg dry	47.3	40-160			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0708 - SW3550C

Blank (BBI0708-BLK1)

Prepared: 09/24/2017 Analyzed: 09/25/2018

TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
Surr: Pentacosane (Surr)	3.08		mg/kg wet	4.90		62.8	40-160			

LCS (BBI0708-BS1)

Prepared: 09/24/2017 Analyzed: 09/25/2018

TPH-Semi-Volatiles (DRO)	84.4 mg/kg wet	10.0	mg/kg wet	99.6	mg/kg wet	84.8	40-160			
Surr: Pentacosane (Surr)	3.38		mg/kg wet	4.98	mg/kg wet	67.9	40-160			

Matrix Spike (BBI0708-MS1)

Source: 18I0501-06

Prepared: 09/24/2017 Analyzed: 09/25/2018

TPH-Semi-Volatiles (DRO)	86.5 mg/kg dry	10.6	mg/kg dry	106	<10.6 mg/kg dry	81.5	40-160			
Surr: Pentacosane (Surr)	3.50		mg/kg dry	5.30	mg/kg dry	66.0	40-160			

Matrix Spike Dup (BBI0708-MSD1)

Source: 18I0501-06

Prepared: 09/24/2017 Analyzed: 09/25/2018

TPH-Semi-Volatiles (DRO)	72.4 mg/kg dry	10.3	mg/kg dry	103	<10.3 mg/kg dry	70.5	40-160	17.7	20	
Surr: Pentacosane (Surr)	2.94		mg/kg dry	5.14	mg/kg dry	57.3	40-160			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0546 - SW3550B

Blank (BBI0546-BLK1)

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet						

<i>Surr: DCB</i>	0.0224		mg/kg wet	0.0319		70.0	30-105		
<i>Surr: TCMX</i>	0.0208		mg/kg wet	0.0319		65.0	30-105		

LCS (BBI0546-BS1)

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	0.183 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	114	60-140		
PCB as Aroclor 1260	0.123 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	77.0	60-140		
<i>Surr: DCB</i>	0.0208		mg/kg wet	0.0321	mg/kg wet	65.0	30-105		
<i>Surr: TCMX</i>	0.0240		mg/kg wet	0.0321	mg/kg wet	75.0	30-105		

Matrix Spike (BBI0546-MS1)

Source: 18I0501-06

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	0.191 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	107	60-140		
PCB as Aroclor 1260	0.153 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	86.0	60-140		
<i>Surr: DCB</i>	0.0249		mg/kg dry	0.0356	mg/kg dry	70.0	30-105		
<i>Surr: TCMX</i>	0.0232		mg/kg dry	0.0356	mg/kg dry	65.0	30-105		

Matrix Spike Dup (BBI0546-MSD1)

Source: 18I0501-06

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	0.195 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	110	60-140	2.45	20
PCB as Aroclor 1260	0.138 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	78.0	60-140	10.1	20
<i>Surr: DCB</i>	0.0266		mg/kg dry	0.0355	mg/kg dry	75.0	30-105		
<i>Surr: TCMX</i>	0.0249		mg/kg dry	0.0355	mg/kg dry	70.0	30-105		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-----------	--------	-----	-----------	------

Batch BBI0419 - No Prep Wet Chem

Blank (BBI0419-BLK1) Prepared & Analyzed: 09/14/2018										
Percent Solids	100 %	0.10	%							
Duplicate (BBI0419-DUP1) Source: 1810409-01 Prepared & Analyzed: 09/14/2018										
Percent Solids	92.7 %	0.10	%		93.7 %			1.09	20	

Batch BBI0463 - No Prep Wet Chem

Blank (BBI0463-BLK1) Prepared & Analyzed: 09/17/2018										
Percent Solids	100 %	0.10	%							
Duplicate (BBI0463-DUP1) Source: 1810508-01 Prepared & Analyzed: 09/17/2018										
Percent Solids	76.1 %	0.10	%		71.5 %			6.25	20	

Batch BBI0580 - No Prep Wet Chem

Blank (BBI0580-BLK1) Prepared: 09/17/2018 Analyzed: 09/20/2018										
Chromium, Hexavalent	<0.20 mg/kg wet	0.20	mg/kg wet							
LCS (BBI0580-BS1) Prepared: 09/17/2018 Analyzed: 09/20/2018										
Chromium, Hexavalent	3.80 mg/kg wet	0.20	mg/kg wet	3.92	mg/kg wet	97.0	80-120			

Batch BBI0706 - No Prep Wet Chem

Blank (BBI0706-BLK1) Prepared: 09/24/2018 Analyzed: 09/26/2018										
Chromium, Hexavalent	<0.20 mg/kg wet	0.20	mg/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/27/2018 17:25
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0706 - No Prep Wet Chem

LCS (BBI0706-BS1)

Prepared: 09/24/2018 Analyzed: 09/26/2018

Chromium, Hexavalent	3.52 mg/kg wet	0.20	mg/kg wet	3.96	mg/kg wet	89.0	80-120
----------------------	----------------	------	-----------	------	-----------	------	--------



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Aluminum	VELAP
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Calcium	VELAP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Magnesium	VELAP
Manganese	VELAP
Nickel	VELAP
Potassium	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7196A in Solids	
Chromium, Hexavalent	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8015C in Solids	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,NC
PCB as Aroclor 1221	VELAP,NC
PCB as Aroclor 1232	VELAP,NC
PCB as Aroclor 1242	VELAP,NC
PCB as Aroclor 1248	VELAP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
PCB as Aroclor 1254	VELAP,NC
PCB as Aroclor 1260	VELAP,NC
SW8270D in Solids	
1,2,4,5-Tetrachlorobenzene	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,2-Diphenylhydrazine	NC,VELAP,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
1-Chloronaphthalene	NC,VELAP,WVDEP
1-Naphthylamine	NC,VELAP,WVDEP
2,3,4,6-Tetrachlorophenol	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dichlorophenol	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Chloronaphthalene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
2-Naphthylamine	NC,VELAP,WVDEP
2-Nitroaniline	NC,VELAP,WVDEP
2-Nitrophenol	NC,VELAP,WVDEP
3-Methylcholanthrene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4,6-Dinitro-2-methylphenol	NC,VELAP,WVDEP
4-Aminobiphenyl	NC,VELAP,WVDEP
4-Bromophenyl phenyl ether	NC,VELAP,WVDEP
4-Chloroaniline	NC,VELAP,WVDEP
4-Chlorophenyl phenyl ether	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
4-Nitrophenol	NC,VELAP,WVDEP
7,12-Dimethylbenz (a) anthracene	NC,VELAP,WVDEP
Acenaphthene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 9/27/2018 17:25
201 Church Street
Blacksburg VA, 24060
Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Acenaphthylene	NC,VELAP,WVDEP
Acetophenone	NC,VELAP,WVDEP
Aniline	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzidine	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (g,h,i) perylene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
Benzoic acid	NC,VELAP,WVDEP
Benzyl alcohol	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Dibenz (a,j) acridine	NC,VELAP,WVDEP
Dibenzofuran	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP
Di-n-octyl phthalate	NC,VELAP,WVDEP
Diphenylamine	NC,VELAP,WVDEP
Ethyl methanesulfonate	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP
Hexachloroethane	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Methyl methanesulfonate	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 9/27/2018 17:25
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodimethylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-butylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
n-Nitrosopiperidine	NC,VELAP,WVDEP
o+m+p-Cresols	NC,VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
p-(Dimethylamino) azobenzene	NC,VELAP,WVDEP
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachloronitrobenzene (quintozene)	NC,WVDEP
Pentachlorophenol	NC,VELAP,WVDEP
Phenacetin	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Pronamide	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
Pyridine	NC,VELAP,WVDEP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/27/2018 17:25
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

- B Blank contamination. The recorded result is associated with a contaminated blank.
- C Continuing calibration verification response for this analyte is outside specifications.
- DND Not Detected
- DS Surrogate concentration reflects a dilution factor.
- E Estimated concentration, outside calibration range
- M Matrix spike recovery is outside established acceptance limits
- M2 Sample was diluted due to matrix interference.
- P Duplicate analysis does not meet the acceptance criteria for precision
- RPD Relative Percent Difference
- Qual Qualifiers
- RE Denotes sample was re-analyzed
- D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
- TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
- PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.



1941 REYMET ROAD
 RICHMOND, VIRGINIA 23237
 (804) 358-8295 PHONE
 (804)358-8297 FAX

Chain of Custody
 Form #: F1331
 Rev. 3.0
 Effective: Aug 24, 2017

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: <i>EEE Consulting</i>	INVOICE TO: <i>same</i>	PROJECT NAME/Quote #: <i>CVTC</i>
CONTACT: <i>Jeff Fisher</i>	INVOICE CONTACT:	SITE NAME: <i>CVTC</i>
ADDRESS: <i>201 Church St. 24060</i>	INVOICE ADDRESS:	PROJECT NUMBER: <i>18-760</i>
PHONE #: <i>540-953-0170 x314</i>	INVOICE PHONE #:	P.O. #: <i>18-760</i>
FAX #:	EMAIL: <i>JFISHER@EEE-CONSULTING.COM</i>	Pretreatment Program:
Is sample for compliance reporting? YES <input checked="" type="radio"/> NO	Is sample from a chlorinated supply? YES <input checked="" type="radio"/> NO	PWS I.D. #:
SAMPLER NAME (PRINT): <i>Jeff Fisher</i>	SAMPLER SIGNATURE: <i>[Signature]</i>	Turn Around Time: Circle: <i>10</i> 5 Days or ___ Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)						COMMENTS
											TPH-DRO/ORO Soils	2,3,7,8-TCDF SIM	SULC 8070	PCB 8082	TOTAL TAL Metals	Hex Chrome 7196A	
1) <i>Task 2.1 77-1 0-5'</i>	<i>6</i>					<i>9-11-18</i>	<i>1000</i>		<i>S</i>	<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)
2) <i>77-1 5-7'</i>							<i>1010</i>			<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3) <i>77-2 0-5'</i>							<i>1018</i>			<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4) <i>77-2 10-14'</i>							<i>1025</i>			<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
5) <i>77-3 0-5'</i>							<i>1035</i>			<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
6) <i>77-3 5-7'</i>							<i>1040</i>			<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
7) <i>77-4 0-6'</i>							<i>1048</i>			<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
8) <i>77-5 0-5'</i>							<i>1055</i>			<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
9) <i>77-6 0-5'</i>							<i>1115</i>			<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
10) <i>77-6 5-11'</i>							<i>1120</i>			<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

RELINQUISHED: <i>[Signature]</i> DATE / TIME: <i>9-12-18 1355</i>	RECEIVED: <i>[Signature]</i> DATE / TIME: <i>9-12-18 1555</i>	QC Data Package Level III <input type="checkbox"/>	LAB USE ONLY Custody Seals used and intact? <input checked="" type="checkbox"/> (Y/N)	COOLER TEMP Received on ice? <input checked="" type="checkbox"/> °C
RELINQUISHED: <i>COURTNEY</i> DATE / TIME:	RECEIVED: <i>[Signature]</i> DATE / TIME: <i>13 Sept 2018 8.00</i>	QC Data Package Level IV <input type="checkbox"/>	EEE-Blacksburg 1810505 CVTC Recd: 09/13/2018 Due: 09/27/2018	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	9/27/2018 17:25
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	1.60°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 1810508

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg, VA 24060

Date Received: September 13, 2018 8:00
Date Issued: October 2, 2018 13:33

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 09/13/2018 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/2/2018 13:33
201 Church Street
Blacksburg VA, 24060

Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18I0508

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Task 2.6 16-S1	18I0508-01	Solids	09/11/2018 14:49	09/13/2018 08:00
Task 2.6 16-S2	18I0508-02	Solids	09/11/2018 14:56	09/13/2018 08:00
Task 2.6 16-S3	18I0508-03	Solids	09/11/2018 15:02	09/13/2018 08:00
Task 2.6 16-S4	18I0508-04	Solids	09/11/2018 15:09	09/13/2018 08:00
Task 2.6 16-S5	18I0508-05	Solids	09/11/2018 15:15	09/13/2018 08:00
Task 2.6 16-S6	18I0508-06	Solids	09/11/2018 15:20	09/13/2018 08:00
Task 2.6 16-S7	18I0508-07	Solids	09/11/2018 15:42	09/13/2018 08:00
Task 2.6 16-S8	18I0508-08	Solids	09/11/2018 15:48	09/13/2018 08:00
Task 2.6 16-S9	18I0508-09	Solids	09/11/2018 15:54	09/13/2018 08:00
Task 2.6 16-S10	18I0508-10	Solids	09/11/2018 15:57	09/13/2018 08:00
Task 2.6 16-S11	18I0508-11	Solids	09/11/2018 16:00	09/13/2018 08:00
Task 2.6 16-S12	18I0508-12	Solids	09/11/2018 16:05	09/13/2018 08:00

Results have been calculated based on dry weight.



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S1

Laboratory Sample ID: 1810508-01

Grab Date/Time: 09/11/2018 14:49

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01RE1	SW6010C	<0.658 mg/kg dry		0.658	1	09/14/18 13:00	09/18/18 18:24	BG
Aluminum	01	SW6010C	18300 mg/kg dry		65.8	20	09/14/18 13:00	09/18/18 16:45	BG
Arsenic	01RE1	SW6010C	12.3 mg/kg dry		1.32	1	09/14/18 13:00	09/18/18 18:24	BG
Barium	01RE1	SW6010C	171 mg/kg dry		0.658	1	09/14/18 13:00	09/18/18 18:24	BG
Beryllium	01RE1	SW6010C	3.61 mg/kg dry		0.263	1	09/14/18 13:00	09/18/18 18:24	BG
Calcium	01	SW6010C	7890 mg/kg dry		132	20	09/14/18 13:00	09/18/18 16:45	BG
Cadmium	01RE1	SW6010C	0.426 mg/kg dry		0.263	1	09/14/18 13:00	09/18/18 18:24	BG
Cobalt	01RE1	SW6010C	14.9 mg/kg dry		0.263	1	09/14/18 13:00	09/18/18 18:24	BG
Chromium	01RE1	SW6010C	20.9 mg/kg dry		0.658	1	09/14/18 13:00	09/18/18 18:24	BG
Copper	01RE1	SW6010C	27.5 mg/kg dry		3.29	1	09/14/18 13:00	09/18/18 18:24	BG
Iron	01	SW6010C	21000 mg/kg dry		65.8	20	09/14/18 13:00	09/18/18 16:45	BG
Mercury	01	SW7471B	0.077 mg/kg dry		0.011	1	09/14/18 13:16	09/17/18 15:51	MWL
Potassium	01RE1	SW6010C	4380 mg/kg dry		32.9	1	09/14/18 13:00	09/18/18 18:24	BG
Magnesium	01	SW6010C	4990 mg/kg dry		65.8	20	09/14/18 13:00	09/18/18 16:45	BG
Manganese	01RE1	SW6010C	227 mg/kg dry		0.658	1	09/14/18 13:00	09/18/18 18:24	BG
Sodium	01RE1	SW6010C	135 mg/kg dry		32.9	1	09/14/18 13:00	09/18/18 18:24	BG
Nickel	01RE1	SW6010C	20.0 mg/kg dry		0.658	1	09/14/18 13:00	09/18/18 18:24	BG
Lead	01RE1	SW6010C	26.1 mg/kg dry		0.658	1	09/14/18 13:00	09/18/18 18:24	BG
Antimony	01RE1	SW6010C	<6.58 mg/kg dry		6.58	1	09/14/18 13:00	09/18/18 18:24	BG
Selenium	01RE1	SW6010C	<3.29 mg/kg dry		3.29	1	09/14/18 13:00	09/18/18 18:24	BG
Thallium	01RE1	SW6010C	<3.29 mg/kg dry		3.29	1	09/14/18 13:00	09/18/18 18:24	BG
Vanadium	01RE1	SW6010C	39.4 mg/kg dry		0.658	1	09/14/18 13:00	09/18/18 18:24	BG
Zinc	01RE1	SW6010C	118 mg/kg dry		0.658	1	09/14/18 13:00	09/18/18 18:24	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	01	SW8015C	<0.14 mg/kg dry		0.14	1	09/14/18 11:21	09/14/18 11:21	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S1

Laboratory Sample ID: 1810508-01

Grab Date/Time: 09/11/2018 14:49

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	01	SW8015C	77.7 %	S	80-120		09/14/18 11:21	09/14/18 11:21	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	01	SW8270D SIM	Not Detected			1	09/18/18 09:10	09/18/18 17:47	SKS
1,2,4,5-Tetrachlorobenzene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
1,2,4-Trichlorobenzene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
1,2-Dichlorobenzene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
1,2-Diphenylhydrazine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
1,3-Dichlorobenzene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
1,4-Dichlorobenzene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
1-Chloronaphthalene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
1-Naphthylamine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,3,4,6-Tetrachlorophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,4,5-Trichlorophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,4,6-Trichlorophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,4-Dichlorophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,4-Dimethylphenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,4-Dinitrophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,4-Dinitrotoluene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,6-Dichlorophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,6-Dinitrotoluene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2-Chloronaphthalene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2-Chlorophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2-Methylnaphthalene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2-Naphthylamine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S1

Laboratory Sample ID: 1810508-01

Grab Date/Time: 09/11/2018 14:49

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2-Nitrophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
3,3'-Dichlorobenzidine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
3-Methylcholanthrene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
3-Nitroaniline	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
4,6-Dinitro-2-methylphenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
4-Aminobiphenyl	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
4-Bromophenyl phenyl ether	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
4-Chloroaniline	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
4-Chlorophenyl phenyl ether	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
4-Nitroaniline	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
4-Nitrophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
7,12-Dimethylbenz (a) anthracene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Acenaphthene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Acenaphthylene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Acetophenone	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Aniline	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Anthracene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Benzidine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Benzo (a) anthracene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Benzo (a) pyrene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Benzo (b) fluoranthene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Benzo (g,h,i) perylene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Benzo (k) fluoranthene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Benzoic acid	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S1

Laboratory Sample ID: 1810508-01

Grab Date/Time: 09/11/2018 14:49

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
2,2'-Oxybis (1-chloropropane)	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<223 ug/kg dry	C	223	2	09/18/18 09:10	09/18/18 17:47	SKS
Butyl benzyl phthalate	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Chrysene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Dibenz (a,h) anthracene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Dibenz (a,j) acridine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Dibenzofuran	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Diethyl phthalate	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Dimethyl phthalate	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Di-n-butyl phthalate	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Di-n-octyl phthalate	01	SW8270D	<223 ug/kg dry	C	223	2	09/18/18 09:10	09/18/18 17:47	SKS
Diphenylamine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Ethyl methanesulfonate	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Fluoranthene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Fluorene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Hexachlorobenzene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Hexachlorobutadiene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Hexachlorocyclopentadiene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Hexachloroethane	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Isophorone	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
m+p-Cresols	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S1 **Laboratory Sample ID:** 1810508-01

Grab Date/Time: 09/11/2018 14:49

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Naphthalene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Nitrobenzene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
n-Nitrosodimethylamine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
n-Nitrosodi-n-butylamine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
n-Nitrosodiphenylamine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
n-Nitrosopiperidine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
o+m+p-Cresols	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
o-Cresol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
p-(Dimethylamino) azobenzene	01	SW8270D	<223 ug/kg dry	C	223	2	09/18/18 09:10	09/18/18 17:47	SKS
p-Chloro-m-cresol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Pentachloronitrobenzene (quintozene)	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Pentachlorophenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Phenacetin	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Phenanthrene	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Phenol	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Pronamide	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Pyrene	01	SW8270D	<223 ug/kg dry	C	223	2	09/18/18 09:10	09/18/18 17:47	SKS
Pyridine	01	SW8270D	<223 ug/kg dry		223	2	09/18/18 09:10	09/18/18 17:47	SKS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270D	41.3 %		35-125		09/18/18 09:10	09/18/18 17:47	SKS
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270D	48.8 %		45-105		09/18/18 09:10	09/18/18 17:47	SKS
Surr: 2-Fluorophenol (Surr)	01	SW8270D	20.2 %	DS	35-105		09/18/18 09:10	09/18/18 17:47	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S1	Laboratory Sample ID: 1810508-01
Grab Date/Time: 09/11/2018 14:49	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Semivolatile Organic Compounds by GCMS

Surr: Nitrobenzene-d5 (Surr)	01	SW8270D	45.6 %		35-100		09/18/18 09:10	09/18/18 17:47	SKS
Surr: Phenol-d5 (Surr)	01	SW8270D	22.5 %	DS	40-100		09/18/18 09:10	09/18/18 17:47	SKS
Surr: p-Terphenyl-d14 (Surr)	01	SW8270D	46.1 %		30-125		09/18/18 09:10	09/18/18 17:47	SKS

Semivolatile Hydrocarbons by GC

TPH-Semi-Volatiles (DRO)	01	SW8015C	20.7 mg/kg dry		13.3	1	09/20/18 15:48	09/21/18 18:31	CVH
Surr: Pentacosane (Surr)	01	SW8015C	51.9 %		40-160		09/20/18 15:48	09/21/18 18:31	CVH
TPH-Semi-Volatiles (ORO)	01	SW8015C	<13.7 mg/kg dry		13.7	1	09/19/18 14:15	09/20/18 19:32	CVH

Organochlorine Pesticides and PCBs by GC/ECD

PCB as Aroclor 1016	01	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 19:27	HLM
PCB as Aroclor 1221	01	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 19:27	HLM
PCB as Aroclor 1232	01	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 19:27	HLM
PCB as Aroclor 1242	01	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 19:27	HLM
PCB as Aroclor 1248	01	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 19:27	HLM
PCB as Aroclor 1254	01	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 19:27	HLM
PCB as Aroclor 1260	01	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 19:27	HLM
Surr: DCB	01	SW8082A	60.0 %		30-105		09/19/18 09:02	09/21/18 19:27	HLM
Surr: TCMX	01	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 19:27	HLM

Wet Chemistry Analysis

Chromium, Hexavalent	01RE1	SW7196A	2.95 mg/kg dry		0.28	1	09/24/18 09:00	09/26/18 11:53	MWL
Percent Solids	01	SM18 2540G	71.5 %		0.10	1	09/17/18 09:18	09/17/18 09:18	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S2

Laboratory Sample ID: 1810508-02

Grab Date/Time: 09/11/2018 14:56

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02RE1	SW6010C	<0.613 mg/kg dry		0.613	1	09/14/18 13:00	09/18/18 18:32	BG
Aluminum	02RE2	SW6010C	36600 mg/kg dry		613	200	09/14/18 13:00	09/19/18 16:15	BG
Arsenic	02RE1	SW6010C	2.56 mg/kg dry		1.23	1	09/14/18 13:00	09/18/18 18:32	BG
Barium	02RE1	SW6010C	102 mg/kg dry		0.613	1	09/14/18 13:00	09/18/18 18:32	BG
Beryllium	02RE1	SW6010C	2.14 mg/kg dry		0.245	1	09/14/18 13:00	09/18/18 18:32	BG
Calcium	02RE1	SW6010C	617 mg/kg dry		6.13	1	09/14/18 13:00	09/18/18 18:32	BG
Cadmium	02RE1	SW6010C	0.474 mg/kg dry		0.245	1	09/14/18 13:00	09/18/18 18:32	BG
Cobalt	02RE1	SW6010C	16.2 mg/kg dry		0.245	1	09/14/18 13:00	09/18/18 18:32	BG
Chromium	02RE1	SW6010C	27.7 mg/kg dry		0.613	1	09/14/18 13:00	09/18/18 18:32	BG
Copper	02RE1	SW6010C	25.4 mg/kg dry		3.07	1	09/14/18 13:00	09/18/18 18:32	BG
Iron	02RE3	SW6010C	38600 mg/kg dry		613	200	09/14/18 13:00	09/20/18 14:14	BG
Mercury	02	SW7471B	0.058 mg/kg dry		0.011	1	09/14/18 13:16	09/17/18 15:59	MWL
Potassium	02RE1	SW6010C	7880 mg/kg dry		30.7	1	09/14/18 13:00	09/18/18 18:32	BG
Magnesium	02	SW6010C	7980 mg/kg dry		61.3	20	09/14/18 13:00	09/18/18 16:53	BG
Manganese	02RE1	SW6010C	337 mg/kg dry		0.613	1	09/14/18 13:00	09/18/18 18:32	BG
Sodium	02RE1	SW6010C	52.0 mg/kg dry		30.7	1	09/14/18 13:00	09/18/18 18:32	BG
Nickel	02RE1	SW6010C	19.4 mg/kg dry		0.613	1	09/14/18 13:00	09/18/18 18:32	BG
Lead	02RE1	SW6010C	29.1 mg/kg dry		0.613	1	09/14/18 13:00	09/18/18 18:32	BG
Antimony	02RE1	SW6010C	<6.13 mg/kg dry		6.13	1	09/14/18 13:00	09/18/18 18:32	BG
Selenium	02RE1	SW6010C	<3.07 mg/kg dry		3.07	1	09/14/18 13:00	09/18/18 18:32	BG
Thallium	02RE1	SW6010C	<3.07 mg/kg dry		3.07	1	09/14/18 13:00	09/18/18 18:32	BG
Vanadium	02RE1	SW6010C	38.9 mg/kg dry		0.613	1	09/14/18 13:00	09/18/18 18:32	BG
Zinc	02RE1	SW6010C	114 mg/kg dry		0.613	1	09/14/18 13:00	09/18/18 18:32	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	02	SW8015C	<0.13 mg/kg dry		0.13	1	09/14/18 11:44	09/14/18 11:44	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S2

Laboratory Sample ID: 1810508-02

Grab Date/Time: 09/11/2018 14:56

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	02	SW8015C	92.8 %		80-120		09/14/18 11:44	09/14/18 11:44	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	02	SW8270D SIM	Not Detected			2	09/18/18 09:10	09/18/18 18:19	SKS
1,2,4,5-Tetrachlorobenzene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
1,2,4-Trichlorobenzene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
1,2-Dichlorobenzene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
1,2-Diphenylhydrazine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
1,3-Dichlorobenzene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
1,4-Dichlorobenzene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
1-Chloronaphthalene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
1-Naphthylamine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,3,4,6-Tetrachlorophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,4,5-Trichlorophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,4,6-Trichlorophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,4-Dichlorophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,4-Dimethylphenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,4-Dinitrophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,4-Dinitrotoluene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,6-Dichlorophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,6-Dinitrotoluene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2-Chloronaphthalene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2-Chlorophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2-Methylnaphthalene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2-Naphthylamine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S2

Laboratory Sample ID: 1810508-02

Grab Date/Time: 09/11/2018 14:56

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2-Nitrophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
3-Methylcholanthrene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
3-Nitroaniline	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
4,6-Dinitro-2-methylphenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
4-Aminobiphenyl	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
4-Bromophenyl phenyl ether	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
4-Chloroaniline	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
4-Chlorophenyl phenyl ether	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
4-Nitroaniline	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
4-Nitrophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
7,12-Dimethylbenz (a) anthracene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Acenaphthene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Acenaphthylene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Acetophenone	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Aniline	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Anthracene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Benzidine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Benzo (a) anthracene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Benzo (a) pyrene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Benzo (b) fluoranthene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Benzo (g,h,i) perylene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Benzo (k) fluoranthene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Benzoic acid	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S2

Laboratory Sample ID: 1810508-02

Grab Date/Time: 09/11/2018 14:56

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
2,2'-Oxybis (1-chloropropane)	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<214 ug/kg dry	C	214	2	09/18/18 09:10	09/18/18 18:19	SKS
Butyl benzyl phthalate	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Chrysene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Dibenz (a,h) anthracene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Dibenz (a,j) acridine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Dibenzofuran	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Diethyl phthalate	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Dimethyl phthalate	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Di-n-butyl phthalate	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Di-n-octyl phthalate	02	SW8270D	<214 ug/kg dry	C	214	2	09/18/18 09:10	09/18/18 18:19	SKS
Diphenylamine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Ethyl methanesulfonate	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Fluoranthene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Fluorene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Hexachlorobenzene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Hexachlorobutadiene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Hexachlorocyclopentadiene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Hexachloroethane	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Isophorone	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
m+p-Cresols	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S2

Laboratory Sample ID: 1810508-02

Grab Date/Time: 09/11/2018 14:56

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Naphthalene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Nitrobenzene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
n-Nitrosodimethylamine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
n-Nitrosodi-n-butylamine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
n-Nitrosodiphenylamine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
n-Nitrosopiperidine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
o+m+p-Cresols	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
o-Cresol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
p-(Dimethylamino) azobenzene	02	SW8270D	<214 ug/kg dry	C	214	2	09/18/18 09:10	09/18/18 18:19	SKS
p-Chloro-m-cresol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Pentachloronitrobenzene (quintozene)	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Pentachlorophenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Phenacetin	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Phenanthrene	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Phenol	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Pronamide	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Pyrene	02	SW8270D	<214 ug/kg dry	C	214	2	09/18/18 09:10	09/18/18 18:19	SKS
Pyridine	02	SW8270D	<214 ug/kg dry		214	2	09/18/18 09:10	09/18/18 18:19	SKS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270D	64.2 %		35-125		09/18/18 09:10	09/18/18 18:19	SKS
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270D	58.9 %		45-105		09/18/18 09:10	09/18/18 18:19	SKS
Surr: 2-Fluorophenol (Surr)	02	SW8270D	51.1 %		35-105		09/18/18 09:10	09/18/18 18:19	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S2	Laboratory Sample ID: 1810508-02
Grab Date/Time: 09/11/2018 14:56	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	02	SW8270D	55.4 %		35-100		09/18/18 09:10	09/18/18 18:19	SKS
Surr: Phenol-d5 (Surr)	02	SW8270D	51.1 %		40-100		09/18/18 09:10	09/18/18 18:19	SKS
Surr: p-Terphenyl-d14 (Surr)	02	SW8270D	57.2 %		30-125		09/18/18 09:10	09/18/18 18:19	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<13.1 mg/kg dry		13.1	1	09/20/18 15:48	09/21/18 18:57	CVH
Surr: Pentacosane (Surr)	02	SW8015C	45.2 %		40-160		09/20/18 15:48	09/21/18 18:57	CVH
TPH-Semi-Volatiles (ORO)	02	SW8015C	<12.8 mg/kg dry		12.8	1	09/19/18 14:15	09/20/18 19:56	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.129 mg/kg dry		0.129	1	09/19/18 09:02	09/21/18 19:48	HLM
PCB as Aroclor 1221	02	SW8082A	<0.129 mg/kg dry		0.129	1	09/19/18 09:02	09/21/18 19:48	HLM
PCB as Aroclor 1232	02	SW8082A	<0.129 mg/kg dry		0.129	1	09/19/18 09:02	09/21/18 19:48	HLM
PCB as Aroclor 1242	02	SW8082A	<0.129 mg/kg dry		0.129	1	09/19/18 09:02	09/21/18 19:48	HLM
PCB as Aroclor 1248	02	SW8082A	<0.129 mg/kg dry		0.129	1	09/19/18 09:02	09/21/18 19:48	HLM
PCB as Aroclor 1254	02	SW8082A	<0.129 mg/kg dry		0.129	1	09/19/18 09:02	09/21/18 19:48	HLM
PCB as Aroclor 1260	02	SW8082A	<0.129 mg/kg dry		0.129	1	09/19/18 09:02	09/21/18 19:48	HLM
Surr: DCB	02	SW8082A	70.0 %		30-105		09/19/18 09:02	09/21/18 19:48	HLM
Surr: TCMX	02	SW8082A	80.0 %		30-105		09/19/18 09:02	09/21/18 19:48	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	02	SW7196A	<0.26 mg/kg dry		0.26	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	02	SM18 2540G	75.0 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S3

Laboratory Sample ID: 1810508-03

Grab Date/Time: 09/11/2018 15:02

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03RE1	SW6010C	<0.664 mg/kg dry		0.664	1	09/14/18 13:00	09/18/18 18:35	BG
Aluminum	03RE2	SW6010C	25900 mg/kg dry		664	200	09/14/18 13:00	09/19/18 16:17	BG
Arsenic	03RE1	SW6010C	1.56 mg/kg dry		1.33	1	09/14/18 13:00	09/18/18 18:35	BG
Barium	03RE1	SW6010C	98.9 mg/kg dry		0.664	1	09/14/18 13:00	09/18/18 18:35	BG
Beryllium	03RE1	SW6010C	1.65 mg/kg dry		0.265	1	09/14/18 13:00	09/18/18 18:35	BG
Calcium	03	SW6010C	4680 mg/kg dry		133	20	09/14/18 13:00	09/18/18 16:55	BG
Cadmium	03RE1	SW6010C	0.433 mg/kg dry		0.265	1	09/14/18 13:00	09/18/18 18:35	BG
Cobalt	03RE1	SW6010C	12.1 mg/kg dry		0.265	1	09/14/18 13:00	09/18/18 18:35	BG
Chromium	03RE1	SW6010C	21.0 mg/kg dry		0.664	1	09/14/18 13:00	09/18/18 18:35	BG
Copper	03RE1	SW6010C	12.8 mg/kg dry		3.32	1	09/14/18 13:00	09/18/18 18:35	BG
Iron	03RE3	SW6010C	33700 mg/kg dry		664	200	09/14/18 13:00	09/20/18 14:16	BG
Mercury	03	SW7471B	0.047 mg/kg dry		0.012	1	09/14/18 13:16	09/17/18 16:01	MWL
Potassium	03RE1	SW6010C	5910 mg/kg dry		33.2	1	09/14/18 13:00	09/18/18 18:35	BG
Magnesium	03	SW6010C	5680 mg/kg dry		66.4	20	09/14/18 13:00	09/18/18 16:55	BG
Manganese	03RE1	SW6010C	280 mg/kg dry		0.664	1	09/14/18 13:00	09/18/18 18:35	BG
Sodium	03RE1	SW6010C	43.2 mg/kg dry		33.2	1	09/14/18 13:00	09/18/18 18:35	BG
Nickel	03RE1	SW6010C	13.4 mg/kg dry		0.664	1	09/14/18 13:00	09/18/18 18:35	BG
Lead	03RE1	SW6010C	31.3 mg/kg dry		0.664	1	09/14/18 13:00	09/18/18 18:35	BG
Antimony	03RE1	SW6010C	<6.64 mg/kg dry		6.64	1	09/14/18 13:00	09/18/18 18:35	BG
Selenium	03RE1	SW6010C	<3.32 mg/kg dry		3.32	1	09/14/18 13:00	09/18/18 18:35	BG
Thallium	03RE1	SW6010C	<3.32 mg/kg dry		3.32	1	09/14/18 13:00	09/18/18 18:35	BG
Vanadium	03RE1	SW6010C	27.6 mg/kg dry		0.664	1	09/14/18 13:00	09/18/18 18:35	BG
Zinc	03RE1	SW6010C	117 mg/kg dry		0.664	1	09/14/18 13:00	09/18/18 18:35	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	03	SW8015C	<0.14 mg/kg dry		0.14	1	09/14/18 12:07	09/14/18 12:07	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S3

Laboratory Sample ID: 1810508-03

Grab Date/Time: 09/11/2018 15:02

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	03	SW8015C	81.1 %		80-120		09/14/18 12:07	09/14/18 12:07	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	03	SW8270D SIM	Not Detected			4	09/18/18 09:10	09/18/18 18:50	SKS
1,2,4,5-Tetrachlorobenzene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
1,2,4-Trichlorobenzene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
1,2-Dichlorobenzene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
1,2-Diphenylhydrazine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
1,3-Dichlorobenzene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
1,4-Dichlorobenzene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
1-Chloronaphthalene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
1-Naphthylamine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,3,4,6-Tetrachlorophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,4,5-Trichlorophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,4,6-Trichlorophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,4-Dichlorophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,4-Dimethylphenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,4-Dinitrophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,4-Dinitrotoluene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,6-Dichlorophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,6-Dinitrotoluene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2-Chloronaphthalene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2-Chlorophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2-Methylnaphthalene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2-Naphthylamine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S3

Laboratory Sample ID: 1810508-03

Grab Date/Time: 09/11/2018 15:02

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2-Nitrophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
3,3'-Dichlorobenzidine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
3-Methylcholanthrene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
3-Nitroaniline	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
4,6-Dinitro-2-methylphenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
4-Aminobiphenyl	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
4-Bromophenyl phenyl ether	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
4-Chloroaniline	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
4-Chlorophenyl phenyl ether	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
4-Nitroaniline	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
4-Nitrophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
7,12-Dimethylbenz (a) anthracene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Acenaphthene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Acenaphthylene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Acetophenone	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Aniline	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Anthracene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Benzidine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Benzo (a) anthracene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Benzo (a) pyrene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Benzo (b) fluoranthene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Benzo (g,h,i) perylene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Benzo (k) fluoranthene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Benzoic acid	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S3

Laboratory Sample ID: 1810508-03

Grab Date/Time: 09/11/2018 15:02

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
bis (2-Chloroethoxy) methane	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
bis (2-Chloroethyl) ether	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
2,2'-Oxybis (1-chloropropane)	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
bis (2-Ethylhexyl) phthalate	03	SW8270D	<454 ug/kg dry	C	454	4	09/18/18 09:10	09/18/18 18:50	SKS
Butyl benzyl phthalate	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Chrysene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Dibenz (a,h) anthracene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Dibenz (a,j) acridine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Dibenzofuran	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Diethyl phthalate	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Dimethyl phthalate	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Di-n-butyl phthalate	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Di-n-octyl phthalate	03	SW8270D	<454 ug/kg dry	C	454	4	09/18/18 09:10	09/18/18 18:50	SKS
Diphenylamine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Ethyl methanesulfonate	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Fluoranthene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Fluorene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Hexachlorobenzene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Hexachlorobutadiene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Hexachlorocyclopentadiene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Hexachloroethane	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Indeno (1,2,3-cd) pyrene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Isophorone	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
m+p-Cresols	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S3 **Laboratory Sample ID:** 1810508-03

Grab Date/Time: 09/11/2018 15:02

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Naphthalene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Nitrobenzene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
n-Nitrosodimethylamine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
n-Nitrosodi-n-butylamine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
n-Nitrosodi-n-propylamine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
n-Nitrosodiphenylamine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
n-Nitrosopiperidine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
o+m+p-Cresols	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
o-Cresol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
p-(Dimethylamino) azobenzene	03	SW8270D	<454 ug/kg dry	C	454	4	09/18/18 09:10	09/18/18 18:50	SKS
p-Chloro-m-cresol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Pentachloronitrobenzene (quintozene)	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Pentachlorophenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Phenacetin	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Phenanthrene	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Phenol	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Pronamide	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Pyrene	03	SW8270D	<454 ug/kg dry	C	454	4	09/18/18 09:10	09/18/18 18:50	SKS
Pyridine	03	SW8270D	<454 ug/kg dry		454	4	09/18/18 09:10	09/18/18 18:50	SKS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270D	75.1 %		35-125		09/18/18 09:10	09/18/18 18:50	SKS
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270D	60.8 %		45-105		09/18/18 09:10	09/18/18 18:50	SKS
Surr: 2-Fluorophenol (Surr)	03	SW8270D	57.6 %		35-105		09/18/18 09:10	09/18/18 18:50	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S3	Laboratory Sample ID: 1810508-03
Grab Date/Time: 09/11/2018 15:02	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	03	SW8270D	69.3 %		35-100		09/18/18 09:10	09/18/18 18:50	SKS
Surr: Phenol-d5 (Surr)	03	SW8270D	62.0 %		40-100		09/18/18 09:10	09/18/18 18:50	SKS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270D	69.7 %		30-125		09/18/18 09:10	09/18/18 18:50	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03	SW8015C	<13.9 mg/kg dry		13.9	1	09/20/18 15:48	09/21/18 19:49	CVH
Surr: Pentacosane (Surr)	03	SW8015C	48.6 %		40-160		09/20/18 15:48	09/21/18 19:49	CVH
TPH-Semi-Volatiles (ORO)	03	SW8015C	<14.2 mg/kg dry		14.2	1	09/19/18 14:15	09/20/18 20:21	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 20:10	HLM
PCB as Aroclor 1221	03	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 20:10	HLM
PCB as Aroclor 1232	03	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 20:10	HLM
PCB as Aroclor 1242	03	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 20:10	HLM
PCB as Aroclor 1248	03	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 20:10	HLM
PCB as Aroclor 1254	03	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 20:10	HLM
PCB as Aroclor 1260	03	SW8082A	<0.136 mg/kg dry		0.136	1	09/19/18 09:02	09/21/18 20:10	HLM
Surr: DCB	03	SW8082A	65.0 %		30-105		09/19/18 09:02	09/21/18 20:10	HLM
Surr: TCMX	03	SW8082A	85.0 %		30-105		09/19/18 09:02	09/21/18 20:10	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	03	SW7196A	<0.29 mg/kg dry		0.29	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	03	SM18 2540G	69.1 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S4 **Laboratory Sample ID:** 1810508-04

Grab Date/Time: 09/11/2018 15:09

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04RE1	SW6010C	<0.553 mg/kg dry	0.553	1	09/14/18 13:00	09/18/18 18:38	BG	
Aluminum	04	SW6010C	11600 mg/kg dry	55.3	20	09/14/18 13:00	09/18/18 16:58	BG	
Arsenic	04RE1	SW6010C	2.07 mg/kg dry	1.11	1	09/14/18 13:00	09/18/18 18:38	BG	
Barium	04RE1	SW6010C	53.8 mg/kg dry	0.553	1	09/14/18 13:00	09/18/18 18:38	BG	
Beryllium	04RE1	SW6010C	0.918 mg/kg dry	0.221	1	09/14/18 13:00	09/18/18 18:38	BG	
Calcium	04RE2	SW6010C	133000 mg/kg dry	1110	200	09/14/18 13:00	09/19/18 16:18	BG	
Cadmium	04RE1	SW6010C	0.302 mg/kg dry	0.221	1	09/14/18 13:00	09/18/18 18:38	BG	
Cobalt	04RE1	SW6010C	8.23 mg/kg dry	0.221	1	09/14/18 13:00	09/18/18 18:38	BG	
Chromium	04RE1	SW6010C	13.5 mg/kg dry	0.553	1	09/14/18 13:00	09/18/18 18:38	BG	
Copper	04RE1	SW6010C	10.9 mg/kg dry	2.76	1	09/14/18 13:00	09/18/18 18:38	BG	
Iron	04	SW6010C	16800 mg/kg dry	55.3	20	09/14/18 13:00	09/18/18 16:58	BG	
Mercury	04	SW7471B	<0.009 mg/kg dry	0.009	1	09/14/18 13:16	09/17/18 16:03	MWL	
Potassium	04RE1	SW6010C	3840 mg/kg dry	27.6	1	09/14/18 13:00	09/18/18 18:38	BG	
Magnesium	04	SW6010C	11300 mg/kg dry	55.3	20	09/14/18 13:00	09/18/18 16:58	BG	
Manganese	04RE1	SW6010C	200 mg/kg dry	0.553	1	09/14/18 13:00	09/18/18 18:38	BG	
Sodium	04RE1	SW6010C	59.9 mg/kg dry	27.6	1	09/14/18 13:00	09/18/18 18:38	BG	
Nickel	04RE1	SW6010C	14.1 mg/kg dry	0.553	1	09/14/18 13:00	09/18/18 18:38	BG	
Lead	04RE1	SW6010C	99.5 mg/kg dry	0.553	1	09/14/18 13:00	09/18/18 18:38	BG	
Antimony	04RE1	SW6010C	<5.53 mg/kg dry	5.53	1	09/14/18 13:00	09/18/18 18:38	BG	
Selenium	04RE1	SW6010C	<2.76 mg/kg dry	2.76	1	09/14/18 13:00	09/18/18 18:38	BG	
Thallium	04RE1	SW6010C	<2.76 mg/kg dry	2.76	1	09/14/18 13:00	09/18/18 18:38	BG	
Vanadium	04RE1	SW6010C	18.1 mg/kg dry	0.553	1	09/14/18 13:00	09/18/18 18:38	BG	
Zinc	04RE1	SW6010C	73.8 mg/kg dry	0.553	1	09/14/18 13:00	09/18/18 18:38	BG	

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	04	SW8015C	<0.11 mg/kg dry	0.11	1	09/14/18 12:30	09/14/18 12:30	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S4

Laboratory Sample ID: 1810508-04

Grab Date/Time: 09/11/2018 15:09

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	04	SW8015C	73.9 %	S	80-120		09/14/18 12:30	09/14/18 12:30	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	04	SW8270D SIM	Not Detected			1	09/18/18 09:10	09/18/18 19:22	SKS
1,2,4,5-Tetrachlorobenzene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
1,2,4-Trichlorobenzene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
1,2-Dichlorobenzene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
1,2-Diphenylhydrazine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
1,3-Dichlorobenzene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
1,4-Dichlorobenzene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
1-Chloronaphthalene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
1-Naphthylamine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,3,4,6-Tetrachlorophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,4,5-Trichlorophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,4,6-Trichlorophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,4-Dichlorophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,4-Dimethylphenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,4-Dinitrophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,4-Dinitrotoluene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,6-Dichlorophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,6-Dinitrotoluene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2-Chloronaphthalene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2-Chlorophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2-Methylnaphthalene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2-Naphthylamine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S4

Laboratory Sample ID: 1810508-04

Grab Date/Time: 09/11/2018 15:09

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2-Nitrophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
3,3'-Dichlorobenzidine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
3-Methylcholanthrene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
3-Nitroaniline	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
4,6-Dinitro-2-methylphenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
4-Aminobiphenyl	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
4-Bromophenyl phenyl ether	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
4-Chloroaniline	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
4-Chlorophenyl phenyl ether	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
4-Nitroaniline	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
4-Nitrophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
7,12-Dimethylbenz (a) anthracene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Acenaphthene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Acenaphthylene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Acetophenone	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Aniline	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Anthracene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Benzidine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Benzo (a) anthracene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Benzo (a) pyrene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Benzo (b) fluoranthene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Benzo (g,h,i) perylene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Benzo (k) fluoranthene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Benzoic acid	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S4

Laboratory Sample ID: 1810508-04

Grab Date/Time: 09/11/2018 15:09

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
bis (2-Chloroethoxy) methane	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
bis (2-Chloroethyl) ether	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
2,2'-Oxybis (1-chloropropane)	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
bis (2-Ethylhexyl) phthalate	04	SW8270D	<89.1 ug/kg dry	C	89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Butyl benzyl phthalate	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Chrysene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Dibenz (a,h) anthracene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Dibenz (a,j) acridine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Dibenzofuran	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Diethyl phthalate	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Dimethyl phthalate	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Di-n-butyl phthalate	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Di-n-octyl phthalate	04	SW8270D	<89.1 ug/kg dry	C	89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Diphenylamine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Ethyl methanesulfonate	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Fluoranthene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Fluorene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Hexachlorobenzene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Hexachlorobutadiene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Hexachlorocyclopentadiene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Hexachloroethane	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Indeno (1,2,3-cd) pyrene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Isophorone	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
m+p-Cresols	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S4

Laboratory Sample ID: 1810508-04

Grab Date/Time: 09/11/2018 15:09

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Naphthalene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Nitrobenzene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
n-Nitrosodimethylamine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
n-Nitrosodi-n-butylamine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
n-Nitrosodi-n-propylamine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
n-Nitrosodiphenylamine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
n-Nitrosopiperidine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
o+m+p-Cresols	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
o-Cresol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
p-(Dimethylamino) azobenzene	04	SW8270D	<89.1 ug/kg dry	C	89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
p-Chloro-m-cresol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Pentachloronitrobenzene (quintozene)	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Pentachlorophenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Phenacetin	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Phenanthrene	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Phenol	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Pronamide	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Pyrene	04	SW8270D	<89.1 ug/kg dry	C	89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Pyridine	04	SW8270D	<89.1 ug/kg dry		89.1	1	09/18/18 09:10	09/18/18 19:22	SKS
Surr: 2,4,6-Tribromophenol (Surr)	04	SW8270D	63.0 %		35-125		09/18/18 09:10	09/18/18 19:22	SKS
Surr: 2-Fluorobiphenyl (Surr)	04	SW8270D	59.1 %		45-105		09/18/18 09:10	09/18/18 19:22	SKS
Surr: 2-Fluorophenol (Surr)	04	SW8270D	49.6 %		35-105		09/18/18 09:10	09/18/18 19:22	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S4	Laboratory Sample ID: 1810508-04
Grab Date/Time: 09/11/2018 15:09	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	04	SW8270D	51.6 %		35-100		09/18/18 09:10	09/18/18 19:22	SKS
Surr: Phenol-d5 (Surr)	04	SW8270D	48.4 %		40-100		09/18/18 09:10	09/18/18 19:22	SKS
Surr: p-Terphenyl-d14 (Surr)	04	SW8270D	55.0 %		30-125		09/18/18 09:10	09/18/18 19:22	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04	SW8015C	<10.7 mg/kg dry		10.7	1	09/20/18 15:48	09/21/18 20:14	CVH
Surr: Pentacosane (Surr)	04	SW8015C	47.5 %		40-160		09/20/18 15:48	09/21/18 20:14	CVH
TPH-Semi-Volatiles (ORO)	04	SW8015C	19.4 mg/kg dry		11.1	1	09/19/18 14:15	09/20/18 20:46	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	04	SW8082A	<0.110 mg/kg dry		0.110	1	09/19/18 09:02	09/21/18 20:31	HLM
PCB as Aroclor 1221	04	SW8082A	<0.110 mg/kg dry		0.110	1	09/19/18 09:02	09/21/18 20:31	HLM
PCB as Aroclor 1232	04	SW8082A	<0.110 mg/kg dry		0.110	1	09/19/18 09:02	09/21/18 20:31	HLM
PCB as Aroclor 1242	04	SW8082A	<0.110 mg/kg dry		0.110	1	09/19/18 09:02	09/21/18 20:31	HLM
PCB as Aroclor 1248	04	SW8082A	<0.110 mg/kg dry		0.110	1	09/19/18 09:02	09/21/18 20:31	HLM
PCB as Aroclor 1254	04	SW8082A	<0.110 mg/kg dry		0.110	1	09/19/18 09:02	09/21/18 20:31	HLM
PCB as Aroclor 1260	04	SW8082A	<0.110 mg/kg dry		0.110	1	09/19/18 09:02	09/21/18 20:31	HLM
Surr: DCB	04	SW8082A	60.0 %		30-105		09/19/18 09:02	09/21/18 20:31	HLM
Surr: TCMX	04	SW8082A	75.0 %		30-105		09/19/18 09:02	09/21/18 20:31	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	04	SW7196A	<0.23 mg/kg dry		0.23	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	04	SM18 2540G	87.9 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S5

Laboratory Sample ID: 1810508-05

Grab Date/Time: 09/11/2018 15:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05RE1	SW6010C	<0.654 mg/kg dry		0.654	1	09/14/18 13:00	09/18/18 18:51	BG
Aluminum	05	SW6010C	20000 mg/kg dry		65.4	20	09/14/18 13:00	09/18/18 17:00	BG
Arsenic	05RE1	SW6010C	5.01 mg/kg dry		1.31	1	09/14/18 13:00	09/18/18 18:51	BG
Barium	05RE1	SW6010C	135 mg/kg dry		0.654	1	09/14/18 13:00	09/18/18 18:51	BG
Beryllium	05RE1	SW6010C	2.46 mg/kg dry		0.262	1	09/14/18 13:00	09/18/18 18:51	BG
Calcium	05	SW6010C	6970 mg/kg dry		131	20	09/14/18 13:00	09/18/18 17:00	BG
Cadmium	05RE1	SW6010C	1.32 mg/kg dry		0.262	1	09/14/18 13:00	09/18/18 18:51	BG
Cobalt	05RE1	SW6010C	17.8 mg/kg dry		0.262	1	09/14/18 13:00	09/18/18 18:51	BG
Chromium	05RE1	SW6010C	18.9 mg/kg dry		0.654	1	09/14/18 13:00	09/18/18 18:51	BG
Copper	05RE1	SW6010C	18.4 mg/kg dry		3.27	1	09/14/18 13:00	09/18/18 18:51	BG
Iron	05RE3	SW6010C	30400 mg/kg dry		654	200	09/14/18 13:00	09/20/18 14:18	BG
Mercury	05	SW7471B	0.068 mg/kg dry		0.011	1	09/14/18 13:16	09/17/18 16:06	MWL
Potassium	05RE1	SW6010C	4680 mg/kg dry		32.7	1	09/14/18 13:00	09/18/18 18:51	BG
Magnesium	05	SW6010C	5000 mg/kg dry		65.4	20	09/14/18 13:00	09/18/18 17:00	BG
Manganese	05RE1	SW6010C	277 mg/kg dry		0.654	1	09/14/18 13:00	09/18/18 18:51	BG
Sodium	05RE1	SW6010C	80.0 mg/kg dry		32.7	1	09/14/18 13:00	09/18/18 18:51	BG
Nickel	05RE1	SW6010C	16.1 mg/kg dry		0.654	1	09/14/18 13:00	09/18/18 18:51	BG
Lead	05RE1	SW6010C	60.6 mg/kg dry		0.654	1	09/14/18 13:00	09/18/18 18:51	BG
Antimony	05RE1	SW6010C	<6.54 mg/kg dry		6.54	1	09/14/18 13:00	09/18/18 18:51	BG
Selenium	05RE1	SW6010C	<3.27 mg/kg dry		3.27	1	09/14/18 13:00	09/18/18 18:51	BG
Thallium	05RE1	SW6010C	<3.27 mg/kg dry		3.27	1	09/14/18 13:00	09/18/18 18:51	BG
Vanadium	05RE1	SW6010C	32.7 mg/kg dry		0.654	1	09/14/18 13:00	09/18/18 18:51	BG
Zinc	05RE1	SW6010C	141 mg/kg dry		0.654	1	09/14/18 13:00	09/18/18 18:51	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	05	SW8015C	<0.14 mg/kg dry		0.14	1	09/14/18 12:52	09/14/18 12:52	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S5

Laboratory Sample ID: 1810508-05

Grab Date/Time: 09/11/2018 15:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	05	SW8015C	75.4 %	S	80-120		09/14/18 12:52	09/14/18 12:52	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	05	SW8270D SIM	Not Detected			2	09/18/18 12:53	09/18/18 19:53	SKS
1,2,4,5-Tetrachlorobenzene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
1,2,4-Trichlorobenzene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
1,2-Dichlorobenzene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
1,2-Diphenylhydrazine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
1,3-Dichlorobenzene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
1,4-Dichlorobenzene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
1-Chloronaphthalene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
1-Naphthylamine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,3,4,6-Tetrachlorophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,4,5-Trichlorophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,4,6-Trichlorophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,4-Dichlorophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,4-Dimethylphenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,4-Dinitrophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,4-Dinitrotoluene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,6-Dichlorophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,6-Dinitrotoluene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2-Chloronaphthalene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2-Chlorophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2-Methylnaphthalene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2-Naphthylamine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S5

Laboratory Sample ID: 1810508-05

Grab Date/Time: 09/11/2018 15:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2-Nitrophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
3,3'-Dichlorobenzidine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
3-Methylcholanthrene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
3-Nitroaniline	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
4,6-Dinitro-2-methylphenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
4-Aminobiphenyl	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
4-Bromophenyl phenyl ether	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
4-Chloroaniline	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
4-Chlorophenyl phenyl ether	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
4-Nitroaniline	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
4-Nitrophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
7,12-Dimethylbenz (a) anthracene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Acenaphthene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Acenaphthylene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Acetophenone	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Aniline	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Anthracene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Benzidine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Benzo (a) anthracene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Benzo (a) pyrene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Benzo (b) fluoranthene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Benzo (g,h,i) perylene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Benzo (k) fluoranthene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Benzoic acid	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S5

Laboratory Sample ID: 1810508-05

Grab Date/Time: 09/11/2018 15:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
bis (2-Chloroethoxy) methane	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
bis (2-Chloroethyl) ether	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
2,2'-Oxybis (1-chloropropane)	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
bis (2-Ethylhexyl) phthalate	05	SW8270D	<231 ug/kg dry	C	231	2	09/18/18 12:53	09/18/18 19:53	SKS
Butyl benzyl phthalate	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Chrysene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Dibenz (a,h) anthracene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Dibenz (a,j) acridine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Dibenzofuran	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Diethyl phthalate	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Dimethyl phthalate	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Di-n-butyl phthalate	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Di-n-octyl phthalate	05	SW8270D	<231 ug/kg dry	C	231	2	09/18/18 12:53	09/18/18 19:53	SKS
Diphenylamine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Ethyl methanesulfonate	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Fluoranthene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Fluorene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Hexachlorobenzene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Hexachlorobutadiene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Hexachlorocyclopentadiene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Hexachloroethane	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Indeno (1,2,3-cd) pyrene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Isophorone	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
m+p-Cresols	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S5

Laboratory Sample ID: 1810508-05

Grab Date/Time: 09/11/2018 15:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Naphthalene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Nitrobenzene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
n-Nitrosodimethylamine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
n-Nitrosodi-n-butylamine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
n-Nitrosodi-n-propylamine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
n-Nitrosodiphenylamine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
n-Nitrosopiperidine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
o+m+p-Cresols	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
o-Cresol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
p-(Dimethylamino) azobenzene	05	SW8270D	<231 ug/kg dry	C	231	2	09/18/18 12:53	09/18/18 19:53	SKS
p-Chloro-m-cresol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Pentachloronitrobenzene (quintozene)	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Pentachlorophenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Phenacetin	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Phenanthrene	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Phenol	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Pronamide	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Pyrene	05	SW8270D	<231 ug/kg dry	C	231	2	09/18/18 12:53	09/18/18 19:53	SKS
Pyridine	05	SW8270D	<231 ug/kg dry		231	2	09/18/18 12:53	09/18/18 19:53	SKS
Surr: 2,4,6-Tribromophenol (Surr)	05	SW8270D	67.4 %		35-125		09/18/18 12:53	09/18/18 19:53	SKS
Surr: 2-Fluorobiphenyl (Surr)	05	SW8270D	63.8 %		45-105		09/18/18 12:53	09/18/18 19:53	SKS
Surr: 2-Fluorophenol (Surr)	05	SW8270D	50.8 %		35-105		09/18/18 12:53	09/18/18 19:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S5	Laboratory Sample ID: 1810508-05
Grab Date/Time: 09/11/2018 15:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	05	SW8270D	60.2 %		35-100		09/18/18 12:53	09/18/18 19:53	SKS
Surr: Phenol-d5 (Surr)	05	SW8270D	50.0 %		40-100		09/18/18 12:53	09/18/18 19:53	SKS
Surr: p-Terphenyl-d14 (Surr)	05	SW8270D	55.9 %		30-125		09/18/18 12:53	09/18/18 19:53	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05	SW8015C	13.4 mg/kg dry		13.1	1	09/20/18 15:48	09/21/18 20:40	CVH
Surr: Pentacosane (Surr)	05	SW8015C	55.0 %		40-160		09/20/18 15:48	09/21/18 20:40	CVH
TPH-Semi-Volatiles (ORO)	05	SW8015C	14.8 mg/kg dry		13.9	1	09/19/18 14:54	09/20/18 23:14	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	05	SW8082A	<0.132 mg/kg dry		0.132	1	09/24/18 13:17	09/25/18 15:47	HLM
PCB as Aroclor 1221	05	SW8082A	<0.132 mg/kg dry		0.132	1	09/24/18 13:17	09/25/18 15:47	HLM
PCB as Aroclor 1232	05	SW8082A	<0.132 mg/kg dry		0.132	1	09/24/18 13:17	09/25/18 15:47	HLM
PCB as Aroclor 1242	05	SW8082A	<0.132 mg/kg dry		0.132	1	09/24/18 13:17	09/25/18 15:47	HLM
PCB as Aroclor 1248	05	SW8082A	<0.132 mg/kg dry		0.132	1	09/24/18 13:17	09/25/18 15:47	HLM
PCB as Aroclor 1254	05	SW8082A	<0.132 mg/kg dry		0.132	1	09/24/18 13:17	09/25/18 15:47	HLM
PCB as Aroclor 1260	05	SW8082A	<0.132 mg/kg dry		0.132	1	09/24/18 13:17	09/25/18 15:47	HLM
Surr: DCB	05	SW8082A	70.0 %		30-105		09/24/18 13:17	09/25/18 15:47	HLM
Surr: TCMX	05	SW8082A	65.0 %		30-105		09/24/18 13:17	09/25/18 15:47	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	05	SW7196A	<0.28 mg/kg dry		0.28	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	05	SM18 2540G	71.9 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S6	Laboratory Sample ID: 1810508-06
Grab Date/Time: 09/11/2018 15:20	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06RE2	SW6010C	<0.714 mg/kg dry		0.714	1	09/14/18 13:00	09/20/18 17:06	BG
Aluminum	06RE1	SW6010C	24000 mg/kg dry		71.4	20	09/14/18 13:00	09/20/18 16:18	BG
Arsenic	06RE2	SW6010C	4.43 mg/kg dry		1.43	1	09/14/18 13:00	09/20/18 17:06	BG
Barium	06RE2	SW6010C	140 mg/kg dry		0.714	1	09/14/18 13:00	09/20/18 17:06	BG
Beryllium	06RE2	SW6010C	1.77 mg/kg dry		0.286	1	09/14/18 13:00	09/20/18 17:06	BG
Calcium	06RE1	SW6010C	3810 mg/kg dry		143	20	09/14/18 13:00	09/20/18 16:18	BG
Cadmium	06RE2	SW6010C	3.30 mg/kg dry		0.286	1	09/14/18 13:00	09/20/18 17:06	BG
Cobalt	06RE2	SW6010C	9.37 mg/kg dry		0.286	1	09/14/18 13:00	09/20/18 17:06	BG
Chromium	06RE2	SW6010C	20.7 mg/kg dry		0.714	1	09/14/18 13:00	09/20/18 17:06	BG
Copper	06RE2	SW6010C	37.7 mg/kg dry		3.57	1	09/14/18 13:00	09/20/18 17:06	BG
Iron	06	SW6010C	30700 mg/kg dry		357	100	09/14/18 13:00	09/20/18 15:40	BG
Mercury	06RE2	SW7471B	0.319 mg/kg dry		0.023	2	09/14/18 14:29	09/24/18 10:48	MWL
Potassium	06RE2	SW6010C	4320 mg/kg dry		35.7	1	09/14/18 13:00	09/20/18 17:06	BG
Magnesium	06RE1	SW6010C	4100 mg/kg dry		71.4	20	09/14/18 13:00	09/20/18 16:18	BG
Manganese	06RE2	SW6010C	289 mg/kg dry		0.714	1	09/14/18 13:00	09/20/18 17:06	BG
Sodium	06RE2	SW6010C	52.5 mg/kg dry		35.7	1	09/14/18 13:00	09/20/18 17:06	BG
Nickel	06RE2	SW6010C	24.4 mg/kg dry		0.714	1	09/14/18 13:00	09/20/18 17:06	BG
Lead	06RE2	SW6010C	81.8 mg/kg dry		0.714	1	09/14/18 13:00	09/20/18 17:06	BG
Antimony	06RE2	SW6010C	<7.14 mg/kg dry		7.14	1	09/14/18 13:00	09/20/18 17:06	BG
Selenium	06RE2	SW6010C	<3.57 mg/kg dry		3.57	1	09/14/18 13:00	09/20/18 17:06	BG
Thallium	06RE2	SW6010C	<3.57 mg/kg dry		3.57	1	09/14/18 13:00	09/20/18 17:06	BG
Vanadium	06RE2	SW6010C	37.1 mg/kg dry		0.714	1	09/14/18 13:00	09/20/18 17:06	BG
Zinc	06RE2	SW6010C	436 mg/kg dry		0.714	1	09/14/18 13:00	09/20/18 17:06	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	06	SW8015C	0.28 mg/kg dry		0.14	1	09/14/18 14:24	09/14/18 14:24	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S6

Laboratory Sample ID: 1810508-06

Grab Date/Time: 09/11/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
Surr: 2,5-Dibromotoluene (Surr FID)	06	SW8015C	89.4 %		80-120		09/14/18 14:24	09/14/18 14:24	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	06	SW8270D SIM	Not Detected			4	09/18/18 12:53	09/18/18 20:25	SKS
1,2,4,5-Tetrachlorobenzene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
1,2,4-Trichlorobenzene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
1,2-Dichlorobenzene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
1,2-Diphenylhydrazine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
1,3-Dichlorobenzene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
1,4-Dichlorobenzene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
1-Chloronaphthalene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
1-Naphthylamine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,3,4,6-Tetrachlorophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,4,5-Trichlorophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,4,6-Trichlorophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,4-Dichlorophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,4-Dimethylphenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,4-Dinitrophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,4-Dinitrotoluene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,6-Dichlorophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,6-Dinitrotoluene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2-Chloronaphthalene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2-Chlorophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2-Methylnaphthalene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2-Naphthylamine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S6

Laboratory Sample ID: 1810508-06

Grab Date/Time: 09/11/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2-Nitrophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
3,3'-Dichlorobenzidine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
3-Methylcholanthrene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
3-Nitroaniline	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
4,6-Dinitro-2-methylphenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
4-Aminobiphenyl	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
4-Bromophenyl phenyl ether	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
4-Chloroaniline	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
4-Chlorophenyl phenyl ether	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
4-Nitroaniline	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
4-Nitrophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
7,12-Dimethylbenz (a) anthracene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Acenaphthene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Acenaphthylene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Acetophenone	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Aniline	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Anthracene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Benzidine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Benzo (a) anthracene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Benzo (a) pyrene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Benzo (b) fluoranthene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Benzo (g,h,i) perylene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Benzo (k) fluoranthene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Benzoic acid	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S6

Laboratory Sample ID: 1810508-06

Grab Date/Time: 09/11/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
bis (2-Chloroethoxy) methane	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
bis (2-Chloroethyl) ether	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
2,2'-Oxybis (1-chloropropane)	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
bis (2-Ethylhexyl) phthalate	06	SW8270D	<476 ug/kg dry	C	476	4	09/18/18 12:53	09/18/18 20:25	SKS
Butyl benzyl phthalate	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Chrysene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Dibenz (a,h) anthracene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Dibenz (a,j) acridine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Dibenzofuran	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Diethyl phthalate	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Dimethyl phthalate	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Di-n-butyl phthalate	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Di-n-octyl phthalate	06	SW8270D	<476 ug/kg dry	C	476	4	09/18/18 12:53	09/18/18 20:25	SKS
Diphenylamine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Ethyl methanesulfonate	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Fluoranthene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Fluorene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Hexachlorobenzene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Hexachlorobutadiene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Hexachlorocyclopentadiene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Hexachloroethane	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Indeno (1,2,3-cd) pyrene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Isophorone	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
m+p-Cresols	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S6

Laboratory Sample ID: 1810508-06

Grab Date/Time: 09/11/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Naphthalene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Nitrobenzene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
n-Nitrosodimethylamine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
n-Nitrosodi-n-butylamine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
n-Nitrosodi-n-propylamine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
n-Nitrosodiphenylamine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
n-Nitrosopiperidine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
o+m+p-Cresols	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
o-Cresol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
p-(Dimethylamino) azobenzene	06	SW8270D	<476 ug/kg dry	C	476	4	09/18/18 12:53	09/18/18 20:25	SKS
p-Chloro-m-cresol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Pentachloronitrobenzene (quintozene)	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Pentachlorophenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Phenacetin	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Phenanthrene	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Phenol	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Pronamide	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Pyrene	06	SW8270D	<476 ug/kg dry	C	476	4	09/18/18 12:53	09/18/18 20:25	SKS
Pyridine	06	SW8270D	<476 ug/kg dry		476	4	09/18/18 12:53	09/18/18 20:25	SKS
Surr: 2,4,6-Tribromophenol (Surr)	06	SW8270D	79.0 %		35-125		09/18/18 12:53	09/18/18 20:25	SKS
Surr: 2-Fluorobiphenyl (Surr)	06	SW8270D	67.4 %		45-105		09/18/18 12:53	09/18/18 20:25	SKS
Surr: 2-Fluorophenol (Surr)	06	SW8270D	64.4 %		35-105		09/18/18 12:53	09/18/18 20:25	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S6	Laboratory Sample ID: 1810508-06
Grab Date/Time: 09/11/2018 15:20	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	06	SW8270D	73.3 %		35-100		09/18/18 12:53	09/18/18 20:25	SKS
Surr: Phenol-d5 (Surr)	06	SW8270D	64.1 %		40-100		09/18/18 12:53	09/18/18 20:25	SKS
Surr: p-Terphenyl-d14 (Surr)	06	SW8270D	75.3 %		30-125		09/18/18 12:53	09/18/18 20:25	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	06	SW8015C	14.4 mg/kg dry		13.8	1	09/20/18 15:48	09/21/18 21:06	CVH
Surr: Pentacosane (Surr)	06	SW8015C	53.5 %		40-160		09/20/18 15:48	09/21/18 21:06	CVH
TPH-Semi-Volatiles (ORO)	06	SW8015C	15.0 mg/kg dry		14.2	1	09/19/18 14:54	09/20/18 23:38	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	06	SW8082A	<0.134 mg/kg dry		0.134	1	09/24/18 13:17	09/25/18 16:09	HLM
PCB as Aroclor 1221	06	SW8082A	<0.134 mg/kg dry		0.134	1	09/24/18 13:17	09/25/18 16:09	HLM
PCB as Aroclor 1232	06	SW8082A	<0.134 mg/kg dry		0.134	1	09/24/18 13:17	09/25/18 16:09	HLM
PCB as Aroclor 1242	06	SW8082A	<0.134 mg/kg dry		0.134	1	09/24/18 13:17	09/25/18 16:09	HLM
PCB as Aroclor 1248	06	SW8082A	<0.134 mg/kg dry		0.134	1	09/24/18 13:17	09/25/18 16:09	HLM
PCB as Aroclor 1254	06	SW8082A	0.227 mg/kg dry		0.134	1	09/24/18 13:17	09/25/18 16:09	HLM
PCB as Aroclor 1260	06	SW8082A	0.134 mg/kg dry		0.134	1	09/24/18 13:17	09/25/18 16:09	HLM
Surr: DCB	06	SW8082A	75.0 %		30-105		09/24/18 13:17	09/25/18 16:09	HLM
Surr: TCMX	06	SW8082A	90.0 %		30-105		09/24/18 13:17	09/25/18 16:09	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	06	SW7196A	<0.28 mg/kg dry		0.28	1	09/24/18 09:00	09/26/18 11:44	MWL
Percent Solids	06	SM18 2540G	69.1 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S7

Laboratory Sample ID: 1810508-07

Grab Date/Time: 09/11/2018 15:42

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	07RE2	SW6010C	<0.541 mg/kg dry		0.541	1	09/14/18 13:00	09/20/18 17:22	BG
Aluminum	07	SW6010C	52200 mg/kg dry		271	100	09/14/18 13:00	09/20/18 15:47	BG
Arsenic	07RE2	SW6010C	4.02 mg/kg dry		1.08	1	09/14/18 13:00	09/20/18 17:22	BG
Barium	07RE2	SW6010C	94.8 mg/kg dry		0.541	1	09/14/18 13:00	09/20/18 17:22	BG
Beryllium	07RE2	SW6010C	1.92 mg/kg dry		0.216	1	09/14/18 13:00	09/20/18 17:22	BG
Calcium	07RE1	SW6010C	1620 mg/kg dry		108	20	09/14/18 13:00	09/20/18 16:26	BG
Cadmium	07RE2	SW6010C	1.18 mg/kg dry		0.216	1	09/14/18 13:00	09/20/18 17:22	BG
Cobalt	07RE2	SW6010C	9.22 mg/kg dry		0.216	1	09/14/18 13:00	09/20/18 17:22	BG
Chromium	07RE2	SW6010C	31.0 mg/kg dry		0.541	1	09/14/18 13:00	09/20/18 17:22	BG
Copper	07RE2	SW6010C	10.8 mg/kg dry		2.71	1	09/14/18 13:00	09/20/18 17:22	BG
Iron	07	SW6010C	46700 mg/kg dry		271	100	09/14/18 13:00	09/20/18 15:47	BG
Mercury	07RE1	SW7471B	0.045 mg/kg dry		0.014	1	09/14/18 14:29	09/24/18 09:36	MWL
Potassium	07RE2	SW6010C	4350 mg/kg dry		27.1	1	09/14/18 13:00	09/20/18 17:22	BG
Magnesium	07RE1	SW6010C	4900 mg/kg dry		54.1	20	09/14/18 13:00	09/20/18 16:26	BG
Manganese	07RE2	SW6010C	192 mg/kg dry		0.541	1	09/14/18 13:00	09/20/18 17:22	BG
Sodium	07RE2	SW6010C	35.8 mg/kg dry		27.1	1	09/14/18 13:00	09/20/18 17:22	BG
Nickel	07RE2	SW6010C	14.1 mg/kg dry		0.541	1	09/14/18 13:00	09/20/18 17:22	BG
Lead	07RE2	SW6010C	15.3 mg/kg dry		0.541	1	09/14/18 13:00	09/20/18 17:22	BG
Antimony	07RE2	SW6010C	<5.41 mg/kg dry		5.41	1	09/14/18 13:00	09/20/18 17:22	BG
Selenium	07RE2	SW6010C	<2.71 mg/kg dry		2.71	1	09/14/18 13:00	09/20/18 17:22	BG
Thallium	07RE2	SW6010C	<2.71 mg/kg dry		2.71	1	09/14/18 13:00	09/20/18 17:22	BG
Vanadium	07RE2	SW6010C	52.8 mg/kg dry		0.541	1	09/14/18 13:00	09/20/18 17:22	BG
Zinc	07RE2	SW6010C	85.7 mg/kg dry		0.541	1	09/14/18 13:00	09/20/18 17:22	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	07	SW8015C	<0.17 mg/kg dry		0.17	1	09/14/18 14:47	09/14/18 14:47	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S7

Laboratory Sample ID: 1810508-07

Grab Date/Time: 09/11/2018 15:42

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	07	SW8015C	91.0 %		80-120		09/14/18 14:47	09/14/18 14:47	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	07	SW8270D SIM	Not Detected			1	09/18/18 12:53	09/18/18 20:57	SKS
1,2,4,5-Tetrachlorobenzene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
1,2,4-Trichlorobenzene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
1,2-Dichlorobenzene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
1,2-Diphenylhydrazine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
1,3-Dichlorobenzene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
1,4-Dichlorobenzene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
1-Chloronaphthalene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
1-Naphthylamine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,3,4,6-Tetrachlorophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,4,5-Trichlorophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,4,6-Trichlorophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,4-Dichlorophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,4-Dimethylphenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,4-Dinitrophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,4-Dinitrotoluene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,6-Dichlorophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,6-Dinitrotoluene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2-Chloronaphthalene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2-Chlorophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2-Methylnaphthalene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2-Naphthylamine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S7

Laboratory Sample ID: 1810508-07

Grab Date/Time: 09/11/2018 15:42

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2-Nitrophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
3,3'-Dichlorobenzidine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
3-Methylcholanthrene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
3-Nitroaniline	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
4,6-Dinitro-2-methylphenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
4-Aminobiphenyl	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
4-Bromophenyl phenyl ether	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
4-Chloroaniline	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
4-Chlorophenyl phenyl ether	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
4-Nitroaniline	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
4-Nitrophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
7,12-Dimethylbenz (a) anthracene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Acenaphthene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Acenaphthylene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Acetophenone	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Aniline	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Anthracene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Benzidine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Benzo (a) anthracene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Benzo (a) pyrene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Benzo (b) fluoranthene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Benzo (g,h,i) perylene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Benzo (k) fluoranthene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Benzoic acid	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S7

Laboratory Sample ID: 1810508-07

Grab Date/Time: 09/11/2018 15:42

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
bis (2-Chloroethoxy) methane	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
bis (2-Chloroethyl) ether	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
2,2'-Oxybis (1-chloropropane)	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
bis (2-Ethylhexyl) phthalate	07	SW8270D	<130 ug/kg dry	C	130	1	09/18/18 12:53	09/18/18 20:57	SKS
Butyl benzyl phthalate	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Chrysene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Dibenz (a,h) anthracene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Dibenz (a,j) acridine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Dibenzofuran	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Diethyl phthalate	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Dimethyl phthalate	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Di-n-butyl phthalate	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Di-n-octyl phthalate	07	SW8270D	<130 ug/kg dry	C	130	1	09/18/18 12:53	09/18/18 20:57	SKS
Diphenylamine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Ethyl methanesulfonate	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Fluoranthene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Fluorene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Hexachlorobenzene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Hexachlorobutadiene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Hexachlorocyclopentadiene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Hexachloroethane	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Indeno (1,2,3-cd) pyrene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Isophorone	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
m+p-Cresols	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S7

Laboratory Sample ID: 1810508-07

Grab Date/Time: 09/11/2018 15:42

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Naphthalene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Nitrobenzene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
n-Nitrosodimethylamine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
n-Nitrosodi-n-butylamine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
n-Nitrosodi-n-propylamine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
n-Nitrosodiphenylamine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
n-Nitrosopiperidine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
o+m+p-Cresols	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
o-Cresol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
p-(Dimethylamino) azobenzene	07	SW8270D	<130 ug/kg dry	C	130	1	09/18/18 12:53	09/18/18 20:57	SKS
p-Chloro-m-cresol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Pentachloronitrobenzene (quintozene)	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Pentachlorophenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Phenacetin	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Phenanthrene	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Phenol	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Pronamide	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Pyrene	07	SW8270D	<130 ug/kg dry	C	130	1	09/18/18 12:53	09/18/18 20:57	SKS
Pyridine	07	SW8270D	<130 ug/kg dry		130	1	09/18/18 12:53	09/18/18 20:57	SKS
Surr: 2,4,6-Tribromophenol (Surr)	07	SW8270D	59.0 %		35-125		09/18/18 12:53	09/18/18 20:57	SKS
Surr: 2-Fluorobiphenyl (Surr)	07	SW8270D	58.6 %		45-105		09/18/18 12:53	09/18/18 20:57	SKS
Surr: 2-Fluorophenol (Surr)	07	SW8270D	51.9 %		35-105		09/18/18 12:53	09/18/18 20:57	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S7	Laboratory Sample ID: 1810508-07
Grab Date/Time: 09/11/2018 15:42	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	07	SW8270D	53.5 %		35-100		09/18/18 12:53	09/18/18 20:57	SKS
Surr: Phenol-d5 (Surr)	07	SW8270D	49.0 %		40-100		09/18/18 12:53	09/18/18 20:57	SKS
Surr: p-Terphenyl-d14 (Surr)	07	SW8270D	50.3 %		30-125		09/18/18 12:53	09/18/18 20:57	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	07	SW8015C	<15.5 mg/kg dry		15.5	1	09/20/18 15:48	09/21/18 21:31	CVH
Surr: Pentacosane (Surr)	07	SW8015C	60.7 %		40-160		09/20/18 15:48	09/21/18 21:31	CVH
TPH-Semi-Volatiles (ORO)	07	SW8015C	<16.0 mg/kg dry		16.0	1	09/19/18 14:54	09/21/18 00:03	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	07	SW8082A	<0.168 mg/kg dry		0.168	1	09/24/18 13:17	09/25/18 16:30	HLM
PCB as Aroclor 1221	07	SW8082A	<0.168 mg/kg dry		0.168	1	09/24/18 13:17	09/25/18 16:30	HLM
PCB as Aroclor 1232	07	SW8082A	<0.168 mg/kg dry		0.168	1	09/24/18 13:17	09/25/18 16:30	HLM
PCB as Aroclor 1242	07	SW8082A	<0.168 mg/kg dry		0.168	1	09/24/18 13:17	09/25/18 16:30	HLM
PCB as Aroclor 1248	07	SW8082A	<0.168 mg/kg dry		0.168	1	09/24/18 13:17	09/25/18 16:30	HLM
PCB as Aroclor 1254	07	SW8082A	<0.168 mg/kg dry		0.168	1	09/24/18 13:17	09/25/18 16:30	HLM
PCB as Aroclor 1260	07	SW8082A	<0.168 mg/kg dry		0.168	1	09/24/18 13:17	09/25/18 16:30	HLM
Surr: DCB	07	SW8082A	75.0 %		30-105		09/24/18 13:17	09/25/18 16:30	HLM
Surr: TCMX	07	SW8082A	75.0 %		30-105		09/24/18 13:17	09/25/18 16:30	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	07	SW7196A	<0.34 mg/kg dry		0.34	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	07	SM18 2540G	57.7 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S8

Laboratory Sample ID: 1810508-08

Grab Date/Time: 09/11/2018 15:48

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	08RE2	SW6010C	<0.594 mg/kg dry		0.594	1	09/14/18 13:00	09/20/18 17:25	BG
Aluminum	08RE1	SW6010C	15800 mg/kg dry		59.4	20	09/14/18 13:00	09/20/18 16:28	BG
Arsenic	08RE2	SW6010C	1.89 mg/kg dry		1.19	1	09/14/18 13:00	09/20/18 17:25	BG
Barium	08RE2	SW6010C	86.2 mg/kg dry		0.594	1	09/14/18 13:00	09/20/18 17:25	BG
Beryllium	08RE2	SW6010C	1.07 mg/kg dry		0.238	1	09/14/18 13:00	09/20/18 17:25	BG
Calcium	08RE1	SW6010C	2150 mg/kg dry		119	20	09/14/18 13:00	09/20/18 16:28	BG
Cadmium	08RE2	SW6010C	0.428 mg/kg dry		0.238	1	09/14/18 13:00	09/20/18 17:25	BG
Cobalt	08RE2	SW6010C	9.59 mg/kg dry		0.238	1	09/14/18 13:00	09/20/18 17:25	BG
Chromium	08RE2	SW6010C	14.5 mg/kg dry		0.594	1	09/14/18 13:00	09/20/18 17:25	BG
Copper	08RE2	SW6010C	7.30 mg/kg dry		2.97	1	09/14/18 13:00	09/20/18 17:25	BG
Iron	08	SW6010C	21100 mg/kg dry		297	100	09/14/18 13:00	09/20/18 15:50	BG
Mercury	08	SW7471B	0.037 mg/kg dry		0.010	1	09/20/18 15:08	09/24/18 09:38	MWL
Potassium	08RE2	SW6010C	6330 mg/kg dry		29.7	1	09/14/18 13:00	09/20/18 17:25	BG
Magnesium	08RE1	SW6010C	5940 mg/kg dry		59.4	20	09/14/18 13:00	09/20/18 16:28	BG
Manganese	08RE2	SW6010C	354 mg/kg dry		0.594	1	09/14/18 13:00	09/20/18 17:25	BG
Sodium	08RE2	SW6010C	35.3 mg/kg dry		29.7	1	09/14/18 13:00	09/20/18 17:25	BG
Nickel	08RE2	SW6010C	10.1 mg/kg dry		0.594	1	09/14/18 13:00	09/20/18 17:25	BG
Lead	08RE2	SW6010C	14.5 mg/kg dry		0.594	1	09/14/18 13:00	09/20/18 17:25	BG
Antimony	08RE2	SW6010C	<5.94 mg/kg dry		5.94	1	09/14/18 13:00	09/20/18 17:25	BG
Selenium	08RE2	SW6010C	<2.97 mg/kg dry		2.97	1	09/14/18 13:00	09/20/18 17:25	BG
Thallium	08RE2	SW6010C	<2.97 mg/kg dry		2.97	1	09/14/18 13:00	09/20/18 17:25	BG
Vanadium	08RE2	SW6010C	17.5 mg/kg dry		0.594	1	09/14/18 13:00	09/20/18 17:25	BG
Zinc	08RE2	SW6010C	101 mg/kg dry		0.594	1	09/14/18 13:00	09/20/18 17:25	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	08RE1	SW8015C	<0.59 mg/kg dry		0.59	1	09/17/18 13:12	09/17/18 13:12	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S8

Laboratory Sample ID: 1810508-08

Grab Date/Time: 09/11/2018 15:48

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	08RE1	SW8015C	87.0 %		80-120		09/17/18 13:12	09/17/18 13:12	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	08	SW8270D SIM	Not Detected			2	09/18/18 12:53	09/18/18 21:28	SKS
1,2,4,5-Tetrachlorobenzene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
1,2,4-Trichlorobenzene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
1,2-Dichlorobenzene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
1,2-Diphenylhydrazine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
1,3-Dichlorobenzene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
1,4-Dichlorobenzene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
1-Chloronaphthalene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
1-Naphthylamine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,3,4,6-Tetrachlorophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,4,5-Trichlorophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,4,6-Trichlorophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,4-Dichlorophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,4-Dimethylphenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,4-Dinitrophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,4-Dinitrotoluene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,6-Dichlorophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,6-Dinitrotoluene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2-Chloronaphthalene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2-Chlorophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2-Methylnaphthalene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2-Naphthylamine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S8

Laboratory Sample ID: 1810508-08

Grab Date/Time: 09/11/2018 15:48

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2-Nitrophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
3,3'-Dichlorobenzidine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
3-Methylcholanthrene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
3-Nitroaniline	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
4,6-Dinitro-2-methylphenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
4-Aminobiphenyl	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
4-Bromophenyl phenyl ether	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
4-Chloroaniline	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
4-Chlorophenyl phenyl ether	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
4-Nitroaniline	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
4-Nitrophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
7,12-Dimethylbenz (a) anthracene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Acenaphthene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Acenaphthylene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Acetophenone	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Aniline	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Anthracene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Benzidine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Benzo (a) anthracene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Benzo (a) pyrene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Benzo (b) fluoranthene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Benzo (g,h,i) perylene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Benzo (k) fluoranthene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Benzoic acid	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S8

Laboratory Sample ID: 1810508-08

Grab Date/Time: 09/11/2018 15:48

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
bis (2-Chloroethoxy) methane	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
bis (2-Chloroethyl) ether	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
2,2'-Oxybis (1-chloropropane)	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
bis (2-Ethylhexyl) phthalate	08	SW8270D	<195 ug/kg dry	C	195	2	09/18/18 12:53	09/18/18 21:28	SKS
Butyl benzyl phthalate	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Chrysene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Dibenz (a,h) anthracene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Dibenz (a,j) acridine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Dibenzofuran	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Diethyl phthalate	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Dimethyl phthalate	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Di-n-butyl phthalate	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Di-n-octyl phthalate	08	SW8270D	<195 ug/kg dry	C	195	2	09/18/18 12:53	09/18/18 21:28	SKS
Diphenylamine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Ethyl methanesulfonate	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Fluoranthene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Fluorene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Hexachlorobenzene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Hexachlorobutadiene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Hexachlorocyclopentadiene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Hexachloroethane	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Indeno (1,2,3-cd) pyrene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Isophorone	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
m+p-Cresols	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S8

Laboratory Sample ID: 1810508-08

Grab Date/Time: 09/11/2018 15:48

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Naphthalene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Nitrobenzene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
n-Nitrosodimethylamine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
n-Nitrosodi-n-butylamine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
n-Nitrosodi-n-propylamine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
n-Nitrosodiphenylamine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
n-Nitrosopiperidine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
o+m+p-Cresols	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
o-Cresol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
p-(Dimethylamino) azobenzene	08	SW8270D	<195 ug/kg dry	C	195	2	09/18/18 12:53	09/18/18 21:28	SKS
p-Chloro-m-cresol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Pentachloronitrobenzene (quintozene)	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Pentachlorophenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Phenacetin	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Phenanthrene	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Phenol	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Pronamide	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Pyrene	08	SW8270D	<195 ug/kg dry	C	195	2	09/18/18 12:53	09/18/18 21:28	SKS
Pyridine	08	SW8270D	<195 ug/kg dry		195	2	09/18/18 12:53	09/18/18 21:28	SKS
Surr: 2,4,6-Tribromophenol (Surr)	08	SW8270D	70.6 %		35-125		09/18/18 12:53	09/18/18 21:28	SKS
Surr: 2-Fluorobiphenyl (Surr)	08	SW8270D	63.4 %		45-105		09/18/18 12:53	09/18/18 21:28	SKS
Surr: 2-Fluorophenol (Surr)	08	SW8270D	54.9 %		35-105		09/18/18 12:53	09/18/18 21:28	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S8	Laboratory Sample ID: 1810508-08
Grab Date/Time: 09/11/2018 15:48	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	08	SW8270D	58.8 %		35-100		09/18/18 12:53	09/18/18 21:28	SKS
Surr: Phenol-d5 (Surr)	08	SW8270D	54.2 %		40-100		09/18/18 12:53	09/18/18 21:28	SKS
Surr: p-Terphenyl-d14 (Surr)	08	SW8270D	61.0 %		30-125		09/18/18 12:53	09/18/18 21:28	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	08	SW8015C	<12.3 mg/kg dry		12.3	1	09/20/18 15:48	09/21/18 21:57	CVH
Surr: Pentacosane (Surr)	08	SW8015C	53.3 %		40-160		09/20/18 15:48	09/21/18 21:57	CVH
TPH-Semi-Volatiles (ORO)	08	SW8015C	<12.5 mg/kg dry		12.5	1	09/19/18 14:54	09/21/18 00:28	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	08	SW8082A	<0.124 mg/kg dry		0.124	1	09/24/18 13:17	09/25/18 16:52	HLM
PCB as Aroclor 1221	08	SW8082A	<0.124 mg/kg dry		0.124	1	09/24/18 13:17	09/25/18 16:52	HLM
PCB as Aroclor 1232	08	SW8082A	<0.124 mg/kg dry		0.124	1	09/24/18 13:17	09/25/18 16:52	HLM
PCB as Aroclor 1242	08	SW8082A	<0.124 mg/kg dry		0.124	1	09/24/18 13:17	09/25/18 16:52	HLM
PCB as Aroclor 1248	08	SW8082A	<0.124 mg/kg dry		0.124	1	09/24/18 13:17	09/25/18 16:52	HLM
PCB as Aroclor 1254	08	SW8082A	<0.124 mg/kg dry		0.124	1	09/24/18 13:17	09/25/18 16:52	HLM
PCB as Aroclor 1260	08	SW8082A	<0.124 mg/kg dry		0.124	1	09/24/18 13:17	09/25/18 16:52	HLM
Surr: DCB	08	SW8082A	65.0 %		30-105		09/24/18 13:17	09/25/18 16:52	HLM
Surr: TCMX	08	SW8082A	55.0 %		30-105		09/24/18 13:17	09/25/18 16:52	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	08	SW7196A	<0.26 mg/kg dry		0.26	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	08	SM18 2540G	77.9 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S9

Laboratory Sample ID: 1810508-09

Grab Date/Time: 09/11/2018 15:54

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	09RE2	SW6010C	<0.624 mg/kg dry		0.624	1	09/14/18 13:00	09/20/18 17:28	BG
Aluminum	09	SW6010C	28200 mg/kg dry		312	100	09/14/18 13:00	09/20/18 15:53	BG
Arsenic	09RE2	SW6010C	3.18 mg/kg dry		1.25	1	09/14/18 13:00	09/20/18 17:28	BG
Barium	09RE2	SW6010C	119 mg/kg dry		0.624	1	09/14/18 13:00	09/20/18 17:28	BG
Beryllium	09RE2	SW6010C	1.46 mg/kg dry		0.250	1	09/14/18 13:00	09/20/18 17:28	BG
Calcium	09RE1	SW6010C	1430 mg/kg dry		125	20	09/14/18 13:00	09/20/18 16:31	BG
Cadmium	09RE2	SW6010C	0.607 mg/kg dry		0.250	1	09/14/18 13:00	09/20/18 17:28	BG
Cobalt	09RE2	SW6010C	10.1 mg/kg dry		0.250	1	09/14/18 13:00	09/20/18 17:28	BG
Chromium	09RE2	SW6010C	18.0 mg/kg dry		0.624	1	09/14/18 13:00	09/20/18 17:28	BG
Copper	09RE2	SW6010C	14.8 mg/kg dry		3.12	1	09/14/18 13:00	09/20/18 17:28	BG
Iron	09	SW6010C	29000 mg/kg dry		312	100	09/14/18 13:00	09/20/18 15:53	BG
Mercury	09	SW7471B	0.041 mg/kg dry		0.010	1	09/20/18 15:08	09/24/18 09:41	MWL
Potassium	09RE2	SW6010C	5680 mg/kg dry		31.2	1	09/14/18 13:00	09/20/18 17:28	BG
Magnesium	09RE1	SW6010C	5030 mg/kg dry		62.4	20	09/14/18 13:00	09/20/18 16:31	BG
Manganese	09RE2	SW6010C	252 mg/kg dry		0.624	1	09/14/18 13:00	09/20/18 17:28	BG
Sodium	09RE2	SW6010C	40.0 mg/kg dry		31.2	1	09/14/18 13:00	09/20/18 17:28	BG
Nickel	09RE2	SW6010C	11.4 mg/kg dry		0.624	1	09/14/18 13:00	09/20/18 17:28	BG
Lead	09RE2	SW6010C	19.8 mg/kg dry		0.624	1	09/14/18 13:00	09/20/18 17:28	BG
Antimony	09RE2	SW6010C	<6.24 mg/kg dry		6.24	1	09/14/18 13:00	09/20/18 17:28	BG
Selenium	09RE2	SW6010C	<3.12 mg/kg dry		3.12	1	09/14/18 13:00	09/20/18 17:28	BG
Thallium	09RE2	SW6010C	<3.12 mg/kg dry		3.12	1	09/14/18 13:00	09/20/18 17:28	BG
Vanadium	09RE2	SW6010C	34.1 mg/kg dry		0.624	1	09/14/18 13:00	09/20/18 17:28	BG
Zinc	09RE2	SW6010C	112 mg/kg dry		0.624	1	09/14/18 13:00	09/20/18 17:28	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	09	SW8015C	<0.13 mg/kg dry	0.13	1	09/14/18 15:56	09/14/18 15:56	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S9

Laboratory Sample ID: 1810508-09

Grab Date/Time: 09/11/2018 15:54

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	09	SW8015C	96.2 %		80-120		09/14/18 15:56	09/14/18 15:56	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	09	SW8270D SIM	Not Detected			2	09/18/18 12:53	09/18/18 18:29	SKS
1,2,4,5-Tetrachlorobenzene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
1,2,4-Trichlorobenzene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
1,2-Dichlorobenzene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
1,2-Diphenylhydrazine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
1,3-Dichlorobenzene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
1,4-Dichlorobenzene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
1-Chloronaphthalene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
1-Naphthylamine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2,3,4,6-Tetrachlorophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2,4,5-Trichlorophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2,4,6-Trichlorophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2,4-Dichlorophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2,4-Dimethylphenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2,4-Dinitrophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2,4-Dinitrotoluene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2,6-Dichlorophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2,6-Dinitrotoluene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2-Chloronaphthalene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2-Chlorophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2-Methylnaphthalene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2-Naphthylamine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S9

Laboratory Sample ID: 1810508-09

Grab Date/Time: 09/11/2018 15:54

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
2-Nitrophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
3,3'-Dichlorobenzidine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
3-Methylcholanthrene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
3-Nitroaniline	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
4,6-Dinitro-2-methylphenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
4-Aminobiphenyl	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
4-Bromophenyl phenyl ether	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
4-Chloroaniline	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
4-Chlorophenyl phenyl ether	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
4-Nitroaniline	09	SW8270D	<196 ug/kg dry	C	196	2	09/18/18 12:53	09/18/18 18:29	SKS
4-Nitrophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
7,12-Dimethylbenz (a) anthracene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Acenaphthene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Acenaphthylene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Acetophenone	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Aniline	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Anthracene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Benzidine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Benzo (a) anthracene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Benzo (a) pyrene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Benzo (b) fluoranthene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Benzo (g,h,i) perylene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Benzo (k) fluoranthene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Benzoic acid	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S9

Laboratory Sample ID: 1810508-09

Grab Date/Time: 09/11/2018 15:54

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
bis (2-Chloroethoxy) methane	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
bis (2-Chloroethyl) ether	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
2,2'-Oxybis (1-chloropropane)	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
bis (2-Ethylhexyl) phthalate	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Butyl benzyl phthalate	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Chrysene	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Dibenz (a,h) anthracene	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Dibenz (a,j) acridine	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Dibenzofuran	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Diethyl phthalate	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Dimethyl phthalate	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Di-n-butyl phthalate	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Di-n-octyl phthalate	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Diphenylamine	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Ethyl methanesulfonate	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Fluoranthene	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Fluorene	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Hexachlorobenzene	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Hexachlorobutadiene	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Hexachlorocyclopentadiene	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Hexachloroethane	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Indeno (1,2,3-cd) pyrene	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
Isophorone	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	
m+p-Cresols	09	SW8270D	<196 ug/kg dry	196	2	09/18/18 12:53	09/18/18 18:29	SKS	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S9	Laboratory Sample ID: 1810508-09
Grab Date/Time: 09/11/2018 15:54	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Naphthalene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Nitrobenzene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
n-Nitrosodimethylamine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
n-Nitrosodi-n-butylamine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
n-Nitrosodi-n-propylamine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
n-Nitrosodiphenylamine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
n-Nitrosopiperidine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
o+m+p-Cresols	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
o-Cresol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
p-(Dimethylamino) azobenzene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
p-Chloro-m-cresol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Pentachloronitrobenzene (quintozene)	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Pentachlorophenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Phenacetin	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Phenanthrene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Phenol	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Pronamide	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Pyrene	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Pyridine	09	SW8270D	<196 ug/kg dry		196	2	09/18/18 12:53	09/18/18 18:29	SKS
Surr: 2,4,6-Tribromophenol (Surr)	09	SW8270D	50.4 %		35-125		09/18/18 12:53	09/18/18 18:29	SKS
Surr: 2-Fluorobiphenyl (Surr)	09	SW8270D	56.2 %		45-105		09/18/18 12:53	09/18/18 18:29	SKS
Surr: 2-Fluorophenol (Surr)	09	SW8270D	65.0 %		35-105		09/18/18 12:53	09/18/18 18:29	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S9	Laboratory Sample ID: 1810508-09
Grab Date/Time: 09/11/2018 15:54	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	09	SW8270D	59.4 %		35-100		09/18/18 12:53	09/18/18 18:29	SKS
Surr: Phenol-d5 (Surr)	09	SW8270D	54.7 %		40-100		09/18/18 12:53	09/18/18 18:29	SKS
Surr: p-Terphenyl-d14 (Surr)	09	SW8270D	79.4 %		30-125		09/18/18 12:53	09/18/18 18:29	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	09	SW8015C	<12.2 mg/kg dry		12.2	1	09/20/18 15:48	09/21/18 22:23	CVH
Surr: Pentacosane (Surr)	09	SW8015C	56.6 %		40-160		09/20/18 15:48	09/21/18 22:23	CVH
TPH-Semi-Volatiles (ORO)	09	SW8015C	<12.2 mg/kg dry		12.2	1	09/19/18 14:54	09/21/18 00:52	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	09	SW8082A	<0.122 mg/kg dry		0.122	1	09/24/18 13:17	09/25/18 17:14	HLM
PCB as Aroclor 1221	09	SW8082A	<0.122 mg/kg dry		0.122	1	09/24/18 13:17	09/25/18 17:14	HLM
PCB as Aroclor 1232	09	SW8082A	<0.122 mg/kg dry		0.122	1	09/24/18 13:17	09/25/18 17:14	HLM
PCB as Aroclor 1242	09	SW8082A	<0.122 mg/kg dry		0.122	1	09/24/18 13:17	09/25/18 17:14	HLM
PCB as Aroclor 1248	09	SW8082A	<0.122 mg/kg dry		0.122	1	09/24/18 13:17	09/25/18 17:14	HLM
PCB as Aroclor 1254	09	SW8082A	<0.122 mg/kg dry		0.122	1	09/24/18 13:17	09/25/18 17:14	HLM
PCB as Aroclor 1260	09	SW8082A	<0.122 mg/kg dry		0.122	1	09/24/18 13:17	09/25/18 17:14	HLM
Surr: DCB	09	SW8082A	75.0 %		30-105		09/24/18 13:17	09/25/18 17:14	HLM
Surr: TCMX	09	SW8082A	85.0 %		30-105		09/24/18 13:17	09/25/18 17:14	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	09	SW7196A	<0.25 mg/kg dry		0.25	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	09	SM18 2540G	78.4 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S10 **Laboratory Sample ID:** 1810508-10

Grab Date/Time: 09/11/2018 15:57

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	10RE2	SW6010C	<0.500 mg/kg dry		0.500	1	09/14/18 13:00	09/20/18 17:30	BG
Aluminum	10	SW6010C	25200 mg/kg dry		199	100	09/14/18 13:00	09/20/18 15:55	BG
Arsenic	10RE2	SW6010C	3.85 mg/kg dry		1.00	1	09/14/18 13:00	09/20/18 17:30	BG
Barium	10RE2	SW6010C	86.5 mg/kg dry		0.500	1	09/14/18 13:00	09/20/18 17:30	BG
Beryllium	10RE2	SW6010C	1.43 mg/kg dry		0.200	1	09/14/18 13:00	09/20/18 17:30	BG
Calcium	10RE1	SW6010C	1190 mg/kg dry		79.6	20	09/14/18 13:00	09/20/18 16:33	BG
Cadmium	10RE2	SW6010C	0.718 mg/kg dry		0.200	1	09/14/18 13:00	09/20/18 17:30	BG
Cobalt	10RE2	SW6010C	10.7 mg/kg dry		0.200	1	09/14/18 13:00	09/20/18 17:30	BG
Chromium	10RE2	SW6010C	16.4 mg/kg dry		0.500	1	09/14/18 13:00	09/20/18 17:30	BG
Copper	10RE2	SW6010C	16.8 mg/kg dry		2.50	1	09/14/18 13:00	09/20/18 17:30	BG
Iron	10	SW6010C	28200 mg/kg dry		199	100	09/14/18 13:00	09/20/18 15:55	BG
Mercury	10	SW7471B	0.030 mg/kg dry		0.012	1	09/20/18 15:08	09/24/18 09:43	MWL
Potassium	10RE2	SW6010C	6700 mg/kg dry		25.0	1	09/14/18 13:00	09/20/18 17:30	BG
Magnesium	10RE1	SW6010C	6800 mg/kg dry		39.8	20	09/14/18 13:00	09/20/18 16:33	BG
Manganese	10RE2	SW6010C	282 mg/kg dry		0.500	1	09/14/18 13:00	09/20/18 17:30	BG
Sodium	10RE2	SW6010C	36.8 mg/kg dry		25.0	1	09/14/18 13:00	09/20/18 17:30	BG
Nickel	10RE2	SW6010C	14.1 mg/kg dry		0.500	1	09/14/18 13:00	09/20/18 17:30	BG
Lead	10RE2	SW6010C	12.3 mg/kg dry		0.500	1	09/14/18 13:00	09/20/18 17:30	BG
Antimony	10RE2	SW6010C	<5.00 mg/kg dry		5.00	1	09/14/18 13:00	09/20/18 17:30	BG
Selenium	10RE2	SW6010C	<2.50 mg/kg dry		2.50	1	09/14/18 13:00	09/20/18 17:30	BG
Thallium	10RE2	SW6010C	<2.50 mg/kg dry		2.50	1	09/14/18 13:00	09/20/18 17:30	BG
Vanadium	10RE2	SW6010C	25.0 mg/kg dry		0.500	1	09/14/18 13:00	09/20/18 17:30	BG
Zinc	10RE2	SW6010C	111 mg/kg dry		0.500	1	09/14/18 13:00	09/20/18 17:30	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	10	SW8015C	<0.15 mg/kg dry	0.15	1	09/14/18 16:19	09/14/18 16:19	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S10

Laboratory Sample ID: 1810508-10

Grab Date/Time: 09/11/2018 15:57

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	10	SW8015C	92.8 %		80-120		09/14/18 16:19	09/14/18 16:19	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	10	SW8270D SIM	Not Detected			1	09/18/18 12:53	09/18/18 19:01	SKS
1,2,4,5-Tetrachlorobenzene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
1,2,4-Trichlorobenzene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
1,2-Dichlorobenzene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
1,2-Diphenylhydrazine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
1,3-Dichlorobenzene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
1,4-Dichlorobenzene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
1-Chloronaphthalene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
1-Naphthylamine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,3,4,6-Tetrachlorophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,4,5-Trichlorophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,4,6-Trichlorophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,4-Dichlorophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,4-Dimethylphenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,4-Dinitrophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,4-Dinitrotoluene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,6-Dichlorophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,6-Dinitrotoluene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2-Chloronaphthalene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2-Chlorophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2-Methylnaphthalene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2-Naphthylamine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S10

Laboratory Sample ID: 1810508-10

Grab Date/Time: 09/11/2018 15:57

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2-Nitrophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
3,3'-Dichlorobenzidine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
3-Methylcholanthrene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
3-Nitroaniline	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
4,6-Dinitro-2-methylphenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
4-Aminobiphenyl	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
4-Bromophenyl phenyl ether	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
4-Chloroaniline	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
4-Chlorophenyl phenyl ether	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
4-Nitroaniline	10	SW8270D	<114 ug/kg dry	C	114	1	09/18/18 12:53	09/18/18 19:01	SKS
4-Nitrophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
7,12-Dimethylbenz (a) anthracene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Acenaphthene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Acenaphthylene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Acetophenone	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Aniline	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Anthracene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Benzidine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Benzo (a) anthracene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Benzo (a) pyrene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Benzo (b) fluoranthene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Benzo (g,h,i) perylene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Benzo (k) fluoranthene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Benzoic acid	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S10

Laboratory Sample ID: 1810508-10

Grab Date/Time: 09/11/2018 15:57

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
bis (2-Chloroethoxy) methane	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
bis (2-Chloroethyl) ether	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
2,2'-Oxybis (1-chloropropane)	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
bis (2-Ethylhexyl) phthalate	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Butyl benzyl phthalate	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Chrysene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Dibenz (a,h) anthracene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Dibenz (a,j) acridine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Dibenzofuran	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Diethyl phthalate	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Dimethyl phthalate	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Di-n-butyl phthalate	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Di-n-octyl phthalate	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Diphenylamine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Ethyl methanesulfonate	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Fluoranthene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Fluorene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Hexachlorobenzene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Hexachlorobutadiene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Hexachlorocyclopentadiene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Hexachloroethane	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Indeno (1,2,3-cd) pyrene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Isophorone	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
m+p-Cresols	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S10

Laboratory Sample ID: 1810508-10

Grab Date/Time: 09/11/2018 15:57

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Naphthalene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Nitrobenzene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
n-Nitrosodimethylamine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
n-Nitrosodi-n-butylamine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
n-Nitrosodi-n-propylamine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
n-Nitrosodiphenylamine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
n-Nitrosopiperidine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
o+m+p-Cresols	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
o-Cresol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
p-(Dimethylamino) azobenzene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
p-Chloro-m-cresol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Pentachloronitrobenzene (quintozene)	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Pentachlorophenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Phenacetin	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Phenanthrene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Phenol	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Pronamide	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Pyrene	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Pyridine	10	SW8270D	<114 ug/kg dry		114	1	09/18/18 12:53	09/18/18 19:01	SKS
Surr: 2,4,6-Tribromophenol (Surr)	10	SW8270D	54.9 %		35-125		09/18/18 12:53	09/18/18 19:01	SKS
Surr: 2-Fluorobiphenyl (Surr)	10	SW8270D	58.9 %		45-105		09/18/18 12:53	09/18/18 19:01	SKS
Surr: 2-Fluorophenol (Surr)	10	SW8270D	80.6 %		35-105		09/18/18 12:53	09/18/18 19:01	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S10	Laboratory Sample ID: 1810508-10
Grab Date/Time: 09/11/2018 15:57	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	10	SW8270D	60.8 %		35-100		09/18/18 12:53	09/18/18 19:01	SKS
Surr: Phenol-d5 (Surr)	10	SW8270D	58.6 %		40-100		09/18/18 12:53	09/18/18 19:01	SKS
Surr: p-Terphenyl-d14 (Surr)	10	SW8270D	87.7 %		30-125		09/18/18 12:53	09/18/18 19:01	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	10	SW8015C	<14.0 mg/kg dry		14.0	1	09/20/18 15:48	09/21/18 22:48	CVH
Surr: Pentacosane (Surr)	10	SW8015C	58.5 %		40-160		09/20/18 15:48	09/21/18 22:48	CVH
TPH-Semi-Volatiles (ORO)	10	SW8015C	<15.3 mg/kg dry		15.3	1	09/19/18 14:54	09/21/18 01:17	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	10	SW8082A	<0.149 mg/kg dry		0.149	1	09/24/18 13:17	09/25/18 17:35	HLM
PCB as Aroclor 1221	10	SW8082A	<0.149 mg/kg dry		0.149	1	09/24/18 13:17	09/25/18 17:35	HLM
PCB as Aroclor 1232	10	SW8082A	<0.149 mg/kg dry		0.149	1	09/24/18 13:17	09/25/18 17:35	HLM
PCB as Aroclor 1242	10	SW8082A	<0.149 mg/kg dry		0.149	1	09/24/18 13:17	09/25/18 17:35	HLM
PCB as Aroclor 1248	10	SW8082A	<0.149 mg/kg dry		0.149	1	09/24/18 13:17	09/25/18 17:35	HLM
PCB as Aroclor 1254	10	SW8082A	<0.149 mg/kg dry		0.149	1	09/24/18 13:17	09/25/18 17:35	HLM
PCB as Aroclor 1260	10	SW8082A	<0.149 mg/kg dry		0.149	1	09/24/18 13:17	09/25/18 17:35	HLM
Surr: DCB	10	SW8082A	70.0 %		30-105		09/24/18 13:17	09/25/18 17:35	HLM
Surr: TCMX	10	SW8082A	70.0 %		30-105		09/24/18 13:17	09/25/18 17:35	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	10	SW7196A	<0.31 mg/kg dry		0.31	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	10	SM18 2540G	63.9 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S11

Laboratory Sample ID: 1810508-11

Grab Date/Time: 09/11/2018 16:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	11RE2	SW6010C	<0.583 mg/kg dry		0.583	1	09/14/18 13:00	09/20/18 17:33	BG
Aluminum	11	SW6010C	23400 mg/kg dry		292	100	09/14/18 13:00	09/20/18 15:58	BG
Arsenic	11RE2	SW6010C	1.39 mg/kg dry		1.17	1	09/14/18 13:00	09/20/18 17:33	BG
Barium	11RE2	SW6010C	92.7 mg/kg dry		0.583	1	09/14/18 13:00	09/20/18 17:33	BG
Beryllium	11RE2	SW6010C	1.46 mg/kg dry		0.233	1	09/14/18 13:00	09/20/18 17:33	BG
Calcium	11RE2	SW6010C	919 mg/kg dry		5.83	1	09/14/18 13:00	09/20/18 17:33	BG
Cadmium	11RE2	SW6010C	0.532 mg/kg dry		0.233	1	09/14/18 13:00	09/20/18 17:33	BG
Cobalt	11RE2	SW6010C	11.8 mg/kg dry		0.233	1	09/14/18 13:00	09/20/18 17:33	BG
Chromium	11RE2	SW6010C	18.8 mg/kg dry		0.583	1	09/14/18 13:00	09/20/18 17:33	BG
Copper	11RE2	SW6010C	18.0 mg/kg dry		2.92	1	09/14/18 13:00	09/20/18 17:33	BG
Iron	11	SW6010C	26600 mg/kg dry		292	100	09/14/18 13:00	09/20/18 15:58	BG
Mercury	11	SW7471B	0.016 mg/kg dry		0.010	1	09/20/18 15:08	09/24/18 09:45	MWL
Potassium	11RE2	SW6010C	8880 mg/kg dry		29.2	1	09/14/18 13:00	09/20/18 17:33	BG
Magnesium	11RE1	SW6010C	7340 mg/kg dry		58.3	20	09/14/18 13:00	09/20/18 16:36	BG
Manganese	11RE2	SW6010C	378 mg/kg dry		0.583	1	09/14/18 13:00	09/20/18 17:33	BG
Sodium	11RE2	SW6010C	42.0 mg/kg dry		29.2	1	09/14/18 13:00	09/20/18 17:33	BG
Nickel	11RE2	SW6010C	11.6 mg/kg dry		0.583	1	09/14/18 13:00	09/20/18 17:33	BG
Lead	11RE2	SW6010C	9.88 mg/kg dry		0.583	1	09/14/18 13:00	09/20/18 17:33	BG
Antimony	11RE2	SW6010C	<5.83 mg/kg dry		5.83	1	09/14/18 13:00	09/20/18 17:33	BG
Selenium	11RE2	SW6010C	<2.92 mg/kg dry		2.92	1	09/14/18 13:00	09/20/18 17:33	BG
Thallium	11RE2	SW6010C	<2.92 mg/kg dry		2.92	1	09/14/18 13:00	09/20/18 17:33	BG
Vanadium	11RE2	SW6010C	23.9 mg/kg dry		0.583	1	09/14/18 13:00	09/20/18 17:33	BG
Zinc	11RE2	SW6010C	102 mg/kg dry		0.583	1	09/14/18 13:00	09/20/18 17:33	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	11	SW8015C	<0.12 mg/kg dry		0.12	1	09/14/18 16:42	09/14/18 16:42	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S11

Laboratory Sample ID: 1810508-11

Grab Date/Time: 09/11/2018 16:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	11	SW8015C	87.9 %		80-120		09/14/18 16:42	09/14/18 16:42	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	11	SW8270D SIM	Not Detected			2	09/18/18 12:53	09/18/18 19:32	SKS
1,2,4,5-Tetrachlorobenzene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
1,2,4-Trichlorobenzene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
1,2-Dichlorobenzene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
1,2-Diphenylhydrazine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
1,3-Dichlorobenzene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
1,4-Dichlorobenzene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
1-Chloronaphthalene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
1-Naphthylamine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,3,4,6-Tetrachlorophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,4,5-Trichlorophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,4,6-Trichlorophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,4-Dichlorophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,4-Dimethylphenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,4-Dinitrophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,4-Dinitrotoluene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,6-Dichlorophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,6-Dinitrotoluene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2-Chloronaphthalene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2-Chlorophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2-Methylnaphthalene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2-Naphthylamine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S11	Laboratory Sample ID: 1810508-11
Grab Date/Time: 09/11/2018 16:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2-Nitrophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
3,3'-Dichlorobenzidine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
3-Methylcholanthrene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
3-Nitroaniline	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
4,6-Dinitro-2-methylphenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
4-Aminobiphenyl	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
4-Bromophenyl phenyl ether	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
4-Chloroaniline	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
4-Chlorophenyl phenyl ether	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
4-Nitroaniline	11	SW8270D	<191 ug/kg dry	C	191	2	09/18/18 12:53	09/18/18 19:32	SKS
4-Nitrophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
7,12-Dimethylbenz (a) anthracene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Acenaphthene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Acenaphthylene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Acetophenone	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Aniline	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Anthracene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Benzidine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Benzo (a) anthracene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Benzo (a) pyrene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Benzo (b) fluoranthene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Benzo (g,h,i) perylene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Benzo (k) fluoranthene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Benzoic acid	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S11

Laboratory Sample ID: 1810508-11

Grab Date/Time: 09/11/2018 16:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
bis (2-Chloroethoxy) methane	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
bis (2-Chloroethyl) ether	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
2,2'-Oxybis (1-chloropropane)	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
bis (2-Ethylhexyl) phthalate	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Butyl benzyl phthalate	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Chrysene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Dibenz (a,h) anthracene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Dibenz (a,j) acridine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Dibenzofuran	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Diethyl phthalate	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Dimethyl phthalate	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Di-n-butyl phthalate	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Di-n-octyl phthalate	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Diphenylamine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Ethyl methanesulfonate	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Fluoranthene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Fluorene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Hexachlorobenzene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Hexachlorobutadiene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Hexachlorocyclopentadiene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Hexachloroethane	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Indeno (1,2,3-cd) pyrene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Isophorone	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
m+p-Cresols	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S11

Laboratory Sample ID: 1810508-11

Grab Date/Time: 09/11/2018 16:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Naphthalene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Nitrobenzene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
n-Nitrosodimethylamine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
n-Nitrosodi-n-butylamine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
n-Nitrosodi-n-propylamine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
n-Nitrosodiphenylamine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
n-Nitrosopiperidine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
o+m+p-Cresols	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
o-Cresol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
p-(Dimethylamino) azobenzene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
p-Chloro-m-cresol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Pentachloronitrobenzene (quintozene)	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Pentachlorophenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Phenacetin	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Phenanthrene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Phenol	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Pronamide	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Pyrene	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Pyridine	11	SW8270D	<191 ug/kg dry		191	2	09/18/18 12:53	09/18/18 19:32	SKS
Surr: 2,4,6-Tribromophenol (Surr)	11	SW8270D	56.3 %		35-125		09/18/18 12:53	09/18/18 19:32	SKS
Surr: 2-Fluorobiphenyl (Surr)	11	SW8270D	57.4 %		45-105		09/18/18 12:53	09/18/18 19:32	SKS
Surr: 2-Fluorophenol (Surr)	11	SW8270D	74.8 %		35-105		09/18/18 12:53	09/18/18 19:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Task 2.6 16-S11	Laboratory Sample ID: 1810508-11
Grab Date/Time: 09/11/2018 16:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	11	SW8270D	61.1 %		35-100		09/18/18 12:53	09/18/18 19:32	SKS
Surr: Phenol-d5 (Surr)	11	SW8270D	55.7 %		40-100		09/18/18 12:53	09/18/18 19:32	SKS
Surr: p-Terphenyl-d14 (Surr)	11	SW8270D	83.8 %		30-125		09/18/18 12:53	09/18/18 19:32	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	11	SW8015C	<11.8 mg/kg dry		11.8	1	09/17/18 09:13	09/18/18 12:21	HLM
Surr: Pentacosane (Surr)	11	SW8015C	45.1 %		40-160		09/17/18 09:13	09/18/18 12:21	HLM
TPH-Semi-Volatiles (ORO)	11	SW8015C	<11.7 mg/kg dry		11.7	1	09/19/18 14:54	09/21/18 01:42	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	11	SW8082A	<0.114 mg/kg dry		0.114	1	09/24/18 13:17	09/25/18 17:57	HLM
PCB as Aroclor 1221	11	SW8082A	<0.114 mg/kg dry		0.114	1	09/24/18 13:17	09/25/18 17:57	HLM
PCB as Aroclor 1232	11	SW8082A	<0.114 mg/kg dry		0.114	1	09/24/18 13:17	09/25/18 17:57	HLM
PCB as Aroclor 1242	11	SW8082A	<0.114 mg/kg dry		0.114	1	09/24/18 13:17	09/25/18 17:57	HLM
PCB as Aroclor 1248	11	SW8082A	<0.114 mg/kg dry		0.114	1	09/24/18 13:17	09/25/18 17:57	HLM
PCB as Aroclor 1254	11	SW8082A	<0.114 mg/kg dry		0.114	1	09/24/18 13:17	09/25/18 17:57	HLM
PCB as Aroclor 1260	11	SW8082A	<0.114 mg/kg dry		0.114	1	09/24/18 13:17	09/25/18 17:57	HLM
Surr: DCB	11	SW8082A	65.0 %		30-105		09/24/18 13:17	09/25/18 17:57	HLM
Surr: TCMX	11	SW8082A	65.0 %		30-105		09/24/18 13:17	09/25/18 17:57	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	11	SW7196A	<0.24 mg/kg dry		0.24	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	11	SM18 2540G	83.8 %		0.10	1	09/18/18 08:57	09/18/18 08:57	PMP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Take 2.6 16-S12 **Laboratory Sample ID:** 1810508-12

Grab Date/Time: 09/11/2018 16:05

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	12RE2	SW6010C	<0.634 mg/kg dry		0.634	1	09/14/18 13:00	09/20/18 17:36	BG
Aluminum	12	SW6010C	26400 mg/kg dry		317	100	09/14/18 13:00	09/20/18 16:00	BG
Arsenic	12RE2	SW6010C	2.75 mg/kg dry		1.27	1	09/14/18 13:00	09/20/18 17:36	BG
Barium	12RE2	SW6010C	108 mg/kg dry		0.634	1	09/14/18 13:00	09/20/18 17:36	BG
Beryllium	12RE2	SW6010C	1.36 mg/kg dry		0.254	1	09/14/18 13:00	09/20/18 17:36	BG
Calcium	12RE1	SW6010C	1380 mg/kg dry		127	20	09/14/18 13:00	09/20/18 16:39	BG
Cadmium	12RE2	SW6010C	0.698 mg/kg dry		0.254	1	09/14/18 13:00	09/20/18 17:36	BG
Cobalt	12RE2	SW6010C	12.6 mg/kg dry		0.254	1	09/14/18 13:00	09/20/18 17:36	BG
Chromium	12RE2	SW6010C	20.4 mg/kg dry		0.634	1	09/14/18 13:00	09/20/18 17:36	BG
Copper	12RE2	SW6010C	16.0 mg/kg dry		3.17	1	09/14/18 13:00	09/20/18 17:36	BG
Iron	12	SW6010C	30200 mg/kg dry		317	100	09/14/18 13:00	09/20/18 16:00	BG
Mercury	12	SW7471B	0.036 mg/kg dry		0.010	1	09/20/18 15:08	09/24/18 09:57	MWL
Potassium	12RE2	SW6010C	7300 mg/kg dry		31.7	1	09/14/18 13:00	09/20/18 17:36	BG
Magnesium	12RE1	SW6010C	7150 mg/kg dry		63.4	20	09/14/18 13:00	09/20/18 16:39	BG
Manganese	12RE2	SW6010C	551 mg/kg dry		0.634	1	09/14/18 13:00	09/20/18 17:36	BG
Sodium	12RE2	SW6010C	35.5 mg/kg dry		31.7	1	09/14/18 13:00	09/20/18 17:36	BG
Nickel	12RE2	SW6010C	14.7 mg/kg dry		0.634	1	09/14/18 13:00	09/20/18 17:36	BG
Lead	12RE2	SW6010C	42.6 mg/kg dry		0.634	1	09/14/18 13:00	09/20/18 17:36	BG
Antimony	12RE2	SW6010C	<6.34 mg/kg dry		6.34	1	09/14/18 13:00	09/20/18 17:36	BG
Selenium	12RE2	SW6010C	<3.17 mg/kg dry		3.17	1	09/14/18 13:00	09/20/18 17:36	BG
Thallium	12RE2	SW6010C	<3.17 mg/kg dry		3.17	1	09/14/18 13:00	09/20/18 17:36	BG
Vanadium	12RE2	SW6010C	27.3 mg/kg dry		0.634	1	09/14/18 13:00	09/20/18 17:36	BG
Zinc	12RE2	SW6010C	143 mg/kg dry		0.634	1	09/14/18 13:00	09/20/18 17:36	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	12	SW8015C	<0.13 mg/kg dry	0.13	1	09/14/18 17:04	09/14/18 17:04	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Take 2.6 16-S12	Laboratory Sample ID: 1810508-12
Grab Date/Time: 09/11/2018 16:05	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	12	SW8015C	94.2 %		80-120		09/14/18 17:04	09/14/18 17:04	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	12	SW8270D SIM	Not Detected			2	09/18/18 12:53	09/18/18 20:04	SKS
1,2,4,5-Tetrachlorobenzene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
1,2,4-Trichlorobenzene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
1,2-Dichlorobenzene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
1,2-Diphenylhydrazine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
1,3-Dichlorobenzene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
1,4-Dichlorobenzene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
1-Chloronaphthalene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
1-Naphthylamine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2,3,4,6-Tetrachlorophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2,4,5-Trichlorophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2,4,6-Trichlorophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2,4-Dichlorophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2,4-Dimethylphenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2,4-Dinitrophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2,4-Dinitrotoluene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2,6-Dichlorophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2,6-Dinitrotoluene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2-Chloronaphthalene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2-Chlorophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2-Methylnaphthalene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2-Naphthylamine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Take 2.6 16-S12

Laboratory Sample ID: 1810508-12

Grab Date/Time: 09/11/2018 16:05

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
2-Nitrophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
3,3'-Dichlorobenzidine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
3-Methylcholanthrene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
3-Nitroaniline	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
4,6-Dinitro-2-methylphenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
4-Aminobiphenyl	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
4-Bromophenyl phenyl ether	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
4-Chloroaniline	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
4-Chlorophenyl phenyl ether	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
4-Nitroaniline	12	SW8270D	<206 ug/kg dry	C	206	2	09/18/18 12:53	09/18/18 20:04	SKS
4-Nitrophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
7,12-Dimethylbenz (a) anthracene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Acenaphthene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Acenaphthylene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Acetophenone	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Aniline	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Anthracene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Benzidine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Benzo (a) anthracene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Benzo (a) pyrene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Benzo (b) fluoranthene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Benzo (g,h,i) perylene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Benzo (k) fluoranthene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Benzoic acid	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Take 2.6 16-S12

Laboratory Sample ID: 1810508-12

Grab Date/Time: 09/11/2018 16:05

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
bis (2-Chloroethoxy) methane	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
bis (2-Chloroethyl) ether	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
2,2'-Oxybis (1-chloropropane)	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
bis (2-Ethylhexyl) phthalate	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Butyl benzyl phthalate	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Chrysene	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Dibenz (a,h) anthracene	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Dibenz (a,j) acridine	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Dibenzofuran	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Diethyl phthalate	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Dimethyl phthalate	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Di-n-butyl phthalate	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Di-n-octyl phthalate	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Diphenylamine	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Ethyl methanesulfonate	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Fluoranthene	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Fluorene	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Hexachlorobenzene	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Hexachlorobutadiene	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Hexachlorocyclopentadiene	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Hexachloroethane	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Indeno (1,2,3-cd) pyrene	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
Isophorone	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	
m+p-Cresols	12	SW8270D	<206 ug/kg dry	206	2	09/18/18 12:53	09/18/18 20:04	SKS	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D. Take 2.6 16-S12

Laboratory Sample ID: 1810508-12

Grab Date/Time: 09/11/2018 16:05

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Naphthalene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Nitrobenzene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
n-Nitrosodimethylamine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
n-Nitrosodi-n-butylamine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
n-Nitrosodi-n-propylamine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
n-Nitrosodiphenylamine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
n-Nitrosopiperidine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
o+m+p-Cresols	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
o-Cresol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
p-(Dimethylamino) azobenzene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
p-Chloro-m-cresol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Pentachloronitrobenzene (quintozene)	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Pentachlorophenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Phenacetin	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Phenanthrene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Phenol	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Pronamide	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Pyrene	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Pyridine	12	SW8270D	<206 ug/kg dry		206	2	09/18/18 12:53	09/18/18 20:04	SKS
Surr: 2,4,6-Tribromophenol (Surr)	12	SW8270D	53.7 %		35-125		09/18/18 12:53	09/18/18 20:04	SKS
Surr: 2-Fluorobiphenyl (Surr)	12	SW8270D	56.3 %		45-105		09/18/18 12:53	09/18/18 20:04	SKS
Surr: 2-Fluorophenol (Surr)	12	SW8270D	63.0 %		35-105		09/18/18 12:53	09/18/18 20:04	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810508

Analytical Results

Sample I.D.			Laboratory Sample ID:						
Take 2.6 16-S12			1810508-12						
Grab Date/Time:	09/11/2018 16:05								
Field Residual Cl:			Field pH:						
Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
<i>Surr: Nitrobenzene-d5 (Surr)</i>	12	SW8270D	57.1 %		35-100		09/18/18 12:53	09/18/18 20:04	SKS
<i>Surr: Phenol-d5 (Surr)</i>	12	SW8270D	49.5 %		40-100		09/18/18 12:53	09/18/18 20:04	SKS
<i>Surr: p-Terphenyl-d14 (Surr)</i>	12	SW8270D	79.8 %		30-125		09/18/18 12:53	09/18/18 20:04	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	12	SW8015C	<13.1 mg/kg dry		13.1	1	09/17/18 09:13	09/18/18 12:47	HLM
<i>Surr: Pentacosane (Surr)</i>	12	SW8015C	46.8 %		40-160		09/17/18 09:13	09/18/18 12:47	HLM
TPH-Semi-Volatiles (ORO)	12	SW8015C	<13.2 mg/kg dry		13.2	1	09/19/18 14:54	09/21/18 02:06	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	12	SW8082A	<0.126 mg/kg dry		0.126	1	09/24/18 13:17	09/25/18 18:18	HLM
PCB as Aroclor 1221	12	SW8082A	<0.126 mg/kg dry		0.126	1	09/24/18 13:17	09/25/18 18:18	HLM
PCB as Aroclor 1232	12	SW8082A	<0.126 mg/kg dry		0.126	1	09/24/18 13:17	09/25/18 18:18	HLM
PCB as Aroclor 1242	12	SW8082A	<0.126 mg/kg dry		0.126	1	09/24/18 13:17	09/25/18 18:18	HLM
PCB as Aroclor 1248	12	SW8082A	<0.126 mg/kg dry		0.126	1	09/24/18 13:17	09/25/18 18:18	HLM
PCB as Aroclor 1254	12	SW8082A	<0.126 mg/kg dry		0.126	1	09/24/18 13:17	09/25/18 18:18	HLM
PCB as Aroclor 1260	12	SW8082A	<0.126 mg/kg dry		0.126	1	09/24/18 13:17	09/25/18 18:18	HLM
<i>Surr: DCB</i>	12	SW8082A	65.0 %		30-105		09/24/18 13:17	09/25/18 18:18	HLM
<i>Surr: TCMX</i>	12	SW8082A	65.0 %		30-105		09/24/18 13:17	09/25/18 18:18	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	12RE1	SW7196A	1.67 mg/kg dry		0.26	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	12	SM18 2540G	75.6 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA ITM Feb 1998 10.1.2.1			
18I0508-06	1.01 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0573	AI80088
18I0508-06RE1	1.01 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0574	AI80088
18I0508-06RE2	1.01 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0576	AI80088
18I0508-07	1.60 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0573	AI80088
18I0508-07RE1	1.60 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0574	AI80088
18I0508-07RE2	1.60 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0576	AI80088
18I0508-08	1.08 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0573	AI80088
18I0508-08RE1	1.08 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0574	AI80088
18I0508-08RE2	1.08 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0576	AI80088
18I0508-09	1.02 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0573	AI80088
18I0508-09RE1	1.02 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0574	AI80088
18I0508-09RE2	1.02 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0576	AI80088
18I0508-10	1.96 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0573	AI80088
18I0508-10RE1	1.96 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0574	AI80088
18I0508-10RE2	1.96 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0576	AI80088
18I0508-11	1.02 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0573	AI80088
18I0508-11RE1	1.02 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0574	AI80088
18I0508-11RE2	1.02 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0576	AI80088
18I0508-12	1.04 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0573	AI80088
18I0508-12RE1	1.04 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0574	AI80088
18I0508-12RE2	1.04 N/A / 50.0 N/A	SW6010C	BBI0447	SBI0576	AI80088

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18I0508-01	1.00 g / 1.00 mL	SM18 2540G	BBI0463	SBI0414	
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18I0508-02	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	
18I0508-03	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	
18I0508-04	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0508-05	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	
18I0508-06	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	
18I0508-07	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	
18I0508-08	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	
18I0508-09	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	
18I0508-10	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	
18I0508-11	1.00 g / 1.00 mL	SM18 2540G	BBI0503	SBI0454	
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I0508-12	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I0508-01	2.51 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0508-01RE1	2.51 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0508-02	2.54 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0508-03	2.52 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0508-04	2.50 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0508-05	2.52 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
18I0508-06	2.54 g / 100 mL	SW7196A	BBI0706	SBI0688	AI80108
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I0508-07	2.52 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0508-08	2.51 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0508-09	2.51 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0508-10	2.53 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0508-11	2.52 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0508-12	2.53 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0508-12RE1	2.53 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method:		SW3050B	
18I0508-01	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0508-01RE1	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0508-02	1.09 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0508-02RE1	1.09 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0508-02RE2	1.09 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0508-02RE3	1.09 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0508-03	1.09 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0508-03RE1	1.09 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0508-03RE2	1.09 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0508-03RE3	1.09 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0508-04	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0508-04RE1	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0508-04RE2	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0508-05	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0508-05RE1	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0508-05RE2	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0508-05RE3	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method: SW3550B			
18I0508-01	30.9 g / 5.00 mL	SW8082A	BBI0546	SBI0614	AH80049
18I0508-02	31.1 g / 5.00 mL	SW8082A	BBI0546	SBI0614	AH80049
18I0508-03	32.0 g / 5.00 mL	SW8082A	BBI0546	SBI0614	AH80049
18I0508-04	31.0 g / 5.00 mL	SW8082A	BBI0546	SBI0614	AH80049
Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method: SW3550B			
18I0508-05	31.6 g / 5.00 mL	SW8082A	BBI0710	SBI0683	AH80049
18I0508-06	32.5 g / 5.00 mL	SW8082A	BBI0710	SBI0683	AH80049
18I0508-07	31.0 g / 5.00 mL	SW8082A	BBI0710	SBI0683	AH80049
18I0508-08	31.2 g / 5.00 mL	SW8082A	BBI0710	SBI0683	AH80049
18I0508-09	31.3 g / 5.00 mL	SW8082A	BBI0710	SBI0683	AH80049
18I0508-10	31.5 g / 5.00 mL	SW8082A	BBI0710	SBI0683	AH80049
18I0508-11	31.5 g / 5.00 mL	SW8082A	BBI0710	SBI0683	AH80049
18I0508-12	31.4 g / 5.00 mL	SW8082A	BBI0710	SBI0683	AH80049

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Hydrocarbons by GC		Preparation Method: SW3550C			
18I0508-11	50.7 g / 1.00 mL	SW8015C	BBI0477	SBI0491	AH80058
18I0508-12	50.6 g / 1.00 mL	SW8015C	BBI0477	SBI0491	AH80058
Semivolatile Organic Compounds by GCMS		Preparation Method: SW3550C			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0508-01	31.4 g / 1.00 mL	SW8270D	BBI0510	SBI0479	AF80080
18I0508-02	31.2 g / 1.00 mL	SW8270D	BBI0510	SBI0479	AF80080
18I0508-03	31.9 g / 1.00 mL	SW8270D	BBI0510	SBI0479	AF80080
18I0508-04	31.9 g / 1.00 mL	SW8270D	BBI0510	SBI0479	AF80080
18I0508-01	31.4 g / 1.00 mL	SW8270D SIM	BBI0510	SBI0479	AF80080
18I0508-02	31.2 g / 1.00 mL	SW8270D SIM	BBI0510	SBI0479	AF80080
18I0508-03	31.9 g / 1.00 mL	SW8270D SIM	BBI0510	SBI0479	AF80080
18I0508-04	31.9 g / 1.00 mL	SW8270D SIM	BBI0510	SBI0479	AF80080
Semivolatile Organic Compounds by GCMS		Preparation Method:	SW3550C		
18I0508-05	30.1 g / 1.00 mL	SW8270D	BBI0528	SBI0479	AF80080
18I0508-06	30.4 g / 1.00 mL	SW8270D	BBI0528	SBI0479	AF80080
18I0508-07	33.4 g / 1.00 mL	SW8270D	BBI0528	SBI0479	AF80080
18I0508-08	32.9 g / 1.00 mL	SW8270D	BBI0528	SBI0479	AF80080
18I0508-09	32.6 g / 1.00 mL	SW8270D	BBI0528	SBI0481	AF80101
18I0508-10	34.3 g / 1.00 mL	SW8270D	BBI0528	SBI0481	AF80101
18I0508-11	31.2 g / 1.00 mL	SW8270D	BBI0528	SBI0481	AF80101
18I0508-12	32.0 g / 1.00 mL	SW8270D	BBI0528	SBI0481	AF80101
18I0508-05	30.1 g / 1.00 mL	SW8270D SIM	BBI0528	SBI0479	AF80080
18I0508-06	30.4 g / 1.00 mL	SW8270D SIM	BBI0528	SBI0479	AF80080
18I0508-07	33.4 g / 1.00 mL	SW8270D SIM	BBI0528	SBI0479	AF80080
18I0508-08	32.9 g / 1.00 mL	SW8270D SIM	BBI0528	SBI0479	AF80080
18I0508-09	32.6 g / 1.00 mL	SW8270D SIM	BBI0528	SBI0481	AF80101
18I0508-10	34.3 g / 1.00 mL	SW8270D SIM	BBI0528	SBI0481	AF80101
18I0508-11	31.2 g / 1.00 mL	SW8270D SIM	BBI0528	SBI0481	AF80101
18I0508-12	32.0 g / 1.00 mL	SW8270D SIM	BBI0528	SBI0481	AF80101
Semivolatile Hydrocarbons by GC		Preparation Method:	SW3550C		
18I0508-01	50.9 g / 1.00 mL	SW8015C	BBI0573	SBI0575	AH80136
18I0508-02	52.0 g / 1.00 mL	SW8015C	BBI0573	SBI0575	AH80136
18I0508-03	51.1 g / 1.00 mL	SW8015C	BBI0573	SBI0575	AH80136
18I0508-04	51.2 g / 1.00 mL	SW8015C	BBI0573	SBI0575	AH80136
Semivolatile Hydrocarbons by GC		Preparation Method:	SW3550C		
18I0508-05	50.1 g / 1.00 mL	SW8015C	BBI0574	SBI0575	AH80136
18I0508-06	51.1 g / 1.00 mL	SW8015C	BBI0574	SBI0575	AH80136
18I0508-07	54.1 g / 1.00 mL	SW8015C	BBI0574	SBI0575	AH80136
18I0508-08	51.4 g / 1.00 mL	SW8015C	BBI0574	SBI0575	AH80136
18I0508-09	52.5 g / 1.00 mL	SW8015C	BBI0574	SBI0575	AH80136



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 13:33

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0508-10	51.0 g / 1.00 mL	SW8015C	BBI0574	SBI0575	AH80136
18I0508-11	51.1 g / 1.00 mL	SW8015C	BBI0574	SBI0575	AH80136
18I0508-12	50.1 g / 1.00 mL	SW8015C	BBI0574	SBI0575	AH80136

Semivolatile Hydrocarbons by GC

Preparation Method: **SW3550C**

18I0508-01	52.8 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058
18I0508-02	50.7 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058
18I0508-03	52.2 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058
18I0508-04	53.3 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058
18I0508-05	53.1 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058
18I0508-06	52.4 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058
18I0508-07	55.8 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058
18I0508-08	52.4 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058
18I0508-09	52.2 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058
18I0508-10	56.0 g / 1.00 mL	SW8015C	BBI0633	SBI0618	AH80058

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Volatile Hydrocarbons by GC

Preparation Method: **SW5030B**

18I0508-01	5.00 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-02	5.05 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-03	5.04 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-04	5.00 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-05	5.01 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-06	5.01 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-07	5.01 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-08	5.04 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-09	5.01 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-10	5.09 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-11	5.03 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0508-12	5.00 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070

Volatile Hydrocarbons by GC

Preparation Method: **SW5030B**

18I0508-08RE1	1.09 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
---------------	------------------	---------	---------	---------	---------

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW7471B			
1810508-01	0.500 g / 20.0 mL	SW7471B	BB10441	SBI0421	AI80052
1810508-02	0.500 g / 20.0 mL	SW7471B	BB10441	SBI0421	AI80052
1810508-03	0.500 g / 20.0 mL	SW7471B	BB10441	SBI0421	AI80052
1810508-04	0.500 g / 20.0 mL	SW7471B	BB10441	SBI0421	AI80052
1810508-05	0.500 g / 20.0 mL	SW7471B	BB10441	SBI0421	AI80052
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW7471B			
1810508-06	0.500 g / 20.0 mL	SW7471B	BB10446	SBI0421	AI80052
1810508-07	0.500 g / 20.0 mL	SW7471B	BB10446	SBI0421	AI80052
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW7471B			
1810508-06RE1	0.504 g / 20.0 mL	SW7471B	BB10608	SBI0622	AI80097
1810508-06RE2	0.504 g / 20.0 mL	SW7471B	BB10608	SBI0622	AI80097
1810508-07RE1	0.500 g / 20.0 mL	SW7471B	BB10608	SBI0622	AI80097
1810508-08	0.501 g / 20.0 mL	SW7471B	BB10608	SBI0622	AI80097
1810508-09	0.506 g / 20.0 mL	SW7471B	BB10608	SBI0622	AI80097
1810508-10	0.501 g / 20.0 mL	SW7471B	BB10608	SBI0622	AI80097
1810508-11	0.501 g / 20.0 mL	SW7471B	BB10608	SBI0622	AI80097
1810508-12	0.506 g / 20.0 mL	SW7471B	BB10608	SBI0622	AI80097



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	--------	-----	-----------	------

Batch BBI0441 - SW7471B

Blank (BBI0441-BLK1)		Prepared: 09/14/2018 Analyzed: 09/17/2018								
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							
LCS (BBI0441-BS1)		Prepared: 09/14/2018 Analyzed: 09/17/2018								
Mercury	0.090 mg/kg wet	0.008	mg/kg wet	0.100	mg/kg wet	90.1	80-120			
LCS Dup (BBI0441-BS1)		Prepared: 09/14/2018 Analyzed: 09/17/2018								
Mercury	0.090 mg/kg wet	0.008	mg/kg wet	0.100	mg/kg wet	90.1	80-120	0.00444	20	
Matrix Spike (BBI0441-MS1)		Source: 18I0511-01		Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.109 mg/kg dry	0.009	mg/kg dry	0.111	0.017 mg/kg dry	82.6	80-120			
Matrix Spike (BBI0441-MS2)		Source: 18I0511-15		Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.114 mg/kg dry	0.009	mg/kg dry	0.110	<0.009 mg/kg dry	103	80-120			
Matrix Spike Dup (BBI0441-MSD1)		Source: 18I0511-01		Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.128 mg/kg dry	0.009	mg/kg dry	0.111	0.017 mg/kg dry	99.9	80-120	16.2	20	
Matrix Spike Dup (BBI0441-MSD2)		Source: 18I0511-15		Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.098 mg/kg dry	0.009	mg/kg dry	0.110	<0.009 mg/kg dry	88.4	80-120	15.4	20	

Batch BBI0445 - SW3050B

Blank (BBI0445-BLK1)		Prepared: 09/14/2018 Analyzed: 09/18/2018								
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet							
Aluminum	2.70 mg/kg wet	2.50	mg/kg wet							B
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet							
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet							
Calcium	<5.00 mg/kg wet	5.00	mg/kg wet							
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet							
Barium	<0.500 mg/kg wet	0.500	mg/kg wet							
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet							
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet							
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet							
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------------------	---------	-----------	------

Batch BBI0445 - SW3050B

Blank (BBI0445-BLK1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Sodium	<25.0 mg/kg wet	25.0	mg/kg wet						
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet						
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet						
Silver	<0.500 mg/kg wet	0.500	mg/kg wet						
Manganese	<0.500 mg/kg wet	0.500	mg/kg wet						
Iron	<2.50 mg/kg wet	2.50	mg/kg wet						
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet						
Potassium	<25.0 mg/kg wet	25.0	mg/kg wet						
Magnesium	<2.50 mg/kg wet	2.50	mg/kg wet						
Copper	<2.50 mg/kg wet	2.50	mg/kg wet						
Lead	<0.500 mg/kg wet	0.500	mg/kg wet						

LCS (BBI0445-BS1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Aluminum	107 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	107	80-120		
Beryllium	98.0 mg/kg wet	0.200	mg/kg wet	99.4	mg/kg wet	98.6	80-120		
Antimony	97.5 mg/kg wet	5.00	mg/kg wet	99.4	mg/kg wet	98.1	80-120		
Calcium	104 mg/kg wet	5.00	mg/kg wet	99.4	mg/kg wet	105	80-120		
Cadmium	100 mg/kg wet	0.200	mg/kg wet	99.4	mg/kg wet	101	80-120		
Vanadium	104 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	105	80-120		
Magnesium	101 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	101	80-120		
Lead	102 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	103	80-120		
Potassium	268 mg/kg wet	25.0	mg/kg wet	249	mg/kg wet	108	80-120		
Thallium	89.7 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	90.2	80-120		
Arsenic	98.9 mg/kg wet	1.00	mg/kg wet	99.4	mg/kg wet	99.5	80-120		
Nickel	101 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	102	80-120		
Silver	5.15 mg/kg wet	0.500	mg/kg wet	4.97	mg/kg wet	104	80-120		
Iron	102 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	103	80-120		
Sodium	267 mg/kg wet	25.0	mg/kg wet	249	mg/kg wet	107	80-120		
Selenium	94.6 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	95.2	80-120		
Copper	106 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	106	80-120		
Barium	107 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	108	80-120		
Cobalt	104 mg/kg wet	0.200	mg/kg wet	99.4	mg/kg wet	105	80-120		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0445 - SW3050B

LCS (BBI0445-BS1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Manganese	102 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	103	80-120		
Zinc	102 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	102	80-120		
Chromium	103 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	104	80-120		

LCS Dup (BBI0445-BSD1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Sodium	252 mg/kg wet	25.0	mg/kg wet	235	mg/kg wet	107	80-120	5.75	20
Manganese	97.9 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	104	80-120	4.58	20
Beryllium	94.0 mg/kg wet	0.200	mg/kg wet	94.0	mg/kg wet	100	80-120	4.19	20
Magnesium	96.2 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	102	80-120	4.51	20
Calcium	98.5 mg/kg wet	5.00	mg/kg wet	94.0	mg/kg wet	105	80-120	5.41	20
Antimony	94.0 mg/kg wet	5.00	mg/kg wet	94.0	mg/kg wet	100	80-120	3.68	20
Potassium	262 mg/kg wet	25.0	mg/kg wet	235	mg/kg wet	111	80-120	2.25	20
Nickel	96.9 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	103	80-120	4.40	20
Iron	98.4 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	105	80-120	3.83	20
Copper	101 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	107	80-120	4.96	20
Cobalt	99.6 mg/kg wet	0.200	mg/kg wet	94.0	mg/kg wet	106	80-120	4.35	20
Lead	97.6 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	104	80-120	4.70	20
Chromium	98.7 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	105	80-120	4.48	20
Cadmium	95.5 mg/kg wet	0.200	mg/kg wet	94.0	mg/kg wet	102	80-120	4.58	20
Aluminum	102 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	109	80-120	4.19	20
Zinc	96.1 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	102	80-120	5.88	20
Vanadium	98.5 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	105	80-120	5.54	20
Silver	4.94 mg/kg wet	0.500	mg/kg wet	4.70	mg/kg wet	105	80-120	4.12	20
Barium	101 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	108	80-120	5.60	20
Thallium	87.2 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	92.8	80-120	2.73	20
Arsenic	95.1 mg/kg wet	1.00	mg/kg wet	94.0	mg/kg wet	101	80-120	3.90	20
Selenium	90.7 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	96.5	80-120	4.22	20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------------------	---------	-----------	------

Batch BBI0445 - SW3050B

Matrix Spike (BBI0445-MS1)

Source: 18I0508-01

Prepared: 09/14/2018 Analyzed: 09/18/2018

Chromium	161 mg/kg dry	13.4	mg/kg dry	134	20.8 mg/kg dry	105	75-125		
Zinc	263 mg/kg dry	13.4	mg/kg dry	134	130 mg/kg dry	99.3	75-125		
Lead	168 mg/kg dry	13.4	mg/kg dry	134	27.2 mg/kg dry	106	75-125		
Sodium	<669 mg/kg dry	669	mg/kg dry	334	<669 mg/kg dry		75-125		M2
Manganese	379 mg/kg dry	13.4	mg/kg dry	134	257 mg/kg dry	91.7	75-125		
Magnesium	4690 mg/kg dry	66.9	mg/kg dry	134	4990 mg/kg dry	-223	75-125		M2
Potassium	4850 mg/kg dry	669	mg/kg dry	334	5100 mg/kg dry	-72.4	75-125		M2
Cobalt	156 mg/kg dry	5.35	mg/kg dry	134	16.2 mg/kg dry	105	75-125		
Copper	170 mg/kg dry	66.9	mg/kg dry	134	<66.9 mg/kg dry	106	75-125		
Beryllium	141 mg/kg dry	5.35	mg/kg dry	134	<5.35 mg/kg dry	105	75-125		
Silver	<13.4 mg/kg dry	13.4	mg/kg dry	6.69	<13.4 mg/kg dry		75-125		M2
Aluminum	23400 mg/kg dry	66.9	mg/kg dry	134	18300 mg/kg dry	3840	75-125		M2
Arsenic	141 mg/kg dry	26.8	mg/kg dry	134	<26.8 mg/kg dry	106	75-125		
Antimony	<134 mg/kg dry	134	mg/kg dry	134	<134 mg/kg dry		75-125		M2
Cadmium	136 mg/kg dry	5.35	mg/kg dry	134	<5.35 mg/kg dry	102	75-125		
Vanadium	179 mg/kg dry	13.4	mg/kg dry	134	42.3 mg/kg dry	102	75-125		
Calcium	7150 mg/kg dry	134	mg/kg dry	134	7890 mg/kg dry	-557	75-125		M2
Barium	332 mg/kg dry	13.4	mg/kg dry	134	186 mg/kg dry	109	75-125		
Iron	21200 mg/kg dry	66.9	mg/kg dry	134	21000 mg/kg dry	151	75-125		M2
Thallium	128 mg/kg dry	66.9	mg/kg dry	134	<66.9 mg/kg dry	95.8	75-125		
Nickel	160 mg/kg dry	13.4	mg/kg dry	134	23.7 mg/kg dry	102	75-125		
Selenium	109 mg/kg dry	66.9	mg/kg dry	134	<66.9 mg/kg dry	81.8	75-125		

Matrix Spike (BBI0445-MS2)

Source: 18I0508-01

Prepared: 09/14/2018 Analyzed: 09/18/2018

Cadmium	121 mg/kg dry	0.268	mg/kg dry	134	<0.268 mg/kg dry	90.2	75-125		
Manganese	334 mg/kg dry	0.669	mg/kg dry	134	257 mg/kg dry	57.7	75-125		M
Potassium	4380 mg/kg dry	33.4	mg/kg dry	334	5100 mg/kg dry	-214	75-125		M
Selenium	108 mg/kg dry	3.34	mg/kg dry	134	<3.34 mg/kg dry	81.0	75-125		
Beryllium	131 mg/kg dry	0.268	mg/kg dry	134	3.79 mg/kg dry	95.0	75-125		
Antimony	26.6 mg/kg dry	6.69	mg/kg dry	134	8.37 mg/kg dry	13.6	75-125		M
Magnesium	3860 mg/kg dry	3.34	mg/kg dry	134	4990 mg/kg dry	-846	75-125		M, E
Arsenic	135 mg/kg dry	1.34	mg/kg dry	134	15.4 mg/kg dry	89.1	75-125		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0445 - SW3050B

Matrix Spike (BBI0445-MS2)	Source: 18I0508-01			Prepared: 09/14/2018 Analyzed: 09/18/2018						
Calcium	5560 mg/kg dry	6.69	mg/kg dry	134	7890 mg/kg dry	-1740	75-125			M, E
Sodium	469 mg/kg dry	33.4	mg/kg dry	334	90.6 mg/kg dry	113	75-125			
Zinc	234 mg/kg dry	0.669	mg/kg dry	134	130 mg/kg dry	77.6	75-125			
Silver	<0.669 mg/kg dry	0.669	mg/kg dry	6.69	<0.669 mg/kg dry		75-125			M
Copper	162 mg/kg dry	3.34	mg/kg dry	134	28.7 mg/kg dry	99.6	75-125			
Iron	14300 mg/kg dry	3.34	mg/kg dry	134	21000 mg/kg dry	4980	75-125			M, E
Chromium	147 mg/kg dry	0.669	mg/kg dry	134	20.8 mg/kg dry	94.5	75-125			
Barium	302 mg/kg dry	0.669	mg/kg dry	134	186 mg/kg dry	86.5	75-125			
Lead	144 mg/kg dry	0.669	mg/kg dry	134	27.2 mg/kg dry	87.7	75-125			
Vanadium	169 mg/kg dry	0.669	mg/kg dry	134	42.3 mg/kg dry	95.1	75-125			
Nickel	141 mg/kg dry	0.669	mg/kg dry	134	23.7 mg/kg dry	87.7	75-125			
Thallium	106 mg/kg dry	3.34	mg/kg dry	134	<3.34 mg/kg dry	79.0	75-125			
Aluminum	20300 mg/kg dry	3.34	mg/kg dry	134	18300 mg/kg dry	1480	75-125			M, E
Cobalt	138 mg/kg dry	0.268	mg/kg dry	134	16.2 mg/kg dry	91.0	75-125			

Matrix Spike Dup (BBI0445-MSD1)	Source: 18I0508-01			Prepared: 09/14/2018 Analyzed: 09/18/2018						
Vanadium	181 mg/kg dry	12.8	mg/kg dry	128	42.3 mg/kg dry	108	75-125	1.11	20	
Antimony	<128 mg/kg dry	128	mg/kg dry	128	<128 mg/kg dry		75-125		20	M2
Selenium	114 mg/kg dry	64.1	mg/kg dry	128	<64.1 mg/kg dry	89.3	75-125	4.42	20	
Sodium	<641 mg/kg dry	641	mg/kg dry	320	<641 mg/kg dry		75-125		20	M2
Zinc	274 mg/kg dry	12.8	mg/kg dry	128	130 mg/kg dry	112	75-125	4.18	20	
Thallium	120 mg/kg dry	64.1	mg/kg dry	128	<64.1 mg/kg dry	93.4	75-125	6.84	20	
Lead	167 mg/kg dry	12.8	mg/kg dry	128	27.2 mg/kg dry	109	75-125	0.749	20	
Nickel	160 mg/kg dry	12.8	mg/kg dry	128	23.7 mg/kg dry	106	75-125	0.349	20	
Aluminum	25600 mg/kg dry	64.1	mg/kg dry	128	18300 mg/kg dry	5700	75-125	8.84	20	M2, E
Calcium	9770 mg/kg dry	128	mg/kg dry	128	7890 mg/kg dry	1460	75-125	31.0	20	M2, P
Cadmium	133 mg/kg dry	5.13	mg/kg dry	128	<5.13 mg/kg dry	104	75-125	2.18	20	
Barium	356 mg/kg dry	12.8	mg/kg dry	128	186 mg/kg dry	133	75-125	7.02	20	M2
Cobalt	156 mg/kg dry	5.13	mg/kg dry	128	16.2 mg/kg dry	109	75-125	0.355	20	
Arsenic	143 mg/kg dry	25.6	mg/kg dry	128	<25.6 mg/kg dry	112	75-125	1.36	20	
Chromium	159 mg/kg dry	12.8	mg/kg dry	128	20.8 mg/kg dry	108	75-125	1.35	20	
Copper	169 mg/kg dry	64.1	mg/kg dry	128	<64.1 mg/kg dry	109	75-125	1.14	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0445 - SW3050B

Matrix Spike Dup (BBI0445-MSD1)

Source: 1810508-01

Prepared: 09/14/2018 Analyzed: 09/18/2018

Beryllium	138 mg/kg dry	5.13	mg/kg dry	128	<5.13 mg/kg dry	107	75-125	2.29	20	
Iron	24400 mg/kg dry	64.1	mg/kg dry	128	21000 mg/kg dry	2640	75-125	14.0	20	M2, E
Silver	<12.8 mg/kg dry	12.8	mg/kg dry	6.41	<12.8 mg/kg dry		75-125		20	M2
Potassium	5410 mg/kg dry	641	mg/kg dry	320	5100 mg/kg dry	99.3	75-125	10.9	20	
Magnesium	5340 mg/kg dry	64.1	mg/kg dry	128	4990 mg/kg dry	277	75-125	13.0	20	M2
Manganese	402 mg/kg dry	12.8	mg/kg dry	128	257 mg/kg dry	114	75-125	5.83	20	

Matrix Spike Dup (BBI0445-MSD2)

Source: 1810508-01

Prepared: 09/14/2018 Analyzed: 09/18/2018

Silver	<0.641 mg/kg dry	0.641	mg/kg dry	6.41	<0.641 mg/kg dry		75-125		20	M
Antimony	22.8 mg/kg dry	6.41	mg/kg dry	128	8.37 mg/kg dry	11.3	75-125		20	M
Aluminum	20800 mg/kg dry	3.20	mg/kg dry	128	18300 mg/kg dry	1980	75-125	2.68	20	M, E
Zinc	231 mg/kg dry	0.641	mg/kg dry	128	130 mg/kg dry	79.0	75-125	1.15	20	
Vanadium	161 mg/kg dry	0.641	mg/kg dry	128	42.3 mg/kg dry	92.7	75-125	5.07	20	
Arsenic	125 mg/kg dry	1.28	mg/kg dry	128	15.4 mg/kg dry	85.7	75-125	7.21	20	
Potassium	4600 mg/kg dry	32.0	mg/kg dry	320	5100 mg/kg dry	-154	75-125	4.92	20	M
Manganese	335 mg/kg dry	0.641	mg/kg dry	128	257 mg/kg dry	60.9	75-125	0.236	20	M
Selenium	98.3 mg/kg dry	3.20	mg/kg dry	128	<3.20 mg/kg dry	76.7	75-125	9.71	20	
Copper	152 mg/kg dry	3.20	mg/kg dry	128	28.7 mg/kg dry	96.2	75-125	6.34	20	
Sodium	433 mg/kg dry	32.0	mg/kg dry	320	90.6 mg/kg dry	107	75-125		20	
Barium	306 mg/kg dry	0.641	mg/kg dry	128	186 mg/kg dry	93.3	75-125	1.28	20	
Thallium	96.8 mg/kg dry	3.20	mg/kg dry	128	<3.20 mg/kg dry	75.6	75-125	8.71	20	
Iron	14900 mg/kg dry	3.20	mg/kg dry	128	21000 mg/kg dry	4740	75-125	3.98	20	M, E
Nickel	131 mg/kg dry	0.641	mg/kg dry	128	23.7 mg/kg dry	84.0	75-125	7.04	20	
Chromium	138 mg/kg dry	0.641	mg/kg dry	128	20.8 mg/kg dry	91.6	75-125	6.37	20	
Cobalt	128 mg/kg dry	0.256	mg/kg dry	128	16.2 mg/kg dry	87.6	75-125	7.11	20	
Cadmium	111 mg/kg dry	0.256	mg/kg dry	128	<0.256 mg/kg dry	86.6	75-125	8.41	20	
Lead	135 mg/kg dry	0.641	mg/kg dry	128	27.2 mg/kg dry	84.1	75-125	6.80	20	
Calcium	6750 mg/kg dry	6.41	mg/kg dry	128	7890 mg/kg dry	-888	75-125	19.4	20	M, E
Beryllium	121 mg/kg dry	0.256	mg/kg dry	128	3.79 mg/kg dry	91.8	75-125	7.49	20	
Magnesium	4060 mg/kg dry	3.20	mg/kg dry	128	4990 mg/kg dry	-721	75-125	5.25	20	M, E



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------------------	---------	-----------	------

Batch BBI0446 - SW7471B

Blank (BBI0446-BLK1)					Prepared: 09/14/2018 Analyzed: 09/17/2018				
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet						
LCS (BBI0446-BS1)					Prepared: 09/14/2018 Analyzed: 09/17/2018				
Mercury	0.096 mg/kg wet	0.008	mg/kg wet	0.100	mg/kg wet	96.1	80-120		
LCS Dup (BBI0446-BSD1)					Prepared: 09/14/2018 Analyzed: 09/17/2018				
Mercury	0.098 mg/kg wet	0.008	mg/kg wet	0.100	mg/kg wet	97.5	80-120	1.47	20

Batch BBI0447 - EPA ITM Feb 1998 10.1.2.1

Blank (BBI0447-BLK1)					Prepared: 09/14/2018 Analyzed: 09/20/2018				
Iron	<2.50 mg/kg wet	2.50	mg/kg wet						B
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet						
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet						
Sodium	<25.0 mg/kg wet	25.0	mg/kg wet						
Magnesium	<2.50 mg/kg wet	2.50	mg/kg wet						
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet						
Lead	<0.500 mg/kg wet	0.500	mg/kg wet						
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet						
Copper	<2.50 mg/kg wet	2.50	mg/kg wet						
Manganese	<0.500 mg/kg wet	0.500	mg/kg wet						
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet						
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet						
Silver	<0.500 mg/kg wet	0.500	mg/kg wet						
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet						
Aluminum	2.77 mg/kg wet	2.50	mg/kg wet						B
Barium	<0.500 mg/kg wet	0.500	mg/kg wet						
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet						
Potassium	<25.0 mg/kg wet	25.0	mg/kg wet						
Calcium	<5.00 mg/kg wet	5.00	mg/kg wet						
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet						
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0447 - EPA ITM Feb 1998 10.1.2.1

Blank (BBI0447-BLK1)

Prepared: 09/14/2018 Analyzed: 09/20/2018

Chromium	<0.500 mg/kg wet	0.500	mg/kg wet	
----------	------------------	-------	-----------	--

LCS (BBI0447-BS1)

Prepared: 09/14/2018 Analyzed: 09/20/2018

Nickel	95.6 mg/kg wet	0.500	mg/kg wet	98.9	mg/kg wet	96.6	80-120		
Cobalt	94.8 mg/kg wet	0.200	mg/kg wet	98.9	mg/kg wet	95.8	80-120		
Barium	108 mg/kg wet	0.500	mg/kg wet	98.9	mg/kg wet	109	80-120		
Zinc	97.0 mg/kg wet	0.500	mg/kg wet	98.9	mg/kg wet	98.1	80-120		
Beryllium	93.0 mg/kg wet	0.200	mg/kg wet	98.9	mg/kg wet	94.0	80-120		
Aluminum	106 mg/kg wet	2.50	mg/kg wet	98.9	mg/kg wet	107	80-120		
Cadmium	94.1 mg/kg wet	0.200	mg/kg wet	98.9	mg/kg wet	95.1	80-120		
Calcium	99.1 mg/kg wet	5.00	mg/kg wet	98.9	mg/kg wet	100	80-120		
Lead	95.3 mg/kg wet	0.500	mg/kg wet	98.9	mg/kg wet	96.3	80-120		
Sodium	266 mg/kg wet	25.0	mg/kg wet	247	mg/kg wet	107	80-120		
Silver	5.25 mg/kg wet	0.500	mg/kg wet	4.95	mg/kg wet	106	80-120		
Chromium	95.3 mg/kg wet	0.500	mg/kg wet	98.9	mg/kg wet	96.3	80-120		
Magnesium	97.7 mg/kg wet	2.50	mg/kg wet	98.9	mg/kg wet	98.8	80-120		
Vanadium	102 mg/kg wet	0.500	mg/kg wet	98.9	mg/kg wet	103	80-120		
Thallium	85.8 mg/kg wet	2.50	mg/kg wet	98.9	mg/kg wet	86.8	80-120		
Selenium	86.3 mg/kg wet	2.50	mg/kg wet	98.9	mg/kg wet	87.3	80-120		
Potassium	261 mg/kg wet	25.0	mg/kg wet	247	mg/kg wet	106	80-120		
Manganese	97.5 mg/kg wet	0.500	mg/kg wet	98.9	mg/kg wet	98.6	80-120		
Iron	99.0 mg/kg wet	2.50	mg/kg wet	98.9	mg/kg wet	100	80-120		
Antimony	92.3 mg/kg wet	5.00	mg/kg wet	98.9	mg/kg wet	93.3	80-120		
Arsenic	91.9 mg/kg wet	1.00	mg/kg wet	98.9	mg/kg wet	92.9	80-120		
Copper	98.3 mg/kg wet	2.50	mg/kg wet	98.9	mg/kg wet	99.4	80-120		

LCS Dup (BBI0447-BSD1)

Prepared: 09/14/2018 Analyzed: 09/20/2018

Barium	106 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	109	80-120	1.93	20
Selenium	86.9 mg/kg wet	2.50	mg/kg wet	97.5	mg/kg wet	89.1	80-120	0.651	20
Beryllium	92.6 mg/kg wet	0.200	mg/kg wet	97.5	mg/kg wet	95.0	80-120	0.404	20
Arsenic	91.8 mg/kg wet	1.00	mg/kg wet	97.5	mg/kg wet	94.2	80-120	0.0753	20
Antimony	92.6 mg/kg wet	5.00	mg/kg wet	97.5	mg/kg wet	95.0	80-120	0.314	20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0447 - EPA ITM Feb 1998 10.1.2.1

LCS Dup (BBI0447-BSD1)

Prepared: 09/14/2018 Analyzed: 09/20/2018

Calcium	97.8 mg/kg wet	5.00	mg/kg wet	97.5	mg/kg wet	100	80-120	1.32	20	
Thallium	86.2 mg/kg wet	2.50	mg/kg wet	97.5	mg/kg wet	88.4	80-120	0.411	20	
Cadmium	94.0 mg/kg wet	0.200	mg/kg wet	97.5	mg/kg wet	96.4	80-120	0.147	20	
Sodium	260 mg/kg wet	25.0	mg/kg wet	244	mg/kg wet	107	80-120	2.09	20	
Vanadium	101 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	103	80-120	0.786	20	
Zinc	96.5 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	99.0	80-120	0.481	20	
Manganese	97.2 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	99.7	80-120	0.313	20	
Iron	98.5 mg/kg wet	2.50	mg/kg wet	97.5	mg/kg wet	101	80-120	0.531	20	
Cobalt	94.9 mg/kg wet	0.200	mg/kg wet	97.5	mg/kg wet	97.3	80-120	0.0591	20	
Copper	98.3 mg/kg wet	2.50	mg/kg wet	97.5	mg/kg wet	101	80-120	0.00300	20	
Chromium	95.0 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	97.4	80-120	0.355	20	
Nickel	95.4 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	97.9	80-120	0.174	20	
Magnesium	96.7 mg/kg wet	2.50	mg/kg wet	97.5	mg/kg wet	99.2	80-120	1.02	20	
Potassium	249 mg/kg wet	25.0	mg/kg wet	244	mg/kg wet	102	80-120	4.63	20	
Lead	95.1 mg/kg wet	0.500	mg/kg wet	97.5	mg/kg wet	97.6	80-120	0.212	20	
Silver	5.16 mg/kg wet	0.500	mg/kg wet	4.87	mg/kg wet	106	80-120	1.70	20	
Aluminum	103 mg/kg wet	2.50	mg/kg wet	97.5	mg/kg wet	106	80-120	3.04	20	

Matrix Spike (BBI0447-MS1)

Source: 18I0508-06

Prepared: 09/14/2018 Analyzed: 09/20/2018

Antimony	<683 mg/kg dry	683	mg/kg dry	137	<683 mg/kg dry	75-125				M2
Beryllium	138 mg/kg dry	27.3	mg/kg dry	137	<27.3 mg/kg dry	101	75-125			
Vanadium	185 mg/kg dry	68.3	mg/kg dry	137	<68.3 mg/kg dry	135	75-125			M2
Calcium	3660 mg/kg dry	683	mg/kg dry	137	3640 mg/kg dry	17.4	75-125			M2
Iron	32600 mg/kg dry	342	mg/kg dry	137	30700 mg/kg dry	1440	75-125			M2
Silver	<68.3 mg/kg dry	68.3	mg/kg dry	6.83	<68.3 mg/kg dry		75-125			M2
Selenium	<342 mg/kg dry	342	mg/kg dry	137	<342 mg/kg dry		75-125			M2
Potassium	6150 mg/kg dry	3420	mg/kg dry	342	5780 mg/kg dry	108	75-125			
Cobalt	146 mg/kg dry	27.3	mg/kg dry	137	<27.3 mg/kg dry	107	75-125			
Lead	280 mg/kg dry	68.3	mg/kg dry	137	120 mg/kg dry	117	75-125			
Thallium	<342 mg/kg dry	342	mg/kg dry	137	<342 mg/kg dry		75-125			M2
Arsenic	<137 mg/kg dry	137	mg/kg dry	137	<137 mg/kg dry		75-125			M2
Copper	<342 mg/kg dry	342	mg/kg dry	137	<342 mg/kg dry	129	75-125			M2



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0447 - EPA ITM Feb 1998 10.1.2.1

Matrix Spike (BBI0447-MS1)

Source: 18I0508-06

Prepared: 09/14/2018 Analyzed: 09/20/2018

Chromium	157 mg/kg dry	68.3	mg/kg dry	137	<68.3 mg/kg dry	115	75-125			
Cadmium	139 mg/kg dry	27.3	mg/kg dry	137	<27.3 mg/kg dry	102	75-125			
Zinc	657 mg/kg dry	68.3	mg/kg dry	137	476 mg/kg dry	132	75-125			M2
Aluminum	35400 mg/kg dry	342	mg/kg dry	137	23700 mg/kg dry	8550	75-125			M2
Nickel	163 mg/kg dry	68.3	mg/kg dry	137	<68.3 mg/kg dry	120	75-125			
Manganese	479 mg/kg dry	68.3	mg/kg dry	137	343 mg/kg dry	99.5	75-125			
Magnesium	4460 mg/kg dry	342	mg/kg dry	137	4040 mg/kg dry	306	75-125			M2
Barium	369 mg/kg dry	68.3	mg/kg dry	137	160 mg/kg dry	153	75-125			M2
Sodium	<3420 mg/kg dry	3420	mg/kg dry	342	<3420 mg/kg dry		75-125			M2

Matrix Spike (BBI0447-MS2)

Source: 18I0508-06

Prepared: 09/14/2018 Analyzed: 09/20/2018

Aluminum	36500 mg/kg dry	68.3	mg/kg dry	137	23700 mg/kg dry	9330	75-125			M2, E
Potassium	6150 mg/kg dry	683	mg/kg dry	342	5780 mg/kg dry	108	75-125			
Antimony	<137 mg/kg dry	137	mg/kg dry	137	<137 mg/kg dry		75-125			M2
Sodium	<683 mg/kg dry	683	mg/kg dry	342	<683 mg/kg dry		75-125			M2
Vanadium	191 mg/kg dry	13.7	mg/kg dry	137	39.5 mg/kg dry	111	75-125			
Zinc	674 mg/kg dry	13.7	mg/kg dry	137	476 mg/kg dry	145	75-125			M2
Lead	251 mg/kg dry	13.7	mg/kg dry	137	120 mg/kg dry	95.9	75-125			
Arsenic	135 mg/kg dry	27.3	mg/kg dry	137	<27.3 mg/kg dry	99.2	75-125			
Copper	185 mg/kg dry	68.3	mg/kg dry	137	<68.3 mg/kg dry	106	75-125			
Nickel	163 mg/kg dry	13.7	mg/kg dry	137	18.2 mg/kg dry	106	75-125			
Thallium	127 mg/kg dry	68.3	mg/kg dry	137	<68.3 mg/kg dry	93.3	75-125			
Manganese	484 mg/kg dry	13.7	mg/kg dry	137	343 mg/kg dry	103	75-125			
Beryllium	142 mg/kg dry	5.46	mg/kg dry	137	<5.46 mg/kg dry	104	75-125			
Magnesium	4550 mg/kg dry	68.3	mg/kg dry	137	4040 mg/kg dry	369	75-125			M2
Cadmium	140 mg/kg dry	5.46	mg/kg dry	137	<5.46 mg/kg dry	102	75-125			
Cobalt	148 mg/kg dry	5.46	mg/kg dry	137	8.58 mg/kg dry	102	75-125			
Barium	364 mg/kg dry	13.7	mg/kg dry	137	160 mg/kg dry	149	75-125			M2
Chromium	165 mg/kg dry	13.7	mg/kg dry	137	27.3 mg/kg dry	101	75-125			
Calcium	3910 mg/kg dry	137	mg/kg dry	137	3640 mg/kg dry	198	75-125			M2
Iron	32500 mg/kg dry	68.3	mg/kg dry	137	30700 mg/kg dry	1310	75-125			M2, E
Selenium	124 mg/kg dry	68.3	mg/kg dry	137	<68.3 mg/kg dry	90.7	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0447 - EPA ITM Feb 1998 10.1.2.1

Matrix Spike (BBI0447-MS2)		Source: 1810508-06		Prepared: 09/14/2018 Analyzed: 09/20/2018						
Silver	<13.7 mg/kg dry	13.7	mg/kg dry	6.83	<13.7 mg/kg dry	75-125				M2

Matrix Spike (BBI0447-MS3)		Source: 1810508-06		Prepared: 09/14/2018 Analyzed: 09/20/2018						
Antimony	22.4 mg/kg dry	6.83	mg/kg dry	137	79.9 mg/kg dry	-42.1	75-125			M
Iron	17300 mg/kg dry	3.42	mg/kg dry	137	30700 mg/kg dry	9800	75-125			M, E
Manganese	382 mg/kg dry	0.683	mg/kg dry	137	343 mg/kg dry	28.2	75-125			M
Copper	157 mg/kg dry	3.42	mg/kg dry	137	39.7 mg/kg dry	85.8	75-125			
Potassium	4960 mg/kg dry	34.2	mg/kg dry	342	5780 mg/kg dry	-241	75-125			M
Lead	197 mg/kg dry	0.683	mg/kg dry	137	120 mg/kg dry	55.8	75-125			M
Magnesium	3410 mg/kg dry	3.42	mg/kg dry	137	4040 mg/kg dry	-462	75-125			M, E
Selenium	99.2 mg/kg dry	3.42	mg/kg dry	137	<3.42 mg/kg dry	72.6	75-125			M
Nickel	132 mg/kg dry	0.683	mg/kg dry	137	18.2 mg/kg dry	82.9	75-125			
Sodium	360 mg/kg dry	34.2	mg/kg dry	342	499 mg/kg dry	-40.7	75-125			M
Cobalt	119 mg/kg dry	0.273	mg/kg dry	137	8.58 mg/kg dry	80.5	75-125			
Chromium	134 mg/kg dry	0.683	mg/kg dry	137	27.3 mg/kg dry	78.4	75-125			
Calcium	2930 mg/kg dry	6.83	mg/kg dry	137	3640 mg/kg dry	-520	75-125			M, E
Beryllium	120 mg/kg dry	0.273	mg/kg dry	137	1.76 mg/kg dry	86.4	75-125			
Vanadium	163 mg/kg dry	0.683	mg/kg dry	137	39.5 mg/kg dry	90.1	75-125			
Cadmium	114 mg/kg dry	0.273	mg/kg dry	137	2.03 mg/kg dry	81.9	75-125			
Thallium	92.6 mg/kg dry	3.42	mg/kg dry	137	30.7 mg/kg dry	45.3	75-125			M
Silver	<0.683 mg/kg dry	0.683	mg/kg dry	6.83	<0.683 mg/kg dry		75-125			M
Barium	305 mg/kg dry	0.683	mg/kg dry	137	160 mg/kg dry	107	75-125			
Aluminum	28800 mg/kg dry	3.42	mg/kg dry	137	23700 mg/kg dry	3750	75-125			M, E
Arsenic	114 mg/kg dry	1.37	mg/kg dry	137	<1.37 mg/kg dry	83.5	75-125			
Zinc	561 mg/kg dry	0.683	mg/kg dry	137	476 mg/kg dry	61.8	75-125			M

Matrix Spike Dup (BBI0447-MSD1)		Source: 1810508-06		Prepared: 09/14/2018 Analyzed: 09/20/2018						
Aluminum	37300 mg/kg dry	358	mg/kg dry	143	23700 mg/kg dry	9490	75-125	5.24	20	M2
Potassium	6300 mg/kg dry	3580	mg/kg dry	358	5780 mg/kg dry	143	75-125	2.32	20	M2
Vanadium	201 mg/kg dry	71.5	mg/kg dry	143	<71.5 mg/kg dry	140	75-125	8.51	20	M2
Arsenic	<143 mg/kg dry	143	mg/kg dry	143	<143 mg/kg dry		75-125		20	M2
Beryllium	145 mg/kg dry	28.6	mg/kg dry	143	<28.6 mg/kg dry	101	75-125	5.03	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-----------	--------	-----	-----------	------

Batch BBI0447 - EPA ITM Feb 1998 10.1.2.1

Matrix Spike Dup (BBI0447-MSD1)		Source: 1810508-06			Prepared: 09/14/2018 Analyzed: 09/20/2018					
Magnesium	4840 mg/kg dry	358	mg/kg dry	143	4040 mg/kg dry	557	75-125	8.15	20	M2
Zinc	701 mg/kg dry	71.5	mg/kg dry	143	476 mg/kg dry	157	75-125	6.41	20	M2
Nickel	168 mg/kg dry	71.5	mg/kg dry	143	<71.5 mg/kg dry	118	75-125	3.05	20	
Barium	360 mg/kg dry	71.5	mg/kg dry	143	160 mg/kg dry	140	75-125	2.37	20	M2
Copper	<358 mg/kg dry	358	mg/kg dry	143	<358 mg/kg dry	133	75-125	7.74	20	M2
Chromium	180 mg/kg dry	71.5	mg/kg dry	143	<71.5 mg/kg dry	126	75-125	13.5	20	M2
Iron	35300 mg/kg dry	358	mg/kg dry	143	30700 mg/kg dry	3210	75-125	7.73	20	M2
Calcium	3480 mg/kg dry	715	mg/kg dry	143	3640 mg/kg dry	-110	75-125	5.09	20	M2
Thallium	<358 mg/kg dry	358	mg/kg dry	143	<358 mg/kg dry		75-125		20	M2
Lead	277 mg/kg dry	71.5	mg/kg dry	143	120 mg/kg dry	110	75-125	0.900	20	
Selenium	<358 mg/kg dry	358	mg/kg dry	143	<358 mg/kg dry		75-125		20	M2
Cadmium	148 mg/kg dry	28.6	mg/kg dry	143	<28.6 mg/kg dry	103	75-125	6.02	20	
Cobalt	158 mg/kg dry	28.6	mg/kg dry	143	<28.6 mg/kg dry	111	75-125	8.07	20	
Sodium	<3580 mg/kg dry	3580	mg/kg dry	358	<3580 mg/kg dry		75-125		20	M2
Silver	<71.5 mg/kg dry	71.5	mg/kg dry	7.15	<71.5 mg/kg dry		75-125		20	M2
Manganese	510 mg/kg dry	71.5	mg/kg dry	143	343 mg/kg dry	117	75-125	6.28	20	
Antimony	<715 mg/kg dry	715	mg/kg dry	143	<715 mg/kg dry		75-125		20	M2

Matrix Spike Dup (BBI0447-MSD2)		Source: 1810508-06			Prepared: 09/14/2018 Analyzed: 09/20/2018					
Zinc	710 mg/kg dry	14.3	mg/kg dry	143	476 mg/kg dry	163	75-125	5.26	20	M2
Antimony	<143 mg/kg dry	143	mg/kg dry	143	<143 mg/kg dry		75-125		20	M2
Iron	35000 mg/kg dry	71.5	mg/kg dry	143	30700 mg/kg dry	3020	75-125	7.50	20	M2, E
Lead	268 mg/kg dry	14.3	mg/kg dry	143	120 mg/kg dry	103	75-125	6.22	20	
Vanadium	199 mg/kg dry	14.3	mg/kg dry	143	39.5 mg/kg dry	111	75-125	3.89	20	
Thallium	133 mg/kg dry	71.5	mg/kg dry	143	<71.5 mg/kg dry	93.2	75-125		20	
Selenium	127 mg/kg dry	71.5	mg/kg dry	143	<71.5 mg/kg dry	88.7	75-125		20	
Sodium	<715 mg/kg dry	715	mg/kg dry	358	<715 mg/kg dry		75-125		20	M2
Calcium	3690 mg/kg dry	143	mg/kg dry	143	3640 mg/kg dry	34.7	75-125	5.82	20	M2
Silver	<14.3 mg/kg dry	14.3	mg/kg dry	7.15	<14.3 mg/kg dry		75-125		20	M2
Nickel	176 mg/kg dry	14.3	mg/kg dry	143	18.2 mg/kg dry	110	75-125	7.47	20	
Cobalt	157 mg/kg dry	5.72	mg/kg dry	143	8.58 mg/kg dry	104	75-125	6.21	20	
Cadmium	149 mg/kg dry	5.72	mg/kg dry	143	<5.72 mg/kg dry	104	75-125	6.30	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------------------	---------	-------	------

Batch BBI0447 - EPA ITM Feb 1998 10.1.2.1

Matrix Spike Dup (BBI0447-MSD2)		Source: 18I0508-06		Prepared: 09/14/2018 Analyzed: 09/20/2018						
Beryllium	151 mg/kg dry	5.72	mg/kg dry	143	<5.72 mg/kg dry	106	75-125	6.48	20	
Barium	353 mg/kg dry	14.3	mg/kg dry	143	160 mg/kg dry	135	75-125	3.10	20	M2
Chromium	172 mg/kg dry	14.3	mg/kg dry	143	27.3 mg/kg dry	101	75-125	3.94	20	
Arsenic	140 mg/kg dry	28.6	mg/kg dry	143	<28.6 mg/kg dry	97.9	75-125		20	
Aluminum	38200 mg/kg dry	71.5	mg/kg dry	143	23700 mg/kg dry	10100	75-125	4.75	20	M2, E
Manganese	518 mg/kg dry	14.3	mg/kg dry	143	343 mg/kg dry	122	75-125	6.74	20	
Copper	201 mg/kg dry	71.5	mg/kg dry	143	<71.5 mg/kg dry	112	75-125	8.11	20	
Magnesium	4910 mg/kg dry	71.5	mg/kg dry	143	4040 mg/kg dry	609	75-125	7.77	20	M2
Potassium	6590 mg/kg dry	715	mg/kg dry	358	5780 mg/kg dry	225	75-125	6.85	20	M2

Matrix Spike Dup (BBI0447-MSD3)		Source: 18I0508-06		Prepared: 09/14/2018 Analyzed: 09/20/2018						
Arsenic	119 mg/kg dry	1.43	mg/kg dry	143	<1.43 mg/kg dry	83.5	75-125		20	
Zinc	594 mg/kg dry	0.715	mg/kg dry	143	476 mg/kg dry	82.3	75-125	5.77	20	
Vanadium	172 mg/kg dry	0.715	mg/kg dry	143	39.5 mg/kg dry	92.6	75-125	5.68	20	
Potassium	5240 mg/kg dry	35.8	mg/kg dry	358	5780 mg/kg dry	-152	75-125	5.50	20	M
Iron	18400 mg/kg dry	3.58	mg/kg dry	143	30700 mg/kg dry	8600	75-125	6.10	20	M, E
Beryllium	127 mg/kg dry	0.286	mg/kg dry	143	1.76 mg/kg dry	87.8	75-125	6.15	20	
Thallium	98.0 mg/kg dry	3.58	mg/kg dry	143	30.7 mg/kg dry	47.1	75-125		20	M
Calcium	2790 mg/kg dry	7.15	mg/kg dry	143	3640 mg/kg dry	-594	75-125	4.90	20	M, E
Silver	<0.715 mg/kg dry	0.715	mg/kg dry	7.15	<0.715 mg/kg dry		75-125		20	M
Sodium	378 mg/kg dry	35.8	mg/kg dry	358	499 mg/kg dry	-33.6	75-125		20	M
Manganese	408 mg/kg dry	0.715	mg/kg dry	143	343 mg/kg dry	45.2	75-125	6.62	20	M
Antimony	23.8 mg/kg dry	7.15	mg/kg dry	143	79.9 mg/kg dry	-39.3	75-125		20	M
Chromium	142 mg/kg dry	0.715	mg/kg dry	143	27.3 mg/kg dry	80.4	75-125	5.79	20	
Selenium	105 mg/kg dry	3.58	mg/kg dry	143	<3.58 mg/kg dry	73.2	75-125		20	M
Aluminum	30200 mg/kg dry	3.58	mg/kg dry	143	23700 mg/kg dry	4530	75-125	4.60	20	M, E
Barium	298 mg/kg dry	0.715	mg/kg dry	143	160 mg/kg dry	96.8	75-125	2.31	20	
Magnesium	3680 mg/kg dry	3.58	mg/kg dry	143	4040 mg/kg dry	-253	75-125	7.59	20	M, E
Cobalt	126 mg/kg dry	0.286	mg/kg dry	143	8.58 mg/kg dry	82.0	75-125	6.06	20	
Nickel	140 mg/kg dry	0.715	mg/kg dry	143	18.2 mg/kg dry	84.8	75-125	5.92	20	
Cadmium	120 mg/kg dry	0.286	mg/kg dry	143	2.03 mg/kg dry	82.6	75-125	5.31	20	
Copper	169 mg/kg dry	3.58	mg/kg dry	143	39.7 mg/kg dry	90.6	75-125	7.57	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0447 - EPA ITM Feb 1998 10.1.2.1

Matrix Spike Dup (BBI0447-MSD3)		Source: 18I0508-06		Prepared: 09/14/2018 Analyzed: 09/20/2018						
Lead	206 mg/kg dry	0.715	mg/kg dry	143	120 mg/kg dry	59.7	75-125	4.61	20	M

Batch BBI0608 - SW7471B

Blank (BBI0608-BLK1)				Prepared: 09/20/2018 Analyzed: 09/24/2018		
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet			

LCS (BBI0608-BS1)				Prepared: 09/20/2018 Analyzed: 09/24/2018						
Mercury	0.093 mg/kg wet	0.008	mg/kg wet	0.0988	mg/kg wet	94.4	80-120			

LCS Dup (BBI0608-BSD1)				Prepared: 09/20/2018 Analyzed: 09/24/2018						
Mercury	0.094 mg/kg wet	0.008	mg/kg wet	0.0996	mg/kg wet	94.1	80-120	0.463	20	

Matrix Spike (BBI0608-MS1)		Source: 18I0508-11		Prepared: 09/20/2018 Analyzed: 09/24/2018						
Mercury	0.127 mg/kg dry	0.009	mg/kg dry	0.114	0.016 mg/kg dry	97.0	80-120			

Matrix Spike Dup (BBI0608-MSD1)		Source: 18I0508-11		Prepared: 09/20/2018 Analyzed: 09/24/2018						
Mercury	0.130 mg/kg dry	0.010	mg/kg dry	0.119	0.016 mg/kg dry	96.1	80-120	2.84	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0429 - SW5030B

Blank (BBI0429-BLK1)

Prepared & Analyzed: 09/14/2018

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet							
Surr: 2,5-Dibromotoluene (Surr FID)	93.4		ug/L	100		93.4	80-120			

LCS (BBI0429-BS1)

Prepared & Analyzed: 09/14/2018

TPH-Volatiles (GRO)	0.99 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	98.7	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	93.5		ug/L	100	ug/L	93.5	80-120			

Matrix Spike (BBI0429-MS1)

Source: 18I0546-01

Prepared & Analyzed: 09/14/2018

TPH-Volatiles (GRO)	0.82 mg/kg wet	0.10	mg/kg wet	1.00	<0.10 mg/kg wet	82.4	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	101		ug/L	100	ug/L	101	80-120			

Matrix Spike Dup (BBI0429-MSD1)

Source: 18I0546-01

Prepared & Analyzed: 09/14/2018

TPH-Volatiles (GRO)	0.85 mg/kg wet	0.10	mg/kg wet	0.998	<0.10 mg/kg wet	85.3	70-130	3.30	20	
Surr: 2,5-Dibromotoluene (Surr FID)	97.5		ug/L	100	ug/L	97.5	80-120			

Batch BBI0480 - SW5030B

Blank (BBI0480-BLK1)

Prepared & Analyzed: 09/17/2018

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet							
Surr: 2,5-Dibromotoluene (Surr FID)	100		ug/L	100		100	80-120			

LCS (BBI0480-BS1)

Prepared & Analyzed: 09/17/2018

TPH-Volatiles (GRO)	0.94 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	94.5	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	97.7		ug/L	100	ug/L	97.7	80-120			

Matrix Spike (BBI0480-MS1)

Source: 18I0511-07

Prepared & Analyzed: 09/17/2018

TPH-Volatiles (GRO)	0.65 mg/kg dry	0.12	mg/kg dry	1.20	<0.12 mg/kg dry	53.9	70-130			M
Surr: 2,5-Dibromotoluene (Surr FID)	105		ug/L	100	ug/L	105	80-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	--------------	----------------	------------	--------------	------

Batch BBI0480 - SW5030B

Matrix Spike Dup (BBI0480-MSD1)

Source: 18I0511-07

Prepared & Analyzed: 09/17/2018

TPH-Volatiles (GRO)	1.06 mg/kg dry	0.12	mg/kg dry	1.20	<0.12 mg/kg dry	87.9	70-130	47.8	20	P
Surr: 2,5-Dibromotoluene (Surr FID)	110		ug/L	100	ug/L	110	80-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	--------------	---------------	--------------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

2,3,7,8-TCDD (SIM)	Not Detected - wet		- wet						
1,2,4,5-Tetrachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,2,4-Trichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,2-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,2-Diphenylhydrazine	<83.3 ug/kg wet	83.3	ug/kg wet						
1,3-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1,4-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
1-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
1-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
2,3,4,6-Tetrachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4,5-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4,6-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dimethylphenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dinitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet						
2,6-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,6-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Chlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Methylnaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
3,3'-Dichlorobenzidine	<83.3 ug/kg wet	83.3	ug/kg wet						
3-Methylcholanthrene	<83.3 ug/kg wet	83.3	ug/kg wet						
3-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4,6-Dinitro-2-methylphenol	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Aminobiphenyl	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Bromophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Chloroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

4-Chlorophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
7,12-Dimethylbenz (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acetophenone	<83.3 ug/kg wet	83.3	ug/kg wet						
Aniline	<83.3 ug/kg wet	83.3	ug/kg wet						
Anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzidine	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (b) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (g,h,i) perylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (k) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzoic acid	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzyl alcohol	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethoxy) methane	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethyl) ether	<83.3 ug/kg wet	83.3	ug/kg wet						
2,2'-Oxybis (1-chloropropane)	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Ethylhexyl) phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Butyl benzyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Chrysene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,h) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,j) acridine	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenzofuran	<83.3 ug/kg wet	83.3	ug/kg wet						
Diethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Dimethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-butyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-octyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Diphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

Ethyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluorene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobutadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorocyclopentadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachloroethane	<83.3 ug/kg wet	83.3	ug/kg wet						
Indeno (1,2,3-cd) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Isophorone	<83.3 ug/kg wet	83.3	ug/kg wet						
m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet						
Methyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet						
Naphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
Nitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodimethylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodi-n-butylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodi-n-propylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodiphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosopiperidine	<83.3 ug/kg wet	83.3	ug/kg wet						
o+m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet						
o-Cresol	<83.3 ug/kg wet	83.3	ug/kg wet						
p-(Dimethylamino) azobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
p-Chloro-m-cresol	<83.3 ug/kg wet	83.3	ug/kg wet						
Pentachloronitrobenzene (quintozene)	<83.3 ug/kg wet	83.3	ug/kg wet						
Pentachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenacetin	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenanthrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenol	<83.3 ug/kg wet	83.3	ug/kg wet						
Pronamide	<83.3 ug/kg wet	83.3	ug/kg wet						
Pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Pyridine	<83.3 ug/kg wet	83.3	ug/kg wet						

Surr: 2,4,6-Tribromophenol (Surr)

1640

ug/kg wet

3070

53.5

35-125



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Blank (BBI0510-BLK1)

Prepared & Analyzed: 09/18/2018

Surr: 2-Fluorobiphenyl (Surr)	888	ug/kg wet	1530	57.9	45-105
Surr: 2-Fluorophenol (Surr)	2380	ug/kg wet	3070	77.6	35-105
Surr: Nitrobenzene-d5 (Surr)	875	ug/kg wet	1530	57.1	35-100
Surr: Phenol-d5 (Surr)	1730	ug/kg wet	3070	56.3	40-100
Surr: p-Terphenyl-d14 (Surr)	1240	ug/kg wet	1530	81.0	30-125

LCS (BBI0510-BS1)

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	845 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	55.6	21.8-66.7
1,2-Dichlorobenzene	838 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	55.1	22-60
1,3-Dichlorobenzene	809 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.2	22-60
1,4-Dichlorobenzene	888 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.4	13-68
1-Chloronaphthalene	912 ug/kg wet	76.0	ug/kg wet		ug/kg wet		0-200
2,4,6-Trichlorophenol	949 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.4	50-115
2,4-Dichlorophenol	870 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.2	50-105
2,4-Dimethylphenol	901 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.3	30-110
2,4-Dinitrophenol	1530 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	101	15-140
2,4-Dinitrotoluene	959 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	63.1	21-99
2,6-Dinitrotoluene	890 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	15-140
2-Chloronaphthalene	877 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.7	45-105
2-Chlorophenol	810 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.3	15-74
2-Nitrophenol	901 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.3	40-115
3,3'-Dichlorobenzidine	653 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	43.0	20-110
4,6-Dinitro-2-methylphenol	1380 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	90.5	40-130
4-Bromophenyl phenyl ether	826 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	54.4	15-110
4-Chlorophenyl phenyl ether	799 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	52.6	15-110
4-Nitrophenol	780 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	51.3	0-125
Acenaphthene	914 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	60.1	27.7-85.5
Acenaphthylene	1010 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	66.5	50-105
Acetophenone	866 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.0	0-200
Anthracene	944 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.1	55-110
Benzo (a) anthracene	983 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.7	55-110



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

LCS (BBI0510-BS1)

Prepared & Analyzed: 09/18/2018

Benzo (a) pyrene	930 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.2	55-110			
Benzo (b) fluoranthene	1110 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	72.9	45-120			
Benzo (g,h,i) perylene	902 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.4	40-125			
Benzo (k) fluoranthene	996 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	65.5	45-125			
bis (2-Chloroethoxy) methane	855 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.2	40-125			
bis (2-Chloroethyl) ether	766 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.4	40-125			
2,2'-Oxybis (1-chloropropane)	771 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.8	40-125			
bis (2-Ethylhexyl) phthalate	1260 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	83.0	40-125			
Butyl benzyl phthalate	1320 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	86.6	45-115			
Chrysene	1030 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	67.5	55-110			
Dibenz (a,h) anthracene	892 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.7	40-125			
Diethyl phthalate	939 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.8	40-120			
Dimethyl phthalate	867 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.0	25-125			
Di-n-butyl phthalate	1070 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	70.6	55-115			
Di-n-octyl phthalate	1420 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	93.3	35-135			
Fluoranthene	982 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.6	55-115			
Fluorene	948 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.4	50-110			
Hexachlorobenzene	830 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	54.6	25-125			
Hexachlorobutadiene	985 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.8	25-125			
Hexachlorocyclopentadiene	742 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	48.8	25-125			
Hexachloroethane	890 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	25-125			
Indeno (1,2,3-cd) pyrene	891 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	45-125			
Isophorone	857 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.4	10-110			
Naphthalene	957 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.9	40-100			
Nitrobenzene	928 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.0	40-100			
n-Nitrosodimethylamine	910 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.9	25-110			
n-Nitrosodi-n-propylamine	926 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	60.9	12-97			
n-Nitrosodiphenylamine	715 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	47.1	12-97			
p-Chloro-m-cresol	900 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.2	10-91			
Pentachlorophenol	902 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.4	30-109			
Phenanthrene	1020 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	66.9	50-115			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

LCS (BBI0510-BS1)

Prepared & Analyzed: 09/18/2018

Phenol	928 ug/kg wet	76.0	ug/kg wet	1530	ug/kg wet	60.4	0-115			
Pyrene	1270 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	83.7	27-110			
Pyridine	762 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.2	0-200			
<hr style="border-top: 1px dashed black;"/>										
<i>Surr: 2,4,6-Tribromophenol (Surr)</i>	1870		ug/kg wet	3040	ug/kg wet	61.6	35-125			
<i>Surr: 2-Fluorobiphenyl (Surr)</i>	959		ug/kg wet	1520	ug/kg wet	63.1	45-105			
<i>Surr: 2-Fluorophenol (Surr)</i>	2670		ug/kg wet	3040	ug/kg wet	87.7	35-105			
<i>Surr: Nitrobenzene-d5 (Surr)</i>	957		ug/kg wet	1520	ug/kg wet	63.0	35-100			
<i>Surr: Phenol-d5 (Surr)</i>	1900		ug/kg wet	3040	ug/kg wet	62.7	40-100			
<i>Surr: p-Terphenyl-d14 (Surr)</i>	1220		ug/kg wet	1520	ug/kg wet	80.1	30-125			

Matrix Spike (BBI0510-MS1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	743 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	41.9	21.8-66.7			
1,2-Dichlorobenzene	731 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	41.2	22-60			
1,3-Dichlorobenzene	692 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	39.0	22-60			
1,4-Dichlorobenzene	770 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	43.4	22-60			
1-Chloronaphthalene	855 ug/kg dry	88.7	ug/kg dry		<88.7 ug/kg dry		0-200			
2,4,6-Trichlorophenol	913 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	51.4	50-115			
2,4-Dichlorophenol	788 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.4	50-105			M
2,4-Dimethylphenol	768 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	43.3	30-110			
2,4-Dinitrophenol	1440 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	81.0	15-140			
2,4-Dinitrotoluene	985 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.5	17-111			
2,6-Dinitrotoluene	858 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.3	15-140			
2-Chloronaphthalene	828 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	46.6	45-105			
2-Chlorophenol	720 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	40.5	19-64			
2-Nitrophenol	820 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	46.2	40-115			
3,3'-Dichlorobenzidine	669 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	37.7	20-110			
4,6-Dinitro-2-methylphenol	1320 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	74.2	40-130			
4-Bromophenyl phenyl ether	784 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.2	15-110			
4-Chlorophenyl phenyl ether	746 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	42.0	15-110			
4-Nitrophenol	874 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	49.2	0-125			
Acenaphthene	866 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.8	24-90			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike (BBI0510-MS1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

Acenaphthylene	955 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	53.8	50-105			
Acetophenone	787 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.3	0-200			
Anthracene	898 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	50.6	55-110			M
Benzo (a) anthracene	988 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.6	55-110			
Benzo (a) pyrene	989 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.7	55-110			
Benzo (b) fluoranthene	1080 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	60.6	45-120			
Benzo (g,h,i) perylene	967 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	54.5	40-125			
Benzo (k) fluoranthene	1120 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	63.1	45-125			
bis (2-Chloroethoxy) methane	793 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.6	40-125			
bis (2-Chloroethyl) ether	673 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	37.9	40-125			M
2,2'-Oxybis (1-chloropropane)	702 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	39.5	40-125			M
bis (2-Ethylhexyl) phthalate	1370 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	77.2	40-125			
Butyl benzyl phthalate	1350 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	76.2	45-115			
Chrysene	1020 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	57.2	55-110			
Dibenz (a,h) anthracene	991 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.8	40-125			
Diethyl phthalate	923 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	52.0	40-120			
Dimethyl phthalate	842 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.4	25-125			
Di-n-butyl phthalate	1080 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	61.0	55-115			
Di-n-octyl phthalate	1600 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	90.0	35-135			
Fluoranthene	964 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	54.3	55-115			M
Fluorene	894 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	50.3	50-110			
Hexachlorobenzene	801 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	45.1	25-125			
Hexachlorobutadiene	865 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.7	25-125			
Hexachlorocyclopentadiene	493 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	27.7	25-125			
Hexachloroethane	784 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.1	25-125			
Indeno (1,2,3-cd) pyrene	979 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	55.1	45-125			
Isophorone	785 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	44.2	10-110			
Naphthalene	854 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.1	40-100			
Nitrobenzene	836 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.1	40-100			
n-Nitrosodimethylamine	844 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.6	25-110			
n-Nitrosodi-n-propylamine	877 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	49.4	12-97			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike (BBI0510-MS1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

n-Nitrosodiphenylamine	686 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	38.6	12-97			
p-Chloro-m-cresol	840 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	47.3	10-91			
Pentachlorophenol	880 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	49.6	27-109			
Phenanthrene	994 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	56.0	50-115			
Phenol	831 ug/kg dry	88.7	ug/kg dry	1790	<88.7 ug/kg dry	46.4	0-115			
Pyrene	1250 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	70.6	23-110			
Pyridine	860 ug/kg dry	88.7	ug/kg dry	1780	<88.7 ug/kg dry	48.4	0-200			
<hr/>										
Surr: 2,4,6-Tribromophenol (Surr)	1790		ug/kg dry	3550	ug/kg dry	50.4	35-125			
Surr: 2-Fluorobiphenyl (Surr)	875		ug/kg dry	1780	ug/kg dry	49.3	45-105			
Surr: 2-Fluorophenol (Surr)	2250		ug/kg dry	3550	ug/kg dry	63.2	35-105			
Surr: Nitrobenzene-d5 (Surr)	855		ug/kg dry	1780	ug/kg dry	48.2	35-100			
Surr: Phenol-d5 (Surr)	1660		ug/kg dry	3550	ug/kg dry	46.7	40-100			
Surr: p-Terphenyl-d14 (Surr)	1180		ug/kg dry	1780	ug/kg dry	66.6	30-125			

Matrix Spike Dup (BBI0510-MSD1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	695 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	41.4	21.8-66.7	6.74	20	
1,2-Dichlorobenzene	685 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	40.8	22-60	6.52	20	
1,3-Dichlorobenzene	663 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	39.5	22-60	4.32	20	
1,4-Dichlorobenzene	723 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.0	22-60	6.38	20	
1-Chloronaphthalene	763 ug/kg dry	83.9	ug/kg dry		<83.9 ug/kg dry		0-200	11.4	20	
2,4,6-Trichlorophenol	798 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.5	50-115	13.4	20	M
2,4-Dichlorophenol	725 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.2	50-105	8.28	20	M
2,4-Dimethylphenol	629 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	37.4	30-110	20.0	20	
2,4-Dinitrophenol	1260 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	75.0	15-140	13.2	20	
2,4-Dinitrotoluene	850 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	50.6	17-111	14.7	20	
2,6-Dinitrotoluene	770 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.9	15-140	10.8	20	
2-Chloronaphthalene	740 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.1	45-105	11.2	20	M
2-Chlorophenol	669 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	39.8	19-64	7.33	20	
2-Nitrophenol	773 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	46.0	40-115	5.98	20	
3,3'-Dichlorobenzidine	517 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	30.8	20-110	25.5	20	P
4,6-Dinitro-2-methylphenol	1130 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	67.2	40-130	15.4	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike Dup (BBI0510-MSD1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

4-Bromophenyl phenyl ether	685 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	40.8	15-110	13.4	20	
4-Chlorophenyl phenyl ether	655 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	39.0	15-110	12.9	20	
4-Nitrophenol	731 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.5	0-125	17.8	20	
Acenaphthene	759 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.2	24-90	13.2	20	
Acenaphthylene	833 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.6	50-105	13.7	20	M
Acetophenone	717 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	42.7	0-200	9.36	20	
Anthracene	753 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.9	55-110	17.6	20	M
Benzo (a) anthracene	826 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.2	55-110	17.8	20	M
Benzo (a) pyrene	831 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.5	55-110	17.3	20	M
Benzo (b) fluoranthene	921 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	54.9	45-120	15.4	20	
Benzo (g,h,i) perylene	789 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.0	40-125	20.3	20	P
Benzo (k) fluoranthene	919 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	54.7	45-125	19.7	20	
bis (2-Chloroethoxy) methane	714 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	42.5	40-125	10.5	20	
bis (2-Chloroethyl) ether	642 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	38.2	40-125	4.64	20	M
2,2'-Oxybis (1-chloropropane)	644 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	38.4	40-125	8.56	20	M
bis (2-Ethylhexyl) phthalate	1150 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	68.5	40-125	17.6	20	
Butyl benzyl phthalate	1160 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	69.1	45-115	15.4	20	
Chrysene	826 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	49.2	55-110	20.6	20	M, P
Dibenz (a,h) anthracene	812 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	48.4	40-125	19.9	20	
Diethyl phthalate	790 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.1	40-120	15.5	20	
Dimethyl phthalate	729 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.4	25-125	14.5	20	
Di-n-butyl phthalate	882 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	52.5	55-115	20.4	20	M, P
Di-n-octyl phthalate	1370 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	81.3	35-135	15.7	20	
Fluoranthene	783 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	46.6	55-115	20.8	20	M, P
Fluorene	781 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	46.5	50-110	13.4	20	M
Hexachlorobenzene	695 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	41.4	25-125	14.1	20	
Hexachlorobutadiene	790 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.1	25-125	9.05	20	
Hexachlorocyclopentadiene	448 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	26.7	25-125	9.48	20	
Hexachloroethane	743 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.3	25-125	5.27	20	
Indeno (1,2,3-cd) pyrene	817 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	48.7	45-125	18.0	20	
Isophorone	720 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	42.9	10-110	8.71	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-----------	--------	-----	-----------	------

Batch BBI0510 - SW3550C

Matrix Spike Dup (BBI0510-MSD1)

Source: 1810501-06

Prepared & Analyzed: 09/18/2018

Naphthalene	792 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	47.2	40-100	7.56	20	
Nitrobenzene	755 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.9	40-100	10.2	20	
n-Nitrosodimethylamine	770 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.9	25-110	9.18	20	
n-Nitrosodi-n-propylamine	758 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	45.1	12-97	14.6	20	
n-Nitrosodiphenylamine	586 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	34.9	12-97	15.7	20	
p-Chloro-m-cresol	730 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	43.5	10-91	14.0	20	
Pentachlorophenol	749 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	44.6	27-109	16.1	20	
Phenanthrene	853 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	50.8	50-115	15.3	20	
Phenol	759 ug/kg dry	83.9	ug/kg dry	1700	<83.9 ug/kg dry	44.8	0-115	9.06	20	
Pyrene	1080 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	64.4	23-110	14.7	20	
Pyridine	813 ug/kg dry	83.9	ug/kg dry	1680	<83.9 ug/kg dry	48.4	0-200	5.55	20	
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1570		ug/kg dry	3360	ug/kg dry	46.9	35-125			
Surr: 2-Fluorobiphenyl (Surr)	780		ug/kg dry	1680	ug/kg dry	46.4	45-105			
Surr: 2-Fluorophenol (Surr)	2150		ug/kg dry	3360	ug/kg dry	64.1	35-105			
Surr: Nitrobenzene-d5 (Surr)	782		ug/kg dry	1680	ug/kg dry	46.6	35-100			
Surr: Phenol-d5 (Surr)	1540		ug/kg dry	3360	ug/kg dry	45.9	40-100			
Surr: p-Terphenyl-d14 (Surr)	1010		ug/kg dry	1680	ug/kg dry	60.2	30-125			

Batch BBI0528 - SW3550C

Blank (BBI0528-BLK1)

Prepared & Analyzed: 09/18/2018

2,3,7,8-TCDD (SIM)	Not Detected - wet		- wet							
1,2,4,5-Tetrachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,2,4-Trichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,2-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,2-Diphenylhydrazine	<83.3 ug/kg wet	83.3	ug/kg wet							
1,3-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,4-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet							
1-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet							
2,3,4,6-Tetrachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0528 - SW3550C

Blank (BBI0528-BLK1)

Prepared & Analyzed: 09/18/2018

2,4,5-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4,6-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4-Dimethylphenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4-Dinitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet							
2,6-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,6-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Chlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Methylnaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
3,3'-Dichlorobenzidine	<83.3 ug/kg wet	83.3	ug/kg wet							
3-Methylcholanthrene	<83.3 ug/kg wet	83.3	ug/kg wet							
3-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet							
4,6-Dinitro-2-methylphenol	<83.3 ug/kg wet	83.3	ug/kg wet							
4-Aminobiphenyl	<83.3 ug/kg wet	83.3	ug/kg wet							
4-Bromophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet							
4-Chloroaniline	<83.3 ug/kg wet	83.3	ug/kg wet							
4-Chlorophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet							
4-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet							
4-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
7,12-Dimethylbenz (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet							
Acenaphthene	<83.3 ug/kg wet	83.3	ug/kg wet							
Acenaphthylene	<83.3 ug/kg wet	83.3	ug/kg wet							
Acetophenone	<83.3 ug/kg wet	83.3	ug/kg wet							
Aniline	<83.3 ug/kg wet	83.3	ug/kg wet							
Anthracene	<83.3 ug/kg wet	83.3	ug/kg wet							
Benzidine	<83.3 ug/kg wet	83.3	ug/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------------------	---------	-----------	------

Batch BBI0528 - SW3550C

Blank (BBI0528-BLK1)

Prepared & Analyzed: 09/18/2018

Benzo (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (b) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (g,h,i) perylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (k) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzoic acid	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzyl alcohol	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethoxy) methane	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethyl) ether	<83.3 ug/kg wet	83.3	ug/kg wet						
2,2'-Oxybis (1-chloropropane)	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Ethylhexyl) phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Butyl benzyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Chrysene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,h) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,j) acridine	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenzofuran	<83.3 ug/kg wet	83.3	ug/kg wet						
Diethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Dimethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-butyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-octyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Diphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
Ethyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluorene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobutadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorocyclopentadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachloroethane	<83.3 ug/kg wet	83.3	ug/kg wet						
Indeno (1,2,3-cd) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Isophorone	<83.3 ug/kg wet	83.3	ug/kg wet						
m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0528 - SW3550C

Blank (BBI0528-BLK1)

Prepared & Analyzed: 09/18/2018

Methyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet
Naphthalene	<83.3 ug/kg wet	83.3	ug/kg wet
Nitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodimethylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodi-n-butylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodi-n-propylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosodiphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet
n-Nitrosopiperidine	<83.3 ug/kg wet	83.3	ug/kg wet
o+m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet
o-Cresol	<83.3 ug/kg wet	83.3	ug/kg wet
p-(Dimethylamino) azobenzene	<83.3 ug/kg wet	83.3	ug/kg wet
p-Chloro-m-cresol	<83.3 ug/kg wet	83.3	ug/kg wet
Pentachloronitrobenzene (quintozene)	<83.3 ug/kg wet	83.3	ug/kg wet
Pentachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet
Phenacetin	<83.3 ug/kg wet	83.3	ug/kg wet
Phenanthrene	<83.3 ug/kg wet	83.3	ug/kg wet
Phenol	<83.3 ug/kg wet	83.3	ug/kg wet
Pronamide	<83.3 ug/kg wet	83.3	ug/kg wet
Pyrene	<83.3 ug/kg wet	83.3	ug/kg wet
Pyridine	<83.3 ug/kg wet	83.3	ug/kg wet

Surr: 2,4,6-Tribromophenol (Surr)	1740		ug/kg wet	3300		52.7	35-125
Surr: 2-Fluorobiphenyl (Surr)	1000		ug/kg wet	1650		60.6	45-105
Surr: 2-Fluorophenol (Surr)	2750		ug/kg wet	3300		83.4	35-105
Surr: Nitrobenzene-d5 (Surr)	1020		ug/kg wet	1650		61.6	35-100
Surr: Phenol-d5 (Surr)	2000		ug/kg wet	3300		60.6	40-100
Surr: p-Terphenyl-d14 (Surr)	1570		ug/kg wet	1650		95.0	30-125

LCS (BBI0528-BS1)

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	750 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	49.4	21.8-66.7
1,2-Dichlorobenzene	748 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	49.2	22-60
1,3-Dichlorobenzene	728 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	47.9	22-60



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-------------	-----	-----------	------

Batch BBI0528 - SW3550C

LCS (BBI0528-BS1)

Prepared & Analyzed: 09/18/2018

1,4-Dichlorobenzene	791 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	52.0	13-68		
1-Chloronaphthalene	894 ug/kg wet	76.0	ug/kg wet		ug/kg wet		0-200		
2,4,6-Trichlorophenol	913 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	60.1	50-115		
2,4-Dichlorophenol	802 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	52.8	50-105		
2,4-Dimethylphenol	815 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.6	30-110		
2,4-Dinitrophenol	1340 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	87.9	15-140		
2,4-Dinitrotoluene	970 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	63.8	21-99		
2,6-Dinitrotoluene	888 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.5	15-140		
2-Chloronaphthalene	860 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.6	45-105		
2-Chlorophenol	744 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	48.9	15-74		
2-Nitrophenol	833 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	54.8	40-115		
3,3'-Dichlorobenzidine	605 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	39.8	20-110		
4,6-Dinitro-2-methylphenol	1210 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	79.7	40-130		
4-Bromophenyl phenyl ether	808 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.2	15-110		
4-Chlorophenyl phenyl ether	779 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	51.3	15-110		
4-Nitrophenol	768 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	50.5	0-125		
Acenaphthene	898 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.1	27.7-85.5		
Acenaphthylene	983 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.7	50-105		
Acetophenone	795 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	52.3	0-200		
Anthracene	945 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	62.2	55-110		
Benzo (a) anthracene	984 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.7	55-110		
Benzo (a) pyrene	935 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.5	55-110		
Benzo (b) fluoranthene	1060 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	69.4	45-120		
Benzo (g,h,i) perylene	818 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.8	40-125		
Benzo (k) fluoranthene	1100 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	72.1	45-125		
bis (2-Chloroethoxy) methane	805 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.0	40-125		
bis (2-Chloroethyl) ether	709 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	46.7	40-125		
2,2'-Oxybis (1-chloropropane)	691 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	45.4	40-125		
bis (2-Ethylhexyl) phthalate	1350 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	89.1	40-125		
Butyl benzyl phthalate	1350 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	88.7	45-115		
Chrysene	986 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	64.9	55-110		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0528 - SW3550C

LCS (BBI0528-BS1)

Prepared & Analyzed: 09/18/2018

Dibenz (a,h) anthracene	858 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.5	40-125			
Diethyl phthalate	931 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	61.2	40-120			
Dimethyl phthalate	853 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.1	25-125			
Di-n-butyl phthalate	1080 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	71.0	55-115			
Di-n-octyl phthalate	1600 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	105	35-135			
Fluoranthene	1010 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	66.4	55-115			
Fluorene	919 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	60.4	50-110			
Hexachlorobenzene	825 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	54.3	25-125			
Hexachlorobutadiene	863 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.8	25-125			
Hexachlorocyclopentadiene	647 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	42.6	25-125			
Hexachloroethane	829 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	54.6	25-125			
Indeno (1,2,3-cd) pyrene	870 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.3	45-125			
Isophorone	813 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	53.5	10-110			
Naphthalene	870 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	57.3	40-100			
Nitrobenzene	845 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	55.6	40-100			
n-Nitrosodimethylamine	910 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	59.9	25-110			
n-Nitrosodi-n-propylamine	890 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	58.6	12-97			
n-Nitrosodiphenylamine	717 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	47.2	12-97			
p-Chloro-m-cresol	856 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	56.3	10-91			
Pentachlorophenol	749 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	49.3	30-109			
Phenanthrene	1020 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	67.1	50-115			
Phenol	864 ug/kg wet	76.0	ug/kg wet	1530	ug/kg wet	56.3	0-115			
Pyrene	1290 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	85.0	27-110			
Pyridine	728 ug/kg wet	76.0	ug/kg wet	1520	ug/kg wet	47.9	0-200			
<hr style="border-top: 1px dashed #000;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1810		ug/kg wet	3040	ug/kg wet	59.7	35-125			
Surr: 2-Fluorobiphenyl (Surr)	928		ug/kg wet	1520	ug/kg wet	61.1	45-105			
Surr: 2-Fluorophenol (Surr)	2300		ug/kg wet	3040	ug/kg wet	75.6	35-105			
Surr: Nitrobenzene-d5 (Surr)	873		ug/kg wet	1520	ug/kg wet	57.4	35-100			
Surr: Phenol-d5 (Surr)	1770		ug/kg wet	3040	ug/kg wet	58.2	40-100			
Surr: p-Terphenyl-d14 (Surr)	1250		ug/kg wet	1520	ug/kg wet	82.2	30-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0528 - SW3550C

Matrix Spike (BBI0528-MS1)

Source: 18I0508-11

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	745 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	41.1	21.8-66.7			
1,2-Dichlorobenzene	753 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	41.5	22-60			
1,3-Dichlorobenzene	717 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	39.5	22-60			
1,4-Dichlorobenzene	794 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	43.8	22-60			
1-Chloronaphthalene	825 ug/kg dry	181	ug/kg dry		<181 ug/kg dry		0-200			
2,4,6-Trichlorophenol	929 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	51.2	50-115			
2,4-Dichlorophenol	792 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	43.7	50-105			M2
2,4-Dimethylphenol	779 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	43.0	30-110			
2,4-Dinitrophenol	1250 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	68.9	15-140			
2,4-Dinitrotoluene	1010 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	55.5	17-111			
2,6-Dinitrotoluene	939 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	51.8	15-140			
2-Chloronaphthalene	828 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	45.7	45-105			
2-Chlorophenol	730 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	40.2	19-64			
2-Nitrophenol	897 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	49.5	40-115			
3,3'-Dichlorobenzidine	512 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	28.2	20-110			
4,6-Dinitro-2-methylphenol	1300 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	71.6	40-130			
4-Bromophenyl phenyl ether	800 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	44.1	15-110			
4-Chlorophenyl phenyl ether	759 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	41.8	15-110			
4-Nitrophenol	811 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	44.7	0-125			
Acenaphthene	875 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	48.3	24-90			
Acenaphthylene	947 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	52.2	50-105			
Acetophenone	752 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	41.5	0-200			
Anthracene	749 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	41.3	55-110			M2
Benzo (a) anthracene	931 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	51.4	55-110			M2
Benzo (a) pyrene	991 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	54.7	55-110			M2
Benzo (b) fluoranthene	1080 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	59.5	45-120			
Benzo (g,h,i) perylene	858 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	47.3	40-125			
Benzo (k) fluoranthene	1080 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	59.5	45-125			
bis (2-Chloroethoxy) methane	790 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	43.6	40-125			
bis (2-Chloroethyl) ether	727 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	40.1	40-125			
2,2'-Oxybis (1-chloropropane)	753 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	41.5	40-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0528 - SW3550C

Matrix Spike (BBI0528-MS1)

Source: 18I0508-11

Prepared & Analyzed: 09/18/2018

bis (2-Ethylhexyl) phthalate	1320 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	72.7	40-125			
Butyl benzyl phthalate	1450 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	79.8	45-115			
Chrysene	931 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	51.3	55-110			M2
Dibenz (a,h) anthracene	879 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	48.5	40-125			
Diethyl phthalate	915 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	50.5	40-120			
Dimethyl phthalate	859 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	47.4	25-125			
Di-n-butyl phthalate	956 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	52.7	55-115			M2
Di-n-octyl phthalate	1620 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	89.4	35-135			
Fluoranthene	701 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	38.7	55-115			M2
Fluorene	881 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	48.6	50-110			M2
Hexachlorobenzene	828 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	45.6	25-125			
Hexachlorobutadiene	873 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	48.1	25-125			
Hexachlorocyclopentadiene	623 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	34.4	25-125			
Hexachloroethane	810 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	44.7	25-125			
Indeno (1,2,3-cd) pyrene	861 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	47.5	45-125			
Isophorone	809 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	44.6	10-110			
Naphthalene	838 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	46.2	40-100			
Nitrobenzene	867 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	47.8	40-100			
n-Nitrosodimethylamine	840 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	46.3	25-110			
n-Nitrosodi-n-propylamine	897 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	49.5	12-97			
n-Nitrosodiphenylamine	682 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	37.6	12-97			
p-Chloro-m-cresol	834 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	46.0	10-91			
Pentachlorophenol	897 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	49.5	27-109			
Phenanthrene	956 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	52.7	50-115			
Phenol	804 ug/kg dry	181	ug/kg dry	1830	<181 ug/kg dry	43.9	0-115			
Pyrene	1360 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	75.0	23-110			
Pyridine	485 ug/kg dry	181	ug/kg dry	1810	<181 ug/kg dry	26.8	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1870		ug/kg dry	3630	ug/kg dry	51.7	35-125			
Surr: 2-Fluorobiphenyl (Surr)	878		ug/kg dry	1810	ug/kg dry	48.4	45-105			
Surr: 2-Fluorophenol (Surr)	2130		ug/kg dry	3630	ug/kg dry	58.6	35-105			
Surr: Nitrobenzene-d5 (Surr)	925		ug/kg dry	1810	ug/kg dry	51.0	35-100			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0528 - SW3550C

Matrix Spike (BBI0528-MS1)

Source: 18I0508-11

Prepared & Analyzed: 09/18/2018

Surr: Phenol-d5 (Surr)	1680		ug/kg dry	3630	ug/kg dry	46.4	40-100			
Surr: p-Terphenyl-d14 (Surr)	1160		ug/kg dry	1810	ug/kg dry	64.2	30-125			

Matrix Spike Dup (BBI0528-MSD1)

Source: 18I0508-11

Prepared & Analyzed: 09/18/2018

1,2,4-Trichlorobenzene	795 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	42.5	21.8-66.7	6.53	20	
1,2-Dichlorobenzene	774 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	41.4	22-60	2.80	20	
1,3-Dichlorobenzene	734 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	39.2	22-60	2.38	20	
1,4-Dichlorobenzene	854 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	45.7	22-60	7.29	20	
1-Chloronaphthalene	851 ug/kg dry	187	ug/kg dry		<187 ug/kg dry		0-200	3.09	20	
2,4,6-Trichlorophenol	960 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	51.4	50-115	3.32	20	
2,4-Dichlorophenol	815 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	43.6	50-105	2.90	20	M2
2,4-Dimethylphenol	804 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	43.0	30-110	3.18	20	
2,4-Dinitrophenol	1280 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	68.6	15-140	2.74	20	
2,4-Dinitrotoluene	1040 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	55.6	17-111	3.23	20	
2,6-Dinitrotoluene	959 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	51.3	15-140	2.15	20	
2-Chloronaphthalene	854 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	45.7	45-105	3.09	20	
2-Chlorophenol	748 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	40.0	19-64	2.49	20	
2-Nitrophenol	919 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	49.1	40-115	2.36	20	
3,3'-Dichlorobenzidine	548 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	29.3	20-110	6.84	20	
4,6-Dinitro-2-methylphenol	1310 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	69.8	40-130	0.542	20	
4-Bromophenyl phenyl ether	826 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	44.2	15-110	3.18	20	
4-Chlorophenyl phenyl ether	769 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	41.1	15-110	1.35	20	
4-Nitrophenol	833 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	44.5	0-125	2.64	20	
Acenaphthene	865 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	46.3	24-90	1.14	20	
Acenaphthylene	952 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	50.9	50-105	0.449	20	
Acetophenone	744 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	39.8	0-200	1.05	20	
Anthracene	753 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	40.3	55-110	0.538	20	M2
Benzo (a) anthracene	963 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	51.5	55-110	3.40	20	M2
Benzo (a) pyrene	1030 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	55.1	55-110	3.89	20	
Benzo (b) fluoranthene	1070 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	57.4	45-120	0.540	20	
Benzo (g,h,i) perylene	893 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	47.8	40-125	4.01	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0528 - SW3550C

Matrix Spike Dup (BBI0528-MSD1)

Source: 18I0508-11

Prepared & Analyzed: 09/18/2018

Benzo (k) fluoranthene	1090 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	58.0	45-125	0.636	20	
bis (2-Chloroethoxy) methane	797 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	42.6	40-125	0.952	20	
bis (2-Chloroethyl) ether	746 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	39.9	40-125	2.49	20	M2
2,2'-Oxybis (1-chloropropane)	758 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	40.5	40-125	0.649	20	
bis (2-Ethylhexyl) phthalate	1470 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	78.8	40-125	11.2	20	
Butyl benzyl phthalate	1500 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	80.4	45-115	3.74	20	
Chrysene	971 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	51.9	55-110	4.25	20	M2
Dibenz (a,h) anthracene	897 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	48.0	40-125	2.01	20	
Diethyl phthalate	927 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	49.6	40-120	1.25	20	
Dimethyl phthalate	878 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	47.0	25-125	2.15	20	
Di-n-butyl phthalate	995 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	53.2	55-115	3.99	20	M2
Di-n-octyl phthalate	1690 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	90.6	35-135	4.37	20	
Fluoranthene	757 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	40.5	55-115	7.63	20	M2
Fluorene	904 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	48.3	50-110	2.59	20	M2
Hexachlorobenzene	835 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	44.6	25-125	0.871	20	
Hexachlorobutadiene	919 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	49.1	25-125	5.14	20	
Hexachlorocyclopentadiene	598 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	32.0	25-125	4.15	20	
Hexachloroethane	841 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	45.0	25-125	3.71	20	
Indeno (1,2,3-cd) pyrene	871 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	46.6	45-125	1.22	20	
Isophorone	834 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	44.6	10-110	3.00	20	
Naphthalene	864 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	46.2	40-100	3.09	20	
Nitrobenzene	882 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	47.2	40-100	1.74	20	
n-Nitrosodimethylamine	1000 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	53.6	25-110	17.7	20	
n-Nitrosodi-n-propylamine	889 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	47.6	12-97	0.871	20	
n-Nitrosodiphenylamine	680 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	36.4	12-97	0.267	20	
p-Chloro-m-cresol	863 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	46.2	10-91	3.43	20	
Pentachlorophenol	916 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	49.0	27-109	2.03	20	
Phenanthrene	971 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	51.9	50-115	1.56	20	
Phenol	839 ug/kg dry	187	ug/kg dry	1890	<187 ug/kg dry	44.4	0-115	4.25	20	
Pyrene	1370 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	73.1	23-110	0.493	20	
Pyridine	784 ug/kg dry	187	ug/kg dry	1870	<187 ug/kg dry	41.9	0-200	47.1	20	P



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0528 - SW3550C

Matrix Spike Dup (BBI0528-MSD1)

Source: 18I0508-11

Prepared & Analyzed: 09/18/2018

Surr: 2,4,6-Tribromophenol (Surr)	1940	ug/kg dry	3740	ug/kg dry	51.8	35-125
Surr: 2-Fluorobiphenyl (Surr)	903	ug/kg dry	1870	ug/kg dry	48.3	45-105
Surr: 2-Fluorophenol (Surr)	2200	ug/kg dry	3740	ug/kg dry	58.9	35-105
Surr: Nitrobenzene-d5 (Surr)	934	ug/kg dry	1870	ug/kg dry	49.9	35-100
Surr: Phenol-d5 (Surr)	1760	ug/kg dry	3740	ug/kg dry	47.2	40-100
Surr: p-Terphenyl-d14 (Surr)	1250	ug/kg dry	1870	ug/kg dry	66.8	30-125



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0477 - SW3550C

Blank (BBI0477-BLK1)						Prepared & Analyzed: 09/17/2018				
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
<i>Surr: Pentacosane (Surr)</i>	2.66		mg/kg wet	5.00		53.2	40-160			
LCS (BBI0477-BS1)						Prepared & Analyzed: 09/17/2018				
TPH-Semi-Volatiles (DRO)	61.5 mg/kg wet	10.0	mg/kg wet	98.4	mg/kg wet	62.4	40-160			
<i>Surr: Pentacosane (Surr)</i>	2.60		mg/kg wet	4.92	mg/kg wet	52.9	40-160			
Matrix Spike (BBI0477-MS1)						Source: 18I0511-06 Prepared & Analyzed: 09/17/2018				
TPH-Semi-Volatiles (DRO)	70.3 mg/kg dry	11.3	mg/kg dry	113	16.4 mg/kg dry	47.6	40-160			
<i>Surr: Pentacosane (Surr)</i>	3.01		mg/kg dry	5.66	mg/kg dry	53.1	40-160			
Matrix Spike Dup (BBI0477-MSD1)						Source: 18I0511-06 Prepared & Analyzed: 09/17/2018				
TPH-Semi-Volatiles (DRO)	72.6 mg/kg dry	11.3	mg/kg dry	113	16.4 mg/kg dry	49.9	40-160	3.27	20	
<i>Surr: Pentacosane (Surr)</i>	2.98		mg/kg dry	5.63	mg/kg dry	53.0	40-160			

Batch BBI0573 - SW3550C

Blank (BBI0573-BLK1)						Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg wet	10.0	mg/kg wet							
LCS (BBI0573-BS1)						Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	48.1 mg/kg wet	10.0	mg/kg wet	98.6	mg/kg wet	48.8	40-160			
Matrix Spike (BBI0573-MS1)						Source: 18I0505-10 Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	56.9 mg/kg dry	11.3	mg/kg dry	113	<11.3 mg/kg dry	50.4	40-160			
Matrix Spike Dup (BBI0573-MSD1)						Source: 18I0505-10 Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	55.6 mg/kg dry	11.4	mg/kg dry	114	<11.4 mg/kg dry	48.6	40-160	2.18	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BBI0574 - SW3550C										
Blank (BBI0574-BLK1) Prepared: 09/19/2018 Analyzed: 09/20/2018										
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg wet	10.0	mg/kg wet							
LCS (BBI0574-BS1) Prepared: 09/19/2018 Analyzed: 09/20/2018										
TPH-Semi-Volatiles (ORO)	47.8 mg/kg wet	10.0	mg/kg wet	99.4	mg/kg wet	48.1	40-160			
Matrix Spike (BBI0574-MS1) Source: 18I0511-02 Prepared: 09/19/2018 Analyzed: 09/21/2018										
TPH-Semi-Volatiles (ORO)	43.9 mg/kg dry	11.1	mg/kg dry	111	<11.1 mg/kg dry	39.7	40-160			M
Matrix Spike Dup (BBI0574-MSD1) Source: 18I0511-02 Prepared: 09/19/2018 Analyzed: 09/21/2018										
TPH-Semi-Volatiles (ORO)	43.3 mg/kg dry	11.1	mg/kg dry	111	<11.1 mg/kg dry	38.9	40-160	1.50	20	M
Batch BBI0633 - SW3550C										
Blank (BBI0633-BLK1) Prepared: 09/20/2018 Analyzed: 09/21/2018										
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
Surr: Pentacosane (Surr)	2.44		mg/kg wet	4.95		49.3	40-160			
LCS (BBI0633-BS1) Prepared: 09/20/2018 Analyzed: 09/21/2018										
TPH-Semi-Volatiles (DRO)	62.0 mg/kg wet	10.0	mg/kg wet	99.6	mg/kg wet	62.2	40-160			
Surr: Pentacosane (Surr)	2.53		mg/kg wet	4.98	mg/kg wet	50.7	40-160			
Matrix Spike (BBI0633-MS1) Source: 18I0508-08 Prepared: 09/20/2018 Analyzed: 09/22/2018										
TPH-Semi-Volatiles (DRO)	55.8 mg/kg dry	12.2	mg/kg dry	122	<12.2 mg/kg dry	45.6	40-160			
Surr: Pentacosane (Surr)	2.65		mg/kg dry	6.12	mg/kg dry	43.4	40-160			
Matrix Spike Dup (BBI0633-MSD1) Source: 18I0508-08 Prepared: 09/20/2018 Analyzed: 09/22/2018										
TPH-Semi-Volatiles (DRO)	67.5 mg/kg dry	12.4	mg/kg dry	124	<12.4 mg/kg dry	54.3	40-160	19.0	20	
Surr: Pentacosane (Surr)	2.95		mg/kg dry	6.22	mg/kg dry	47.3	40-160			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0546 - SW3550B

Blank (BBI0546-BLK1)

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet						
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet						

Surr: DCB	0.0224		mg/kg wet	0.0319		70.0	30-105		
Surr: TCMX	0.0208		mg/kg wet	0.0319		65.0	30-105		

LCS (BBI0546-BS1)

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	0.183 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	114	60-140		
PCB as Aroclor 1260	0.123 mg/kg wet	0.100	mg/kg wet	0.160	mg/kg wet	77.0	60-140		
Surr: DCB	0.0208		mg/kg wet	0.0321	mg/kg wet	65.0	30-105		
Surr: TCMX	0.0240		mg/kg wet	0.0321	mg/kg wet	75.0	30-105		

Matrix Spike (BBI0546-MS1)

Source: 18I0501-06

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	0.191 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	107	60-140		
PCB as Aroclor 1260	0.153 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	86.0	60-140		
Surr: DCB	0.0249		mg/kg dry	0.0356	mg/kg dry	70.0	30-105		
Surr: TCMX	0.0232		mg/kg dry	0.0356	mg/kg dry	65.0	30-105		

Matrix Spike Dup (BBI0546-MSD1)

Source: 18I0501-06

Prepared: 09/19/2018 Analyzed: 09/21/2018

PCB as Aroclor 1016	0.195 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	110	60-140	2.45	20
PCB as Aroclor 1260	0.138 mg/kg dry	0.107	mg/kg dry	0.178	<0.107 mg/kg dry	78.0	60-140	10.1	20
Surr: DCB	0.0266		mg/kg dry	0.0355	mg/kg dry	75.0	30-105		
Surr: TCMX	0.0249		mg/kg dry	0.0355	mg/kg dry	70.0	30-105		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0710 - SW3550B

Blank (BBI0710-BLK1)

Prepared: 09/24/2018 Analyzed: 09/25/2018

PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet							
Surr: DCB	0.0244		mg/kg wet	0.0325		75.0	30-105			
Surr: TCMX	0.0195		mg/kg wet	0.0325		60.0	30-105			

LCS (BBI0710-BS1)

Prepared: 09/24/2018 Analyzed: 09/25/2018

PCB as Aroclor 1016	0.169 mg/kg wet	0.100	mg/kg wet	0.164	mg/kg wet	103	60-140			
PCB as Aroclor 1260	0.133 mg/kg wet	0.100	mg/kg wet	0.164	mg/kg wet	81.0	60-140			
Surr: DCB	0.0246		mg/kg wet	0.0328	mg/kg wet	75.0	30-105			
Surr: TCMX	0.0230		mg/kg wet	0.0328	mg/kg wet	70.0	30-105			

Matrix Spike (BBI0710-MS1)

Source: 18I0861-32

Prepared: 09/24/2018 Analyzed: 09/25/2018

PCB as Aroclor 1016	0.350 mg/kg dry	0.114	mg/kg dry	0.189	<0.114 mg/kg dry	185	60-140			M
PCB as Aroclor 1260	0.587 mg/kg dry	0.114	mg/kg dry	0.189	0.318 mg/kg dry	142	60-140			M
Surr: DCB	0.0303		mg/kg dry	0.0379	mg/kg dry	80.0	30-105			
Surr: TCMX	0.0341		mg/kg dry	0.0379	mg/kg dry	90.0	30-105			

Matrix Spike Dup (BBI0710-MSD1)

Source: 18I0861-32

Prepared: 09/24/2018 Analyzed: 09/25/2018

PCB as Aroclor 1016	0.300 mg/kg dry	0.102	mg/kg dry	0.170	<0.102 mg/kg dry	177	60-140	15.3	20	M
PCB as Aroclor 1260	0.559 mg/kg dry	0.102	mg/kg dry	0.170	0.318 mg/kg dry	142	60-140	4.98	20	M
Surr: DCB	0.0272		mg/kg dry	0.0340	mg/kg dry	80.0	30-105			
Surr: TCMX	0.0289		mg/kg dry	0.0340	mg/kg dry	85.0	30-105			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
Batch BBI0463 - No Prep Wet Chem									
Blank (BBI0463-BLK1)					Prepared & Analyzed: 09/17/2018				
Percent Solids	100 %	0.10	%						
Duplicate (BBI0463-DUP1)					Source: 18I0508-01 Prepared & Analyzed: 09/17/2018				
Percent Solids	76.1 %	0.10	%	71.5 %			6.25	20	
Batch BBI0503 - No Prep Wet Chem									
Blank (BBI0503-BLK1)					Prepared & Analyzed: 09/18/2018				
Percent Solids	100 %	0.10	%						
Duplicate (BBI0503-DUP1)					Source: 18I0508-11 Prepared & Analyzed: 09/18/2018				
Percent Solids	83.1 %	0.10	%	83.8 %			0.906	20	
Batch BBI0538 - No Prep Wet Chem									
Blank (BBI0538-BLK1)					Prepared & Analyzed: 09/19/2018				
Percent Solids	100 %	0.10	%						
Duplicate (BBI0538-DUP1)					Source: 18I0511-09 Prepared & Analyzed: 09/19/2018				
Percent Solids	85.8 %	0.10	%	86.3 %			0.623	20	
Batch BBI0706 - No Prep Wet Chem									
Blank (BBI0706-BLK1)					Prepared: 09/24/2018 Analyzed: 09/26/2018				
Chromium, Hexavalent	<0.20 mg/kg wet	0.20	mg/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0706 - No Prep Wet Chem

LCS (BBI0706-BS1)		Prepared: 09/24/2018	Analyzed: 09/26/2018
Chromium, Hexavalent	3.52 mg/kg wet	0.20 mg/kg wet	3.96 mg/kg wet 89.0 80-120

Batch BBJ0030 - No Prep Wet Chem

Blank (BBJ0030-BLK1)		Prepared: 09/27/2018	Analyzed: 10/01/2018
Chromium, Hexavalent	<0.20 mg/kg wet	0.20 mg/kg wet	

LCS (BBJ0030-BS1)		Prepared: 09/27/2018	Analyzed: 10/01/2018
Chromium, Hexavalent	3.71 mg/kg wet	0.20 mg/kg wet	3.99 mg/kg wet 93.0 80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Aluminum	VELAP
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Calcium	VELAP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Magnesium	VELAP
Manganese	VELAP
Nickel	VELAP
Potassium	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7196A in Solids	
Chromium, Hexavalent	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8015C in Solids	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
TPH-Volatiles (GRO)	VELAP,NC,WVDEP
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,NC
PCB as Aroclor 1221	VELAP,NC
PCB as Aroclor 1232	VELAP,NC
PCB as Aroclor 1242	VELAP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
PCB as Aroclor 1248	VELAP,NC
PCB as Aroclor 1254	VELAP,NC
PCB as Aroclor 1260	VELAP,NC
SW8270D in Solids	
1,2,4,5-Tetrachlorobenzene	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,2-Diphenylhydrazine	NC,VELAP,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
1-Chloronaphthalene	NC,VELAP,WVDEP
1-Naphthylamine	NC,VELAP,WVDEP
2,3,4,6-Tetrachlorophenol	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dichlorophenol	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Chloronaphthalene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
2-Naphthylamine	NC,VELAP,WVDEP
2-Nitroaniline	NC,VELAP,WVDEP
2-Nitrophenol	NC,VELAP,WVDEP
3-Methylcholanthrene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4,6-Dinitro-2-methylphenol	NC,VELAP,WVDEP
4-Aminobiphenyl	NC,VELAP,WVDEP
4-Bromophenyl phenyl ether	NC,VELAP,WVDEP
4-Chloroaniline	NC,VELAP,WVDEP
4-Chlorophenyl phenyl ether	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
4-Nitrophenol	NC,VELAP,WVDEP
7,12-Dimethylbenz (a) anthracene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Acenaphthene	NC,VELAP,WVDEP
Acenaphthylene	NC,VELAP,WVDEP
Acetophenone	NC,VELAP,WVDEP
Aniline	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzidine	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (g,h,i) perylene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
Benzoic acid	NC,VELAP,WVDEP
Benzyl alcohol	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Dibenz (a,j) acridine	NC,VELAP,WVDEP
Dibenzofuran	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP
Di-n-octyl phthalate	NC,VELAP,WVDEP
Diphenylamine	NC,VELAP,WVDEP
Ethyl methanesulfonate	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP
Hexachloroethane	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Methyl methanesulfonate	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 13:33
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Naphthalene	NC,VELAP,WVDEP
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodimethylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-butylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
n-Nitrosopiperidine	NC,VELAP,WVDEP
o+m+p-Cresols	NC,VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
p-(Dimethylamino) azobenzene	NC,VELAP,WVDEP
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachloronitrobenzene (quintozene)	NC,WVDEP
Pentachlorophenol	NC,VELAP,WVDEP
Phenacetin	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Pronamide	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
Pyridine	NC,VELAP,WVDEP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis


Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers


- B Blank contamination. The recorded result is associated with a contaminated blank.
- C Continuing calibration verification response for this analyte is outside specifications.
- DND Not Detected
- DS Surrogate concentration reflects a dilution factor.
- E Estimated concentration, outside calibration range
- M Matrix spike recovery is outside established acceptance limits
- M2 Sample was diluted due to matrix interference.
- P Duplicate analysis does not meet the acceptance criteria for precision
- S Surrogate recovery was outside acceptance criteria
- RPD Relative Percent Difference
- Qual Qualifiers
- RE Denotes sample was re-analyzed
- D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
- TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
- PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

COMPANY NAME: <u>EEE Consulting</u>	INVOICE TO: <u>Same</u>	PROJECT NAME/Quote #: <u>CVTC</u>
CONTACT: <u>Jeff Fisher</u>	INVOICE CONTACT:	SITE NAME: <u>CVTC</u>
ADDRESS: <u>201 Church St. 24060</u>	INVOICE ADDRESS:	PROJECT NUMBER: <u>18-760</u>
PHONE #: <u>540-953-0170 x 314</u>	INVOICE PHONE #:	P.O. #: <u>18-760</u>
FAX #:	EMAIL: <u>JFISHER@EEE-CONSULTING.COM</u>	Pretreatment Program:
Is sample for compliance reporting? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Is sample from a chlorinated supply? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	PWS I.D. #:
SAMPLER NAME (PRINT): <u>Jeff Fisher</u>	SAMPLER SIGNATURE: 	Turn Around Time: Circle: <u>10</u> 5 Days or ___ Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)						COMMENTS
											TPH 600/DRG/DRG 8015	2,3,7,8-TCDF 5/M	SVOCs 8270	PCBs 8082	Total TAL Metals	Hex Chrome 7186A	
1) <u>Task 2.6</u>						<u>9-11-18</u>	<u>1449</u>		<u>S</u>	<u>2</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>		
2)							<u>1456</u>			<u>2</u>							
3)							<u>1502</u>			<u>2</u>							
4)							<u>1509</u>			<u>2</u>							
5)							<u>1515</u>			<u>2</u>							
6)							<u>1520</u>			<u>2</u>							
7)							<u>1542</u>			<u>2</u>							
8)							<u>1548</u>			<u>2</u>							
9)							<u>1554</u>			<u>2</u>							
10)							<u>1557</u>			<u>2</u>							

RELINQUISHED:  DATE / TIME: <u>9-12-18 1355</u>	RECEIVED: <u>M. Hunter</u> DATE / TIME: <u>9-12-18 1355</u>	QC Data Package Level III <input type="checkbox"/>	LAB USE ONLY Custody Seals used and intact? <input checked="" type="checkbox"/> (Y/N)	COOLER TEMP Received on ice? <input checked="" type="checkbox"/> (Y/N) <u>1.6°C</u>
RELINQUISHED: <u>COURTNEY</u> DATE / TIME:	RECEIVED: <u>Jeff</u> DATE / TIME: <u>13 Sept 2016 8:00</u>	QC Data Package Level IV <input type="checkbox"/>	EEE-Blacksburg	1810508
RELINQUISHED:	RECEIVED:		CVTC	Recd: 09/13/2018 Due: 09/27/2018

CHAIN OF CUSTODY

COMPANY NAME: <u>EEC Consulting</u>		INVOICE TO: <u>SCM</u>	PROJECT NAME/Quote #: <u>CVTC</u>
CONTACT: <u>Jeff Fisher</u>		INVOICE CONTACT:	SITE NAME: <u>CVTC</u>
ADDRESS: <u>201 Church St. 24060</u>		INVOICE ADDRESS:	PROJECT NUMBER: <u>18-760</u>
PHONE #: <u>540-87-0170 x 314</u>		INVOICE PHONE #:	P.O. #: <u>18-760</u>
FAX #:	EMAIL: <u>JFISHER@EEC-CONSULTING.COM</u>		Pretreatment Program:
Is sample for compliance reporting? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Is sample from a chlorinated supply? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	
PWS I.D. #:		Turn Around Time: Circle <u>10</u> 5 Days or ___ Day(s)	
SAMPLER NAME (PRINT): <u>Jeff Fisher</u>		SAMPLER SIGNATURE:	

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other _____

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)						COMMENTS
											TPH - Gro/Dro/ORO	2,3,7,8-TCDD SIM	SUOCs 8270	PDBs 8082	Total TAL Metals	Hex Chrome 7196A	
1) <u>Task 2.6 16-511</u>	<input checked="" type="checkbox"/>					<u>9-11-18 1600</u>			<u>S</u>	<u>2</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
2) <u>16-512</u>	<input checked="" type="checkbox"/>					<u>9-11-18 1605</u>			<u>S</u>	<u>2</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
3)																	
4)																	
5)																	
6)																	
7)																	
8)																	
9)																	
10)																	

RELINQUISHED: <u>9-12-18</u>	DATE / TIME: <u>1355</u>	RECEIVED: <u>9-12-18 1355</u>	DATE / TIME: <u>1355</u>	QC Data Package Level III <input type="checkbox"/>	LAB USE ONLY Custody Seals used and intact? <input checked="" type="checkbox"/> (N) <input type="checkbox"/> (Y/N) EEE-Blacksburg 1810508 CVTC Recd: 09/13/2018 Due: 09/27/2018	COOLER TEMP: <u>1.6°C</u>	Received on ice? <input checked="" type="checkbox"/> (N) <input type="checkbox"/> (Y/N)
RELINQUISHED: <u>Cooler</u>	DATE / TIME:	RECEIVED: <u>13 Sept 2018 8:00</u>	DATE / TIME:	QC Data Package Level IV <input type="checkbox"/>			
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:				



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 13:33
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	1.60°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

As per Jeff Fisher, certification for 2,3,7,8 TCDD SIM not necessary. MMR 9/13/18 15:17



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 1810511

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg, VA 24060

Date Received: September 13, 2018 8:00

Date Issued: October 2, 2018 14:29

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 09/13/2018 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/2/2018 14:29
201 Church Street
Blacksburg VA, 24060

Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18I0511

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Task 2.9 39-21 0-5'	18I0511-01	Solids	09/12/2018 09:50	09/13/2018 08:00
Task 2.9 39-21 5-9'	18I0511-02	Solids	09/12/2018 09:55	09/13/2018 08:00
Task 2.9 39-22 0-5'	18I0511-03	Solids	09/12/2018 10:15	09/13/2018 08:00
Task 2.9 39-23 0-5'	18I0511-04	Solids	09/12/2018 10:25	09/13/2018 08:00
Task 2.9 39-23 5-10'	18I0511-05	Solids	09/12/2018 10:32	09/13/2018 08:00
Task 2.9 39-23 10-13'	18I0511-06	Solids	09/12/2018 10:50	09/13/2018 08:00
Task 2.9 39-24 0-5'	18I0511-07	Solids	09/12/2018 11:05	09/13/2018 08:00
Task 2.9 39-24 5-10'	18I0511-08	Solids	09/12/2018 11:10	09/13/2018 08:00
Task 2.9 39-21 10-14.5'	18I0511-09	Solids	09/12/2018 11:15	09/13/2018 08:00
Task 2.9 39-25 0-5'	18I0511-10	Solids	09/12/2018 11:20	09/13/2018 08:00
Task 2.9 39-25 5-10'	18I0511-11	Solids	09/12/2018 11:25	09/13/2018 08:00
Task 2.9 39-25 10-14'	18I0511-12	Solids	09/12/2018 11:30	09/13/2018 08:00
Task 2.9 39-26 0-5'	18I0511-13	Solids	09/12/2018 11:38	09/13/2018 08:00
Task 2.9 39-26 5-10'	18I0511-14	Solids	09/12/2018 11:45	09/13/2018 08:00
Task 2.9 39-26 10-13'	18I0511-15	Solids	09/12/2018 11:50	09/13/2018 08:00

Results have been calculated based on dry weight.



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-21 0-5' Laboratory Sample ID: 18I0511-01

Grab Date/Time: 09/12/2018 09:50

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01RE1	SW6010C	<0.548 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 18:53	BG
Aluminum	01	SW6010C	16200 mg/kg dry		54.8	20	09/14/18 13:00	09/18/18 17:03	BG
Arsenic	01RE1	SW6010C	<1.10 mg/kg dry		1.10	1	09/14/18 13:00	09/18/18 18:53	BG
Barium	01RE1	SW6010C	102 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 18:53	BG
Beryllium	01RE1	SW6010C	1.63 mg/kg dry		0.219	1	09/14/18 13:00	09/18/18 18:53	BG
Calcium	01RE1	SW6010C	713 mg/kg dry		5.48	1	09/14/18 13:00	09/18/18 18:53	BG
Cadmium	01RE1	SW6010C	0.391 mg/kg dry		0.219	1	09/14/18 13:00	09/18/18 18:53	BG
Cobalt	01RE1	SW6010C	11.6 mg/kg dry		0.219	1	09/14/18 13:00	09/18/18 18:53	BG
Chromium	01RE1	SW6010C	13.1 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 18:53	BG
Copper	01RE1	SW6010C	5.23 mg/kg dry		2.74	1	09/14/18 13:00	09/18/18 18:53	BG
Iron	01RE3	SW6010C	37300 mg/kg dry		548	200	09/14/18 13:00	09/20/18 14:20	BG
Mercury	01	SW7471B	0.017 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:08	MWL
Potassium	01RE1	SW6010C	5730 mg/kg dry		27.4	1	09/14/18 13:00	09/18/18 18:53	BG
Magnesium	01	SW6010C	4700 mg/kg dry		54.8	20	09/14/18 13:00	09/18/18 17:03	BG
Manganese	01RE1	SW6010C	368 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 18:53	BG
Sodium	01RE1	SW6010C	268 mg/kg dry		27.4	1	09/14/18 13:00	09/18/18 18:53	BG
Nickel	01RE1	SW6010C	18.4 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 18:53	BG
Lead	01RE1	SW6010C	111 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 18:53	BG
Antimony	01RE1	SW6010C	<5.48 mg/kg dry		5.48	1	09/14/18 13:00	09/18/18 18:53	BG
Selenium	01RE1	SW6010C	<2.74 mg/kg dry		2.74	1	09/14/18 13:00	09/18/18 18:53	BG
Thallium	01RE1	SW6010C	<2.74 mg/kg dry		2.74	1	09/14/18 13:00	09/18/18 18:53	BG
Vanadium	01RE1	SW6010C	23.3 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 18:53	BG
Zinc	01RE1	SW6010C	120 mg/kg dry		0.548	1	09/14/18 13:00	09/18/18 18:53	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	01	SW8015C	<0.11 mg/kg dry	0.11	1	09/14/18 17:27	09/14/18 17:27	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-21 0-5'	Laboratory Sample ID: 18I0511-01
Grab Date/Time: 09/12/2018 09:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	01	SW8015C	102 %		80-120		09/14/18 17:27	09/14/18 17:27	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	<11.1 mg/kg dry		11.1	1	09/17/18 09:13	09/18/18 13:12	HLM
<i>Surr: Pentacosane (Surr)</i>	01	SW8015C	49.4 %		40-160		09/17/18 09:13	09/18/18 13:12	HLM
TPH-Semi-Volatiles (ORO)	01	SW8015C	<10.7 mg/kg dry		10.7	1	09/19/18 14:54	09/21/18 02:31	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	01	SW8081B	<6.00 ug/kg dry		6.00	1	09/25/18 14:49	09/26/18 12:54	HLM
4,4'-DDE	01	SW8081B	<4.00 ug/kg dry		4.00	1	09/25/18 14:49	09/26/18 12:54	HLM
4,4'-DDT	01	SW8081B	<4.00 ug/kg dry		4.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Aldrin	01	SW8081B	<2.00 ug/kg dry		2.00	1	09/25/18 14:49	09/26/18 12:54	HLM
alpha-BHC	01	SW8081B	<2.00 ug/kg dry		2.00	1	09/25/18 14:49	09/26/18 12:54	HLM
beta-BHC	01	SW8081B	<2.00 ug/kg dry		2.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Chlordane	01	SW8081B	<42.0 ug/kg dry		42.0	1	09/25/18 14:49	09/26/18 12:54	HLM
delta-BHC	01	SW8081B	<4.00 ug/kg dry		4.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Dieldrin	01	SW8081B	<4.00 ug/kg dry		4.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Endosulfan I	01	SW8081B	<4.00 ug/kg dry		4.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Endosulfan II	01	SW8081B	<6.00 ug/kg dry		6.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Endosulfan sulfate	01	SW8081B	<2.00 ug/kg dry		2.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Endrin	01	SW8081B	<4.00 ug/kg dry		4.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Endrin aldehyde	01	SW8081B	<8.00 ug/kg dry		8.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Endrin ketone	01	SW8081B	<2.00 ug/kg dry		2.00	1	09/25/18 14:49	09/26/18 12:54	HLM
gamma-BHC (Lindane)	01	SW8081B	<2.00 ug/kg dry		2.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Heptachlor	01	SW8081B	<2.00 ug/kg dry		2.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Heptachlor epoxide	01	SW8081B	<40.0 ug/kg dry		40.0	1	09/25/18 14:49	09/26/18 12:54	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-21 0-5' **Laboratory Sample ID:** 18I0511-01

Grab Date/Time: 09/12/2018 09:50

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	01	SW8081B	<40.0 ug/kg dry		40.0	1	09/25/18 14:49	09/26/18 12:54	HLM
Mirex	01	SW8081B	<6.00 ug/kg dry		6.00	1	09/25/18 14:49	09/26/18 12:54	HLM
Toxaphene	01	SW8081B	<42.0 ug/kg dry		42.0	1	09/25/18 14:49	09/26/18 12:54	HLM
<i>Surr: TCMX</i>	<i>01</i>	<i>SW8081B</i>	<i>350 %</i>	<i>S</i>	<i>30-105</i>		<i>09/25/18 14:49</i>	<i>09/26/18 12:54</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>01</i>	<i>SW8081B</i>	<i>400 %</i>	<i>S</i>	<i>30-105</i>		<i>09/25/18 14:49</i>	<i>09/26/18 12:54</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	01	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 16:18	SKS
2,4,5-TP (Silvex)	01	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 16:18	SKS
2,4-D	01	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 16:18	SKS
Dinoseb	01	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 16:18	SKS
Pentachlorophenol	01	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 16:18	SKS
<i>Surr: DCAA (Surr)</i>	<i>01</i>	<i>SW8151A</i>	<i>50.0 %</i>		<i>31-87</i>		<i>09/20/18 10:51</i>	<i>09/24/18 16:18</i>	<i>SKS</i>
Wet Chemistry Analysis									
Chromium, Hexavalent	01	SW7196A	<0.22 mg/kg dry		0.22	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	01	SM18 2540G	90.0 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-21 5-9' Laboratory Sample ID: 1810511-02

Grab Date/Time: 09/12/2018 09:55

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02RE1	SW6010C	<0.550 mg/kg dry		0.550	1	09/14/18 13:00	09/18/18 18:56	BG
Aluminum	02RE2	SW6010C	35400 mg/kg dry		550	200	09/14/18 13:00	09/19/18 16:25	BG
Arsenic	02RE1	SW6010C	<1.10 mg/kg dry		1.10	1	09/14/18 13:00	09/18/18 18:56	BG
Barium	02RE1	SW6010C	112 mg/kg dry		0.550	1	09/14/18 13:00	09/18/18 18:56	BG
Beryllium	02RE1	SW6010C	1.95 mg/kg dry		0.220	1	09/14/18 13:00	09/18/18 18:56	BG
Calcium	02RE1	SW6010C	436 mg/kg dry		5.50	1	09/14/18 13:00	09/18/18 18:56	BG
Cadmium	02RE1	SW6010C	0.455 mg/kg dry		0.220	1	09/14/18 13:00	09/18/18 18:56	BG
Cobalt	02RE1	SW6010C	12.2 mg/kg dry		0.220	1	09/14/18 13:00	09/18/18 18:56	BG
Chromium	02RE1	SW6010C	25.5 mg/kg dry		0.550	1	09/14/18 13:00	09/18/18 18:56	BG
Copper	02RE1	SW6010C	5.91 mg/kg dry		2.75	1	09/14/18 13:00	09/18/18 18:56	BG
Iron	02RE3	SW6010C	40500 mg/kg dry		550	200	09/14/18 13:00	09/20/18 14:22	BG
Mercury	02	SW7471B	0.015 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:15	MWL
Potassium	02RE1	SW6010C	6670 mg/kg dry		27.5	1	09/14/18 13:00	09/18/18 18:56	BG
Magnesium	02	SW6010C	6050 mg/kg dry		55.0	20	09/14/18 13:00	09/18/18 17:05	BG
Manganese	02RE1	SW6010C	204 mg/kg dry		0.550	1	09/14/18 13:00	09/18/18 18:56	BG
Sodium	02RE1	SW6010C	388 mg/kg dry		27.5	1	09/14/18 13:00	09/18/18 18:56	BG
Nickel	02RE1	SW6010C	15.1 mg/kg dry		0.550	1	09/14/18 13:00	09/18/18 18:56	BG
Lead	02RE1	SW6010C	14.5 mg/kg dry		0.550	1	09/14/18 13:00	09/18/18 18:56	BG
Antimony	02RE1	SW6010C	<5.50 mg/kg dry		5.50	1	09/14/18 13:00	09/18/18 18:56	BG
Selenium	02RE1	SW6010C	<2.75 mg/kg dry		2.75	1	09/14/18 13:00	09/18/18 18:56	BG
Thallium	02RE1	SW6010C	<2.75 mg/kg dry		2.75	1	09/14/18 13:00	09/18/18 18:56	BG
Vanadium	02RE1	SW6010C	36.7 mg/kg dry		0.550	1	09/14/18 13:00	09/18/18 18:56	BG
Zinc	02RE1	SW6010C	81.3 mg/kg dry		0.550	1	09/14/18 13:00	09/18/18 18:56	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	02	SW8015C	<0.11 mg/kg dry	0.11	1	09/14/18 17:50	09/14/18 17:50	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-21 5-9'	Laboratory Sample ID: 18I0511-02
Grab Date/Time: 09/12/2018 09:55	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	02	SW8015C	107 %		80-120		09/14/18 17:50	09/14/18 17:50	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<10.9 mg/kg dry		10.9	1	09/17/18 09:13	09/18/18 13:38	HLM
<i>Surr: Pentacosane (Surr)</i>	02	SW8015C	51.8 %		40-160		09/17/18 09:13	09/18/18 13:38	HLM
TPH-Semi-Volatiles (ORO)	02	SW8015C	<11.1 mg/kg dry		11.1	1	09/19/18 14:54	09/21/18 02:55	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	02	SW8081B	<6.66 ug/kg dry		6.66	1	09/25/18 14:49	09/26/18 13:13	HLM
4,4'-DDE	02	SW8081B	<4.44 ug/kg dry		4.44	1	09/25/18 14:49	09/26/18 13:13	HLM
4,4'-DDT	02	SW8081B	<4.44 ug/kg dry		4.44	1	09/25/18 14:49	09/26/18 13:13	HLM
Aldrin	02	SW8081B	<2.22 ug/kg dry		2.22	1	09/25/18 14:49	09/26/18 13:13	HLM
alpha-BHC	02	SW8081B	<2.22 ug/kg dry		2.22	1	09/25/18 14:49	09/26/18 13:13	HLM
beta-BHC	02	SW8081B	<2.22 ug/kg dry		2.22	1	09/25/18 14:49	09/26/18 13:13	HLM
Chlordane	02	SW8081B	<46.6 ug/kg dry		46.6	1	09/25/18 14:49	09/26/18 13:13	HLM
delta-BHC	02	SW8081B	<4.44 ug/kg dry		4.44	1	09/25/18 14:49	09/26/18 13:13	HLM
Dieldrin	02	SW8081B	<4.44 ug/kg dry		4.44	1	09/25/18 14:49	09/26/18 13:13	HLM
Endosulfan I	02	SW8081B	<4.44 ug/kg dry		4.44	1	09/25/18 14:49	09/26/18 13:13	HLM
Endosulfan II	02	SW8081B	<6.66 ug/kg dry		6.66	1	09/25/18 14:49	09/26/18 13:13	HLM
Endosulfan sulfate	02	SW8081B	<2.22 ug/kg dry		2.22	1	09/25/18 14:49	09/26/18 13:13	HLM
Endrin	02	SW8081B	<4.44 ug/kg dry		4.44	1	09/25/18 14:49	09/26/18 13:13	HLM
Endrin aldehyde	02	SW8081B	<8.89 ug/kg dry		8.89	1	09/25/18 14:49	09/26/18 13:13	HLM
Endrin ketone	02	SW8081B	<2.22 ug/kg dry		2.22	1	09/25/18 14:49	09/26/18 13:13	HLM
gamma-BHC (Lindane)	02	SW8081B	<2.22 ug/kg dry		2.22	1	09/25/18 14:49	09/26/18 13:13	HLM
Heptachlor	02	SW8081B	<2.22 ug/kg dry		2.22	1	09/25/18 14:49	09/26/18 13:13	HLM
Heptachlor epoxide	02	SW8081B	<44.4 ug/kg dry		44.4	1	09/25/18 14:49	09/26/18 13:13	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-21 5-9' **Laboratory Sample ID:** 18I0511-02

Grab Date/Time: 09/12/2018 09:55

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	02	SW8081B	<44.4 ug/kg dry		44.4	1	09/25/18 14:49	09/26/18 13:13	HLM
Mirex	02	SW8081B	<6.66 ug/kg dry		6.66	1	09/25/18 14:49	09/26/18 13:13	HLM
Toxaphene	02	SW8081B	<46.6 ug/kg dry		46.6	1	09/25/18 14:49	09/26/18 13:13	HLM
<i>Surr: TCMX</i>	02	SW8081B	300 %	S	30-105		09/25/18 14:49	09/26/18 13:13	HLM
<i>Surr: DCB</i>	02	SW8081B	400 %	S	30-105		09/25/18 14:49	09/26/18 13:13	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	02	SW8151A	<154 ug/kg dry		154	1	09/20/18 10:51	09/24/18 16:36	SKS
2,4,5-TP (Silvex)	02	SW8151A	<154 ug/kg dry		154	1	09/20/18 10:51	09/24/18 16:36	SKS
2,4-D	02	SW8151A	<154 ug/kg dry		154	1	09/20/18 10:51	09/24/18 16:36	SKS
Dinoseb	02	SW8151A	<154 ug/kg dry		154	1	09/20/18 10:51	09/24/18 16:36	SKS
Pentachlorophenol	02	SW8151A	<154 ug/kg dry		154	1	09/20/18 10:51	09/24/18 16:36	SKS
<i>Surr: DCAA (Surr)</i>	02	SW8151A	45.0 %		31-87		09/20/18 10:51	09/24/18 16:36	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	02	SW7196A	<0.22 mg/kg dry		0.22	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	02	SM18 2540G	88.9 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-22 0-5' Laboratory Sample ID: 18I0511-03

Grab Date/Time: 09/12/2018 10:15

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03RE1	SW6010C	<0.528 mg/kg dry		0.528	1	09/14/18 13:00	09/18/18 18:59	BG
Aluminum	03	SW6010C	14200 mg/kg dry		52.8	20	09/14/18 13:00	09/18/18 17:21	BG
Arsenic	03RE1	SW6010C	5.26 mg/kg dry		1.06	1	09/14/18 13:00	09/18/18 18:59	BG
Barium	03RE1	SW6010C	393 mg/kg dry		0.528	1	09/14/18 13:00	09/18/18 18:59	BG
Beryllium	03RE1	SW6010C	1.72 mg/kg dry		0.211	1	09/14/18 13:00	09/18/18 18:59	BG
Calcium	03RE2	SW6010C	79600 mg/kg dry		1060	200	09/14/18 13:00	09/19/18 16:26	BG
Cadmium	03RE1	SW6010C	0.699 mg/kg dry		0.211	1	09/14/18 13:00	09/18/18 18:59	BG
Cobalt	03RE1	SW6010C	7.80 mg/kg dry		0.211	1	09/14/18 13:00	09/18/18 18:59	BG
Chromium	03RE1	SW6010C	18.7 mg/kg dry		0.528	1	09/14/18 13:00	09/18/18 18:59	BG
Copper	03RE1	SW6010C	16.0 mg/kg dry		2.64	1	09/14/18 13:00	09/18/18 18:59	BG
Iron	03	SW6010C	18600 mg/kg dry		52.8	20	09/14/18 13:00	09/18/18 17:21	BG
Mercury	03	SW7471B	0.087 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:18	MWL
Potassium	03RE1	SW6010C	2550 mg/kg dry		26.4	1	09/14/18 13:00	09/18/18 18:59	BG
Magnesium	03	SW6010C	6010 mg/kg dry		52.8	20	09/14/18 13:00	09/18/18 17:21	BG
Manganese	03	SW6010C	3300 mg/kg dry		10.6	20	09/14/18 13:00	09/18/18 17:21	BG
Sodium	03RE1	SW6010C	146 mg/kg dry		26.4	1	09/14/18 13:00	09/18/18 18:59	BG
Nickel	03RE1	SW6010C	11.0 mg/kg dry		0.528	1	09/14/18 13:00	09/18/18 18:59	BG
Lead	03RE1	SW6010C	162 mg/kg dry		0.528	1	09/14/18 13:00	09/18/18 18:59	BG
Antimony	03RE1	SW6010C	<5.28 mg/kg dry		5.28	1	09/14/18 13:00	09/18/18 18:59	BG
Selenium	03RE1	SW6010C	<2.64 mg/kg dry		2.64	1	09/14/18 13:00	09/18/18 18:59	BG
Thallium	03RE1	SW6010C	3.58 mg/kg dry		2.64	1	09/14/18 13:00	09/18/18 18:59	BG
Vanadium	03RE1	SW6010C	24.5 mg/kg dry		0.528	1	09/14/18 13:00	09/18/18 18:59	BG
Zinc	03RE1	SW6010C	137 mg/kg dry		0.528	1	09/14/18 13:00	09/18/18 18:59	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	03	SW8015C	<0.11 mg/kg dry	0.11	1	09/14/18 18:13	09/14/18 18:13	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-22 0-5'	Laboratory Sample ID: 18I0511-03
Grab Date/Time: 09/12/2018 10:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	03	SW8015C	74.5 %	S	80-120		09/14/18 18:13	09/14/18 18:13	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03	SW8015C	40.9 mg/kg dry		11.3	1	09/17/18 09:13	09/18/18 14:04	HLM
<i>Surr: Pentacosane (Surr)</i>	03	SW8015C	73.6 %		40-160		09/17/18 09:13	09/18/18 14:04	HLM
TPH-Semi-Volatiles (ORO)	03	SW8015C	40.6 mg/kg dry		11.3	1	09/19/18 14:54	09/21/18 03:20	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	03	SW8081B	<6.69 ug/kg dry		6.69	1	09/25/18 14:49	09/26/18 13:32	HLM
4,4'-DDE	03	SW8081B	9.28 ug/kg dry		4.46	1	09/25/18 14:49	09/26/18 13:32	HLM
4,4'-DDT	03	SW8081B	<4.46 ug/kg dry		4.46	1	09/25/18 14:49	09/26/18 13:32	HLM
Aldrin	03	SW8081B	<2.23 ug/kg dry		2.23	1	09/25/18 14:49	09/26/18 13:32	HLM
alpha-BHC	03	SW8081B	<2.23 ug/kg dry		2.23	1	09/25/18 14:49	09/26/18 13:32	HLM
beta-BHC	03	SW8081B	<2.23 ug/kg dry		2.23	1	09/25/18 14:49	09/26/18 13:32	HLM
Chlordane	03	SW8081B	<46.8 ug/kg dry		46.8	1	09/25/18 14:49	09/26/18 13:32	HLM
delta-BHC	03	SW8081B	<4.46 ug/kg dry		4.46	1	09/25/18 14:49	09/26/18 13:32	HLM
Dieldrin	03	SW8081B	<4.46 ug/kg dry		4.46	1	09/25/18 14:49	09/26/18 13:32	HLM
Endosulfan I	03	SW8081B	<4.46 ug/kg dry		4.46	1	09/25/18 14:49	09/26/18 13:32	HLM
Endosulfan II	03	SW8081B	<6.69 ug/kg dry		6.69	1	09/25/18 14:49	09/26/18 13:32	HLM
Endosulfan sulfate	03	SW8081B	<2.23 ug/kg dry		2.23	1	09/25/18 14:49	09/26/18 13:32	HLM
Endrin	03	SW8081B	<4.46 ug/kg dry		4.46	1	09/25/18 14:49	09/26/18 13:32	HLM
Endrin aldehyde	03	SW8081B	<8.91 ug/kg dry		8.91	1	09/25/18 14:49	09/26/18 13:32	HLM
Endrin ketone	03	SW8081B	<2.23 ug/kg dry		2.23	1	09/25/18 14:49	09/26/18 13:32	HLM
gamma-BHC (Lindane)	03	SW8081B	<2.23 ug/kg dry		2.23	1	09/25/18 14:49	09/26/18 13:32	HLM
Heptachlor	03	SW8081B	<2.23 ug/kg dry		2.23	1	09/25/18 14:49	09/26/18 13:32	HLM
Heptachlor epoxide	03	SW8081B	<44.6 ug/kg dry		44.6	1	09/25/18 14:49	09/26/18 13:32	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-22 0-5'	Laboratory Sample ID: 18I0511-03
Grab Date/Time: 09/12/2018 10:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	03	SW8081B	<44.6 ug/kg dry		44.6	1	09/25/18 14:49	09/26/18 13:32	HLM
Mirex	03	SW8081B	<6.69 ug/kg dry		6.69	1	09/25/18 14:49	09/26/18 13:32	HLM
Toxaphene	03	SW8081B	<46.8 ug/kg dry		46.8	1	09/25/18 14:49	09/26/18 13:32	HLM
Surr: TCMX	03	SW8081B	50.0 %		30-105		09/25/18 14:49	09/26/18 13:32	HLM
Surr: DCB	03	SW8081B	80.0 %		30-105		09/25/18 14:49	09/26/18 13:32	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	03	SW8151A	<664 ug/kg dry		664	4	09/20/18 10:51	09/24/18 17:30	SKS
2,4,5-TP (Silvex)	03	SW8151A	<664 ug/kg dry		664	4	09/20/18 10:51	09/24/18 17:30	SKS
2,4-D	03	SW8151A	<664 ug/kg dry		664	4	09/20/18 10:51	09/24/18 17:30	SKS
Dinoseb	03	SW8151A	<664 ug/kg dry		664	4	09/20/18 10:51	09/24/18 17:30	SKS
Pentachlorophenol	03	SW8151A	<664 ug/kg dry		664	4	09/20/18 10:51	09/24/18 17:30	SKS
Surr: DCAA (Surr)	03	SW8151A	80.0 %		31-87		09/20/18 10:51	09/24/18 17:30	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	03	SW7196A	<0.23 mg/kg dry		0.23	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	03	SM18 2540G	87.4 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-23 0-5' Laboratory Sample ID: 1810511-04

Grab Date/Time: 09/12/2018 10:25

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04RE1	SW6010C	<0.557 mg/kg dry		0.557	1	09/14/18 13:00	09/18/18 19:01	BG
Aluminum	04RE2	SW6010C	44100 mg/kg dry		557	200	09/14/18 13:00	09/19/18 16:29	BG
Arsenic	04RE1	SW6010C	<1.11 mg/kg dry		1.11	1	09/14/18 13:00	09/18/18 19:01	BG
Barium	04RE1	SW6010C	150 mg/kg dry		0.557	1	09/14/18 13:00	09/18/18 19:01	BG
Beryllium	04RE1	SW6010C	1.51 mg/kg dry		0.223	1	09/14/18 13:00	09/18/18 19:01	BG
Calcium	04RE2	SW6010C	30500 mg/kg dry		1110	200	09/14/18 13:00	09/19/18 16:29	BG
Cadmium	04RE1	SW6010C	0.350 mg/kg dry		0.223	1	09/14/18 13:00	09/18/18 19:01	BG
Cobalt	04RE1	SW6010C	13.9 mg/kg dry		0.223	1	09/14/18 13:00	09/18/18 19:01	BG
Chromium	04RE1	SW6010C	29.0 mg/kg dry		0.557	1	09/14/18 13:00	09/18/18 19:01	BG
Copper	04RE1	SW6010C	4.95 mg/kg dry		2.79	1	09/14/18 13:00	09/18/18 19:01	BG
Iron	04RE3	SW6010C	31200 mg/kg dry		557	200	09/14/18 13:00	09/20/18 14:24	BG
Mercury	04	SW7471B	0.034 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:20	MWL
Potassium	04RE1	SW6010C	8160 mg/kg dry		27.9	1	09/14/18 13:00	09/18/18 19:01	BG
Magnesium	04	SW6010C	9730 mg/kg dry		55.7	20	09/14/18 13:00	09/18/18 17:23	BG
Manganese	04RE1	SW6010C	382 mg/kg dry		0.557	1	09/14/18 13:00	09/18/18 19:01	BG
Sodium	04RE1	SW6010C	102 mg/kg dry		27.9	1	09/14/18 13:00	09/18/18 19:01	BG
Nickel	04RE1	SW6010C	14.9 mg/kg dry		0.557	1	09/14/18 13:00	09/18/18 19:01	BG
Lead	04RE1	SW6010C	24.8 mg/kg dry		0.557	1	09/14/18 13:00	09/18/18 19:01	BG
Antimony	04RE1	SW6010C	<5.57 mg/kg dry		5.57	1	09/14/18 13:00	09/18/18 19:01	BG
Selenium	04RE1	SW6010C	<2.79 mg/kg dry		2.79	1	09/14/18 13:00	09/18/18 19:01	BG
Thallium	04RE1	SW6010C	<2.79 mg/kg dry		2.79	1	09/14/18 13:00	09/18/18 19:01	BG
Vanadium	04RE1	SW6010C	34.9 mg/kg dry		0.557	1	09/14/18 13:00	09/18/18 19:01	BG
Zinc	04RE1	SW6010C	101 mg/kg dry		0.557	1	09/14/18 13:00	09/18/18 19:01	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	04	SW8015C	<0.11 mg/kg dry	0.11	1	09/14/18 18:35	09/14/18 18:35	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-23 0-5'	Laboratory Sample ID: 18I0511-04
Grab Date/Time: 09/12/2018 10:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	04	SW8015C	96.1 %		80-120		09/14/18 18:35	09/14/18 18:35	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04	SW8015C	<11.0 mg/kg dry		11.0	1	09/17/18 09:13	09/18/18 14:30	HLM
<i>Surr: Pentacosane (Surr)</i>	04	SW8015C	60.7 %		40-160		09/17/18 09:13	09/18/18 14:30	HLM
TPH-Semi-Volatiles (ORO)	04	SW8015C	<11.3 mg/kg dry		11.3	1	09/19/18 14:54	09/21/18 03:45	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	04	SW8081B	<6.80 ug/kg dry		6.80	1	09/25/18 14:49	09/26/18 13:51	HLM
4,4'-DDE	04	SW8081B	<4.53 ug/kg dry		4.53	1	09/25/18 14:49	09/26/18 13:51	HLM
4,4'-DDT	04	SW8081B	<4.53 ug/kg dry		4.53	1	09/25/18 14:49	09/26/18 13:51	HLM
Aldrin	04	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 13:51	HLM
alpha-BHC	04	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 13:51	HLM
beta-BHC	04	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 13:51	HLM
Chlordane	04	SW8081B	<47.6 ug/kg dry		47.6	1	09/25/18 14:49	09/26/18 13:51	HLM
delta-BHC	04	SW8081B	<4.53 ug/kg dry		4.53	1	09/25/18 14:49	09/26/18 13:51	HLM
Dieldrin	04	SW8081B	<4.53 ug/kg dry		4.53	1	09/25/18 14:49	09/26/18 13:51	HLM
Endosulfan I	04	SW8081B	<4.53 ug/kg dry		4.53	1	09/25/18 14:49	09/26/18 13:51	HLM
Endosulfan II	04	SW8081B	<6.80 ug/kg dry		6.80	1	09/25/18 14:49	09/26/18 13:51	HLM
Endosulfan sulfate	04	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 13:51	HLM
Endrin	04	SW8081B	<4.53 ug/kg dry		4.53	1	09/25/18 14:49	09/26/18 13:51	HLM
Endrin aldehyde	04	SW8081B	<9.06 ug/kg dry		9.06	1	09/25/18 14:49	09/26/18 13:51	HLM
Endrin ketone	04	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 13:51	HLM
gamma-BHC (Lindane)	04	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 13:51	HLM
Heptachlor	04	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 13:51	HLM
Heptachlor epoxide	04	SW8081B	<45.3 ug/kg dry		45.3	1	09/25/18 14:49	09/26/18 13:51	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-23 0-5'	Laboratory Sample ID: 18I0511-04
Grab Date/Time: 09/12/2018 10:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	04	SW8081B	<45.3 ug/kg dry		45.3	1	09/25/18 14:49	09/26/18 13:51	HLM
Mirex	04	SW8081B	<6.80 ug/kg dry		6.80	1	09/25/18 14:49	09/26/18 13:51	HLM
Toxaphene	04	SW8081B	<47.6 ug/kg dry		47.6	1	09/25/18 14:49	09/26/18 13:51	HLM
Surr: TCMX	04	SW8081B	50.0 %		30-105		09/25/18 14:49	09/26/18 13:51	HLM
Surr: DCB	04	SW8081B	80.0 %		30-105		09/25/18 14:49	09/26/18 13:51	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	04	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 17:47	SKS
2,4,5-TP (Silvex)	04	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 17:47	SKS
2,4-D	04	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 17:47	SKS
Dinoseb	04	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 17:47	SKS
Pentachlorophenol	04	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 17:47	SKS
Surr: DCAA (Surr)	04	SW8151A	85.0 %		31-87		09/20/18 10:51	09/24/18 17:47	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	04	SW7196A	<0.23 mg/kg dry		0.23	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	04	SM18 2540G	87.4 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-23 5-10' Laboratory Sample ID: 1810511-05

Grab Date/Time: 09/12/2018 10:32

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05RE1	SW6010C	<0.534 mg/kg dry		0.534	1	09/14/18 13:00	09/18/18 19:04	BG
Aluminum	05RE2	SW6010C	48700 mg/kg dry		534	200	09/14/18 13:00	09/19/18 16:30	BG
Arsenic	05RE1	SW6010C	<1.07 mg/kg dry		1.07	1	09/14/18 13:00	09/18/18 19:04	BG
Barium	05RE1	SW6010C	155 mg/kg dry		0.534	1	09/14/18 13:00	09/18/18 19:04	BG
Beryllium	05RE1	SW6010C	1.90 mg/kg dry		0.214	1	09/14/18 13:00	09/18/18 19:04	BG
Calcium	05RE1	SW6010C	491 mg/kg dry		5.34	1	09/14/18 13:00	09/18/18 19:04	BG
Cadmium	05RE1	SW6010C	0.434 mg/kg dry		0.214	1	09/14/18 13:00	09/18/18 19:04	BG
Cobalt	05RE1	SW6010C	19.0 mg/kg dry		0.214	1	09/14/18 13:00	09/18/18 19:04	BG
Chromium	05RE1	SW6010C	30.7 mg/kg dry		0.534	1	09/14/18 13:00	09/18/18 19:04	BG
Copper	05RE1	SW6010C	9.10 mg/kg dry		2.67	1	09/14/18 13:00	09/18/18 19:04	BG
Iron	05RE3	SW6010C	39600 mg/kg dry		534	200	09/14/18 13:00	09/20/18 14:26	BG
Mercury	05	SW7471B	0.017 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:28	MWL
Potassium	05	SW6010C	13900 mg/kg dry		534	20	09/14/18 13:00	09/18/18 17:26	BG
Magnesium	05	SW6010C	11300 mg/kg dry		53.4	20	09/14/18 13:00	09/18/18 17:26	BG
Manganese	05RE1	SW6010C	436 mg/kg dry		0.534	1	09/14/18 13:00	09/18/18 19:04	BG
Sodium	05RE1	SW6010C	62.1 mg/kg dry		26.7	1	09/14/18 13:00	09/18/18 19:04	BG
Nickel	05RE1	SW6010C	18.1 mg/kg dry		0.534	1	09/14/18 13:00	09/18/18 19:04	BG
Lead	05RE1	SW6010C	10.3 mg/kg dry		0.534	1	09/14/18 13:00	09/18/18 19:04	BG
Antimony	05RE1	SW6010C	<5.34 mg/kg dry		5.34	1	09/14/18 13:00	09/18/18 19:04	BG
Selenium	05RE1	SW6010C	<2.67 mg/kg dry		2.67	1	09/14/18 13:00	09/18/18 19:04	BG
Thallium	05RE1	SW6010C	<2.67 mg/kg dry		2.67	1	09/14/18 13:00	09/18/18 19:04	BG
Vanadium	05RE1	SW6010C	39.2 mg/kg dry		0.534	1	09/14/18 13:00	09/18/18 19:04	BG
Zinc	05RE1	SW6010C	126 mg/kg dry		0.534	1	09/14/18 13:00	09/18/18 19:04	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	05	SW8015C	<0.11 mg/kg dry	0.11	1	09/17/18 13:35	09/17/18 13:35	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-23 5-10'	Laboratory Sample ID: 18I0511-05
Grab Date/Time: 09/12/2018 10:32	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	05	SW8015C	104 %		80-120		09/17/18 13:35	09/17/18 13:35	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05	SW8015C	<11.0 mg/kg dry		11.0	1	09/17/18 09:13	09/18/18 14:56	HLM
<i>Surr: Pentacosane (Surr)</i>	05	SW8015C	48.3 %		40-160		09/17/18 09:13	09/18/18 14:56	HLM
TPH-Semi-Volatiles (ORO)	05	SW8015C	<11.3 mg/kg dry		11.3	1	09/19/18 14:54	09/21/18 04:09	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	05	SW8081B	<6.54 ug/kg dry		6.54	1	09/25/18 14:49	09/26/18 14:09	HLM
4,4'-DDE	05	SW8081B	<4.36 ug/kg dry		4.36	1	09/25/18 14:49	09/26/18 14:09	HLM
4,4'-DDT	05	SW8081B	<4.36 ug/kg dry		4.36	1	09/25/18 14:49	09/26/18 14:09	HLM
Aldrin	05	SW8081B	<2.18 ug/kg dry		2.18	1	09/25/18 14:49	09/26/18 14:09	HLM
alpha-BHC	05	SW8081B	<2.18 ug/kg dry		2.18	1	09/25/18 14:49	09/26/18 14:09	HLM
beta-BHC	05	SW8081B	<2.18 ug/kg dry		2.18	1	09/25/18 14:49	09/26/18 14:09	HLM
Chlordane	05	SW8081B	<45.8 ug/kg dry		45.8	1	09/25/18 14:49	09/26/18 14:09	HLM
delta-BHC	05	SW8081B	<4.36 ug/kg dry		4.36	1	09/25/18 14:49	09/26/18 14:09	HLM
Dieldrin	05	SW8081B	<4.36 ug/kg dry		4.36	1	09/25/18 14:49	09/26/18 14:09	HLM
Endosulfan I	05	SW8081B	<4.36 ug/kg dry		4.36	1	09/25/18 14:49	09/26/18 14:09	HLM
Endosulfan II	05	SW8081B	<6.54 ug/kg dry		6.54	1	09/25/18 14:49	09/26/18 14:09	HLM
Endosulfan sulfate	05	SW8081B	<2.18 ug/kg dry		2.18	1	09/25/18 14:49	09/26/18 14:09	HLM
Endrin	05	SW8081B	<4.36 ug/kg dry		4.36	1	09/25/18 14:49	09/26/18 14:09	HLM
Endrin aldehyde	05	SW8081B	<8.72 ug/kg dry		8.72	1	09/25/18 14:49	09/26/18 14:09	HLM
Endrin ketone	05	SW8081B	<2.18 ug/kg dry		2.18	1	09/25/18 14:49	09/26/18 14:09	HLM
gamma-BHC (Lindane)	05	SW8081B	<2.18 ug/kg dry		2.18	1	09/25/18 14:49	09/26/18 14:09	HLM
Heptachlor	05	SW8081B	<2.18 ug/kg dry		2.18	1	09/25/18 14:49	09/26/18 14:09	HLM
Heptachlor epoxide	05	SW8081B	<43.6 ug/kg dry		43.6	1	09/25/18 14:49	09/26/18 14:09	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-23 5-10' **Laboratory Sample ID:** 18I0511-05

Grab Date/Time: 09/12/2018 10:32

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	05	SW8081B	<43.6 ug/kg dry		43.6	1	09/25/18 14:49	09/26/18 14:09	HLM
Mirex	05	SW8081B	<6.54 ug/kg dry		6.54	1	09/25/18 14:49	09/26/18 14:09	HLM
Toxaphene	05	SW8081B	<45.8 ug/kg dry		45.8	1	09/25/18 14:49	09/26/18 14:09	HLM
<i>Surr: TCMX</i>	<i>05</i>	<i>SW8081B</i>	<i>80.0 %</i>		<i>30-105</i>		<i>09/25/18 14:49</i>	<i>09/26/18 14:09</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>05</i>	<i>SW8081B</i>	<i>90.0 %</i>		<i>30-105</i>		<i>09/25/18 14:49</i>	<i>09/26/18 14:09</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	05	SW8151A	<163 ug/kg dry		163	1	09/20/18 10:51	09/24/18 18:23	SKS
2,4,5-TP (Silvex)	05	SW8151A	<163 ug/kg dry		163	1	09/20/18 10:51	09/24/18 18:23	SKS
2,4-D	05	SW8151A	<163 ug/kg dry		163	1	09/20/18 10:51	09/24/18 18:23	SKS
Dinoseb	05	SW8151A	<163 ug/kg dry		163	1	09/20/18 10:51	09/24/18 18:23	SKS
Pentachlorophenol	05	SW8151A	<163 ug/kg dry		163	1	09/20/18 10:51	09/24/18 18:23	SKS
<i>Surr: DCAA (Surr)</i>	<i>05</i>	<i>SW8151A</i>	<i>45.0 %</i>		<i>31-87</i>		<i>09/20/18 10:51</i>	<i>09/24/18 18:23</i>	<i>SKS</i>
Wet Chemistry Analysis									
Chromium, Hexavalent	05	SW7196A	<0.23 mg/kg dry		0.23	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	05	SM18 2540G	86.3 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-23 10-13' Laboratory Sample ID: 1810511-06

Grab Date/Time: 09/12/2018 10:50

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06RE1	SW6010C	<0.531 mg/kg dry		0.531	1	09/14/18 13:00	09/18/18 19:07	BG
Aluminum	06RE2	SW6010C	39700 mg/kg dry		531	200	09/14/18 13:00	09/19/18 16:32	BG
Arsenic	06RE1	SW6010C	<1.06 mg/kg dry		1.06	1	09/14/18 13:00	09/18/18 19:07	BG
Barium	06RE1	SW6010C	136 mg/kg dry		0.531	1	09/14/18 13:00	09/18/18 19:07	BG
Beryllium	06RE1	SW6010C	1.91 mg/kg dry		0.213	1	09/14/18 13:00	09/18/18 19:07	BG
Calcium	06RE1	SW6010C	481 mg/kg dry		5.31	1	09/14/18 13:00	09/18/18 19:07	BG
Cadmium	06RE1	SW6010C	0.330 mg/kg dry		0.213	1	09/14/18 13:00	09/18/18 19:07	BG
Cobalt	06RE1	SW6010C	14.4 mg/kg dry		0.213	1	09/14/18 13:00	09/18/18 19:07	BG
Chromium	06RE1	SW6010C	20.0 mg/kg dry		0.531	1	09/14/18 13:00	09/18/18 19:07	BG
Copper	06RE1	SW6010C	3.66 mg/kg dry		2.66	1	09/14/18 13:00	09/18/18 19:07	BG
Iron	06RE3	SW6010C	34100 mg/kg dry		531	200	09/14/18 13:00	09/20/18 14:28	BG
Mercury	06	SW7471B	<0.009 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:29	MWL
Potassium	06RE1	SW6010C	7720 mg/kg dry		26.6	1	09/14/18 13:00	09/18/18 19:07	BG
Magnesium	06	SW6010C	8850 mg/kg dry		53.1	20	09/14/18 13:00	09/18/18 17:28	BG
Manganese	06RE1	SW6010C	299 mg/kg dry		0.531	1	09/14/18 13:00	09/18/18 19:07	BG
Sodium	06RE1	SW6010C	48.5 mg/kg dry		26.6	1	09/14/18 13:00	09/18/18 19:07	BG
Nickel	06RE1	SW6010C	16.0 mg/kg dry		0.531	1	09/14/18 13:00	09/18/18 19:07	BG
Lead	06RE1	SW6010C	7.57 mg/kg dry		0.531	1	09/14/18 13:00	09/18/18 19:07	BG
Antimony	06RE1	SW6010C	<5.31 mg/kg dry		5.31	1	09/14/18 13:00	09/18/18 19:07	BG
Selenium	06RE1	SW6010C	<2.66 mg/kg dry		2.66	1	09/14/18 13:00	09/18/18 19:07	BG
Thallium	06RE1	SW6010C	<2.66 mg/kg dry		2.66	1	09/14/18 13:00	09/18/18 19:07	BG
Vanadium	06RE1	SW6010C	28.0 mg/kg dry		0.531	1	09/14/18 13:00	09/18/18 19:07	BG
Zinc	06RE1	SW6010C	98.5 mg/kg dry		0.531	1	09/14/18 13:00	09/18/18 19:07	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	06	SW8015C	0.62 mg/kg dry		0.11	1	09/17/18 13:58	09/17/18 13:58	DFH
---------------------	----	---------	----------------	--	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-23 10-13'	Laboratory Sample ID: 18I0511-06
Grab Date/Time: 09/12/2018 10:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	06	SW8015C	97.9 %		80-120		09/17/18 13:58	09/17/18 13:58	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	06	SW8015C	16.4 mg/kg dry		10.9	1	09/17/18 09:13	09/17/18 16:52	HLM
<i>Surr: Pentacosane (Surr)</i>	06	SW8015C	61.5 %		40-160		09/17/18 09:13	09/17/18 16:52	HLM
TPH-Semi-Volatiles (ORO)	06	SW8015C	<11.3 mg/kg dry		11.3	1	09/19/18 14:54	09/21/18 04:34	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	06	SW8081B	<6.63 ug/kg dry		6.63	1	09/25/18 14:49	09/26/18 14:28	HLM
4,4'-DDE	06	SW8081B	<4.42 ug/kg dry		4.42	1	09/25/18 14:49	09/26/18 14:28	HLM
4,4'-DDT	06	SW8081B	<4.42 ug/kg dry		4.42	1	09/25/18 14:49	09/26/18 14:28	HLM
Aldrin	06	SW8081B	<2.21 ug/kg dry		2.21	1	09/25/18 14:49	09/26/18 14:28	HLM
alpha-BHC	06	SW8081B	<2.21 ug/kg dry		2.21	1	09/25/18 14:49	09/26/18 14:28	HLM
beta-BHC	06	SW8081B	<2.21 ug/kg dry		2.21	1	09/25/18 14:49	09/26/18 14:28	HLM
Chlordane	06	SW8081B	<46.4 ug/kg dry		46.4	1	09/25/18 14:49	09/26/18 14:28	HLM
delta-BHC	06	SW8081B	<4.42 ug/kg dry		4.42	1	09/25/18 14:49	09/26/18 14:28	HLM
Dieldrin	06	SW8081B	<4.42 ug/kg dry		4.42	1	09/25/18 14:49	09/26/18 14:28	HLM
Endosulfan I	06	SW8081B	<4.42 ug/kg dry		4.42	1	09/25/18 14:49	09/26/18 14:28	HLM
Endosulfan II	06	SW8081B	<6.63 ug/kg dry		6.63	1	09/25/18 14:49	09/26/18 14:28	HLM
Endosulfan sulfate	06	SW8081B	<2.21 ug/kg dry		2.21	1	09/25/18 14:49	09/26/18 14:28	HLM
Endrin	06	SW8081B	<4.42 ug/kg dry		4.42	1	09/25/18 14:49	09/26/18 14:28	HLM
Endrin aldehyde	06	SW8081B	<8.84 ug/kg dry		8.84	1	09/25/18 14:49	09/26/18 14:28	HLM
Endrin ketone	06	SW8081B	<2.21 ug/kg dry		2.21	1	09/25/18 14:49	09/26/18 14:28	HLM
gamma-BHC (Lindane)	06	SW8081B	<2.21 ug/kg dry		2.21	1	09/25/18 14:49	09/26/18 14:28	HLM
Heptachlor	06	SW8081B	<2.21 ug/kg dry		2.21	1	09/25/18 14:49	09/26/18 14:28	HLM
Heptachlor epoxide	06	SW8081B	<44.2 ug/kg dry		44.2	1	09/25/18 14:49	09/26/18 14:28	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-23 10-13' **Laboratory Sample ID:** 18I0511-06

Grab Date/Time: 09/12/2018 10:50

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	06	SW8081B	<44.2 ug/kg dry		44.2	1	09/25/18 14:49	09/26/18 14:28	HLM
Mirex	06	SW8081B	<6.63 ug/kg dry		6.63	1	09/25/18 14:49	09/26/18 14:28	HLM
Toxaphene	06	SW8081B	<46.4 ug/kg dry		46.4	1	09/25/18 14:49	09/26/18 14:28	HLM
<i>Surr: TCMX</i>	06	SW8081B	70.0 %		30-105		09/25/18 14:49	09/26/18 14:28	HLM
<i>Surr: DCB</i>	06	SW8081B	80.0 %		30-105		09/25/18 14:49	09/26/18 14:28	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	06	SW8151A	<162 ug/kg dry		162	1	09/20/18 10:51	09/24/18 18:41	SKS
2,4,5-TP (Silvex)	06	SW8151A	<162 ug/kg dry		162	1	09/20/18 10:51	09/24/18 18:41	SKS
2,4-D	06	SW8151A	<162 ug/kg dry		162	1	09/20/18 10:51	09/24/18 18:41	SKS
Dinoseb	06	SW8151A	<162 ug/kg dry		162	1	09/20/18 10:51	09/24/18 18:41	SKS
Pentachlorophenol	06	SW8151A	<162 ug/kg dry		162	1	09/20/18 10:51	09/24/18 18:41	SKS
<i>Surr: DCAA (Surr)</i>	06	SW8151A	45.0 %		31-87		09/20/18 10:51	09/24/18 18:41	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	06	SW7196A	<0.22 mg/kg dry		0.22	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	06	SM18 2540G	87.5 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-24 0-5' Laboratory Sample ID: 1810511-07

Grab Date/Time: 09/12/2018 11:05

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	07RE1	SW6010C	<0.575 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 19:09	BG
Aluminum	07RE2	SW6010C	38800 mg/kg dry		575	200	09/14/18 13:00	09/19/18 16:42	BG
Arsenic	07RE1	SW6010C	<1.15 mg/kg dry		1.15	1	09/14/18 13:00	09/18/18 19:09	BG
Barium	07RE1	SW6010C	67.8 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 19:09	BG
Beryllium	07RE1	SW6010C	1.71 mg/kg dry		0.230	1	09/14/18 13:00	09/18/18 19:09	BG
Calcium	07RE1	SW6010C	370 mg/kg dry		5.75	1	09/14/18 13:00	09/18/18 19:09	BG
Cadmium	07RE1	SW6010C	0.576 mg/kg dry		0.230	1	09/14/18 13:00	09/18/18 19:09	BG
Cobalt	07RE1	SW6010C	5.78 mg/kg dry		0.230	1	09/14/18 13:00	09/18/18 19:09	BG
Chromium	07RE1	SW6010C	34.5 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 19:09	BG
Copper	07RE1	SW6010C	6.50 mg/kg dry		2.88	1	09/14/18 13:00	09/18/18 19:09	BG
Iron	07RE3	SW6010C	41300 mg/kg dry		575	200	09/14/18 13:00	09/20/18 14:30	BG
Mercury	07	SW7471B	0.014 mg/kg dry		0.010	1	09/14/18 13:16	09/17/18 16:32	MWL
Potassium	07RE1	SW6010C	3490 mg/kg dry		28.8	1	09/14/18 13:00	09/18/18 19:09	BG
Magnesium	07	SW6010C	2750 mg/kg dry		57.5	20	09/14/18 13:00	09/18/18 17:31	BG
Manganese	07RE1	SW6010C	122 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 19:09	BG
Sodium	07RE1	SW6010C	46.5 mg/kg dry		28.8	1	09/14/18 13:00	09/18/18 19:09	BG
Nickel	07RE1	SW6010C	6.21 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 19:09	BG
Lead	07RE1	SW6010C	16.9 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 19:09	BG
Antimony	07RE1	SW6010C	<5.75 mg/kg dry		5.75	1	09/14/18 13:00	09/18/18 19:09	BG
Selenium	07RE1	SW6010C	<2.88 mg/kg dry		2.88	1	09/14/18 13:00	09/18/18 19:09	BG
Thallium	07RE1	SW6010C	<2.88 mg/kg dry		2.88	1	09/14/18 13:00	09/18/18 19:09	BG
Vanadium	07RE1	SW6010C	54.6 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 19:09	BG
Zinc	07RE1	SW6010C	54.4 mg/kg dry		0.575	1	09/14/18 13:00	09/18/18 19:09	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	07	SW8015C	<0.12 mg/kg dry	0.12	1	09/17/18 14:21	09/17/18 14:21	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-24 0-5' **Laboratory Sample ID:** 18I0511-07

Grab Date/Time: 09/12/2018 11:05

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	07	SW8015C	96.3 %		80-120		09/17/18 14:21	09/17/18 14:21	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	07	SW8015C	<12.1 mg/kg dry		12.1	1	09/17/18 09:13	09/18/18 15:21	HLM
<i>Surr: Pentacosane (Surr)</i>	07	SW8015C	59.0 %		40-160		09/17/18 09:13	09/18/18 15:21	HLM
TPH-Semi-Volatiles (ORO)	07	SW8015C	<11.8 mg/kg dry		11.8	1	09/19/18 14:54	09/21/18 04:59	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	07	SW8081B	<7.31 ug/kg dry		7.31	1	09/25/18 14:49	09/26/18 14:47	HLM
4,4'-DDE	07	SW8081B	<4.87 ug/kg dry		4.87	1	09/25/18 14:49	09/26/18 14:47	HLM
4,4'-DDT	07	SW8081B	<4.87 ug/kg dry		4.87	1	09/25/18 14:49	09/26/18 14:47	HLM
Aldrin	07	SW8081B	<2.44 ug/kg dry		2.44	1	09/25/18 14:49	09/26/18 14:47	HLM
alpha-BHC	07	SW8081B	<2.44 ug/kg dry		2.44	1	09/25/18 14:49	09/26/18 14:47	HLM
beta-BHC	07	SW8081B	<2.44 ug/kg dry		2.44	1	09/25/18 14:49	09/26/18 14:47	HLM
Chlordane	07	SW8081B	<51.1 ug/kg dry		51.1	1	09/25/18 14:49	09/26/18 14:47	HLM
delta-BHC	07	SW8081B	<4.87 ug/kg dry		4.87	1	09/25/18 14:49	09/26/18 14:47	HLM
Dieldrin	07	SW8081B	<4.87 ug/kg dry		4.87	1	09/25/18 14:49	09/26/18 14:47	HLM
Endosulfan I	07	SW8081B	<4.87 ug/kg dry		4.87	1	09/25/18 14:49	09/26/18 14:47	HLM
Endosulfan II	07	SW8081B	<7.31 ug/kg dry		7.31	1	09/25/18 14:49	09/26/18 14:47	HLM
Endosulfan sulfate	07	SW8081B	<2.44 ug/kg dry		2.44	1	09/25/18 14:49	09/26/18 14:47	HLM
Endrin	07	SW8081B	<4.87 ug/kg dry		4.87	1	09/25/18 14:49	09/26/18 14:47	HLM
Endrin aldehyde	07	SW8081B	<9.74 ug/kg dry		9.74	1	09/25/18 14:49	09/26/18 14:47	HLM
Endrin ketone	07	SW8081B	<2.44 ug/kg dry		2.44	1	09/25/18 14:49	09/26/18 14:47	HLM
gamma-BHC (Lindane)	07	SW8081B	<2.44 ug/kg dry		2.44	1	09/25/18 14:49	09/26/18 14:47	HLM
Heptachlor	07	SW8081B	<2.44 ug/kg dry		2.44	1	09/25/18 14:49	09/26/18 14:47	HLM
Heptachlor epoxide	07	SW8081B	<48.7 ug/kg dry		48.7	1	09/25/18 14:49	09/26/18 14:47	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-24 0-5'	Laboratory Sample ID: 18I0511-07
Grab Date/Time: 09/12/2018 11:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	07	SW8081B	<48.7 ug/kg dry		48.7	1	09/25/18 14:49	09/26/18 14:47	HLM
Mirex	07	SW8081B	<7.31 ug/kg dry		7.31	1	09/25/18 14:49	09/26/18 14:47	HLM
Toxaphene	07	SW8081B	<51.1 ug/kg dry		51.1	1	09/25/18 14:49	09/26/18 14:47	HLM
Surr: TCMX	07	SW8081B	70.0 %		30-105		09/25/18 14:49	09/26/18 14:47	HLM
Surr: DCB	07	SW8081B	90.0 %		30-105		09/25/18 14:49	09/26/18 14:47	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	07	SW8151A	<181 ug/kg dry		181	1	09/20/18 10:51	09/24/18 18:59	SKS
2,4,5-TP (Silvex)	07	SW8151A	<181 ug/kg dry		181	1	09/20/18 10:51	09/24/18 18:59	SKS
2,4-D	07	SW8151A	<181 ug/kg dry		181	1	09/20/18 10:51	09/24/18 18:59	SKS
Dinoseb	07	SW8151A	<181 ug/kg dry		181	1	09/20/18 10:51	09/24/18 18:59	SKS
Pentachlorophenol	07	SW8151A	<181 ug/kg dry		181	1	09/20/18 10:51	09/24/18 18:59	SKS
Surr: DCAA (Surr)	07	SW8151A	55.0 %		31-87		09/20/18 10:51	09/24/18 18:59	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	07	SW7196A	<0.24 mg/kg dry		0.24	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	07	SM18 2540G	81.9 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-24 5-10' Laboratory Sample ID: 1810511-08

Grab Date/Time: 09/12/2018 11:10

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	08RE1	SW6010C	<0.595 mg/kg dry		0.595	1	09/14/18 13:00	09/18/18 19:12	BG
Aluminum	08RE2	SW6010C	40900 mg/kg dry		595	200	09/14/18 13:00	09/19/18 16:43	BG
Arsenic	08RE1	SW6010C	<1.19 mg/kg dry		1.19	1	09/14/18 13:00	09/18/18 19:12	BG
Barium	08RE1	SW6010C	109 mg/kg dry		0.595	1	09/14/18 13:00	09/18/18 19:12	BG
Beryllium	08RE1	SW6010C	1.74 mg/kg dry		0.238	1	09/14/18 13:00	09/18/18 19:12	BG
Calcium	08RE1	SW6010C	50.4 mg/kg dry		5.95	1	09/14/18 13:00	09/18/18 19:12	BG
Cadmium	08RE1	SW6010C	0.392 mg/kg dry		0.238	1	09/14/18 13:00	09/18/18 19:12	BG
Cobalt	08RE1	SW6010C	11.9 mg/kg dry		0.238	1	09/14/18 13:00	09/18/18 19:12	BG
Chromium	08RE1	SW6010C	28.9 mg/kg dry		0.595	1	09/14/18 13:00	09/18/18 19:12	BG
Copper	08RE1	SW6010C	24.5 mg/kg dry		2.98	1	09/14/18 13:00	09/18/18 19:12	BG
Iron	08RE3	SW6010C	39200 mg/kg dry		595	200	09/14/18 13:00	09/20/18 14:32	BG
Mercury	08	SW7471B	0.019 mg/kg dry		0.010	1	09/14/18 13:16	09/17/18 16:34	MWL
Potassium	08RE1	SW6010C	7360 mg/kg dry		29.8	1	09/14/18 13:00	09/18/18 19:12	BG
Magnesium	08	SW6010C	6310 mg/kg dry		59.5	20	09/14/18 13:00	09/18/18 17:33	BG
Manganese	08RE1	SW6010C	255 mg/kg dry		0.595	1	09/14/18 13:00	09/18/18 19:12	BG
Sodium	08RE1	SW6010C	52.7 mg/kg dry		29.8	1	09/14/18 13:00	09/18/18 19:12	BG
Nickel	08RE1	SW6010C	11.1 mg/kg dry		0.595	1	09/14/18 13:00	09/18/18 19:12	BG
Lead	08RE1	SW6010C	13.3 mg/kg dry		0.595	1	09/14/18 13:00	09/18/18 19:12	BG
Antimony	08RE1	SW6010C	<5.95 mg/kg dry		5.95	1	09/14/18 13:00	09/18/18 19:12	BG
Selenium	08RE1	SW6010C	<2.98 mg/kg dry		2.98	1	09/14/18 13:00	09/18/18 19:12	BG
Thallium	08RE1	SW6010C	<2.98 mg/kg dry		2.98	1	09/14/18 13:00	09/18/18 19:12	BG
Vanadium	08RE1	SW6010C	41.6 mg/kg dry		0.595	1	09/14/18 13:00	09/18/18 19:12	BG
Zinc	08RE1	SW6010C	78.8 mg/kg dry		0.595	1	09/14/18 13:00	09/18/18 19:12	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	08	SW8015C	<0.12 mg/kg dry		0.12	1	09/17/18 14:44	09/17/18 14:44	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-24 5-10'	Laboratory Sample ID: 18I0511-08
Grab Date/Time: 09/12/2018 11:10	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	08	SW8015C	105 %		80-120		09/17/18 14:44	09/17/18 14:44	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	08	SW8015C	<11.7 mg/kg dry		11.7	1	09/17/18 09:13	09/18/18 15:47	HLM
<i>Surr: Pentacosane (Surr)</i>	08	SW8015C	48.0 %		40-160		09/17/18 09:13	09/18/18 15:47	HLM
TPH-Semi-Volatiles (ORO)	08	SW8015C	<12.1 mg/kg dry		12.1	1	09/19/18 14:54	09/21/18 05:23	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	08	SW8081B	<7.18 ug/kg dry		7.18	1	09/25/18 14:49	09/26/18 15:09	HLM
4,4'-DDE	08	SW8081B	<4.79 ug/kg dry		4.79	1	09/25/18 14:49	09/26/18 15:09	HLM
4,4'-DDT	08	SW8081B	<4.79 ug/kg dry		4.79	1	09/25/18 14:49	09/26/18 15:09	HLM
Aldrin	08	SW8081B	<2.39 ug/kg dry		2.39	1	09/25/18 14:49	09/26/18 15:09	HLM
alpha-BHC	08	SW8081B	<2.39 ug/kg dry		2.39	1	09/25/18 14:49	09/26/18 15:09	HLM
beta-BHC	08	SW8081B	<2.39 ug/kg dry		2.39	1	09/25/18 14:49	09/26/18 15:09	HLM
Chlordane	08	SW8081B	<50.3 ug/kg dry		50.3	1	09/25/18 14:49	09/26/18 15:09	HLM
delta-BHC	08	SW8081B	<4.79 ug/kg dry		4.79	1	09/25/18 14:49	09/26/18 15:09	HLM
Dieldrin	08	SW8081B	<4.79 ug/kg dry		4.79	1	09/25/18 14:49	09/26/18 15:09	HLM
Endosulfan I	08	SW8081B	<4.79 ug/kg dry		4.79	1	09/25/18 14:49	09/26/18 15:09	HLM
Endosulfan II	08	SW8081B	<7.18 ug/kg dry		7.18	1	09/25/18 14:49	09/26/18 15:09	HLM
Endosulfan sulfate	08	SW8081B	<2.39 ug/kg dry		2.39	1	09/25/18 14:49	09/26/18 15:09	HLM
Endrin	08	SW8081B	<4.79 ug/kg dry		4.79	1	09/25/18 14:49	09/26/18 15:09	HLM
Endrin aldehyde	08	SW8081B	<9.57 ug/kg dry		9.57	1	09/25/18 14:49	09/26/18 15:09	HLM
Endrin ketone	08	SW8081B	<2.39 ug/kg dry		2.39	1	09/25/18 14:49	09/26/18 15:09	HLM
gamma-BHC (Lindane)	08	SW8081B	<2.39 ug/kg dry		2.39	1	09/25/18 14:49	09/26/18 15:09	HLM
Heptachlor	08	SW8081B	<2.39 ug/kg dry		2.39	1	09/25/18 14:49	09/26/18 15:09	HLM
Heptachlor epoxide	08	SW8081B	<47.9 ug/kg dry		47.9	1	09/25/18 14:49	09/26/18 15:09	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-24 5-10'	Laboratory Sample ID: 18I0511-08
Grab Date/Time: 09/12/2018 11:10	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	08	SW8081B	<47.9 ug/kg dry		47.9	1	09/25/18 14:49	09/26/18 15:09	HLM
Mirex	08	SW8081B	<7.18 ug/kg dry		7.18	1	09/25/18 14:49	09/26/18 15:09	HLM
Toxaphene	08	SW8081B	<50.3 ug/kg dry		50.3	1	09/25/18 14:49	09/26/18 15:09	HLM
Surr: TCMX	08	SW8081B	65.0 %		30-105		09/25/18 14:49	09/26/18 15:09	HLM
Surr: DCB	08	SW8081B	80.0 %		30-105		09/25/18 14:49	09/26/18 15:09	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	08	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:16	SKS
2,4,5-TP (Silvex)	08	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:16	SKS
2,4-D	08	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:16	SKS
Dinoseb	08	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:16	SKS
Pentachlorophenol	08	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:16	SKS
Surr: DCAA (Surr)	08	SW8151A	80.0 %		31-87		09/20/18 10:51	09/24/18 19:16	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	08	SW7196A	0.24 mg/kg dry		0.24	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	08	SM18 2540G	81.9 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-21 10-14.5' Laboratory Sample ID: 1810511-09

Grab Date/Time: 09/12/2018 11:15

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	09RE1	SW6010C	<0.535 mg/kg dry		0.535	1	09/14/18 13:00	09/18/18 19:27	BG
Aluminum	09RE2	SW6010C	40500 mg/kg dry		535	200	09/14/18 13:00	09/19/18 16:46	BG
Arsenic	09RE1	SW6010C	<1.07 mg/kg dry		1.07	1	09/14/18 13:00	09/18/18 19:27	BG
Barium	09RE1	SW6010C	204 mg/kg dry		0.535	1	09/14/18 13:00	09/18/18 19:27	BG
Beryllium	09RE1	SW6010C	1.90 mg/kg dry		0.214	1	09/14/18 13:00	09/18/18 19:27	BG
Calcium	09RE1	SW6010C	105 mg/kg dry		5.35	1	09/14/18 13:00	09/18/18 19:27	BG
Cadmium	09RE1	SW6010C	0.305 mg/kg dry		0.214	1	09/14/18 13:00	09/18/18 19:27	BG
Cobalt	09RE1	SW6010C	47.8 mg/kg dry		0.214	1	09/14/18 13:00	09/18/18 19:27	BG
Chromium	09RE1	SW6010C	24.4 mg/kg dry		0.535	1	09/14/18 13:00	09/18/18 19:27	BG
Copper	09RE1	SW6010C	10.4 mg/kg dry		2.68	1	09/14/18 13:00	09/18/18 19:27	BG
Iron	09RE3	SW6010C	30500 mg/kg dry		535	200	09/14/18 13:00	09/20/18 14:41	BG
Mercury	09	SW7471B	0.012 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:36	MWL
Potassium	09RE1	SW6010C	8850 mg/kg dry		26.8	1	09/14/18 13:00	09/18/18 19:27	BG
Magnesium	09	SW6010C	9060 mg/kg dry		53.5	20	09/14/18 13:00	09/18/18 17:36	BG
Manganese	09RE1	SW6010C	814 mg/kg dry		0.535	1	09/14/18 13:00	09/18/18 19:27	BG
Sodium	09RE1	SW6010C	61.9 mg/kg dry		26.8	1	09/14/18 13:00	09/18/18 19:27	BG
Nickel	09RE1	SW6010C	15.9 mg/kg dry		0.535	1	09/14/18 13:00	09/18/18 19:27	BG
Lead	09RE1	SW6010C	15.8 mg/kg dry		0.535	1	09/14/18 13:00	09/18/18 19:27	BG
Antimony	09RE1	SW6010C	<5.35 mg/kg dry		5.35	1	09/14/18 13:00	09/18/18 19:27	BG
Selenium	09RE1	SW6010C	<2.68 mg/kg dry		2.68	1	09/14/18 13:00	09/18/18 19:27	BG
Thallium	09RE1	SW6010C	<2.68 mg/kg dry		2.68	1	09/14/18 13:00	09/18/18 19:27	BG
Vanadium	09RE1	SW6010C	35.5 mg/kg dry		0.535	1	09/14/18 13:00	09/18/18 19:27	BG
Zinc	09RE1	SW6010C	112 mg/kg dry		0.535	1	09/14/18 13:00	09/18/18 19:27	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	09	SW8015C	<0.11 mg/kg dry	0.11	1	09/17/18 15:06	09/17/18 15:06	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-21 10-14.5' **Laboratory Sample ID:** 18I0511-09

Grab Date/Time: 09/12/2018 11:15

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	09	SW8015C	100 %		80-120		09/17/18 15:06	09/17/18 15:06	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	09	SW8015C	<11.2 mg/kg dry		11.2	1	09/17/18 09:13	09/18/18 16:13	HLM
<i>Surr: Pentacosane (Surr)</i>	09	SW8015C	50.0 %		40-160		09/17/18 09:13	09/18/18 16:13	HLM
TPH-Semi-Volatiles (ORO)	09	SW8015C	<11.5 mg/kg dry		11.5	1	09/20/18 15:35	09/21/18 16:18	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	09	SW8081B	<6.81 ug/kg dry		6.81	1	09/25/18 14:49	09/26/18 15:28	HLM
4,4'-DDE	09	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 15:28	HLM
4,4'-DDT	09	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 15:28	HLM
Aldrin	09	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 15:28	HLM
alpha-BHC	09	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 15:28	HLM
beta-BHC	09	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 15:28	HLM
Chlordane	09	SW8081B	<47.7 ug/kg dry		47.7	1	09/25/18 14:49	09/26/18 15:28	HLM
delta-BHC	09	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 15:28	HLM
Dieldrin	09	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 15:28	HLM
Endosulfan I	09	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 15:28	HLM
Endosulfan II	09	SW8081B	<6.81 ug/kg dry		6.81	1	09/25/18 14:49	09/26/18 15:28	HLM
Endosulfan sulfate	09	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 15:28	HLM
Endrin	09	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 15:28	HLM
Endrin aldehyde	09	SW8081B	<9.09 ug/kg dry		9.09	1	09/25/18 14:49	09/26/18 15:28	HLM
Endrin ketone	09	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 15:28	HLM
gamma-BHC (Lindane)	09	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 15:28	HLM
Heptachlor	09	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 15:28	HLM
Heptachlor epoxide	09	SW8081B	<45.4 ug/kg dry		45.4	1	09/25/18 14:49	09/26/18 15:28	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-21 10-14.5' **Laboratory Sample ID:** 18I0511-09

Grab Date/Time: 09/12/2018 11:15

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	09	SW8081B	<45.4 ug/kg dry		45.4	1	09/25/18 14:49	09/26/18 15:28	HLM
Mirex	09	SW8081B	<6.81 ug/kg dry		6.81	1	09/25/18 14:49	09/26/18 15:28	HLM
Toxaphene	09	SW8081B	<47.7 ug/kg dry		47.7	1	09/25/18 14:49	09/26/18 15:28	HLM
<i>Surr: TCMX</i>	09	SW8081B	65.0 %		30-105		09/25/18 14:49	09/26/18 15:28	HLM
<i>Surr: DCB</i>	09	SW8081B	70.0 %		30-105		09/25/18 14:49	09/26/18 15:28	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	09	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:34	SKS
2,4,5-TP (Silvex)	09	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:34	SKS
2,4-D	09	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:34	SKS
Dinoseb	09	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:34	SKS
Pentachlorophenol	09	SW8151A	<164 ug/kg dry		164	1	09/20/18 10:51	09/24/18 19:34	SKS
<i>Surr: DCAA (Surr)</i>	09	SW8151A	40.0 %		31-87		09/20/18 10:51	09/24/18 19:34	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	09	SW7196A	<0.23 mg/kg dry		0.23	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	09	SM18 2540G	86.3 %		0.10	1	09/19/18 09:42	09/19/18 09:42	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-25 0-5' Laboratory Sample ID: 1810511-10

Grab Date/Time: 09/12/2018 11:20

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	10RE1	SW6010C	<0.546 mg/kg dry		0.546	1	09/14/18 13:00	09/18/18 19:30	BG
Aluminum	10RE2	SW6010C	32800 mg/kg dry		546	200	09/14/18 13:00	09/19/18 16:48	BG
Arsenic	10RE1	SW6010C	1.35 mg/kg dry		1.09	1	09/14/18 13:00	09/18/18 19:30	BG
Barium	10RE1	SW6010C	107 mg/kg dry		0.546	1	09/14/18 13:00	09/18/18 19:30	BG
Beryllium	10RE1	SW6010C	1.67 mg/kg dry		0.218	1	09/14/18 13:00	09/18/18 19:30	BG
Calcium	10RE2	SW6010C	26500 mg/kg dry		1090	200	09/14/18 13:00	09/19/18 16:48	BG
Cadmium	10RE1	SW6010C	0.629 mg/kg dry		0.218	1	09/14/18 13:00	09/18/18 19:30	BG
Cobalt	10RE1	SW6010C	9.59 mg/kg dry		0.218	1	09/14/18 13:00	09/18/18 19:30	BG
Chromium	10RE1	SW6010C	20.4 mg/kg dry		0.546	1	09/14/18 13:00	09/18/18 19:30	BG
Copper	10RE1	SW6010C	5.94 mg/kg dry		2.73	1	09/14/18 13:00	09/18/18 19:30	BG
Iron	10RE3	SW6010C	39200 mg/kg dry		546	200	09/14/18 13:00	09/20/18 14:43	BG
Mercury	10	SW7471B	0.034 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:38	MWL
Potassium	10RE1	SW6010C	5910 mg/kg dry		27.3	1	09/14/18 13:00	09/18/18 19:30	BG
Magnesium	10	SW6010C	6670 mg/kg dry		54.6	20	09/14/18 13:00	09/18/18 17:39	BG
Manganese	10RE1	SW6010C	187 mg/kg dry		0.546	1	09/14/18 13:00	09/18/18 19:30	BG
Sodium	10RE1	SW6010C	192 mg/kg dry		27.3	1	09/14/18 13:00	09/18/18 19:30	BG
Nickel	10RE1	SW6010C	15.1 mg/kg dry		0.546	1	09/14/18 13:00	09/18/18 19:30	BG
Lead	10RE1	SW6010C	24.4 mg/kg dry		0.546	1	09/14/18 13:00	09/18/18 19:30	BG
Antimony	10RE1	SW6010C	<5.46 mg/kg dry		5.46	1	09/14/18 13:00	09/18/18 19:30	BG
Selenium	10RE1	SW6010C	<2.73 mg/kg dry		2.73	1	09/14/18 13:00	09/18/18 19:30	BG
Thallium	10RE1	SW6010C	<2.73 mg/kg dry		2.73	1	09/14/18 13:00	09/18/18 19:30	BG
Vanadium	10RE1	SW6010C	35.6 mg/kg dry		0.546	1	09/14/18 13:00	09/18/18 19:30	BG
Zinc	10RE1	SW6010C	82.6 mg/kg dry		0.546	1	09/14/18 13:00	09/18/18 19:30	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	10	SW8015C	<0.11 mg/kg dry	0.11	1	09/17/18 15:29	09/17/18 15:29	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-25 0-5' **Laboratory Sample ID:** 18I0511-10

Grab Date/Time: 09/12/2018 11:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	10	SW8015C	93.1 %		80-120		09/17/18 15:29	09/17/18 15:29	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	10	SW8015C	30.9 mg/kg dry		11.6	1	09/17/18 09:13	09/18/18 17:05	HLM
<i>Surr: Pentacosane (Surr)</i>	10	SW8015C	55.3 %		40-160		09/17/18 09:13	09/18/18 17:05	HLM
TPH-Semi-Volatiles (ORO)	10	SW8015C	58.4 mg/kg dry		11.6	1	09/20/18 15:35	09/21/18 16:43	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	10	SW8081B	<6.19 ug/kg dry		6.19	1	09/25/18 14:49	09/26/18 15:47	HLM
4,4'-DDE	10	SW8081B	<4.13 ug/kg dry		4.13	1	09/25/18 14:49	09/26/18 15:47	HLM
4,4'-DDT	10	SW8081B	<4.13 ug/kg dry		4.13	1	09/25/18 14:49	09/26/18 15:47	HLM
Aldrin	10	SW8081B	<2.06 ug/kg dry		2.06	1	09/25/18 14:49	09/26/18 15:47	HLM
alpha-BHC	10	SW8081B	<2.06 ug/kg dry		2.06	1	09/25/18 14:49	09/26/18 15:47	HLM
beta-BHC	10	SW8081B	<2.06 ug/kg dry		2.06	1	09/25/18 14:49	09/26/18 15:47	HLM
Chlordane	10	SW8081B	<43.3 ug/kg dry		43.3	1	09/25/18 14:49	09/26/18 15:47	HLM
delta-BHC	10	SW8081B	<4.13 ug/kg dry		4.13	1	09/25/18 14:49	09/26/18 15:47	HLM
Dieldrin	10	SW8081B	<4.13 ug/kg dry		4.13	1	09/25/18 14:49	09/26/18 15:47	HLM
Endosulfan I	10	SW8081B	<4.13 ug/kg dry		4.13	1	09/25/18 14:49	09/26/18 15:47	HLM
Endosulfan II	10	SW8081B	<6.19 ug/kg dry		6.19	1	09/25/18 14:49	09/26/18 15:47	HLM
Endosulfan sulfate	10	SW8081B	<2.06 ug/kg dry		2.06	1	09/25/18 14:49	09/26/18 15:47	HLM
Endrin	10	SW8081B	<4.13 ug/kg dry		4.13	1	09/25/18 14:49	09/26/18 15:47	HLM
Endrin aldehyde	10	SW8081B	<8.25 ug/kg dry		8.25	1	09/25/18 14:49	09/26/18 15:47	HLM
Endrin ketone	10	SW8081B	<2.06 ug/kg dry		2.06	1	09/25/18 14:49	09/26/18 15:47	HLM
gamma-BHC (Lindane)	10	SW8081B	<2.06 ug/kg dry		2.06	1	09/25/18 14:49	09/26/18 15:47	HLM
Heptachlor	10	SW8081B	<2.06 ug/kg dry		2.06	1	09/25/18 14:49	09/26/18 15:47	HLM
Heptachlor epoxide	10	SW8081B	<41.3 ug/kg dry		41.3	1	09/25/18 14:49	09/26/18 15:47	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-25 0-5'	Laboratory Sample ID: 18I0511-10
Grab Date/Time: 09/12/2018 11:20	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	10	SW8081B	<41.3 ug/kg dry		41.3	1	09/25/18 14:49	09/26/18 15:47	HLM
Mirex	10	SW8081B	<6.19 ug/kg dry		6.19	1	09/25/18 14:49	09/26/18 15:47	HLM
Toxaphene	10	SW8081B	<43.3 ug/kg dry		43.3	1	09/25/18 14:49	09/26/18 15:47	HLM
Surr: TCMX	10	SW8081B	55.0 %		30-105		09/25/18 14:49	09/26/18 15:47	HLM
Surr: DCB	10	SW8081B	55.0 %		30-105		09/25/18 14:49	09/26/18 15:47	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	10	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 19:52	SKS
2,4,5-TP (Silvex)	10	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 19:52	SKS
2,4-D	10	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 19:52	SKS
Dinoseb	10	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 19:52	SKS
Pentachlorophenol	10	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 19:52	SKS
Surr: DCAA (Surr)	10	SW8151A	45.0 %		31-87		09/20/18 10:51	09/24/18 19:52	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	10	SW7196A	<0.23 mg/kg dry		0.23	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	10	SM18 2540G	85.5 %		0.10	1	09/20/18 09:53	09/20/18 09:53	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-25 5-10' Laboratory Sample ID: 18I0511-11

Grab Date/Time: 09/12/2018 11:25

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	11RE1	SW6010C	<0.563 mg/kg dry		0.563	1	09/14/18 13:00	09/18/18 19:33	BG
Aluminum	11RE2	SW6010C	49400 mg/kg dry		563	200	09/14/18 13:00	09/19/18 16:49	BG
Arsenic	11RE1	SW6010C	7.55 mg/kg dry		1.13	1	09/14/18 13:00	09/18/18 19:33	BG
Barium	11RE1	SW6010C	223 mg/kg dry		0.563	1	09/14/18 13:00	09/18/18 19:33	BG
Beryllium	11RE1	SW6010C	2.05 mg/kg dry		0.225	1	09/14/18 13:00	09/18/18 19:33	BG
Calcium	11RE1	SW6010C	296 mg/kg dry		5.63	1	09/14/18 13:00	09/18/18 19:33	BG
Cadmium	11RE1	SW6010C	<0.225 mg/kg dry		0.225	1	09/14/18 13:00	09/18/18 19:33	BG
Cobalt	11RE1	SW6010C	15.4 mg/kg dry		0.225	1	09/14/18 13:00	09/18/18 19:33	BG
Chromium	11RE1	SW6010C	15.9 mg/kg dry		0.563	1	09/14/18 13:00	09/18/18 19:33	BG
Copper	11RE1	SW6010C	25.4 mg/kg dry		2.82	1	09/14/18 13:00	09/18/18 19:33	BG
Iron	11RE3	SW6010C	28900 mg/kg dry		563	200	09/14/18 13:00	09/20/18 14:45	BG
Mercury	11	SW7471B	0.012 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:40	MWL
Potassium	11RE1	SW6010C	7850 mg/kg dry		28.2	1	09/14/18 13:00	09/18/18 19:33	BG
Magnesium	11	SW6010C	7960 mg/kg dry		56.3	20	09/14/18 13:00	09/18/18 17:41	BG
Manganese	11RE1	SW6010C	276 mg/kg dry		0.563	1	09/14/18 13:00	09/18/18 19:33	BG
Sodium	11RE1	SW6010C	276 mg/kg dry		28.2	1	09/14/18 13:00	09/18/18 19:33	BG
Nickel	11RE1	SW6010C	14.0 mg/kg dry		0.563	1	09/14/18 13:00	09/18/18 19:33	BG
Lead	11RE1	SW6010C	11.6 mg/kg dry		0.563	1	09/14/18 13:00	09/18/18 19:33	BG
Antimony	11RE1	SW6010C	<5.63 mg/kg dry		5.63	1	09/14/18 13:00	09/18/18 19:33	BG
Selenium	11RE1	SW6010C	<2.82 mg/kg dry		2.82	1	09/14/18 13:00	09/18/18 19:33	BG
Thallium	11RE1	SW6010C	<2.82 mg/kg dry		2.82	1	09/14/18 13:00	09/18/18 19:33	BG
Vanadium	11RE1	SW6010C	24.6 mg/kg dry		0.563	1	09/14/18 13:00	09/18/18 19:33	BG
Zinc	11RE1	SW6010C	99.2 mg/kg dry		0.563	1	09/14/18 13:00	09/18/18 19:33	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	11	SW8015C	<0.12 mg/kg dry		0.12	1	09/17/18 15:52	09/17/18 15:52	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-25 5-10'	Laboratory Sample ID: 18I0511-11
Grab Date/Time: 09/12/2018 11:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	11	SW8015C	98.6 %		80-120		09/17/18 15:52	09/17/18 15:52	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	11	SW8015C	<11.4 mg/kg dry		11.4	1	09/17/18 09:13	09/18/18 17:30	HLM
<i>Surr: Pentacosane (Surr)</i>	11	SW8015C	39.8 %	S	40-160		09/17/18 09:13	09/18/18 17:30	HLM
TPH-Semi-Volatiles (ORO)	11	SW8015C	<11.5 mg/kg dry		11.5	1	09/20/18 15:35	09/21/18 17:08	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	11	SW8081B	<6.81 ug/kg dry		6.81	1	09/25/18 14:49	09/26/18 16:24	HLM
4,4'-DDE	11	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 16:24	HLM
4,4'-DDT	11	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 16:24	HLM
Aldrin	11	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 16:24	HLM
alpha-BHC	11	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 16:24	HLM
beta-BHC	11	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 16:24	HLM
Chlordane	11	SW8081B	<47.6 ug/kg dry		47.6	1	09/25/18 14:49	09/26/18 16:24	HLM
delta-BHC	11	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 16:24	HLM
Dieldrin	11	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 16:24	HLM
Endosulfan I	11	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 16:24	HLM
Endosulfan II	11	SW8081B	<6.81 ug/kg dry		6.81	1	09/25/18 14:49	09/26/18 16:24	HLM
Endosulfan sulfate	11	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 16:24	HLM
Endrin	11	SW8081B	<4.54 ug/kg dry		4.54	1	09/25/18 14:49	09/26/18 16:24	HLM
Endrin aldehyde	11	SW8081B	<9.08 ug/kg dry		9.08	1	09/25/18 14:49	09/26/18 16:24	HLM
Endrin ketone	11	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 16:24	HLM
gamma-BHC (Lindane)	11	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 16:24	HLM
Heptachlor	11	SW8081B	<2.27 ug/kg dry		2.27	1	09/25/18 14:49	09/26/18 16:24	HLM
Heptachlor epoxide	11	SW8081B	<45.4 ug/kg dry		45.4	1	09/25/18 14:49	09/26/18 16:24	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-25 5-10'	Laboratory Sample ID: 18I0511-11
Grab Date/Time: 09/12/2018 11:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	11	SW8081B	<45.4 ug/kg dry		45.4	1	09/25/18 14:49	09/26/18 16:24	HLM
Mirex	11	SW8081B	<6.81 ug/kg dry		6.81	1	09/25/18 14:49	09/26/18 16:24	HLM
Toxaphene	11	SW8081B	<47.6 ug/kg dry		47.6	1	09/25/18 14:49	09/26/18 16:24	HLM
Surr: TCMX	11	SW8081B	50.0 %		30-105		09/25/18 14:49	09/26/18 16:24	HLM
Surr: DCB	11	SW8081B	60.0 %		30-105		09/25/18 14:49	09/26/18 16:24	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	11	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 20:10	SKS
2,4,5-TP (Silvex)	11	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 20:10	SKS
2,4-D	11	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 20:10	SKS
Dinoseb	11	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 20:10	SKS
Pentachlorophenol	11	SW8151A	<167 ug/kg dry		167	1	09/20/18 10:51	09/24/18 20:10	SKS
Surr: DCAA (Surr)	11	SW8151A	55.0 %		31-87		09/20/18 10:51	09/24/18 20:10	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	11	SW7196A	<0.23 mg/kg dry		0.23	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	11	SM18 2540G	86.1 %		0.10	1	09/20/18 09:53	09/20/18 09:53	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-25 10-14' Laboratory Sample ID: 18I0511-12

Grab Date/Time: 09/12/2018 11:30

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	12RE1	SW6010C	<0.521 mg/kg dry		0.521	1	09/14/18 13:00	09/18/18 19:35	BG
Aluminum	12RE2	SW6010C	33500 mg/kg dry		521	200	09/14/18 13:00	09/19/18 16:52	BG
Arsenic	12RE1	SW6010C	2.97 mg/kg dry		1.04	1	09/14/18 13:00	09/18/18 19:35	BG
Barium	12RE1	SW6010C	213 mg/kg dry		0.521	1	09/14/18 13:00	09/18/18 19:35	BG
Beryllium	12RE1	SW6010C	1.75 mg/kg dry		0.208	1	09/14/18 13:00	09/18/18 19:35	BG
Calcium	12RE1	SW6010C	274 mg/kg dry		5.21	1	09/14/18 13:00	09/18/18 19:35	BG
Cadmium	12RE1	SW6010C	0.233 mg/kg dry		0.208	1	09/14/18 13:00	09/18/18 19:35	BG
Cobalt	12RE1	SW6010C	22.9 mg/kg dry		0.208	1	09/14/18 13:00	09/18/18 19:35	BG
Chromium	12RE1	SW6010C	14.4 mg/kg dry		0.521	1	09/14/18 13:00	09/18/18 19:35	BG
Copper	12RE1	SW6010C	17.9 mg/kg dry		2.61	1	09/14/18 13:00	09/18/18 19:35	BG
Iron	12RE3	SW6010C	29900 mg/kg dry		521	200	09/14/18 13:00	09/20/18 14:47	BG
Mercury	12	SW7471B	0.010 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:43	MWL
Potassium	12RE1	SW6010C	8680 mg/kg dry		26.1	1	09/14/18 13:00	09/18/18 19:35	BG
Magnesium	12	SW6010C	8780 mg/kg dry		52.1	20	09/14/18 13:00	09/18/18 17:44	BG
Manganese	12RE1	SW6010C	525 mg/kg dry		0.521	1	09/14/18 13:00	09/18/18 19:35	BG
Sodium	12RE1	SW6010C	171 mg/kg dry		26.1	1	09/14/18 13:00	09/18/18 19:35	BG
Nickel	12RE1	SW6010C	13.1 mg/kg dry		0.521	1	09/14/18 13:00	09/18/18 19:35	BG
Lead	12RE1	SW6010C	8.45 mg/kg dry		0.521	1	09/14/18 13:00	09/18/18 19:35	BG
Antimony	12RE1	SW6010C	<5.21 mg/kg dry		5.21	1	09/14/18 13:00	09/18/18 19:35	BG
Selenium	12RE1	SW6010C	<2.61 mg/kg dry		2.61	1	09/14/18 13:00	09/18/18 19:35	BG
Thallium	12RE1	SW6010C	<2.61 mg/kg dry		2.61	1	09/14/18 13:00	09/18/18 19:35	BG
Vanadium	12RE1	SW6010C	23.3 mg/kg dry		0.521	1	09/14/18 13:00	09/18/18 19:35	BG
Zinc	12RE1	SW6010C	111 mg/kg dry		0.521	1	09/14/18 13:00	09/18/18 19:35	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	12	SW8015C	<0.11 mg/kg dry	0.11	1	09/17/18 16:15	09/17/18 16:15	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-25 10-14'	Laboratory Sample ID: 18I0511-12
Grab Date/Time: 09/12/2018 11:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	12	SW8015C	104 %		80-120		09/17/18 16:15	09/17/18 16:15	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	12	SW8015C	<10.5 mg/kg dry		10.5	1	09/17/18 09:13	09/18/18 17:56	HLM
<i>Surr: Pentacosane (Surr)</i>	12	SW8015C	50.5 %		40-160		09/17/18 09:13	09/18/18 17:56	HLM
TPH-Semi-Volatiles (ORO)	12	SW8015C	<10.7 mg/kg dry		10.7	1	09/20/18 15:35	09/21/18 17:32	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	12	SW8081B	<6.49 ug/kg dry		6.49	1	09/25/18 14:49	09/26/18 16:42	HLM
4,4'-DDE	12	SW8081B	<4.33 ug/kg dry		4.33	1	09/25/18 14:49	09/26/18 16:42	HLM
4,4'-DDT	12	SW8081B	<4.33 ug/kg dry		4.33	1	09/25/18 14:49	09/26/18 16:42	HLM
Aldrin	12	SW8081B	<2.16 ug/kg dry		2.16	1	09/25/18 14:49	09/26/18 16:42	HLM
alpha-BHC	12	SW8081B	<2.16 ug/kg dry		2.16	1	09/25/18 14:49	09/26/18 16:42	HLM
beta-BHC	12	SW8081B	<2.16 ug/kg dry		2.16	1	09/25/18 14:49	09/26/18 16:42	HLM
Chlordane	12	SW8081B	<45.5 ug/kg dry		45.5	1	09/25/18 14:49	09/26/18 16:42	HLM
delta-BHC	12	SW8081B	<4.33 ug/kg dry		4.33	1	09/25/18 14:49	09/26/18 16:42	HLM
Dieldrin	12	SW8081B	<4.33 ug/kg dry		4.33	1	09/25/18 14:49	09/26/18 16:42	HLM
Endosulfan I	12	SW8081B	<4.33 ug/kg dry		4.33	1	09/25/18 14:49	09/26/18 16:42	HLM
Endosulfan II	12	SW8081B	<6.49 ug/kg dry		6.49	1	09/25/18 14:49	09/26/18 16:42	HLM
Endosulfan sulfate	12	SW8081B	<2.16 ug/kg dry		2.16	1	09/25/18 14:49	09/26/18 16:42	HLM
Endrin	12	SW8081B	<4.33 ug/kg dry		4.33	1	09/25/18 14:49	09/26/18 16:42	HLM
Endrin aldehyde	12	SW8081B	<8.66 ug/kg dry		8.66	1	09/25/18 14:49	09/26/18 16:42	HLM
Endrin ketone	12	SW8081B	<2.16 ug/kg dry		2.16	1	09/25/18 14:49	09/26/18 16:42	HLM
gamma-BHC (Lindane)	12	SW8081B	<2.16 ug/kg dry		2.16	1	09/25/18 14:49	09/26/18 16:42	HLM
Heptachlor	12	SW8081B	<2.16 ug/kg dry		2.16	1	09/25/18 14:49	09/26/18 16:42	HLM
Heptachlor epoxide	12	SW8081B	<43.3 ug/kg dry		43.3	1	09/25/18 14:49	09/26/18 16:42	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-25 10-14'	Laboratory Sample ID: 18I0511-12
Grab Date/Time: 09/12/2018 11:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	12	SW8081B	<43.3 ug/kg dry		43.3	1	09/25/18 14:49	09/26/18 16:42	HLM
Mirex	12	SW8081B	<6.49 ug/kg dry		6.49	1	09/25/18 14:49	09/26/18 16:42	HLM
Toxaphene	12	SW8081B	<45.5 ug/kg dry		45.5	1	09/25/18 14:49	09/26/18 16:42	HLM
Surr: TCMX	12	SW8081B	55.0 %		30-105		09/25/18 14:49	09/26/18 16:42	HLM
Surr: DCB	12	SW8081B	75.0 %		30-105		09/25/18 14:49	09/26/18 16:42	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	12	SW8151A	<156 ug/kg dry		156	1	09/20/18 10:51	09/24/18 20:27	SKS
2,4,5-TP (Silvex)	12	SW8151A	<156 ug/kg dry		156	1	09/20/18 10:51	09/24/18 20:27	SKS
2,4-D	12	SW8151A	<156 ug/kg dry		156	1	09/20/18 10:51	09/24/18 20:27	SKS
Dinoseb	12	SW8151A	<156 ug/kg dry		156	1	09/20/18 10:51	09/24/18 20:27	SKS
Pentachlorophenol	12	SW8151A	<156 ug/kg dry		156	1	09/20/18 10:51	09/24/18 20:27	SKS
Surr: DCAA (Surr)	12	SW8151A	50.0 %		31-87		09/20/18 10:51	09/24/18 20:27	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	12	SW7196A	<0.21 mg/kg dry		0.21	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	12	SM18 2540G	91.5 %		0.10	1	09/20/18 09:53	09/20/18 09:53	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-26 0-5' Laboratory Sample ID: 1810511-13

Grab Date/Time: 09/12/2018 11:38

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	13RE1	SW6010C	<0.623 mg/kg dry		0.623	1	09/14/18 13:00	09/18/18 19:38	BG
Aluminum	13RE2	SW6010C	23000 mg/kg dry		623	200	09/14/18 13:00	09/19/18 16:54	BG
Arsenic	13RE1	SW6010C	<1.25 mg/kg dry		1.25	1	09/14/18 13:00	09/18/18 19:38	BG
Barium	13RE1	SW6010C	59.3 mg/kg dry		0.623	1	09/14/18 13:00	09/18/18 19:38	BG
Beryllium	13RE1	SW6010C	1.52 mg/kg dry		0.249	1	09/14/18 13:00	09/18/18 19:38	BG
Calcium	13RE2	SW6010C	67100 mg/kg dry		1250	200	09/14/18 13:00	09/19/18 16:53	BG
Cadmium	13RE1	SW6010C	0.621 mg/kg dry		0.249	1	09/14/18 13:00	09/18/18 19:38	BG
Cobalt	13RE1	SW6010C	6.63 mg/kg dry		0.249	1	09/14/18 13:00	09/18/18 19:38	BG
Chromium	13RE1	SW6010C	18.0 mg/kg dry		0.623	1	09/14/18 13:00	09/18/18 19:38	BG
Copper	13RE1	SW6010C	3.61 mg/kg dry		3.11	1	09/14/18 13:00	09/18/18 19:38	BG
Iron	13RE3	SW6010C	37500 mg/kg dry		623	200	09/14/18 13:00	09/20/18 14:49	BG
Mercury	13	SW7471B	0.040 mg/kg dry		0.010	1	09/14/18 13:16	09/17/18 16:45	MWL
Potassium	13RE1	SW6010C	3650 mg/kg dry		31.1	1	09/14/18 13:00	09/18/18 19:38	BG
Magnesium	13	SW6010C	6040 mg/kg dry		62.3	20	09/14/18 13:00	09/18/18 17:56	BG
Manganese	13RE1	SW6010C	166 mg/kg dry		0.623	1	09/14/18 13:00	09/18/18 19:38	BG
Sodium	13RE1	SW6010C	70.2 mg/kg dry		31.1	1	09/14/18 13:00	09/18/18 19:38	BG
Nickel	13RE1	SW6010C	11.6 mg/kg dry		0.623	1	09/14/18 13:00	09/18/18 19:38	BG
Lead	13RE1	SW6010C	196 mg/kg dry		0.623	1	09/14/18 13:00	09/18/18 19:38	BG
Antimony	13RE1	SW6010C	<6.23 mg/kg dry		6.23	1	09/14/18 13:00	09/18/18 19:38	BG
Selenium	13RE1	SW6010C	<3.11 mg/kg dry		3.11	1	09/14/18 13:00	09/18/18 19:38	BG
Thallium	13RE1	SW6010C	<3.11 mg/kg dry		3.11	1	09/14/18 13:00	09/18/18 19:38	BG
Vanadium	13RE1	SW6010C	30.8 mg/kg dry		0.623	1	09/14/18 13:00	09/18/18 19:38	BG
Zinc	13RE1	SW6010C	75.4 mg/kg dry		0.623	1	09/14/18 13:00	09/18/18 19:38	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	13	SW8015C	<0.13 mg/kg dry	0.13	1	09/17/18 16:38	09/17/18 16:38	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-26 0-5'	Laboratory Sample ID: 18I0511-13
Grab Date/Time: 09/12/2018 11:38	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	13	SW8015C	99.2 %		80-120		09/17/18 16:38	09/17/18 16:38	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	13	SW8015C	75.8 mg/kg dry		12.4	1	09/17/18 09:13	09/18/18 18:22	HLM
<i>Surr: Pentacosane (Surr)</i>	13	SW8015C	65.5 %		40-160		09/17/18 09:13	09/18/18 18:22	HLM
TPH-Semi-Volatiles (ORO)	13	SW8015C	<12.6 mg/kg dry		12.6	1	09/20/18 15:35	09/21/18 17:57	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	13	SW8081B	<7.34 ug/kg dry		7.34	1	09/25/18 14:49	09/26/18 17:01	HLM
4,4'-DDE	13	SW8081B	<4.90 ug/kg dry		4.90	1	09/25/18 14:49	09/26/18 17:01	HLM
4,4'-DDT	13	SW8081B	<4.90 ug/kg dry		4.90	1	09/25/18 14:49	09/26/18 17:01	HLM
Aldrin	13	SW8081B	<2.45 ug/kg dry		2.45	1	09/25/18 14:49	09/26/18 17:01	HLM
alpha-BHC	13	SW8081B	<2.45 ug/kg dry		2.45	1	09/25/18 14:49	09/26/18 17:01	HLM
beta-BHC	13	SW8081B	<2.45 ug/kg dry		2.45	1	09/25/18 14:49	09/26/18 17:01	HLM
Chlordane	13	SW8081B	<51.4 ug/kg dry		51.4	1	09/25/18 14:49	09/26/18 17:01	HLM
delta-BHC	13	SW8081B	<4.90 ug/kg dry		4.90	1	09/25/18 14:49	09/26/18 17:01	HLM
Dieldrin	13	SW8081B	<4.90 ug/kg dry		4.90	1	09/25/18 14:49	09/26/18 17:01	HLM
Endosulfan I	13	SW8081B	<4.90 ug/kg dry		4.90	1	09/25/18 14:49	09/26/18 17:01	HLM
Endosulfan II	13	SW8081B	<7.34 ug/kg dry		7.34	1	09/25/18 14:49	09/26/18 17:01	HLM
Endosulfan sulfate	13	SW8081B	<2.45 ug/kg dry		2.45	1	09/25/18 14:49	09/26/18 17:01	HLM
Endrin	13	SW8081B	<4.90 ug/kg dry		4.90	1	09/25/18 14:49	09/26/18 17:01	HLM
Endrin aldehyde	13	SW8081B	<9.79 ug/kg dry		9.79	1	09/25/18 14:49	09/26/18 17:01	HLM
Endrin ketone	13	SW8081B	<2.45 ug/kg dry		2.45	1	09/25/18 14:49	09/26/18 17:01	HLM
gamma-BHC (Lindane)	13	SW8081B	<2.45 ug/kg dry		2.45	1	09/25/18 14:49	09/26/18 17:01	HLM
Heptachlor	13	SW8081B	<2.45 ug/kg dry		2.45	1	09/25/18 14:49	09/26/18 17:01	HLM
Heptachlor epoxide	13	SW8081B	<49.0 ug/kg dry		49.0	1	09/25/18 14:49	09/26/18 17:01	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-26 0-5' **Laboratory Sample ID:** 18I0511-13

Grab Date/Time: 09/12/2018 11:38

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	13	SW8081B	<49.0 ug/kg dry		49.0	1	09/25/18 14:49	09/26/18 17:01	HLM
Mirex	13	SW8081B	<7.34 ug/kg dry		7.34	1	09/25/18 14:49	09/26/18 17:01	HLM
Toxaphene	13	SW8081B	<51.4 ug/kg dry		51.4	1	09/25/18 14:49	09/26/18 17:01	HLM
<i>Surr: TCMX</i>	13	SW8081B	70.0 %		30-105		09/25/18 14:49	09/26/18 17:01	HLM
<i>Surr: DCB</i>	13	SW8081B	85.0 %		30-105		09/25/18 14:49	09/26/18 17:01	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	13	SW8151A	<177 ug/kg dry		177	1	09/20/18 10:51	09/24/18 20:45	SKS
2,4,5-TP (Silvex)	13	SW8151A	<177 ug/kg dry		177	1	09/20/18 10:51	09/24/18 20:45	SKS
2,4-D	13	SW8151A	<177 ug/kg dry		177	1	09/20/18 10:51	09/24/18 20:45	SKS
Dinoseb	13	SW8151A	<177 ug/kg dry		177	1	09/20/18 10:51	09/24/18 20:45	SKS
Pentachlorophenol	13	SW8151A	<177 ug/kg dry		177	1	09/20/18 10:51	09/24/18 20:45	SKS
<i>Surr: DCAA (Surr)</i>	13	SW8151A	70.0 %		31-87		09/20/18 10:51	09/24/18 20:45	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	13	SW7196A	<0.25 mg/kg dry		0.25	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	13	SM18 2540G	78.6 %		0.10	1	09/20/18 09:53	09/20/18 09:53	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-26 5-10'	Laboratory Sample ID: 18I0511-14
Grab Date/Time: 09/12/2018 11:45	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	14RE1	SW6010C	<0.568 mg/kg dry		0.568	1	09/14/18 13:00	09/18/18 19:41	BG
Aluminum	14RE2	SW6010C	26800 mg/kg dry		568	200	09/14/18 13:00	09/19/18 16:56	BG
Arsenic	14RE1	SW6010C	<1.14 mg/kg dry		1.14	1	09/14/18 13:00	09/18/18 19:41	BG
Barium	14RE1	SW6010C	79.4 mg/kg dry		0.568	1	09/14/18 13:00	09/18/18 19:41	BG
Beryllium	14RE1	SW6010C	1.58 mg/kg dry		0.227	1	09/14/18 13:00	09/18/18 19:41	BG
Calcium	14RE1	SW6010C	296 mg/kg dry		5.68	1	09/14/18 13:00	09/18/18 19:41	BG
Cadmium	14RE1	SW6010C	0.398 mg/kg dry		0.227	1	09/14/18 13:00	09/18/18 19:41	BG
Cobalt	14RE1	SW6010C	7.76 mg/kg dry		0.227	1	09/14/18 13:00	09/18/18 19:41	BG
Chromium	14RE1	SW6010C	15.2 mg/kg dry		0.568	1	09/14/18 13:00	09/18/18 19:41	BG
Copper	14RE1	SW6010C	<2.84 mg/kg dry		2.84	1	09/14/18 13:00	09/18/18 19:41	BG
Iron	14RE3	SW6010C	38000 mg/kg dry		568	200	09/14/18 13:00	09/20/18 14:51	BG
Mercury	14	SW7471B	<0.009 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:47	MWL
Potassium	14RE1	SW6010C	4200 mg/kg dry		28.4	1	09/14/18 13:00	09/18/18 19:41	BG
Magnesium	14	SW6010C	4180 mg/kg dry		56.8	20	09/14/18 13:00	09/18/18 17:59	BG
Manganese	14RE1	SW6010C	126 mg/kg dry		0.568	1	09/14/18 13:00	09/18/18 19:41	BG
Sodium	14RE1	SW6010C	43.6 mg/kg dry		28.4	1	09/14/18 13:00	09/18/18 19:41	BG
Nickel	14RE1	SW6010C	12.9 mg/kg dry		0.568	1	09/14/18 13:00	09/18/18 19:41	BG
Lead	14RE1	SW6010C	11.6 mg/kg dry		0.568	1	09/14/18 13:00	09/18/18 19:41	BG
Antimony	14RE1	SW6010C	<5.68 mg/kg dry		5.68	1	09/14/18 13:00	09/18/18 19:41	BG
Selenium	14RE1	SW6010C	<2.84 mg/kg dry		2.84	1	09/14/18 13:00	09/18/18 19:41	BG
Thallium	14RE1	SW6010C	<2.84 mg/kg dry		2.84	1	09/14/18 13:00	09/18/18 19:41	BG
Vanadium	14RE1	SW6010C	29.5 mg/kg dry		0.568	1	09/14/18 13:00	09/18/18 19:41	BG
Zinc	14RE1	SW6010C	52.8 mg/kg dry		0.568	1	09/14/18 13:00	09/18/18 19:41	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	14	SW8015C	<0.12 mg/kg dry		0.12	1	09/17/18 17:01	09/17/18 17:01	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-26 5-10'	Laboratory Sample ID: 18I0511-14
Grab Date/Time: 09/12/2018 11:45	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	14	SW8015C	102 %		80-120		09/17/18 17:01	09/17/18 17:01	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	14	SW8015C	<11.4 mg/kg dry		11.4	1	09/17/18 09:13	09/18/18 18:48	HLM
<i>Surr: Pentacosane (Surr)</i>	14	SW8015C	51.4 %		40-160		09/17/18 09:13	09/18/18 18:48	HLM
TPH-Semi-Volatiles (ORO)	14	SW8015C	<11.1 mg/kg dry		11.1	1	09/20/18 15:35	09/21/18 18:22	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	14	SW8081B	<6.21 ug/kg dry		6.21	1	09/25/18 14:49	09/26/18 17:20	HLM
4,4'-DDE	14	SW8081B	<4.14 ug/kg dry		4.14	1	09/25/18 14:49	09/26/18 17:20	HLM
4,4'-DDT	14	SW8081B	<4.14 ug/kg dry		4.14	1	09/25/18 14:49	09/26/18 17:20	HLM
Aldrin	14	SW8081B	<2.07 ug/kg dry		2.07	1	09/25/18 14:49	09/26/18 17:20	HLM
alpha-BHC	14	SW8081B	<2.07 ug/kg dry		2.07	1	09/25/18 14:49	09/26/18 17:20	HLM
beta-BHC	14	SW8081B	<2.07 ug/kg dry		2.07	1	09/25/18 14:49	09/26/18 17:20	HLM
Chlordane	14	SW8081B	<43.5 ug/kg dry		43.5	1	09/25/18 14:49	09/26/18 17:20	HLM
delta-BHC	14	SW8081B	<4.14 ug/kg dry		4.14	1	09/25/18 14:49	09/26/18 17:20	HLM
Dieldrin	14	SW8081B	<4.14 ug/kg dry		4.14	1	09/25/18 14:49	09/26/18 17:20	HLM
Endosulfan I	14	SW8081B	<4.14 ug/kg dry		4.14	1	09/25/18 14:49	09/26/18 17:20	HLM
Endosulfan II	14	SW8081B	<6.21 ug/kg dry		6.21	1	09/25/18 14:49	09/26/18 17:20	HLM
Endosulfan sulfate	14	SW8081B	<2.07 ug/kg dry		2.07	1	09/25/18 14:49	09/26/18 17:20	HLM
Endrin	14	SW8081B	<4.14 ug/kg dry		4.14	1	09/25/18 14:49	09/26/18 17:20	HLM
Endrin aldehyde	14	SW8081B	<8.28 ug/kg dry		8.28	1	09/25/18 14:49	09/26/18 17:20	HLM
Endrin ketone	14	SW8081B	<2.07 ug/kg dry		2.07	1	09/25/18 14:49	09/26/18 17:20	HLM
gamma-BHC (Lindane)	14	SW8081B	<2.07 ug/kg dry		2.07	1	09/25/18 14:49	09/26/18 17:20	HLM
Heptachlor	14	SW8081B	<2.07 ug/kg dry		2.07	1	09/25/18 14:49	09/26/18 17:20	HLM
Heptachlor epoxide	14	SW8081B	<41.4 ug/kg dry		41.4	1	09/25/18 14:49	09/26/18 17:20	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-26 5-10'	Laboratory Sample ID: 18I0511-14
Grab Date/Time: 09/12/2018 11:45	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	14	SW8081B	<41.4 ug/kg dry		41.4	1	09/25/18 14:49	09/26/18 17:20	HLM
Mirex	14	SW8081B	<6.21 ug/kg dry		6.21	1	09/25/18 14:49	09/26/18 17:20	HLM
Toxaphene	14	SW8081B	<43.5 ug/kg dry		43.5	1	09/25/18 14:49	09/26/18 17:20	HLM
Surr: TCMX	14	SW8081B	65.0 %		30-105		09/25/18 14:49	09/26/18 17:20	HLM
Surr: DCB	14	SW8081B	80.0 %		30-105		09/25/18 14:49	09/26/18 17:20	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	14	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 21:03	SKS
2,4,5-TP (Silvex)	14	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 21:03	SKS
2,4-D	14	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 21:03	SKS
Dinoseb	14	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 21:03	SKS
Pentachlorophenol	14	SW8151A	<174 ug/kg dry		174	1	09/20/18 10:51	09/24/18 21:03	SKS
Surr: DCAA (Surr)	14	SW8151A	75.0 %		31-87		09/20/18 10:51	09/24/18 21:03	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	14	SW7196A	0.23 mg/kg dry		0.23	1	09/27/18 10:20	10/01/18 15:00	MWL
Percent Solids	14	SM18 2540G	86.0 %		0.10	1	09/20/18 09:53	09/20/18 09:53	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810511

Analytical Results

Sample I.D. Task 2.9 39-26 10-13' Laboratory Sample ID: 1810511-15

Grab Date/Time: 09/12/2018 11:50

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	15RE1	SW6010C	<0.544 mg/kg dry		0.544	1	09/14/18 13:00	09/18/18 19:43	BG
Aluminum	15RE2	SW6010C	21600 mg/kg dry		544	200	09/14/18 13:00	09/19/18 16:57	BG
Arsenic	15RE1	SW6010C	<1.09 mg/kg dry		1.09	1	09/14/18 13:00	09/18/18 19:43	BG
Barium	15RE1	SW6010C	82.6 mg/kg dry		0.544	1	09/14/18 13:00	09/18/18 19:43	BG
Beryllium	15RE1	SW6010C	1.67 mg/kg dry		0.218	1	09/14/18 13:00	09/18/18 19:43	BG
Calcium	15RE1	SW6010C	652 mg/kg dry		5.44	1	09/14/18 13:00	09/18/18 19:43	BG
Cadmium	15RE1	SW6010C	0.447 mg/kg dry		0.218	1	09/14/18 13:00	09/18/18 19:43	BG
Cobalt	15RE1	SW6010C	9.62 mg/kg dry		0.218	1	09/14/18 13:00	09/18/18 19:43	BG
Chromium	15RE1	SW6010C	12.5 mg/kg dry		0.544	1	09/14/18 13:00	09/18/18 19:43	BG
Copper	15RE1	SW6010C	<2.72 mg/kg dry		2.72	1	09/14/18 13:00	09/18/18 19:43	BG
Iron	15RE3	SW6010C	40500 mg/kg dry		544	200	09/14/18 13:00	09/20/18 14:53	BG
Mercury	15	SW7471B	<0.009 mg/kg dry		0.009	1	09/14/18 13:16	09/17/18 16:54	MWL
Potassium	15RE1	SW6010C	5130 mg/kg dry		27.2	1	09/14/18 13:00	09/18/18 19:43	BG
Magnesium	15	SW6010C	4930 mg/kg dry		54.4	20	09/14/18 13:00	09/18/18 18:02	BG
Manganese	15RE1	SW6010C	160 mg/kg dry		0.544	1	09/14/18 13:00	09/18/18 19:43	BG
Sodium	15RE1	SW6010C	45.6 mg/kg dry		27.2	1	09/14/18 13:00	09/18/18 19:43	BG
Nickel	15RE1	SW6010C	15.7 mg/kg dry		0.544	1	09/14/18 13:00	09/18/18 19:43	BG
Lead	15RE1	SW6010C	8.07 mg/kg dry		0.544	1	09/14/18 13:00	09/18/18 19:43	BG
Antimony	15RE1	SW6010C	<5.44 mg/kg dry		5.44	1	09/14/18 13:00	09/18/18 19:43	BG
Selenium	15RE1	SW6010C	<2.72 mg/kg dry		2.72	1	09/14/18 13:00	09/18/18 19:43	BG
Thallium	15RE1	SW6010C	<2.72 mg/kg dry		2.72	1	09/14/18 13:00	09/18/18 19:43	BG
Vanadium	15RE1	SW6010C	25.6 mg/kg dry		0.544	1	09/14/18 13:00	09/18/18 19:43	BG
Zinc	15RE1	SW6010C	64.3 mg/kg dry		0.544	1	09/14/18 13:00	09/18/18 19:43	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	15	SW8015C	<0.11 mg/kg dry	0.11	1	09/17/18 17:24	09/17/18 17:24	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-26 10-13'	Laboratory Sample ID: 18I0511-15
Grab Date/Time: 09/12/2018 11:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	15	SW8015C	103 %		80-120		09/17/18 17:24	09/17/18 17:24	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	15	SW8015C	<10.6 mg/kg dry		10.6	1	09/17/18 09:13	09/18/18 19:13	HLM
<i>Surr: Pentacosane (Surr)</i>	15	SW8015C	49.0 %		40-160		09/17/18 09:13	09/18/18 19:13	HLM
TPH-Semi-Volatiles (ORO)	15	SW8015C	<10.5 mg/kg dry		10.5	1	09/20/18 15:35	09/21/18 18:46	CVH
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	15	SW8081B	<6.33 ug/kg dry		6.33	1	09/25/18 14:49	09/26/18 17:38	HLM
4,4'-DDE	15	SW8081B	<4.22 ug/kg dry		4.22	1	09/25/18 14:49	09/26/18 17:38	HLM
4,4'-DDT	15	SW8081B	<4.22 ug/kg dry		4.22	1	09/25/18 14:49	09/26/18 17:38	HLM
Aldrin	15	SW8081B	<2.11 ug/kg dry		2.11	1	09/25/18 14:49	09/26/18 17:38	HLM
alpha-BHC	15	SW8081B	<2.11 ug/kg dry		2.11	1	09/25/18 14:49	09/26/18 17:38	HLM
beta-BHC	15	SW8081B	<2.11 ug/kg dry		2.11	1	09/25/18 14:49	09/26/18 17:38	HLM
Chlordane	15	SW8081B	<44.3 ug/kg dry		44.3	1	09/25/18 14:49	09/26/18 17:38	HLM
delta-BHC	15	SW8081B	<4.22 ug/kg dry		4.22	1	09/25/18 14:49	09/26/18 17:38	HLM
Dieldrin	15	SW8081B	<4.22 ug/kg dry		4.22	1	09/25/18 14:49	09/26/18 17:38	HLM
Endosulfan I	15	SW8081B	<4.22 ug/kg dry		4.22	1	09/25/18 14:49	09/26/18 17:38	HLM
Endosulfan II	15	SW8081B	<6.33 ug/kg dry		6.33	1	09/25/18 14:49	09/26/18 17:38	HLM
Endosulfan sulfate	15	SW8081B	<2.11 ug/kg dry		2.11	1	09/25/18 14:49	09/26/18 17:38	HLM
Endrin	15	SW8081B	<4.22 ug/kg dry		4.22	1	09/25/18 14:49	09/26/18 17:38	HLM
Endrin aldehyde	15	SW8081B	<8.44 ug/kg dry		8.44	1	09/25/18 14:49	09/26/18 17:38	HLM
Endrin ketone	15	SW8081B	<2.11 ug/kg dry		2.11	1	09/25/18 14:49	09/26/18 17:38	HLM
gamma-BHC (Lindane)	15	SW8081B	<2.11 ug/kg dry		2.11	1	09/25/18 14:49	09/26/18 17:38	HLM
Heptachlor	15	SW8081B	<2.11 ug/kg dry		2.11	1	09/25/18 14:49	09/26/18 17:38	HLM
Heptachlor epoxide	15	SW8081B	<42.2 ug/kg dry		42.2	1	09/25/18 14:49	09/26/18 17:38	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18I0511

Analytical Results

Sample I.D. Task 2.9 39-26 10-13' **Laboratory Sample ID:** 18I0511-15

Grab Date/Time: 09/12/2018 11:50

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	15	SW8081B	<42.2 ug/kg dry		42.2	1	09/25/18 14:49	09/26/18 17:38	HLM
Mirex	15	SW8081B	<6.33 ug/kg dry		6.33	1	09/25/18 14:49	09/26/18 17:38	HLM
Toxaphene	15	SW8081B	<44.3 ug/kg dry		44.3	1	09/25/18 14:49	09/26/18 17:38	HLM
<i>Surr: TCMX</i>	15	SW8081B	45.0 %		30-105		09/25/18 14:49	09/26/18 17:38	HLM
<i>Surr: DCB</i>	15	SW8081B	55.0 %		30-105		09/25/18 14:49	09/26/18 17:38	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	15	SW8151A	<158 ug/kg dry		158	1	09/20/18 10:51	09/24/18 21:20	SKS
2,4,5-TP (Silvex)	15	SW8151A	<158 ug/kg dry		158	1	09/20/18 10:51	09/24/18 21:20	SKS
2,4-D	15	SW8151A	<158 ug/kg dry		158	1	09/20/18 10:51	09/24/18 21:20	SKS
Dinoseb	15	SW8151A	<158 ug/kg dry		158	1	09/20/18 10:51	09/24/18 21:20	SKS
Pentachlorophenol	15	SW8151A	<158 ug/kg dry		158	1	09/20/18 10:51	09/24/18 21:20	SKS
<i>Surr: DCAA (Surr)</i>	15	SW8151A	115 %	S	31-87		09/20/18 10:51	09/24/18 21:20	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	15	SW7196A	<0.22 mg/kg dry		0.22	1	09/27/18 11:30	10/01/18 15:00	MWL
Percent Solids	15	SM18 2540G	90.6 %		0.10	1	09/20/18 09:53	09/20/18 09:53	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg VA, 24060

Date Issued: 10/2/2018 14:29

Submitted To: Jeff Fisher
 Client Site I.D.: CVTC

Project Number: 18-760
 Purchase Order: 18-760

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18I0511-01	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
18I0511-02	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
18I0511-03	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
18I0511-04	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
18I0511-05	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
18I0511-06	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
18I0511-07	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
18I0511-08	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
18I0511-09	1.00 g / 1.00 mL	SM18 2540G	BBI0538	SBI0490	
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18I0511-10	1.00 g / 1.00 mL	SM18 2540G	BBI0579	SBI0533	
18I0511-11	1.00 g / 1.00 mL	SM18 2540G	BBI0579	SBI0533	
18I0511-12	1.00 g / 1.00 mL	SM18 2540G	BBI0579	SBI0533	
18I0511-13	1.00 g / 1.00 mL	SM18 2540G	BBI0579	SBI0533	
18I0511-14	1.00 g / 1.00 mL	SM18 2540G	BBI0579	SBI0533	
18I0511-15	1.00 g / 1.00 mL	SM18 2540G	BBI0579	SBI0533	
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18I0511-01	2.53 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-02	2.51 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-03	2.51 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-04	2.51 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-05	2.51 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-06	2.56 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-07	2.53 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-08	2.50 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-09	2.51 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-10	2.57 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-11	2.56 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-12	2.56 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
18I0511-13	2.54 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0511-14	2.53 g / 100 mL	SW7196A	BBJ0030	SBJ0029	AJ80006
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18I0511-15	2.52 g / 100 mL	SW7196A	BBJ0031	SBJ0029	AJ80006

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW3050B			
18I0511-01	1.01 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-01RE1	1.01 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-01RE2	1.01 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-01RE3	1.01 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-02	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-02RE1	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-02RE2	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-02RE3	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-03	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-03RE1	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-03RE2	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-04	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-04RE1	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-04RE2	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-04RE3	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-05	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-05RE1	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-05RE2	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-05RE3	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-06	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-06RE1	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-06RE2	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-06RE3	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-07	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-07RE1	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-07RE2	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-07RE3	1.06 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-08	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-08RE1	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 14:29

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0511-08RE2	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-08RE3	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-09	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-09RE1	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-09RE2	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-09RE3	1.08 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-10	1.07 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-10RE1	1.07 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-10RE2	1.07 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-10RE3	1.07 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-11	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-11RE1	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-11RE2	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-11RE3	1.03 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-12	1.05 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-12RE1	1.05 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-12RE2	1.05 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-12RE3	1.05 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-13	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-13RE1	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-13RE2	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-13RE3	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-14	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-14RE1	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-14RE2	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-14RE3	1.02 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091
18I0511-15	1.01 g / 50.0 mL	SW6010C	BBI0445	SBI0500	AI80075
18I0511-15RE1	1.01 g / 50.0 mL	SW6010C	BBI0445	SBI0503	AI80075
18I0511-15RE2	1.01 g / 50.0 mL	SW6010C	BBI0445	SBI0524	AI80083
18I0511-15RE3	1.01 g / 50.0 mL	SW6010C	BBI0445	SBI0564	AI80091

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Herbicides by GC/ECD		Preparation Method: SW3510C			
18I0511-01	30.5 g / 5.00 mL	SW8151A	BBI0635	SBI0626	AG80138
18I0511-02	32.9 g / 5.00 mL	SW8151A	BBI0635	SBI0626	AG80138



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/2/2018 14:29

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
1810511-03	31.0 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-04	30.8 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-05	31.9 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-06	31.7 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-07	30.4 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-08	33.4 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-09	31.8 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-10	30.3 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-11	31.2 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-12	31.5 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-13	32.4 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-14	30.1 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138
1810511-15	31.4 g / 5.00 mL	SW8151A	BB10635	SBI0626	AG80138

Organochlorine Pesticides and PCBs by GC/ECD

Preparation Method: **SW3510C**

1810511-01	33.4 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-02	30.4 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-03	30.8 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-04	30.3 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-05	31.9 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-06	31.0 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-07	30.1 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-08	30.6 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-09	30.6 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-10	34.0 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-11	30.7 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-12	30.3 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-13	31.2 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-14	33.7 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036
1810511-15	31.4 g / 5.00 mL	SW8081B	BB10733	SBI0731	AD80036

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
		Preparation Method: SW3550C			
1810511-01	50.0 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058
1810511-02	51.8 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058
1810511-03	50.7 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg VA, 24060

Date Issued: 10/2/2018 14:29

Submitted To: Jeff Fisher
 Client Site I.D.: CVTC

Project Number: 18-760
 Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID	
1810511-04	52.2 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-05	52.8 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-06	52.6 g / 1.00 mL	SW8015C	BB10477	SBI0453	AH80058	
1810511-07	50.6 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-08	52.1 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-09	51.6 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-10	50.6 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-11	50.7 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-12	51.9 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-13	51.5 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-14	50.9 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
1810511-15	52.2 g / 1.00 mL	SW8015C	BB10477	SBI0491	AH80058	
Semivolatile Hydrocarbons by GC		Preparation Method:	SW3550C			
1810511-01	51.7 g / 1.00 mL	SW8015C	BB10574	SBI0575	AH80136	
1810511-02	50.9 g / 1.00 mL	SW8015C	BB10574	SBI0575	AH80136	
1810511-03	50.5 g / 1.00 mL	SW8015C	BB10574	SBI0575	AH80136	
1810511-04	50.8 g / 1.00 mL	SW8015C	BB10574	SBI0575	AH80136	
1810511-05	51.4 g / 1.00 mL	SW8015C	BB10574	SBI0575	AH80136	
1810511-06	50.4 g / 1.00 mL	SW8015C	BB10574	SBI0575	AH80136	
1810511-07	51.9 g / 1.00 mL	SW8015C	BB10574	SBI0575	AH80136	
1810511-08	50.5 g / 1.00 mL	SW8015C	BB10574	SBI0575	AH80136	
Semivolatile Hydrocarbons by GC		Preparation Method:	SW3550C			
1810511-09	50.2 g / 1.00 mL	SW8015C	BB10632	SBI0644	AH80136	
1810511-10	50.3 g / 1.00 mL	SW8015C	BB10632	SBI0644	AH80136	
1810511-11	50.4 g / 1.00 mL	SW8015C	BB10632	SBI0644	AH80136	
1810511-12	51.2 g / 1.00 mL	SW8015C	BB10632	SBI0644	AH80136	
1810511-13	50.4 g / 1.00 mL	SW8015C	BB10632	SBI0644	AH80136	
1810511-14	52.2 g / 1.00 mL	SW8015C	BB10632	SBI0644	AH80136	
1810511-15	52.8 g / 1.00 mL	SW8015C	BB10632	SBI0644	AH80136	
Sample ID		Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC		Preparation Method:	SW5030B			
1810511-01	5.01 g / 5.00 mL	SW8015C	BB10429	SBI0384	AF80070	
1810511-02	5.00 g / 5.00 mL	SW8015C	BB10429	SBI0384	AF80070	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg VA, 24060

Date Issued: 10/2/2018 14:29

Submitted To: Jeff Fisher
 Client Site I.D.: CVTC

Project Number: 18-760
 Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0511-03	5.04 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
18I0511-04	5.05 g / 5.00 mL	SW8015C	BBI0429	SBI0384	AF80070
Volatile Hydrocarbons by GC		Preparation Method: SW5030B			
18I0511-05	5.05 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-06	5.05 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-07	5.08 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-08	5.03 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-09	5.05 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-10	5.09 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-11	5.01 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-12	5.00 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-13	5.01 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-14	5.03 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
18I0511-15	5.08 g / 5.00 mL	SW8015C	BBI0480	SBI0446	AF80070
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW7471B			
18I0511-01	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-02	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-03	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-04	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-05	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-06	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-07	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-08	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-09	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-10	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-11	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-12	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-13	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-14	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052
18I0511-15	0.500 g / 20.0 mL	SW7471B	BBI0441	SBI0421	AI80052



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	--------	-----	-----------	------

Batch BBI0441 - SW7471B

Blank (BBI0441-BLK1)		Prepared: 09/14/2018 Analyzed: 09/17/2018								
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							
LCS (BBI0441-BS1)		Prepared: 09/14/2018 Analyzed: 09/17/2018								
Mercury	0.090 mg/kg wet	0.008	mg/kg wet	0.100	mg/kg wet	90.1	80-120			
LCS Dup (BBI0441-BSD1)		Prepared: 09/14/2018 Analyzed: 09/17/2018								
Mercury	0.090 mg/kg wet	0.008	mg/kg wet	0.100	mg/kg wet	90.1	80-120	0.00444	20	
Matrix Spike (BBI0441-MS1)		Source: 18I0511-01		Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.109 mg/kg dry	0.009	mg/kg dry	0.111	0.017 mg/kg dry	82.6	80-120			
Matrix Spike (BBI0441-MS2)		Source: 18I0511-15		Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.114 mg/kg dry	0.009	mg/kg dry	0.110	<0.009 mg/kg dry	103	80-120			
Matrix Spike Dup (BBI0441-MSD1)		Source: 18I0511-01		Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.128 mg/kg dry	0.009	mg/kg dry	0.111	0.017 mg/kg dry	99.9	80-120	16.2	20	
Matrix Spike Dup (BBI0441-MSD2)		Source: 18I0511-15		Prepared: 09/14/2018 Analyzed: 09/17/2018						
Mercury	0.098 mg/kg dry	0.009	mg/kg dry	0.110	<0.009 mg/kg dry	88.4	80-120	15.4	20	

Batch BBI0445 - SW3050B

Blank (BBI0445-BLK1)		Prepared: 09/14/2018 Analyzed: 09/18/2018								
Manganese	<0.500 mg/kg wet	0.500	mg/kg wet							
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet							
Calcium	<5.00 mg/kg wet	5.00	mg/kg wet							
Lead	<0.500 mg/kg wet	0.500	mg/kg wet							
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet							
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet							
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet							
Potassium	<25.0 mg/kg wet	25.0	mg/kg wet							
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet							
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet							
Copper	<2.50 mg/kg wet	2.50	mg/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	--------------	---------------	--------------	------

Batch BBI0445 - SW3050B

Blank (BBI0445-BLK1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Magnesium	<2.50 mg/kg wet	2.50	mg/kg wet						
Sodium	<25.0 mg/kg wet	25.0	mg/kg wet						
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet						
Iron	<2.50 mg/kg wet	2.50	mg/kg wet						
Silver	<0.500 mg/kg wet	0.500	mg/kg wet						
Barium	<0.500 mg/kg wet	0.500	mg/kg wet						
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet						
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet						
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet						
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet						
Aluminum	2.70 mg/kg wet	2.50	mg/kg wet						B

LCS (BBI0445-BS1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Potassium	268 mg/kg wet	25.0	mg/kg wet	249	mg/kg wet	108	80-120		
Magnesium	101 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	101	80-120		
Zinc	102 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	102	80-120		
Manganese	102 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	103	80-120		
Antimony	97.5 mg/kg wet	5.00	mg/kg wet	99.4	mg/kg wet	98.1	80-120		
Sodium	267 mg/kg wet	25.0	mg/kg wet	249	mg/kg wet	107	80-120		
Nickel	101 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	102	80-120		
Lead	102 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	103	80-120		
Selenium	94.6 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	95.2	80-120		
Vanadium	104 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	105	80-120		
Cobalt	104 mg/kg wet	0.200	mg/kg wet	99.4	mg/kg wet	105	80-120		
Iron	102 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	103	80-120		
Silver	5.15 mg/kg wet	0.500	mg/kg wet	4.97	mg/kg wet	104	80-120		
Copper	106 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	106	80-120		
Thallium	89.7 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	90.2	80-120		
Aluminum	107 mg/kg wet	2.50	mg/kg wet	99.4	mg/kg wet	107	80-120		
Chromium	103 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	104	80-120		
Calcium	104 mg/kg wet	5.00	mg/kg wet	99.4	mg/kg wet	105	80-120		
Barium	107 mg/kg wet	0.500	mg/kg wet	99.4	mg/kg wet	108	80-120		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 14:29
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0445 - SW3050B

LCS (BBI0445-BS1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Beryllium	98.0 mg/kg wet	0.200	mg/kg wet	99.4	mg/kg wet	98.6	80-120			
Arsenic	98.9 mg/kg wet	1.00	mg/kg wet	99.4	mg/kg wet	99.5	80-120			
Cadmium	100 mg/kg wet	0.200	mg/kg wet	99.4	mg/kg wet	101	80-120			

LCS Dup (BBI0445-BSD1)

Prepared: 09/14/2018 Analyzed: 09/18/2018

Antimony	94.0 mg/kg wet	5.00	mg/kg wet	94.0	mg/kg wet	100	80-120	3.68	20	
Barium	101 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	108	80-120	5.60	20	
Selenium	90.7 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	96.5	80-120	4.22	20	
Arsenic	95.1 mg/kg wet	1.00	mg/kg wet	94.0	mg/kg wet	101	80-120	3.90	20	
Aluminum	102 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	109	80-120	4.19	20	
Vanadium	98.5 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	105	80-120	5.54	20	
Silver	4.94 mg/kg wet	0.500	mg/kg wet	4.70	mg/kg wet	105	80-120	4.12	20	
Thallium	87.2 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	92.8	80-120	2.73	20	
Beryllium	94.0 mg/kg wet	0.200	mg/kg wet	94.0	mg/kg wet	100	80-120	4.19	20	
Copper	101 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	107	80-120	4.96	20	
Calcium	98.5 mg/kg wet	5.00	mg/kg wet	94.0	mg/kg wet	105	80-120	5.41	20	
Iron	98.4 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	105	80-120	3.83	20	
Nickel	96.9 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	103	80-120	4.40	20	
Cadmium	95.5 mg/kg wet	0.200	mg/kg wet	94.0	mg/kg wet	102	80-120	4.58	20	
Sodium	252 mg/kg wet	25.0	mg/kg wet	235	mg/kg wet	107	80-120	5.75	20	
Cobalt	99.6 mg/kg wet	0.200	mg/kg wet	94.0	mg/kg wet	106	80-120	4.35	20	
Manganese	97.9 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	104	80-120	4.58	20	
Chromium	98.7 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	105	80-120	4.48	20	
Magnesium	96.2 mg/kg wet	2.50	mg/kg wet	94.0	mg/kg wet	102	80-120	4.51	20	
Potassium	262 mg/kg wet	25.0	mg/kg wet	235	mg/kg wet	111	80-120	2.25	20	
Zinc	96.1 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	102	80-120	5.88	20	
Lead	97.6 mg/kg wet	0.500	mg/kg wet	94.0	mg/kg wet	104	80-120	4.70	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0445 - SW3050B

Matrix Spike (BBI0445-MS1)

Source: 18I0508-01

Prepared: 09/14/2018 Analyzed: 09/18/2018

Beryllium	141 mg/kg dry	5.35	mg/kg dry	134	<5.35 mg/kg dry	105	75-125			
Thallium	128 mg/kg dry	66.9	mg/kg dry	134	<66.9 mg/kg dry	95.8	75-125			
Cobalt	156 mg/kg dry	5.35	mg/kg dry	134	16.2 mg/kg dry	105	75-125			
Manganese	379 mg/kg dry	13.4	mg/kg dry	134	257 mg/kg dry	91.7	75-125			
Silver	<13.4 mg/kg dry	13.4	mg/kg dry	6.69	<13.4 mg/kg dry		75-125			M2
Nickel	160 mg/kg dry	13.4	mg/kg dry	134	23.7 mg/kg dry	102	75-125			
Magnesium	4690 mg/kg dry	66.9	mg/kg dry	134	4990 mg/kg dry	-223	75-125			M2
Lead	168 mg/kg dry	13.4	mg/kg dry	134	27.2 mg/kg dry	106	75-125			
Antimony	<134 mg/kg dry	134	mg/kg dry	134	<134 mg/kg dry		75-125			M2
Potassium	4850 mg/kg dry	669	mg/kg dry	334	5100 mg/kg dry	-72.4	75-125			M2
Aluminum	23400 mg/kg dry	66.9	mg/kg dry	134	18300 mg/kg dry	3840	75-125			M2
Cadmium	136 mg/kg dry	5.35	mg/kg dry	134	<5.35 mg/kg dry	102	75-125			
Sodium	<669 mg/kg dry	669	mg/kg dry	334	<669 mg/kg dry		75-125			M2
Selenium	109 mg/kg dry	66.9	mg/kg dry	134	<66.9 mg/kg dry	81.8	75-125			
Vanadium	179 mg/kg dry	13.4	mg/kg dry	134	42.3 mg/kg dry	102	75-125			
Arsenic	141 mg/kg dry	26.8	mg/kg dry	134	<26.8 mg/kg dry	106	75-125			
Zinc	263 mg/kg dry	13.4	mg/kg dry	134	130 mg/kg dry	99.3	75-125			
Calcium	7150 mg/kg dry	134	mg/kg dry	134	7890 mg/kg dry	-557	75-125			M2
Copper	170 mg/kg dry	66.9	mg/kg dry	134	<66.9 mg/kg dry	106	75-125			
Barium	332 mg/kg dry	13.4	mg/kg dry	134	186 mg/kg dry	109	75-125			
Iron	21200 mg/kg dry	66.9	mg/kg dry	134	21000 mg/kg dry	151	75-125			M2
Chromium	161 mg/kg dry	13.4	mg/kg dry	134	20.8 mg/kg dry	105	75-125			

Matrix Spike (BBI0445-MS2)

Source: 18I0508-01

Prepared: 09/14/2018 Analyzed: 09/18/2018

Zinc	234 mg/kg dry	0.669	mg/kg dry	134	130 mg/kg dry	77.6	75-125			
Cobalt	138 mg/kg dry	0.268	mg/kg dry	134	16.2 mg/kg dry	91.0	75-125			
Beryllium	131 mg/kg dry	0.268	mg/kg dry	134	3.79 mg/kg dry	95.0	75-125			
Nickel	141 mg/kg dry	0.669	mg/kg dry	134	23.7 mg/kg dry	87.7	75-125			
Antimony	26.6 mg/kg dry	6.69	mg/kg dry	134	8.37 mg/kg dry	13.6	75-125			M
Lead	144 mg/kg dry	0.669	mg/kg dry	134	27.2 mg/kg dry	87.7	75-125			
Cadmium	121 mg/kg dry	0.268	mg/kg dry	134	<0.268 mg/kg dry	90.2	75-125			
Calcium	5560 mg/kg dry	6.69	mg/kg dry	134	7890 mg/kg dry	-1740	75-125			M, E



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 14:29
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0445 - SW3050B

Matrix Spike (BBI0445-MS2)

Source: 18I0508-01

Prepared: 09/14/2018 Analyzed: 09/18/2018

Sodium	469 mg/kg dry	33.4	mg/kg dry	334	90.6 mg/kg dry	113	75-125			
Selenium	108 mg/kg dry	3.34	mg/kg dry	134	<3.34 mg/kg dry	81.0	75-125			
Vanadium	169 mg/kg dry	0.669	mg/kg dry	134	42.3 mg/kg dry	95.1	75-125			
Copper	162 mg/kg dry	3.34	mg/kg dry	134	28.7 mg/kg dry	99.6	75-125			
Arsenic	135 mg/kg dry	1.34	mg/kg dry	134	15.4 mg/kg dry	89.1	75-125			
Barium	302 mg/kg dry	0.669	mg/kg dry	134	186 mg/kg dry	86.5	75-125			
Chromium	147 mg/kg dry	0.669	mg/kg dry	134	20.8 mg/kg dry	94.5	75-125			
Manganese	334 mg/kg dry	0.669	mg/kg dry	134	257 mg/kg dry	57.7	75-125			M
Magnesium	3860 mg/kg dry	3.34	mg/kg dry	134	4990 mg/kg dry	-846	75-125			M, E
Silver	<0.669 mg/kg dry	0.669	mg/kg dry	6.69	<0.669 mg/kg dry		75-125			M
Thallium	106 mg/kg dry	3.34	mg/kg dry	134	<3.34 mg/kg dry	79.0	75-125			
Aluminum	20300 mg/kg dry	3.34	mg/kg dry	134	18300 mg/kg dry	1480	75-125			M, E
Iron	14300 mg/kg dry	3.34	mg/kg dry	134	21000 mg/kg dry	4980	75-125			M, E
Potassium	4380 mg/kg dry	33.4	mg/kg dry	334	5100 mg/kg dry	-214	75-125			M

Matrix Spike Dup (BBI0445-MSD1)

Source: 18I0508-01

Prepared: 09/14/2018 Analyzed: 09/18/2018

Selenium	114 mg/kg dry	64.1	mg/kg dry	128	<64.1 mg/kg dry	89.3	75-125	4.42	20	
Calcium	9770 mg/kg dry	128	mg/kg dry	128	7890 mg/kg dry	1460	75-125	31.0	20	M2, P
Thallium	120 mg/kg dry	64.1	mg/kg dry	128	<64.1 mg/kg dry	93.4	75-125	6.84	20	
Arsenic	143 mg/kg dry	25.6	mg/kg dry	128	<25.6 mg/kg dry	112	75-125	1.36	20	
Antimony	<128 mg/kg dry	128	mg/kg dry	128	<128 mg/kg dry		75-125		20	M2
Chromium	159 mg/kg dry	12.8	mg/kg dry	128	20.8 mg/kg dry	108	75-125	1.35	20	
Vanadium	181 mg/kg dry	12.8	mg/kg dry	128	42.3 mg/kg dry	108	75-125	1.11	20	
Barium	356 mg/kg dry	12.8	mg/kg dry	128	186 mg/kg dry	133	75-125	7.02	20	M2
Copper	169 mg/kg dry	64.1	mg/kg dry	128	<64.1 mg/kg dry	109	75-125	1.14	20	
Iron	24400 mg/kg dry	64.1	mg/kg dry	128	21000 mg/kg dry	2640	75-125	14.0	20	M2, E
Sodium	<641 mg/kg dry	641	mg/kg dry	320	<641 mg/kg dry		75-125		20	M2
Beryllium	138 mg/kg dry	5.13	mg/kg dry	128	<5.13 mg/kg dry	107	75-125	2.29	20	
Potassium	5410 mg/kg dry	641	mg/kg dry	320	5100 mg/kg dry	99.3	75-125	10.9	20	
Cadmium	133 mg/kg dry	5.13	mg/kg dry	128	<5.13 mg/kg dry	104	75-125	2.18	20	
Lead	167 mg/kg dry	12.8	mg/kg dry	128	27.2 mg/kg dry	109	75-125	0.749	20	
Silver	<12.8 mg/kg dry	12.8	mg/kg dry	6.41	<12.8 mg/kg dry		75-125		20	M2



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0445 - SW3050B

Matrix Spike Dup (BBI0445-MSD1) Source: 18I0508-01 Prepared: 09/14/2018 Analyzed: 09/18/2018

Nickel	160 mg/kg dry	12.8	mg/kg dry	128	23.7 mg/kg dry	106	75-125	0.349	20	
Magnesium	5340 mg/kg dry	64.1	mg/kg dry	128	4990 mg/kg dry	277	75-125	13.0	20	M2
Manganese	402 mg/kg dry	12.8	mg/kg dry	128	257 mg/kg dry	114	75-125	5.83	20	
Cobalt	156 mg/kg dry	5.13	mg/kg dry	128	16.2 mg/kg dry	109	75-125	0.355	20	
Zinc	274 mg/kg dry	12.8	mg/kg dry	128	130 mg/kg dry	112	75-125	4.18	20	
Aluminum	25600 mg/kg dry	64.1	mg/kg dry	128	18300 mg/kg dry	5700	75-125	8.84	20	M2, E

Matrix Spike Dup (BBI0445-MSD2) Source: 18I0508-01 Prepared: 09/14/2018 Analyzed: 09/18/2018

Iron	14900 mg/kg dry	3.20	mg/kg dry	128	21000 mg/kg dry	4740	75-125	3.98	20	M, E
Selenium	98.3 mg/kg dry	3.20	mg/kg dry	128	<3.20 mg/kg dry	76.7	75-125	9.71	20	
Barium	306 mg/kg dry	0.641	mg/kg dry	128	186 mg/kg dry	93.3	75-125	1.28	20	
Magnesium	4060 mg/kg dry	3.20	mg/kg dry	128	4990 mg/kg dry	-721	75-125	5.25	20	M, E
Sodium	433 mg/kg dry	32.0	mg/kg dry	320	90.6 mg/kg dry	107	75-125		20	
Silver	<0.641 mg/kg dry	0.641	mg/kg dry	6.41	<0.641 mg/kg dry		75-125		20	M
Cobalt	128 mg/kg dry	0.256	mg/kg dry	128	16.2 mg/kg dry	87.6	75-125	7.11	20	
Chromium	138 mg/kg dry	0.641	mg/kg dry	128	20.8 mg/kg dry	91.6	75-125	6.37	20	
Calcium	6750 mg/kg dry	6.41	mg/kg dry	128	7890 mg/kg dry	-888	75-125	19.4	20	M, E
Cadmium	111 mg/kg dry	0.256	mg/kg dry	128	<0.256 mg/kg dry	86.6	75-125	8.41	20	
Lead	135 mg/kg dry	0.641	mg/kg dry	128	27.2 mg/kg dry	84.1	75-125	6.80	20	
Arsenic	125 mg/kg dry	1.28	mg/kg dry	128	15.4 mg/kg dry	85.7	75-125	7.21	20	
Copper	152 mg/kg dry	3.20	mg/kg dry	128	28.7 mg/kg dry	96.2	75-125	6.34	20	
Aluminum	20800 mg/kg dry	3.20	mg/kg dry	128	18300 mg/kg dry	1980	75-125	2.68	20	M, E
Nickel	131 mg/kg dry	0.641	mg/kg dry	128	23.7 mg/kg dry	84.0	75-125	7.04	20	
Potassium	4600 mg/kg dry	32.0	mg/kg dry	320	5100 mg/kg dry	-154	75-125	4.92	20	M
Beryllium	121 mg/kg dry	0.256	mg/kg dry	128	3.79 mg/kg dry	91.8	75-125	7.49	20	
Manganese	335 mg/kg dry	0.641	mg/kg dry	128	257 mg/kg dry	60.9	75-125	0.236	20	M
Thallium	96.8 mg/kg dry	3.20	mg/kg dry	128	<3.20 mg/kg dry	75.6	75-125	8.71	20	
Antimony	22.8 mg/kg dry	6.41	mg/kg dry	128	8.37 mg/kg dry	11.3	75-125		20	M
Zinc	231 mg/kg dry	0.641	mg/kg dry	128	130 mg/kg dry	79.0	75-125	1.15	20	
Vanadium	161 mg/kg dry	0.641	mg/kg dry	128	42.3 mg/kg dry	92.7	75-125	5.07	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------------------	---------	-------	------

Batch BBI0429 - SW5030B

Blank (BBI0429-BLK1)

Prepared & Analyzed: 09/14/2018

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet						
Surr: 2,5-Dibromotoluene (Surr FID)	93.4		ug/L	100		93.4	80-120		

LCS (BBI0429-BS1)

Prepared & Analyzed: 09/14/2018

TPH-Volatiles (GRO)	0.99 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	98.7	70-130		
Surr: 2,5-Dibromotoluene (Surr FID)	93.5		ug/L	100	ug/L	93.5	80-120		

Matrix Spike (BBI0429-MS1)

Source: 18I0546-01

Prepared & Analyzed: 09/14/2018

TPH-Volatiles (GRO)	0.82 mg/kg wet	0.10	mg/kg wet	1.00	<0.10 mg/kg wet	82.4	70-130		
Surr: 2,5-Dibromotoluene (Surr FID)	101		ug/L	100	ug/L	101	80-120		

Matrix Spike Dup (BBI0429-MSD1)

Source: 18I0546-01

Prepared & Analyzed: 09/14/2018

TPH-Volatiles (GRO)	0.85 mg/kg wet	0.10	mg/kg wet	0.998	<0.10 mg/kg wet	85.3	70-130	3.30	20
Surr: 2,5-Dibromotoluene (Surr FID)	97.5		ug/L	100	ug/L	97.5	80-120		

Batch BBI0480 - SW5030B

Blank (BBI0480-BLK1)

Prepared & Analyzed: 09/17/2018

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet						
Surr: 2,5-Dibromotoluene (Surr FID)	100		ug/L	100		100	80-120		

LCS (BBI0480-BS1)

Prepared & Analyzed: 09/17/2018

TPH-Volatiles (GRO)	0.94 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	94.5	70-130		
Surr: 2,5-Dibromotoluene (Surr FID)	97.7		ug/L	100	ug/L	97.7	80-120		

Matrix Spike (BBI0480-MS1)

Source: 18I0511-07

Prepared & Analyzed: 09/17/2018

TPH-Volatiles (GRO)	0.65 mg/kg dry	0.12	mg/kg dry	1.20	<0.12 mg/kg dry	53.9	70-130		M
Surr: 2,5-Dibromotoluene (Surr FID)	105		ug/L	100	ug/L	105	80-120		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 14:29
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0480 - SW5030B

Matrix Spike Dup (BBI0480-MSD1)

Source: 18I0511-07

Prepared & Analyzed: 09/17/2018

TPH-Volatiles (GRO)	1.06 mg/kg dry	0.12	mg/kg dry	1.20	<0.12 mg/kg dry	87.9	70-130	47.8	20	P
Surr: 2,5-Dibromotoluene (Surr FID)	110		ug/L	100	ug/L	110	80-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0477 - SW3550C

Blank (BBI0477-BLK1)						Prepared & Analyzed: 09/17/2018				
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
<i>Surr: Pentacosane (Surr)</i>	2.66		mg/kg wet	5.00		53.2	40-160			
LCS (BBI0477-BS1)						Prepared & Analyzed: 09/17/2018				
TPH-Semi-Volatiles (DRO)	61.5 mg/kg wet	10.0	mg/kg wet	98.4	mg/kg wet	62.4	40-160			
<i>Surr: Pentacosane (Surr)</i>	2.60		mg/kg wet	4.92	mg/kg wet	52.9	40-160			
Matrix Spike (BBI0477-MS1)						Source: 18I0511-06 Prepared & Analyzed: 09/17/2018				
TPH-Semi-Volatiles (DRO)	70.3 mg/kg dry	11.3	mg/kg dry	113	16.4 mg/kg dry	47.6	40-160			
<i>Surr: Pentacosane (Surr)</i>	3.01		mg/kg dry	5.66	mg/kg dry	53.1	40-160			
Matrix Spike Dup (BBI0477-MSD1)						Source: 18I0511-06 Prepared & Analyzed: 09/17/2018				
TPH-Semi-Volatiles (DRO)	72.6 mg/kg dry	11.3	mg/kg dry	113	16.4 mg/kg dry	49.9	40-160	3.27	20	
<i>Surr: Pentacosane (Surr)</i>	2.98		mg/kg dry	5.63	mg/kg dry	53.0	40-160			

Batch BBI0574 - SW3550C

Blank (BBI0574-BLK1)						Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg wet	10.0	mg/kg wet							
LCS (BBI0574-BS1)						Prepared: 09/19/2018 Analyzed: 09/20/2018				
TPH-Semi-Volatiles (ORO)	47.8 mg/kg wet	10.0	mg/kg wet	99.4	mg/kg wet	48.1	40-160			
Matrix Spike (BBI0574-MS1)						Source: 18I0511-02 Prepared: 09/19/2018 Analyzed: 09/21/2018				
TPH-Semi-Volatiles (ORO)	43.9 mg/kg dry	11.1	mg/kg dry	111	<11.1 mg/kg dry	39.7	40-160			M
Matrix Spike Dup (BBI0574-MSD1)						Source: 18I0511-02 Prepared: 09/19/2018 Analyzed: 09/21/2018				
TPH-Semi-Volatiles (ORO)	43.3 mg/kg dry	11.1	mg/kg dry	111	<11.1 mg/kg dry	38.9	40-160	1.50	20	M



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0632 - SW3550C

Blank (BBI0632-BLK1)						Prepared: 09/20/2018 Analyzed: 09/21/2018				
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg wet	10.0	mg/kg wet							
LCS (BBI0632-BS1)						Prepared: 09/20/2018 Analyzed: 09/21/2018				
TPH-Semi-Volatiles (ORO)	39.9 mg/kg wet	10.0	mg/kg wet	99.0	mg/kg wet	40.3	40-160			
Matrix Spike (BBI0632-MS1)						Prepared: 09/20/2018 Analyzed: 09/21/2018				
TPH-Semi-Volatiles (ORO)	51.5 mg/kg dry	11.0	mg/kg dry	110	<11.0 mg/kg dry	46.8	40-160			
Matrix Spike Dup (BBI0632-MSD1)						Prepared: 09/20/2018 Analyzed: 09/21/2018				
TPH-Semi-Volatiles (ORO)	49.4 mg/kg dry	11.4	mg/kg dry	114	<11.4 mg/kg dry	43.1	40-160	4.12	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0733 - SW3510C

Blank (BBI0733-BLK1)

Prepared: 09/25/2018 Analyzed: 09/26/2018

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet						
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet						
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet						
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet						
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet						
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet						
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet						
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet						
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet						
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet						
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet						
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet						
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet						
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet						
Endrin ketone	<2.00 ug/kg wet	2.00	ug/kg wet						
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet						
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet						
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet						
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet						
Mirex	<6.00 ug/kg wet	6.00	ug/kg wet						
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet						
<hr/>									
Surr: TCMX	11.6		ug/kg wet	6.60		175	30-105		S
Surr: DCB	14.9		ug/kg wet	6.60		225	30-105		S

LCS (BBI0733-BS1)

Prepared: 09/25/2018 Analyzed: 09/26/2018

4,4'-DDD	16.6 ug/kg wet	6.00	ug/kg wet	16.6	ug/kg wet	100	23-134		
4,4'-DDE	13.2 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	80.0	23-134		
4,4'-DDT	16.6 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	100	23-134		
Aldrin	9.93 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	60.0	23-134		
alpha-BHC	9.93 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	60.0	23-134		
beta-BHC	13.2 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	80.0	23-134		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0733 - SW3510C

LCS (BBI0733-BS1)

Prepared: 09/25/2018 Analyzed: 09/26/2018

delta-BHC	13.2 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	80.0	23-134			
Dieldrin	14.9 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	90.0	23-134			
Endosulfan I	14.9 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	90.0	23-134			
Endosulfan II	16.6 ug/kg wet	6.00	ug/kg wet	16.6	ug/kg wet	100	23-134			
Endosulfan sulfate	14.9 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	90.0	23-134			
Endrin	16.6 ug/kg wet	4.00	ug/kg wet	16.6	ug/kg wet	100	23-134			
Endrin aldehyde	13.2 ug/kg wet	8.00	ug/kg wet	16.6	ug/kg wet	80.0	23-134			
Endrin ketone	16.6 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	100	23-134			
gamma-BHC (Lindane)	9.93 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	60.0	23-134			
Heptachlor	9.93 ug/kg wet	2.00	ug/kg wet	16.6	ug/kg wet	60.0	23-134			
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet	16.6	ug/kg wet	80.0	23-134			
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet	16.6	ug/kg wet	100	23-134			
Mirex	14.9 ug/kg wet	6.00	ug/kg wet	16.6	ug/kg wet	90.0	23-134			
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	11.6		ug/kg wet	6.62	ug/kg wet	175	30-105			S
Surr: DCB	16.6		ug/kg wet	6.62	ug/kg wet	250	30-105			S

LCS (BBI0733-BS2)

Prepared: 09/25/2018 Analyzed: 09/26/2018

Toxaphene	327 ug/kg wet	42.0	ug/kg wet	415	ug/kg wet	78.8	23-134			
-----------	---------------	------	-----------	-----	-----------	------	--------	--	--	--

LCS (BBI0733-BS3)

Prepared: 09/25/2018 Analyzed: 09/26/2018

Chlordane	166 ug/kg wet	42.0	ug/kg wet	414	ug/kg wet	40.0	23-134			
-----------	---------------	------	-----------	-----	-----------	------	--------	--	--	--

Matrix Spike (BBI0733-MS1)

Source: 1810511-06

Prepared: 09/25/2018 Analyzed: 09/26/2018

4,4'-DDD	13.3 ug/kg dry	6.83	ug/kg dry	19.0	<6.83 ug/kg dry	70.0	23-134			
4,4'-DDE	11.4 ug/kg dry	4.55	ug/kg dry	19.0	<4.55 ug/kg dry	60.0	23-134			
4,4'-DDT	11.4 ug/kg dry	4.55	ug/kg dry	19.0	<4.55 ug/kg dry	60.0	23-134			
Aldrin	11.4 ug/kg dry	2.28	ug/kg dry	19.0	<2.28 ug/kg dry	60.0	23-134			
alpha-BHC	11.4 ug/kg dry	2.28	ug/kg dry	19.0	<2.28 ug/kg dry	60.0	23-134			
beta-BHC	11.4 ug/kg dry	2.28	ug/kg dry	19.0	<2.28 ug/kg dry	60.0	23-134			
delta-BHC	13.3 ug/kg dry	4.55	ug/kg dry	19.0	<4.55 ug/kg dry	70.0	23-134			
Dieldrin	13.3 ug/kg dry	4.55	ug/kg dry	19.0	<4.55 ug/kg dry	70.0	23-134			
Endosulfan I	13.3 ug/kg dry	4.55	ug/kg dry	19.0	<4.55 ug/kg dry	70.0	23-134			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0733 - SW3510C

Matrix Spike (BBI0733-MS1)

Source: 1810511-06

Prepared: 09/25/2018 Analyzed: 09/26/2018

Endosulfan II	13.3 ug/kg dry	6.83	ug/kg dry	19.0	<6.83 ug/kg dry	70.0	23-134			
Endosulfan sulfate	13.3 ug/kg dry	2.28	ug/kg dry	19.0	<2.28 ug/kg dry	70.0	23-134			
Endrin	13.3 ug/kg dry	4.55	ug/kg dry	19.0	<4.55 ug/kg dry	70.0	23-134			
Endrin aldehyde	9.49 ug/kg dry	9.11	ug/kg dry	19.0	<9.11 ug/kg dry	50.0	23-134			
Endrin ketone	15.2 ug/kg dry	2.28	ug/kg dry	19.0	<2.28 ug/kg dry	80.0	23-134			
gamma-BHC (Lindane)	11.4 ug/kg dry	2.28	ug/kg dry	19.0	<2.28 ug/kg dry	60.0	23-134			
Heptachlor	11.4 ug/kg dry	2.28	ug/kg dry	19.0	<2.28 ug/kg dry	60.0	23-134			
Heptachlor epoxide	<45.5 ug/kg dry	45.5	ug/kg dry	19.0	<45.5 ug/kg dry	70.0	23-134			
Methoxychlor	<45.5 ug/kg dry	45.5	ug/kg dry	19.0	<45.5 ug/kg dry	60.0	23-134			
Mirex	13.3 ug/kg dry	6.83	ug/kg dry	19.0	<6.83 ug/kg dry	70.0	23-134			
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	5.69		ug/kg dry	7.59	ug/kg dry	75.0	30-105			
Surr: DCB	5.69		ug/kg dry	7.59	ug/kg dry	75.0	30-105			

Matrix Spike Dup (BBI0733-MSD1)

Source: 1810511-06

Prepared: 09/25/2018 Analyzed: 09/26/2018

4,4'-DDD	15.0 ug/kg dry	6.74	ug/kg dry	18.7	<6.74 ug/kg dry	80.0	23-134	12.0	20	
4,4'-DDE	13.1 ug/kg dry	4.49	ug/kg dry	18.7	<4.49 ug/kg dry	70.0	23-134	14.1	20	
4,4'-DDT	13.1 ug/kg dry	4.49	ug/kg dry	18.7	<4.49 ug/kg dry	70.0	23-134	14.1	20	
Aldrin	11.2 ug/kg dry	2.25	ug/kg dry	18.7	<2.25 ug/kg dry	60.0	23-134	1.32	20	
alpha-BHC	13.1 ug/kg dry	2.25	ug/kg dry	18.7	<2.25 ug/kg dry	70.0	23-134	14.1	20	
beta-BHC	15.0 ug/kg dry	2.25	ug/kg dry	18.7	<2.25 ug/kg dry	80.0	23-134	27.3	20	P
delta-BHC	15.0 ug/kg dry	4.49	ug/kg dry	18.7	<4.49 ug/kg dry	80.0	23-134	12.0	20	
Dieldrin	13.1 ug/kg dry	4.49	ug/kg dry	18.7	<4.49 ug/kg dry	70.0	23-134	1.32	20	
Endosulfan I	13.1 ug/kg dry	4.49	ug/kg dry	18.7	<4.49 ug/kg dry	70.0	23-134	1.32	20	
Endosulfan II	15.0 ug/kg dry	6.74	ug/kg dry	18.7	<6.74 ug/kg dry	80.0	23-134	12.0	20	
Endosulfan sulfate	15.0 ug/kg dry	2.25	ug/kg dry	18.7	<2.25 ug/kg dry	80.0	23-134	12.0	20	
Endrin	15.0 ug/kg dry	4.49	ug/kg dry	18.7	<4.49 ug/kg dry	80.0	23-134	12.0	20	
Endrin aldehyde	11.2 ug/kg dry	8.99	ug/kg dry	18.7	<8.99 ug/kg dry	60.0	23-134	16.9	20	
Endrin ketone	16.9 ug/kg dry	2.25	ug/kg dry	18.7	<2.25 ug/kg dry	90.0	23-134	10.4	20	
gamma-BHC (Lindane)	13.1 ug/kg dry	2.25	ug/kg dry	18.7	<2.25 ug/kg dry	70.0	23-134	14.1	20	
Heptachlor	13.1 ug/kg dry	2.25	ug/kg dry	18.7	<2.25 ug/kg dry	70.0	23-134	14.1	20	
Heptachlor epoxide	<44.9 ug/kg dry	44.9	ug/kg dry	18.7	<44.9 ug/kg dry	70.0	23-134	1.32	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 14:29
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0733 - SW3510C

Matrix Spike Dup (BBI0733-MSD1)

Source: 1810511-06

Prepared: 09/25/2018 Analyzed: 09/26/2018

Methoxychlor	<44.9 ug/kg dry	44.9	ug/kg dry	18.7	<44.9 ug/kg dry	80.0	23-134	27.3	20	P
Mirex	13.1 ug/kg dry	6.74	ug/kg dry	18.7	<6.74 ug/kg dry	70.0	23-134	1.32	20	
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	5.62		ug/kg dry	7.49	ug/kg dry	75.0	30-105			
Surr: DCB	5.62		ug/kg dry	7.49	ug/kg dry	75.0	30-105			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Herbicides by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0635 - SW3510C

Blank (BBI0635-BLK1)

Prepared: 09/20/2018 Analyzed: 09/24/2018

2,4,5-T	<150 ug/kg wet	150	ug/kg wet						
2,4,5-TP (Silvex)	<150 ug/kg wet	150	ug/kg wet						
2,4-D	<150 ug/kg wet	150	ug/kg wet						
Dinoseb	<150 ug/kg wet	150	ug/kg wet						
Pentachlorophenol	<150 ug/kg wet	150	ug/kg wet						

Surr: DCAA (Surr) 11.6 ug/kg wet 33.2 35.0 31-87

LCS (BBI0635-BS1)

Prepared: 09/20/2018 Analyzed: 09/24/2018

2,4,5-T	<149 ug/kg wet	149	ug/kg wet	16.6	ug/kg wet	70.0	62-98		
2,4,5-TP (Silvex)	<149 ug/kg wet	149	ug/kg wet	16.6	ug/kg wet	90.0	55-106		
2,4-D	<149 ug/kg wet	149	ug/kg wet	16.6	ug/kg wet	90.0	57-114		
Dinoseb	<149 ug/kg wet	149	ug/kg wet	16.6	ug/kg wet	90.0	53-111		
Pentachlorophenol	<149 ug/kg wet	149	ug/kg wet	16.6	ug/kg wet	80.0	50-96		

Surr: DCAA (Surr) 24.8 ug/kg wet 33.1 ug/kg wet 75.0 31-87

Matrix Spike (BBI0635-MS1)

Source: 18I0511-02

Prepared: 09/20/2018 Analyzed: 09/24/2018

2,4,5-T	<168 ug/kg dry	168	ug/kg dry	18.6	<168 ug/kg dry	90.0	50-130		
2,4,5-TP (Silvex)	<168 ug/kg dry	168	ug/kg dry	18.6	<168 ug/kg dry	110	55-106		M
2,4-D	<168 ug/kg dry	168	ug/kg dry	18.6	<168 ug/kg dry	110	57-114		
Dinoseb	<168 ug/kg dry	168	ug/kg dry	18.6	<168 ug/kg dry	100	60-130		
Pentachlorophenol	<168 ug/kg dry	168	ug/kg dry	18.6	<168 ug/kg dry	80.0	50-96		

Surr: DCAA (Surr) 29.8 ug/kg dry 37.3 ug/kg dry 80.0 31-87

Matrix Spike Dup (BBI0635-MSD1)

Source: 18I0511-02

Prepared: 09/20/2018 Analyzed: 09/24/2018

2,4,5-T	<168 ug/kg dry	168	ug/kg dry	18.7	<168 ug/kg dry	70.0	50-130	24.7	20	P
2,4,5-TP (Silvex)	<168 ug/kg dry	168	ug/kg dry	18.7	<168 ug/kg dry	90.0	55-106	19.7	20	
2,4-D	<168 ug/kg dry	168	ug/kg dry	18.7	<168 ug/kg dry	100	57-114	9.19	20	
Dinoseb	<168 ug/kg dry	168	ug/kg dry	18.7	<168 ug/kg dry	70.0	60-130	35.0	20	P
Pentachlorophenol	<168 ug/kg dry	168	ug/kg dry	18.7	<168 ug/kg dry	50.0	50-96	45.8	20	P

Surr: DCAA (Surr) 24.3 ug/kg dry 37.4 ug/kg dry 65.0 31-87



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0538 - No Prep Wet Chem

Blank (BBI0538-BLK1)				Prepared & Analyzed: 09/19/2018						
Percent Solids	100 %	0.10	%							
Duplicate (BBI0538-DUP1)				Source: 1810511-09 Prepared & Analyzed: 09/19/2018						
Percent Solids	85.8 %	0.10	%	86.3 %				0.623	20	

Batch BBI0579 - No Prep Wet Chem

Blank (BBI0579-BLK1)				Prepared & Analyzed: 09/20/2018						
Percent Solids	100 %	0.10	%							
Duplicate (BBI0579-DUP1)				Source: 1810647-02 Prepared & Analyzed: 09/20/2018						
Percent Solids	73.3 %	0.10	%	70.7 %				3.55	20	
Duplicate (BBI0579-DUP2)				Source: 1810647-06 Prepared & Analyzed: 09/20/2018						
Percent Solids	73.6 %	0.10	%	75.5 %				2.48	20	

Batch BBJ0030 - No Prep Wet Chem

Blank (BBJ0030-BLK1)				Prepared: 09/27/2018 Analyzed: 10/01/2018						
Chromium, Hexavalent	<0.20 mg/kg wet	0.20	mg/kg wet							
LCS (BBJ0030-BS1)				Prepared: 09/27/2018 Analyzed: 10/01/2018						
Chromium, Hexavalent	3.71 mg/kg wet	0.20	mg/kg wet	3.99	mg/kg wet	93.0	80-120			

Batch BBJ0031 - No Prep Wet Chem

Blank (BBJ0031-BLK1)				Prepared: 09/27/2018 Analyzed: 10/01/2018						
Chromium, Hexavalent	<0.20 mg/kg wet	0.20	mg/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 14:29
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0031 - No Prep Wet Chem

LCS (BBJ0031-BS1)

Prepared: 09/27/2018 Analyzed: 10/01/2018

Chromium, Hexavalent	3.40 mg/kg wet	0.20	mg/kg wet	3.96	mg/kg wet	86.0	80-120			
----------------------	----------------	------	-----------	------	-----------	------	--------	--	--	--

Matrix Spike (BBJ0031-MS1)

Source: 18I0511-15

Prepared: 09/27/2018 Analyzed: 10/01/2018

Chromium, Hexavalent	3.70 mg/kg dry	0.22	mg/kg dry	4.40	<0.22 mg/kg dry	84.0	80-120			
----------------------	----------------	------	-----------	------	-----------------	------	--------	--	--	--

Matrix Spike Dup (BBJ0031-MSD1)

Source: 18I0511-15

Prepared: 09/27/2018 Analyzed: 10/01/2018

Chromium, Hexavalent	3.70 mg/kg dry	0.22	mg/kg dry	4.40	<0.22 mg/kg dry	84.0	80-120	0.0797	20	
----------------------	----------------	------	-----------	------	-----------------	------	--------	--------	----	--



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Aluminum	VELAP
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Calcium	VELAP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Magnesium	VELAP
Manganese	VELAP
Nickel	VELAP
Potassium	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7196A in Solids	
Chromium, Hexavalent	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8015C in Solids	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
TPH-Volatiles (GRO)	VELAP,NC,WVDEP
SW8081B in Solids	
alpha-BHC	NC,VELAP
beta-BHC	NC,VELAP
Chlordane	NC,VELAP
delta-BHC	NC,VELAP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/2/2018 14:29
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Dieldrin	NC,VELAP
Endosulfan I	NC,VELAP
Endosulfan II	NC,VELAP
Endosulfan sulfate	NC,VELAP
Endrin	NC,VELAP
Endrin aldehyde	NC,VELAP
Endrin ketone	NC,VELAP
gamma-BHC (Lindane)	NC,VELAP
Heptachlor	NC,VELAP
Heptachlor epoxide	NC,VELAP
Methoxychlor	NC,VELAP
Mirex	NC,VELAP
Toxaphene	NC,VELAP
SW8151A in Solids	
2,4,5-T	NC,VELAP
2,4,5-TP (Silvex)	NC,VELAP
2,4-D	NC,VELAP
Dinoseb	NC,VELAP
Pentachlorophenol	NC,VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 14:29
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

B Blank contamination. The recorded result is associated with a contaminated blank.

E Estimated concentration, outside calibration range

M Matrix spike recovery is outside established acceptance limits

M2 Sample was diluted due to matrix interference.

P Duplicate analysis does not meet the acceptance criteria for precision

S Surrogate recovery was outside acceptance criteria

RPD Relative Percent Difference

Qual Qualifiers

-RE Denotes sample was re-analyzed

D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.



1941 REYMET ROAD
 RICHMOND, VIRGINIA 23237
 (804) 358-8295 PHONE
 (804)358-8297 FAX

Chain of Custody
 Form #: F1331
 Rev. 3.0
 Effective: Aug 24, 2017

CHAIN OF CUSTODY

PAGE 1 OF 2

COMPANY NAME: <i>EEE Consulting</i>	INVOICE TO: <i>Same</i>	PROJECT NAME/Quote #: <i>CVTC</i>
CONTACT: <i>Jeff Fisher</i>	INVOICE CONTACT:	SITE NAME: <i>CVTC</i>
ADDRESS: <i>201 Church St. 24060</i>	INVOICE ADDRESS:	PROJECT NUMBER: <i>18-760</i>
PHONE #: <i>540-953-0170 x 314</i>	INVOICE PHONE #:	P.O. #: <i>18-760</i>
FAX #:	EMAIL: <i>JFISHER@EEE-CONSULTING.COM</i>	Pretreatment Program:
Is sample for compliance reporting? YES <input checked="" type="radio"/> NO	Is sample from a chlorinated supply? YES <input checked="" type="radio"/> NO	PWS I.D. #:
SAMPLER NAME (PRINT): <i>Jeff Fisher</i>	SAMPLER SIGNATURE: <i>[Signature]</i>	Turn Around Time: Circle: <input checked="" type="radio"/> 5 Days or ___ Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)					COMMENTS
											TPH-CRo/DRU/GRU	Pesticides	Herbicides	Total TALK Metals	Hex Chrome 7196A	
1) <i>Task 2.9</i>						<i>9-12-18</i>	<i>0950</i>		<i>S</i>	<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)
2)							<i>0955</i>			<i>1</i>						
3)							<i>1015</i>			<i>1</i>						
4)							<i>1025</i>			<i>1</i>						
5)							<i>1032</i>			<i>1</i>						
6)							<i>1050</i>			<i>1</i>						
7)							<i>1105</i>			<i>1</i>						
8)							<i>1110</i>			<i>1</i>						
9)							<i>1115</i>			<i>1</i>						
10)																

RELINQUISHED: <i>[Signature]</i> DATE / TIME: <i>9-12-18 1355</i>	RECEIVED: <i>[Signature]</i> DATE / TIME: <i>9-12-18 1355</i>	QC Data Package	LAB USE ONLY Custody Seals used and intact? (Y/N): <input checked="" type="checkbox"/>	COOLER TEMP (°C) Received on ice? (Y/N): <input checked="" type="checkbox"/>
RELINQUISHED: <i>COURIER</i> DATE / TIME:	RECEIVED: <i>[Signature]</i> DATE / TIME: <i>Sept 13 2018 8:00</i>	Level III <input type="checkbox"/>	EEE-Blacksburg CVTC Recd: 09/13/2018 Due: 09/27/2018	1810511
RELINQUISHED: DATE / TIME:	RECEIVED: DATE / TIME:	Level IV <input type="checkbox"/>		

CHAIN OF CUSTODY

COMPANY NAME: <u>EEE Consulting, Inc.</u>	INVOICE TO: <u>Same</u>	PROJECT NAME/Quote #: <u>CVTC</u>
CONTACT: <u>201 Church St. 24060</u>	INVOICE CONTACT:	SITE NAME: <u>CVTC</u>
ADDRESS: <u>Jeff Fisher</u>	INVOICE ADDRESS:	PROJECT NUMBER: <u>18-760</u>
PHONE #: <u>540-953-0170 x314</u>	INVOICE PHONE #:	P.O. #: <u>18-760</u>
FAX #:	EMAIL: <u>JFISHER@EEE-CONSULTING.COM</u>	Pretreatment Program:
Is sample for compliance reporting? YES <input checked="" type="radio"/> NO	Is sample from a chlorinated supply? YES <input checked="" type="radio"/> NO	PWS I.D. #:
SAMPLER NAME (PRINT): <u>Jeff Fisher</u>	SAMPLER SIGNATURE:	Turn Around Time: Circle: <u>10</u> 5 Days or ___ Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)					COMMENTS
											TPH - GR/DRO/DRO	Pesticides	Herbicides	Total TAL Metals	Hex Chrome 7196A	
1) Task 2.9 39-25 0-5'	6					9-12-18	1120		S	1	X	X	X	X	X	Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)
2) 39-25 5-10'							1125									
3) 39-25 10-14'							1130									
4) 39-26 0-5'							1138									
5) 39-26 5-10'							1145									
6) 39-26 10-13'							1150									
7)																
8)																
9)																
10)																

RELINQUISHED:	DATE / TIME: <u>9-12-18 1355</u>	RECEIVED:	DATE / TIME: <u>9-12-18 1355</u>	QC Data Package	LAB USE ONLY Custody Seals used and intact? (Y/N): <input checked="" type="checkbox"/>	COOLER TEMP Received on ice? (Y/N): <input checked="" type="checkbox"/> <u>1.6°C</u>
RELINQUISHED: <u>COUROSAL</u>	DATE / TIME:	RECEIVED:	DATE / TIME: <u>13 Sept 2018 8.00</u>	Level III <input type="checkbox"/>	EEE-Blacksburg 1810511 CVTC Recd: 09/13/2018 Due: 09/27/2018	
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level IV <input type="checkbox"/>		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/2/2018 14:29
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	1.60°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

As per Jeff Fisher, certification for 2,3,7,8 TCDD SIM not necessary. MMR 9/13/18 15:17



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 1810746

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg, VA 24060

Date Received: September 20, 2018 8:00

Date Issued: October 4, 2018 17:08

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 09/20/2018 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/4/2018 17:08
201 Church Street
Blacksburg VA, 24060
Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 1810746

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Task 2.9 39-A	1810746-01	Soil	09/12/2018 14:15	09/20/2018 08:00
Task 2.9 39-B	1810746-02	Soil	09/12/2018 14:20	09/20/2018 08:00
Task 2.9 39-C	1810746-03	Soil	09/12/2018 14:20 to 09/12/2018 14:33	09/20/2018 08:00
Task 2.9 39-D	1810746-04	Soil	09/12/2018 14:45	09/20/2018 08:00
Task 2.9 39-E	1810746-05	Soil	09/12/2018 14:50	09/20/2018 08:00
Task 2.9 39-F	1810746-06	Soil	09/12/2018 15:00	09/20/2018 08:00

Results have been calculated based on dry weight.



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-A

Laboratory Sample ID: 1810746-01

Composite Start-End Date/Time: 09/12/2018 14:15 - 09/12/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.502 mg/kg dry		0.502	1	09/20/18 09:30	09/27/18 16:59	BG
Aluminum	01	SW6010C	20200 mg/kg dry		502	200	09/20/18 09:30	09/27/18 16:10	BG
Arsenic	01	SW6010C	2.86 mg/kg dry		1.00	1	09/20/18 09:30	09/27/18 16:59	BG
Barium	01	SW6010C	236 mg/kg dry		100	200	09/20/18 09:30	09/27/18 16:10	BG
Beryllium	01	SW6010C	1.05 mg/kg dry		0.201	1	09/20/18 09:30	09/27/18 16:59	BG
Calcium	01	SW6010C	71100 mg/kg dry		1000	200	09/20/18 09:30	09/27/18 16:10	BG
Cadmium	01	SW6010C	1.84 mg/kg dry		0.201	1	09/20/18 09:30	09/27/18 16:59	BG
Cobalt	01	SW6010C	8.76 mg/kg dry		4.01	20	09/20/18 09:30	09/27/18 16:38	BG
Chromium	01	SW6010C	19.4 mg/kg dry		10.0	20	09/20/18 09:30	09/27/18 16:38	BG
Copper	01	SW6010C	31.9 mg/kg dry		2.51	1	09/20/18 09:30	09/27/18 16:59	BG
Iron	01	SW6010C	25800 mg/kg dry		502	200	09/20/18 09:30	09/27/18 16:10	BG
Mercury	01	SW7471B	0.036 mg/kg dry		0.008	1	09/27/18 10:18	09/28/18 09:43	MWL
Potassium	01	SW6010C	4080 mg/kg dry		502	20	09/20/18 09:30	09/27/18 16:38	BG
Magnesium	01	SW6010C	11700 mg/kg dry		502	200	09/20/18 09:30	09/27/18 16:10	BG
Manganese	01	SW6010C	337 mg/kg dry		100	200	09/20/18 09:30	09/27/18 16:10	BG
Sodium	01	SW6010C	7710 mg/kg dry		5020	200	09/20/18 09:30	09/27/18 16:10	BG
Nickel	01	SW6010C	17.4 mg/kg dry		10.0	20	09/20/18 09:30	09/27/18 16:38	BG
Lead	01	SW6010C	1520 mg/kg dry		100	200	09/20/18 09:30	09/27/18 16:10	BG
Antimony	01	SW6010C	<5.02 mg/kg dry		5.02	1	09/20/18 09:30	09/27/18 16:59	BG
Selenium	01	SW6010C	<2.51 mg/kg dry		2.51	1	09/20/18 09:30	09/27/18 16:59	BG
Thallium	01	SW6010C	<2.51 mg/kg dry		2.51	1	09/20/18 09:30	09/27/18 16:59	BG
Vanadium	01	SW6010C	30.4 mg/kg dry		10.0	20	09/20/18 09:30	09/27/18 16:38	BG
Zinc	01	SW6010C	600 mg/kg dry		100	200	09/20/18 09:30	09/27/18 16:10	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	01RE1	SW8015C	<0.53 mg/kg dry		0.53	1	09/20/18 16:21	09/20/18 16:21	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-A	Laboratory Sample ID: 1810746-01
Composite Start-End Date/Time: 09/12/2018 14:15 - 09/12/2018 14:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	01RE1	SW8015C	77.6 %	S	80-120		09/20/18 16:21	09/20/18 16:21	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01RE1	SW8015C	1050 mg/kg dry		103	10	09/26/18 15:02	09/28/18 11:38	HLM
<i>Surr: Pentacosane (Surr)</i>	01RE1	SW8015C	99.2 %		40-160		09/26/18 15:02	09/28/18 11:38	HLM
TPH-Semi-Volatiles (ORO)	01RE1	SW8015C	13700 mg/kg dry		488	10	09/26/18 08:37	09/27/18 13:05	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	01	SW8081B	<31.4 ug/kg dry		31.4	5	09/26/18 13:15	10/01/18 21:16	HLM
4,4'-DDE	01	SW8081B	<21.0 ug/kg dry		21.0	5	09/26/18 13:15	10/01/18 21:16	HLM
4,4'-DDT	01	SW8081B	<21.0 ug/kg dry		21.0	5	09/26/18 13:15	10/01/18 21:16	HLM
Aldrin	01	SW8081B	<10.5 ug/kg dry		10.5	5	09/26/18 13:15	10/01/18 21:16	HLM
alpha-BHC	01	SW8081B	<10.5 ug/kg dry		10.5	5	09/26/18 13:15	10/01/18 21:16	HLM
beta-BHC	01	SW8081B	<10.5 ug/kg dry		10.5	5	09/26/18 13:15	10/01/18 21:16	HLM
Chlordane	01	SW8081B	<220 ug/kg dry		220	5	09/26/18 13:15	10/01/18 21:16	HLM
delta-BHC	01	SW8081B	<21.0 ug/kg dry		21.0	5	09/26/18 13:15	10/01/18 21:16	HLM
Dieldrin	01	SW8081B	<21.0 ug/kg dry		21.0	5	09/26/18 13:15	10/01/18 21:16	HLM
Endosulfan I	01	SW8081B	<21.0 ug/kg dry		21.0	5	09/26/18 13:15	10/01/18 21:16	HLM
Endosulfan II	01	SW8081B	<31.4 ug/kg dry		31.4	5	09/26/18 13:15	10/01/18 21:16	HLM
Endosulfan sulfate	01	SW8081B	<10.5 ug/kg dry		10.5	5	09/26/18 13:15	10/01/18 21:16	HLM
Endrin	01	SW8081B	<21.0 ug/kg dry		21.0	5	09/26/18 13:15	10/01/18 21:16	HLM
Endrin aldehyde	01	SW8081B	<41.9 ug/kg dry		41.9	5	09/26/18 13:15	10/01/18 21:16	HLM
Endrin ketone	01	SW8081B	<10.5 ug/kg dry		10.5	5	09/26/18 13:15	10/01/18 21:16	HLM
gamma-BHC (Lindane)	01	SW8081B	<10.5 ug/kg dry		10.5	5	09/26/18 13:15	10/01/18 21:16	HLM
Heptachlor	01	SW8081B	<10.5 ug/kg dry		10.5	5	09/26/18 13:15	10/01/18 21:16	HLM
Heptachlor epoxide	01	SW8081B	<210 ug/kg dry		210	5	09/26/18 13:15	10/01/18 21:16	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-A	Laboratory Sample ID: 1810746-01
Composite Start-End Date/Time: 09/12/2018 14:15 - 09/12/2018 14:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	01	SW8081B	<210 ug/kg dry		210	5	09/26/18 13:15	10/01/18 21:16	HLM
Mirex	01	SW8081B	<31.4 ug/kg dry		31.4	5	09/26/18 13:15	10/01/18 21:16	HLM
Toxaphene	01	SW8081B	<220 ug/kg dry		220	5	09/26/18 13:15	10/01/18 21:16	HLM
Surr: TCMX	01	SW8081B	%	DS	30-105		09/26/18 13:15	10/01/18 21:16	HLM
Surr: DCB	01	SW8081B	25.0 %	DS	30-105		09/26/18 13:15	10/01/18 21:16	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	01	SW8151A	<631 ug/kg dry	H	631	4	10/02/18 12:56	10/03/18 14:58	SKS
2,4,5-TP (Silvex)	01	SW8151A	<631 ug/kg dry	H	631	4	10/02/18 12:56	10/03/18 14:58	SKS
2,4-D	01RE1	SW8151A	876 ug/kg dry		158	50	10/02/18 12:56	10/04/18 11:13	SKS
Dinoseb	01	SW8151A	<631 ug/kg dry	H	631	4	10/02/18 12:56	10/03/18 14:58	SKS
Pentachlorophenol	01	SW8151A	<631 ug/kg dry	H	631	4	10/02/18 12:56	10/03/18 14:58	SKS
Surr: DCAA (Surr)	01	SW8151A	100 %	DS	31-87		10/02/18 12:56	10/03/18 14:58	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	01	SW7196A	1.76 mg/kg dry		0.21	1	09/27/18 11:30	10/01/18 15:00	MWL
Percent Solids	01	SM18 2540G	94.8 %		0.10	1	09/21/18 11:17	09/21/18 11:17	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-B	Laboratory Sample ID: 1810746-02
Composite Start-End Date/Time: 09/12/2018 14:20 - 09/12/2018 14:20	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	<0.519 mg/kg dry		0.519	1	09/20/18 09:30	09/27/18 17:17	BG
Aluminum	02	SW6010C	20700 mg/kg dry		519	200	09/20/18 09:30	09/27/18 16:18	BG
Arsenic	02	SW6010C	3.80 mg/kg dry		1.04	1	09/20/18 09:30	09/27/18 17:17	BG
Barium	02	SW6010C	286 mg/kg dry		104	200	09/20/18 09:30	09/27/18 16:18	BG
Beryllium	02	SW6010C	0.999 mg/kg dry		0.208	1	09/20/18 09:30	09/27/18 17:17	BG
Calcium	02	SW6010C	56100 mg/kg dry		1040	200	09/20/18 09:30	09/27/18 16:18	BG
Cadmium	02	SW6010C	2.85 mg/kg dry		0.208	1	09/20/18 09:30	09/27/18 17:17	BG
Cobalt	02	SW6010C	6.86 mg/kg dry		4.15	20	09/20/18 09:30	09/27/18 16:46	BG
Chromium	02	SW6010C	24.8 mg/kg dry		10.4	20	09/20/18 09:30	09/27/18 16:46	BG
Copper	02	SW6010C	29.6 mg/kg dry		2.59	1	09/20/18 09:30	09/27/18 17:17	BG
Iron	02	SW6010C	23300 mg/kg dry		519	200	09/20/18 09:30	09/27/18 16:18	BG
Mercury	02	SW7471B	0.140 mg/kg dry		0.008	1	09/27/18 10:18	09/28/18 09:50	MWL
Potassium	02	SW6010C	3170 mg/kg dry		519	20	09/20/18 09:30	09/27/18 16:46	BG
Magnesium	02	SW6010C	9730 mg/kg dry		519	200	09/20/18 09:30	09/27/18 16:18	BG
Manganese	02	SW6010C	299 mg/kg dry		104	200	09/20/18 09:30	09/27/18 16:18	BG
Sodium	02	SW6010C	817 mg/kg dry		519	20	09/20/18 09:30	09/27/18 16:46	BG
Nickel	02	SW6010C	18.4 mg/kg dry		10.4	20	09/20/18 09:30	09/27/18 16:46	BG
Lead	02	SW6010C	2150 mg/kg dry		104	200	09/20/18 09:30	09/27/18 16:18	BG
Antimony	02	SW6010C	<5.19 mg/kg dry		5.19	1	09/20/18 09:30	09/27/18 17:17	BG
Selenium	02	SW6010C	<2.59 mg/kg dry		2.59	1	09/20/18 09:30	09/27/18 17:17	BG
Thallium	02	SW6010C	<2.59 mg/kg dry		2.59	1	09/20/18 09:30	09/27/18 17:17	BG
Vanadium	02	SW6010C	28.0 mg/kg dry		10.4	20	09/20/18 09:30	09/27/18 16:46	BG
Zinc	02	SW6010C	848 mg/kg dry		104	200	09/20/18 09:30	09/27/18 16:18	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	02RE1	SW8015C	<0.54 mg/kg dry		0.54	1	09/20/18 16:44	09/20/18 16:44	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-B	Laboratory Sample ID: 1810746-02
Composite Start-End Date/Time: 09/12/2018 14:20 - 09/12/2018 14:20	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	02RE1	SW8015C	65.7 %	S	80-120		09/20/18 16:44	09/20/18 16:44	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02RE1	SW8015C	1010 mg/kg dry		105	10	09/26/18 15:02	09/28/18 12:04	HLM
<i>Surr: Pentacosane (Surr)</i>	02RE1	SW8015C	153 %		40-160		09/26/18 15:02	09/28/18 12:04	HLM
TPH-Semi-Volatiles (ORO)	02RE1	SW8015C	2410 mg/kg dry		104	10	09/26/18 08:37	09/27/18 13:30	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	02	SW8081B	<32.0 ug/kg dry		32.0	5	09/26/18 13:15	10/01/18 21:34	HLM
4,4'-DDE	02	SW8081B	26.7 ug/kg dry		21.3	5	09/26/18 13:15	10/01/18 21:34	HLM
4,4'-DDT	02	SW8081B	88.9 ug/kg dry		21.3	5	09/26/18 13:15	10/01/18 21:34	HLM
Aldrin	02	SW8081B	<10.7 ug/kg dry		10.7	5	09/26/18 13:15	10/01/18 21:34	HLM
alpha-BHC	02	SW8081B	<10.7 ug/kg dry		10.7	5	09/26/18 13:15	10/01/18 21:34	HLM
beta-BHC	02	SW8081B	<10.7 ug/kg dry		10.7	5	09/26/18 13:15	10/01/18 21:34	HLM
Chlordane	02	SW8081B	<224 ug/kg dry		224	5	09/26/18 13:15	10/01/18 21:34	HLM
delta-BHC	02	SW8081B	<21.3 ug/kg dry		21.3	5	09/26/18 13:15	10/01/18 21:34	HLM
Dieldrin	02	SW8081B	<21.3 ug/kg dry		21.3	5	09/26/18 13:15	10/01/18 21:34	HLM
Endosulfan I	02	SW8081B	<21.3 ug/kg dry		21.3	5	09/26/18 13:15	10/01/18 21:34	HLM
Endosulfan II	02	SW8081B	<32.0 ug/kg dry		32.0	5	09/26/18 13:15	10/01/18 21:34	HLM
Endosulfan sulfate	02	SW8081B	<10.7 ug/kg dry		10.7	5	09/26/18 13:15	10/01/18 21:34	HLM
Endrin	02	SW8081B	<21.3 ug/kg dry		21.3	5	09/26/18 13:15	10/01/18 21:34	HLM
Endrin aldehyde	02	SW8081B	<42.7 ug/kg dry		42.7	5	09/26/18 13:15	10/01/18 21:34	HLM
Endrin ketone	02	SW8081B	<10.7 ug/kg dry		10.7	5	09/26/18 13:15	10/01/18 21:34	HLM
gamma-BHC (Lindane)	02	SW8081B	<10.7 ug/kg dry		10.7	5	09/26/18 13:15	10/01/18 21:34	HLM
Heptachlor	02	SW8081B	<10.7 ug/kg dry		10.7	5	09/26/18 13:15	10/01/18 21:34	HLM
Heptachlor epoxide	02	SW8081B	<213 ug/kg dry		213	5	09/26/18 13:15	10/01/18 21:34	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-B	Laboratory Sample ID: 1810746-02
Composite Start-End Date/Time: 09/12/2018 14:20 - 09/12/2018 14:20	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	02	SW8081B	<213 ug/kg dry		213	5	09/26/18 13:15	10/01/18 21:34	HLM
Mirex	02	SW8081B	<32.0 ug/kg dry		32.0	5	09/26/18 13:15	10/01/18 21:34	HLM
Toxaphene	02	SW8081B	<224 ug/kg dry		224	5	09/26/18 13:15	10/01/18 21:34	HLM
<i>Surr: TCMX</i>	02	SW8081B	50.0 %		30-105		09/26/18 13:15	10/01/18 21:34	HLM
<i>Surr: DCB</i>	02	SW8081B	50.0 %		30-105		09/26/18 13:15	10/01/18 21:34	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	02	SW8151A	13.9 ug/kg dry	H	2.50	4	10/02/18 12:56	10/03/18 15:16	SKS
2,4,5-TP (Silvex)	02	SW8151A	<626 ug/kg dry	H	626	4	10/02/18 12:56	10/03/18 15:16	SKS
2,4-D	02	SW8151A	97.3 ug/kg dry	H	12.5	4	10/02/18 12:56	10/03/18 15:16	SKS
Dinoseb	02	SW8151A	<626 ug/kg dry	H	626	4	10/02/18 12:56	10/03/18 15:16	SKS
Pentachlorophenol	02	SW8151A	<626 ug/kg dry	H	626	4	10/02/18 12:56	10/03/18 15:16	SKS
<i>Surr: DCAA (Surr)</i>	02	SW8151A	80.0 %	S	31-87		10/02/18 12:56	10/03/18 15:16	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	02	SW7196A	0.47 mg/kg dry		0.21	1	09/27/18 11:30	10/01/18 15:00	MWL
Percent Solids	02	SM18 2540G	92.5 %		0.10	1	09/21/18 11:17	09/21/18 11:17	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-C **Laboratory Sample ID:** 1810746-03

Composite Start-End Date/Time: 09/12/2018 14:20 - 09/12/2018 14:33

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03	SW6010C	<0.500 mg/kg dry		0.500	1	09/20/18 09:30	09/27/18 17:20	BG
Aluminum	03	SW6010C	15100 mg/kg dry		495	200	09/20/18 09:30	09/27/18 16:20	BG
Arsenic	03	SW6010C	2.08 mg/kg dry		1.00	1	09/20/18 09:30	09/27/18 17:20	BG
Barium	03	SW6010C	183 mg/kg dry		99.1	200	09/20/18 09:30	09/27/18 16:20	BG
Beryllium	03	SW6010C	0.885 mg/kg dry		0.200	1	09/20/18 09:30	09/27/18 17:20	BG
Calcium	03	SW6010C	79000 mg/kg dry		991	200	09/20/18 09:30	09/27/18 16:20	BG
Cadmium	03	SW6010C	1.07 mg/kg dry		0.200	1	09/20/18 09:30	09/27/18 17:20	BG
Cobalt	03	SW6010C	12.9 mg/kg dry		3.96	20	09/20/18 09:30	09/27/18 16:49	BG
Chromium	03	SW6010C	19.2 mg/kg dry		9.91	20	09/20/18 09:30	09/27/18 16:49	BG
Copper	03	SW6010C	46.9 mg/kg dry		2.50	1	09/20/18 09:30	09/27/18 17:20	BG
Iron	03	SW6010C	26900 mg/kg dry		495	200	09/20/18 09:30	09/27/18 16:20	BG
Mercury	03	SW7471B	0.057 mg/kg dry		0.008	1	09/27/18 10:18	09/28/18 09:53	MWL
Potassium	03	SW6010C	5270 mg/kg dry		4950	200	09/20/18 09:30	09/27/18 16:20	BG
Magnesium	03	SW6010C	18600 mg/kg dry		495	200	09/20/18 09:30	09/27/18 16:20	BG
Manganese	03	SW6010C	307 mg/kg dry		99.1	200	09/20/18 09:30	09/27/18 16:20	BG
Sodium	03	SW6010C	19500 mg/kg dry		4950	200	09/20/18 09:30	09/27/18 16:20	BG
Nickel	03	SW6010C	19.1 mg/kg dry		9.91	20	09/20/18 09:30	09/27/18 16:49	BG
Lead	03	SW6010C	954 mg/kg dry		99.1	200	09/20/18 09:30	09/27/18 16:20	BG
Antimony	03	SW6010C	<5.00 mg/kg dry		5.00	1	09/20/18 09:30	09/27/18 17:20	BG
Selenium	03	SW6010C	<2.50 mg/kg dry		2.50	1	09/20/18 09:30	09/27/18 17:20	BG
Thallium	03	SW6010C	<2.50 mg/kg dry		2.50	1	09/20/18 09:30	09/27/18 17:20	BG
Vanadium	03	SW6010C	45.5 mg/kg dry		9.91	20	09/20/18 09:30	09/27/18 16:49	BG
Zinc	03	SW6010C	209 mg/kg dry		99.1	200	09/20/18 09:30	09/27/18 16:20	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	03RE1	SW8015C	<0.53 mg/kg dry	0.53	1	09/20/18 17:07	09/20/18 17:07	DFH
---------------------	-------	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-C	Laboratory Sample ID: 1810746-03
Composite Start-End Date/Time: 09/12/2018 14:20 - 09/12/2018 14:33	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	03RE1	SW8015C	92.4 %		80-120		09/20/18 17:07	09/20/18 17:07	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03RE1	SW8015C	1630 mg/kg dry		104	10	09/26/18 15:02	09/28/18 12:29	HLM
<i>Surr: Pentacosane (Surr)</i>	03RE1	SW8015C	167 %	DS	40-160		09/26/18 15:02	09/28/18 12:29	HLM
TPH-Semi-Volatiles (ORO)	03RE1	SW8015C	4390 mg/kg dry		489	10	09/26/18 08:37	09/27/18 13:55	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	03	SW8081B	<31.7 ug/kg dry		31.7	5	09/26/18 13:15	10/01/18 21:53	HLM
4,4'-DDE	03	SW8081B	61.6 ug/kg dry		21.1	5	09/26/18 13:15	10/01/18 21:53	HLM
4,4'-DDT	03	SW8081B	88.0 ug/kg dry		21.1	5	09/26/18 13:15	10/01/18 21:53	HLM
Aldrin	03	SW8081B	<10.6 ug/kg dry		10.6	5	09/26/18 13:15	10/01/18 21:53	HLM
alpha-BHC	03	SW8081B	<10.6 ug/kg dry		10.6	5	09/26/18 13:15	10/01/18 21:53	HLM
beta-BHC	03	SW8081B	<10.6 ug/kg dry		10.6	5	09/26/18 13:15	10/01/18 21:53	HLM
Chlordane	03	SW8081B	<222 ug/kg dry		222	5	09/26/18 13:15	10/01/18 21:53	HLM
delta-BHC	03	SW8081B	<21.1 ug/kg dry		21.1	5	09/26/18 13:15	10/01/18 21:53	HLM
Dieldrin	03	SW8081B	<21.1 ug/kg dry		21.1	5	09/26/18 13:15	10/01/18 21:53	HLM
Endosulfan I	03	SW8081B	<21.1 ug/kg dry		21.1	5	09/26/18 13:15	10/01/18 21:53	HLM
Endosulfan II	03	SW8081B	<31.7 ug/kg dry		31.7	5	09/26/18 13:15	10/01/18 21:53	HLM
Endosulfan sulfate	03	SW8081B	<10.6 ug/kg dry		10.6	5	09/26/18 13:15	10/01/18 21:53	HLM
Endrin	03	SW8081B	<21.1 ug/kg dry		21.1	5	09/26/18 13:15	10/01/18 21:53	HLM
Endrin aldehyde	03	SW8081B	<42.2 ug/kg dry		42.2	5	09/26/18 13:15	10/01/18 21:53	HLM
Endrin ketone	03	SW8081B	<10.6 ug/kg dry		10.6	5	09/26/18 13:15	10/01/18 21:53	HLM
gamma-BHC (Lindane)	03	SW8081B	<10.6 ug/kg dry		10.6	5	09/26/18 13:15	10/01/18 21:53	HLM
Heptachlor	03	SW8081B	<10.6 ug/kg dry		10.6	5	09/26/18 13:15	10/01/18 21:53	HLM
Heptachlor epoxide	03	SW8081B	<211 ug/kg dry		211	5	09/26/18 13:15	10/01/18 21:53	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-C	Laboratory Sample ID: 1810746-03
Composite Start-End Date/Time: 09/12/2018 14:20 - 09/12/2018 14:33	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	03	SW8081B	<211 ug/kg dry		211	5	09/26/18 13:15	10/01/18 21:53	HLM
Mirex	03	SW8081B	<31.7 ug/kg dry		31.7	5	09/26/18 13:15	10/01/18 21:53	HLM
Toxaphene	03	SW8081B	<222 ug/kg dry		222	5	09/26/18 13:15	10/01/18 21:53	HLM
Surr: TCMX	03	SW8081B	75.0 %		30-105		09/26/18 13:15	10/01/18 21:53	HLM
Surr: DCB	03	SW8081B	75.0 %		30-105		09/26/18 13:15	10/01/18 21:53	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	03RE2	SW8151A	307 ug/kg dry		30.7	10	10/02/18 12:56	10/04/18 11:49	SKS
2,4,5-TP (Silvex)	03	SW8151A	<307 ug/kg dry	H	307	2	10/02/18 12:56	10/03/18 15:34	SKS
2,4-D	03RE1	SW8151A	1360 ug/kg dry		307	100	10/02/18 12:56	10/04/18 11:31	SKS
Dinoseb	03	SW8151A	<307 ug/kg dry	H	307	2	10/02/18 12:56	10/03/18 15:34	SKS
Pentachlorophenol	03	SW8151A	<307 ug/kg dry	H	307	2	10/02/18 12:56	10/03/18 15:34	SKS
Surr: DCAA (Surr)	03	SW8151A	40.0 %	S	31-87		10/02/18 12:56	10/03/18 15:34	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	03	SW7196A	<0.21 mg/kg dry		0.21	1	09/27/18 11:30	10/01/18 15:00	MWL
Percent Solids	03	SM18 2540G	94.1 %		0.10	1	09/21/18 11:17	09/21/18 11:17	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-D **Laboratory Sample ID:** 1810746-04

Composite Start-End Date/Time: 09/12/2018 14:45 - 09/12/2018 14:45

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04	SW6010C	<0.505 mg/kg dry		0.505	1	09/20/18 09:30	09/27/18 17:23	BG
Aluminum	04	SW6010C	15600 mg/kg dry		505	200	09/20/18 09:30	09/27/18 16:23	BG
Arsenic	04	SW6010C	24.1 mg/kg dry		20.2	20	09/20/18 09:30	09/27/18 16:51	BG
Barium	04	SW6010C	189 mg/kg dry		101	200	09/20/18 09:30	09/27/18 16:23	BG
Beryllium	04	SW6010C	1.04 mg/kg dry		0.202	1	09/20/18 09:30	09/27/18 17:23	BG
Calcium	04	SW6010C	30800 mg/kg dry		1010	200	09/20/18 09:30	09/27/18 16:23	BG
Cadmium	04	SW6010C	1.64 mg/kg dry		0.202	1	09/20/18 09:30	09/27/18 17:23	BG
Cobalt	04	SW6010C	6.40 mg/kg dry		4.04	20	09/20/18 09:30	09/27/18 16:51	BG
Chromium	04	SW6010C	23.0 mg/kg dry		10.1	20	09/20/18 09:30	09/27/18 16:51	BG
Copper	04	SW6010C	28.1 mg/kg dry		2.52	1	09/20/18 09:30	09/27/18 17:23	BG
Iron	04	SW6010C	17800 mg/kg dry		505	200	09/20/18 09:30	09/27/18 16:23	BG
Mercury	04	SW7471B	0.081 mg/kg dry		0.008	1	09/27/18 10:18	09/28/18 09:55	MWL
Potassium	04	SW6010C	3620 mg/kg dry		505	20	09/20/18 09:30	09/27/18 16:51	BG
Magnesium	04	SW6010C	4610 mg/kg dry		505	200	09/20/18 09:30	09/27/18 16:23	BG
Manganese	04	SW6010C	496 mg/kg dry		101	200	09/20/18 09:30	09/27/18 16:23	BG
Sodium	04	SW6010C	1760 mg/kg dry		505	20	09/20/18 09:30	09/27/18 16:51	BG
Nickel	04	SW6010C	11.9 mg/kg dry		10.1	20	09/20/18 09:30	09/27/18 16:51	BG
Lead	04	SW6010C	230 mg/kg dry		101	200	09/20/18 09:30	09/27/18 16:23	BG
Antimony	04	SW6010C	<5.05 mg/kg dry		5.05	1	09/20/18 09:30	09/27/18 17:23	BG
Selenium	04	SW6010C	<2.52 mg/kg dry		2.52	1	09/20/18 09:30	09/27/18 17:23	BG
Thallium	04	SW6010C	<2.52 mg/kg dry		2.52	1	09/20/18 09:30	09/27/18 17:23	BG
Vanadium	04	SW6010C	24.9 mg/kg dry		10.1	20	09/20/18 09:30	09/27/18 16:51	BG
Zinc	04	SW6010C	569 mg/kg dry		101	200	09/20/18 09:30	09/27/18 16:23	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	04	SW8015C	<0.11 mg/kg dry		0.11	1	09/20/18 14:51	09/20/18 14:51	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-D	Laboratory Sample ID: 1810746-04
Composite Start-End Date/Time: 09/12/2018 14:45 - 09/12/2018 14:45	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	04	SW8015C	103 %		80-120		09/20/18 14:51	09/20/18 14:51	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04RE1	SW8015C	1790 mg/kg dry		107	10	09/26/18 15:02	09/28/18 12:55	HLM
<i>Surr: Pentacosane (Surr)</i>	04RE1	SW8015C	41.6 %		40-160		09/26/18 15:02	09/28/18 12:55	HLM
TPH-Semi-Volatiles (ORO)	04	SW8015C	<10.8 mg/kg dry		10.8	1	09/26/18 08:37	09/26/18 23:25	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	04	SW8081B	<32.4 ug/kg dry		32.4	5	09/26/18 13:15	10/01/18 22:11	HLM
4,4'-DDE	04	SW8081B	<21.6 ug/kg dry		21.6	5	09/26/18 13:15	10/01/18 22:11	HLM
4,4'-DDT	04	SW8081B	<21.6 ug/kg dry		21.6	5	09/26/18 13:15	10/01/18 22:11	HLM
Aldrin	04	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:11	HLM
alpha-BHC	04	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:11	HLM
beta-BHC	04	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:11	HLM
Chlordane	04	SW8081B	<226 ug/kg dry		226	5	09/26/18 13:15	10/01/18 22:11	HLM
delta-BHC	04	SW8081B	<21.6 ug/kg dry		21.6	5	09/26/18 13:15	10/01/18 22:11	HLM
Dieldrin	04	SW8081B	<21.6 ug/kg dry		21.6	5	09/26/18 13:15	10/01/18 22:11	HLM
Endosulfan I	04	SW8081B	<21.6 ug/kg dry		21.6	5	09/26/18 13:15	10/01/18 22:11	HLM
Endosulfan II	04	SW8081B	<32.4 ug/kg dry		32.4	5	09/26/18 13:15	10/01/18 22:11	HLM
Endosulfan sulfate	04	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:11	HLM
Endrin	04	SW8081B	<21.6 ug/kg dry		21.6	5	09/26/18 13:15	10/01/18 22:11	HLM
Endrin aldehyde	04	SW8081B	<43.1 ug/kg dry		43.1	5	09/26/18 13:15	10/01/18 22:11	HLM
Endrin ketone	04	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:11	HLM
gamma-BHC (Lindane)	04	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:11	HLM
Heptachlor	04	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:11	HLM
Heptachlor epoxide	04	SW8081B	<216 ug/kg dry		216	5	09/26/18 13:15	10/01/18 22:11	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-D	Laboratory Sample ID: 1810746-04
Composite Start-End Date/Time: 09/12/2018 14:45 - 09/12/2018 14:45	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	04	SW8081B	<216 ug/kg dry		216	5	09/26/18 13:15	10/01/18 22:11	HLM
Mirex	04	SW8081B	<32.4 ug/kg dry		32.4	5	09/26/18 13:15	10/01/18 22:11	HLM
Toxaphene	04	SW8081B	<226 ug/kg dry		226	5	09/26/18 13:15	10/01/18 22:11	HLM
Surr: TCMX	04	SW8081B	75.0 %		30-105		09/26/18 13:15	10/01/18 22:11	HLM
Surr: DCB	04	SW8081B	100 %		30-105		09/26/18 13:15	10/01/18 22:11	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	04	SW8151A	114 ug/kg dry	H	12.8	4	10/02/18 12:56	10/03/18 15:51	SKS
2,4,5-TP (Silvex)	04	SW8151A	<639 ug/kg dry	H	639	4	10/02/18 12:56	10/03/18 15:51	SKS
2,4-D	04RE1	SW8151A	1950 ug/kg dry		319	100	10/02/18 12:56	10/04/18 12:07	SKS
Dinoseb	04	SW8151A	<639 ug/kg dry	H	639	4	10/02/18 12:56	10/03/18 15:51	SKS
Pentachlorophenol	04	SW8151A	<639 ug/kg dry	H	639	4	10/02/18 12:56	10/03/18 15:51	SKS
Surr: DCAA (Surr)	04	SW8151A	100 %	DS	31-87		10/02/18 12:56	10/03/18 15:51	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	04	SW7196A	<0.21 mg/kg dry		0.21	1	09/27/18 11:30	10/01/18 15:00	MWL
Percent Solids	04	SM18 2540G	92.4 %		0.10	1	09/21/18 11:17	09/21/18 11:17	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-E

Laboratory Sample ID: 1810746-05

Composite Start-End Date/Time: 09/12/2018 14:50 - 09/12/2018 14:50

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05	SW6010C	<0.525 mg/kg dry		0.525	1	09/20/18 09:30	09/27/18 17:25	BG
Aluminum	05	SW6010C	21500 mg/kg dry		525	200	09/20/18 09:30	09/27/18 16:26	BG
Arsenic	05	SW6010C	33.1 mg/kg dry		21.0	20	09/20/18 09:30	09/27/18 16:54	BG
Barium	05	SW6010C	314 mg/kg dry		105	200	09/20/18 09:30	09/27/18 16:26	BG
Beryllium	05	SW6010C	1.90 mg/kg dry		0.210	1	09/20/18 09:30	09/27/18 17:25	BG
Calcium	05	SW6010C	55900 mg/kg dry		1050	200	09/20/18 09:30	09/27/18 16:26	BG
Cadmium	05	SW6010C	2.38 mg/kg dry		0.210	1	09/20/18 09:30	09/27/18 17:25	BG
Cobalt	05	SW6010C	11.0 mg/kg dry		4.20	20	09/20/18 09:30	09/27/18 16:54	BG
Chromium	05	SW6010C	72.4 mg/kg dry		10.5	20	09/20/18 09:30	09/27/18 16:54	BG
Copper	05	SW6010C	50.7 mg/kg dry		2.63	1	09/20/18 09:30	09/27/18 17:25	BG
Iron	05	SW6010C	40200 mg/kg dry		525	200	09/20/18 09:30	09/27/18 16:26	BG
Mercury	05	SW7471B	0.080 mg/kg dry		0.009	1	09/27/18 10:18	09/28/18 09:58	MWL
Potassium	05	SW6010C	5750 mg/kg dry		5250	200	09/20/18 09:30	09/27/18 16:26	BG
Magnesium	05	SW6010C	8080 mg/kg dry		525	200	09/20/18 09:30	09/27/18 16:26	BG
Manganese	05	SW6010C	779 mg/kg dry		105	200	09/20/18 09:30	09/27/18 16:26	BG
Sodium	05	SW6010C	793 mg/kg dry		525	20	09/20/18 09:30	09/27/18 16:54	BG
Nickel	05	SW6010C	21.7 mg/kg dry		10.5	20	09/20/18 09:30	09/27/18 16:54	BG
Lead	05	SW6010C	759 mg/kg dry		105	200	09/20/18 09:30	09/27/18 16:26	BG
Antimony	05	SW6010C	<5.25 mg/kg dry		5.25	1	09/20/18 09:30	09/27/18 17:25	BG
Selenium	05	SW6010C	<2.63 mg/kg dry		2.63	1	09/20/18 09:30	09/27/18 17:25	BG
Thallium	05	SW6010C	<2.63 mg/kg dry		2.63	1	09/20/18 09:30	09/27/18 17:25	BG
Vanadium	05	SW6010C	33.5 mg/kg dry		10.5	20	09/20/18 09:30	09/27/18 16:54	BG
Zinc	05	SW6010C	391 mg/kg dry		105	200	09/20/18 09:30	09/27/18 16:26	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	05	SW8015C	0.54 mg/kg dry		0.11	1	09/20/18 15:13	09/20/18 15:13	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results	Laboratory Sample ID: 1810746-05
Sample I.D. Task 2.9 39-E	
Composite Start-End Date/Time: 09/12/2018 14:50 - 09/12/2018 14:50	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	05	SW8015C	1010 %	S	80-120		09/20/18 15:13	09/20/18 15:13	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05RE1	SW8015C	2860 mg/kg dry		1090	100	09/26/18 15:02	09/28/18 13:21	HLM
<i>Surr: Pentacosane (Surr)</i>	05RE1	SW8015C	162 %	DS	40-160		09/26/18 15:02	09/28/18 13:21	HLM
TPH-Semi-Volatiles (ORO)	05RE1	SW8015C	11100 mg/kg dry		5440	100	09/26/18 08:37	09/27/18 14:20	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	05	SW8081B	<32.5 ug/kg dry		32.5	5	09/26/18 13:15	10/01/18 22:30	HLM
4,4'-DDE	05	SW8081B	<21.7 ug/kg dry		21.7	5	09/26/18 13:15	10/01/18 22:30	HLM
4,4'-DDT	05	SW8081B	<21.7 ug/kg dry		21.7	5	09/26/18 13:15	10/01/18 22:30	HLM
Aldrin	05	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:30	HLM
alpha-BHC	05	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:30	HLM
beta-BHC	05	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:30	HLM
Chlordane	05	SW8081B	<228 ug/kg dry		228	5	09/26/18 13:15	10/01/18 22:30	HLM
delta-BHC	05	SW8081B	<21.7 ug/kg dry		21.7	5	09/26/18 13:15	10/01/18 22:30	HLM
Dieldrin	05	SW8081B	<21.7 ug/kg dry		21.7	5	09/26/18 13:15	10/01/18 22:30	HLM
Endosulfan I	05	SW8081B	<21.7 ug/kg dry		21.7	5	09/26/18 13:15	10/01/18 22:30	HLM
Endosulfan II	05	SW8081B	<32.5 ug/kg dry		32.5	5	09/26/18 13:15	10/01/18 22:30	HLM
Endosulfan sulfate	05	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:30	HLM
Endrin	05	SW8081B	<21.7 ug/kg dry		21.7	5	09/26/18 13:15	10/01/18 22:30	HLM
Endrin aldehyde	05	SW8081B	<43.3 ug/kg dry		43.3	5	09/26/18 13:15	10/01/18 22:30	HLM
Endrin ketone	05	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:30	HLM
gamma-BHC (Lindane)	05	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:30	HLM
Heptachlor	05	SW8081B	<10.8 ug/kg dry		10.8	5	09/26/18 13:15	10/01/18 22:30	HLM
Heptachlor epoxide	05	SW8081B	<217 ug/kg dry		217	5	09/26/18 13:15	10/01/18 22:30	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-E	Laboratory Sample ID: 1810746-05
Composite Start-End Date/Time: 09/12/2018 14:50 - 09/12/2018 14:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	05	SW8081B	<217 ug/kg dry		217	5	09/26/18 13:15	10/01/18 22:30	HLM
Mirex	05	SW8081B	<32.5 ug/kg dry		32.5	5	09/26/18 13:15	10/01/18 22:30	HLM
Toxaphene	05	SW8081B	<228 ug/kg dry		228	5	09/26/18 13:15	10/01/18 22:30	HLM
Surr: TCMX	05	SW8081B	125 %	DS	30-105		09/26/18 13:15	10/01/18 22:30	HLM
Surr: DCB	05	SW8081B	50.0 %		30-105		09/26/18 13:15	10/01/18 22:30	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	05RE2	SW8151A	150 ug/kg dry		33.7	10	10/02/18 12:56	10/04/18 12:42	SKS
2,4,5-TP (Silvex)	05	SW8151A	<674 ug/kg dry	H	674	4	10/02/18 12:56	10/03/18 16:09	SKS
2,4-D	05RE1	SW8151A	1870 ug/kg dry		337	100	10/02/18 12:56	10/04/18 12:24	SKS
Dinoseb	05	SW8151A	<674 ug/kg dry	H	674	4	10/02/18 12:56	10/03/18 16:09	SKS
Pentachlorophenol	05	SW8151A	<674 ug/kg dry	H	674	4	10/02/18 12:56	10/03/18 16:09	SKS
Surr: DCAA (Surr)	05	SW8151A	100 %	DS	31-87		10/02/18 12:56	10/03/18 16:09	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	05	SW7196A	1.72 mg/kg dry		0.22	1	09/27/18 11:30	10/01/18 15:00	MWL
Percent Solids	05	SM18 2540G	89.0 %		0.10	1	09/21/18 11:17	09/21/18 11:17	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-F **Laboratory Sample ID:** 1810746-06

Composite Start-End Date/Time: 09/12/2018 15:00 - 09/12/2018 15:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06	SW6010C	<0.528 mg/kg dry		0.528	1	09/20/18 09:30	09/27/18 17:28	BG
Aluminum	06	SW6010C	35000 mg/kg dry		528	200	09/20/18 09:30	09/27/18 16:36	BG
Arsenic	06	SW6010C	11.5 mg/kg dry		1.06	1	09/20/18 09:30	09/27/18 17:28	BG
Barium	06	SW6010C	290 mg/kg dry		106	200	09/20/18 09:30	09/27/18 16:36	BG
Beryllium	06	SW6010C	1.74 mg/kg dry		0.211	1	09/20/18 09:30	09/27/18 17:28	BG
Calcium	06	SW6010C	24400 mg/kg dry		1060	200	09/20/18 09:30	09/27/18 16:36	BG
Cadmium	06	SW6010C	2.00 mg/kg dry		0.211	1	09/20/18 09:30	09/27/18 17:28	BG
Cobalt	06	SW6010C	15.4 mg/kg dry		4.22	20	09/20/18 09:30	09/27/18 16:56	BG
Chromium	06	SW6010C	48.2 mg/kg dry		10.6	20	09/20/18 09:30	09/27/18 16:56	BG
Copper	06	SW6010C	30.6 mg/kg dry		2.64	1	09/20/18 09:30	09/27/18 17:28	BG
Iron	06	SW6010C	31200 mg/kg dry		528	200	09/20/18 09:30	09/27/18 16:36	BG
Mercury	06	SW7471B	0.112 mg/kg dry		0.009	1	09/27/18 10:18	09/28/18 10:00	MWL
Potassium	06	SW6010C	8880 mg/kg dry		5280	200	09/20/18 09:30	09/27/18 16:36	BG
Magnesium	06	SW6010C	7970 mg/kg dry		528	200	09/20/18 09:30	09/27/18 16:36	BG
Manganese	06	SW6010C	1070 mg/kg dry		106	200	09/20/18 09:30	09/27/18 16:36	BG
Sodium	06	SW6010C	1300 mg/kg dry		528	20	09/20/18 09:30	09/27/18 16:56	BG
Nickel	06	SW6010C	17.4 mg/kg dry		10.6	20	09/20/18 09:30	09/27/18 16:56	BG
Lead	06	SW6010C	951 mg/kg dry		106	200	09/20/18 09:30	09/27/18 16:36	BG
Antimony	06	SW6010C	<5.28 mg/kg dry		5.28	1	09/20/18 09:30	09/27/18 17:28	BG
Selenium	06	SW6010C	<2.64 mg/kg dry		2.64	1	09/20/18 09:30	09/27/18 17:28	BG
Thallium	06	SW6010C	<2.64 mg/kg dry		2.64	1	09/20/18 09:30	09/27/18 17:28	BG
Vanadium	06	SW6010C	39.9 mg/kg dry		10.6	20	09/20/18 09:30	09/27/18 16:56	BG
Zinc	06	SW6010C	425 mg/kg dry		10.6	20	09/20/18 09:30	09/27/18 16:56	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	06	SW8015C	<0.11 mg/kg dry	0.11	1	09/20/18 15:59	09/20/18 15:59	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-F	Laboratory Sample ID: 1810746-06
Composite Start-End Date/Time: 09/12/2018 15:00 - 09/12/2018 15:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	06	SW8015C	137 %	S	80-120		09/20/18 15:59	09/20/18 15:59	DFH
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	06	SW8015C	542 mg/kg dry		11.0	1	09/26/18 15:02	09/27/18 18:20	HLM
<i>Surr: Pentacosane (Surr)</i>	06	SW8015C	42.7 %		40-160		09/26/18 15:02	09/27/18 18:20	HLM
TPH-Semi-Volatiles (ORO)	06RE1	SW8015C	7200 mg/kg dry		529	10	09/26/18 08:37	09/27/18 14:45	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	06	SW8081B	<33.5 ug/kg dry		33.5	5	09/26/18 13:15	10/01/18 22:48	HLM
4,4'-DDE	06	SW8081B	167 ug/kg dry		22.3	5	09/26/18 13:15	10/01/18 22:48	HLM
4,4'-DDT	06	SW8081B	93.0 ug/kg dry		22.3	5	09/26/18 13:15	10/01/18 22:48	HLM
Aldrin	06	SW8081B	<11.2 ug/kg dry		11.2	5	09/26/18 13:15	10/01/18 22:48	HLM
alpha-BHC	06	SW8081B	<11.2 ug/kg dry		11.2	5	09/26/18 13:15	10/01/18 22:48	HLM
beta-BHC	06	SW8081B	<11.2 ug/kg dry		11.2	5	09/26/18 13:15	10/01/18 22:48	HLM
Chlordane	06	SW8081B	<234 ug/kg dry		234	5	09/26/18 13:15	10/01/18 22:48	HLM
delta-BHC	06	SW8081B	<22.3 ug/kg dry		22.3	5	09/26/18 13:15	10/01/18 22:48	HLM
Dieldrin	06	SW8081B	<22.3 ug/kg dry		22.3	5	09/26/18 13:15	10/01/18 22:48	HLM
Endosulfan I	06	SW8081B	<22.3 ug/kg dry		22.3	5	09/26/18 13:15	10/01/18 22:48	HLM
Endosulfan II	06	SW8081B	<33.5 ug/kg dry		33.5	5	09/26/18 13:15	10/01/18 22:48	HLM
Endosulfan sulfate	06	SW8081B	<11.2 ug/kg dry		11.2	5	09/26/18 13:15	10/01/18 22:48	HLM
Endrin	06	SW8081B	<22.3 ug/kg dry		22.3	5	09/26/18 13:15	10/01/18 22:48	HLM
Endrin aldehyde	06	SW8081B	<44.6 ug/kg dry		44.6	5	09/26/18 13:15	10/01/18 22:48	HLM
Endrin ketone	06	SW8081B	<11.2 ug/kg dry		11.2	5	09/26/18 13:15	10/01/18 22:48	HLM
gamma-BHC (Lindane)	06	SW8081B	<11.2 ug/kg dry		11.2	5	09/26/18 13:15	10/01/18 22:48	HLM
Heptachlor	06	SW8081B	<11.2 ug/kg dry		11.2	5	09/26/18 13:15	10/01/18 22:48	HLM
Heptachlor epoxide	06	SW8081B	<223 ug/kg dry		223	5	09/26/18 13:15	10/01/18 22:48	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1810746

Analytical Results

Sample I.D. Task 2.9 39-F	Laboratory Sample ID: 1810746-06
Composite Start-End Date/Time: 09/12/2018 15:00 - 09/12/2018 15:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Methoxychlor	06	SW8081B	<223 ug/kg dry		223	5	09/26/18 13:15	10/01/18 22:48	HLM
Mirex	06	SW8081B	<33.5 ug/kg dry		33.5	5	09/26/18 13:15	10/01/18 22:48	HLM
Toxaphene	06	SW8081B	<234 ug/kg dry		234	5	09/26/18 13:15	10/01/18 22:48	HLM
Surr: TCMX	06	SW8081B	50.0 %		30-105		09/26/18 13:15	10/01/18 22:48	HLM
Surr: DCB	06	SW8081B	50.0 %		30-105		09/26/18 13:15	10/01/18 22:48	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	06RE1	SW8151A	3730 ug/kg dry		3360	1000	10/02/18 12:56	10/04/18 13:00	SKS
2,4,5-TP (Silvex)	06	SW8151A	<672 ug/kg dry	H	672	4	10/02/18 12:56	10/03/18 16:27	SKS
2,4-D	06RE2	SW8151A	84000 ug/kg dry		16800	5000	10/02/18 12:56	10/04/18 14:23	SKS
Dinoseb	06	SW8151A	<672 ug/kg dry	H	672	4	10/02/18 12:56	10/03/18 16:27	SKS
Pentachlorophenol	06	SW8151A	<672 ug/kg dry	H	672	4	10/02/18 12:56	10/03/18 16:27	SKS
Surr: DCAA (Surr)	06	SW8151A	80.0 %	S	31-87		10/02/18 12:56	10/03/18 16:27	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	06	SW7196A	<0.27 mg/kg dry		0.27	1	09/27/18 11:30	10/01/18 15:00	MWL
Percent Solids	06	SM18 2540G	88.2 %		0.10	1	09/21/18 11:17	09/21/18 11:17	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/4/2018 17:08

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Analytical Summary

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Wet Chemistry Analysis

Preparation Method: No Prep Wet Chem

18I0746-01	1.00 g / 1.00 mL	SM18 2540G	BBI0638	SBI0585	
18I0746-02	1.00 g / 1.00 mL	SM18 2540G	BBI0638	SBI0585	
18I0746-03	1.00 g / 1.00 mL	SM18 2540G	BBI0638	SBI0585	
18I0746-04	1.00 g / 1.00 mL	SM18 2540G	BBI0638	SBI0585	
18I0746-05	1.00 g / 1.00 mL	SM18 2540G	BBI0638	SBI0585	
18I0746-06	1.00 g / 1.00 mL	SM18 2540G	BBI0638	SBI0585	

Wet Chemistry Analysis

Preparation Method: No Prep Wet Chem

18I0746-01	2.51 g / 100 mL	SW7196A	BBJ0031	SBJ0029	AJ80006
18I0746-02	2.53 g / 100 mL	SW7196A	BBJ0031	SBJ0029	AJ80006
18I0746-03	2.55 g / 100 mL	SW7196A	BBJ0031	SBJ0029	AJ80006
18I0746-04	2.53 g / 100 mL	SW7196A	BBJ0031	SBJ0029	AJ80006
18I0746-05	2.55 g / 100 mL	SW7196A	BBJ0031	SBJ0029	AJ80006
18I0746-06	2.11 g / 100 mL	SW7196A	BBJ0031	SBJ0029	AJ80006

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method: SW3050B

18I0746-01	1.05 g / 50.0 mL	SW6010C	BBI0576	SBI0775	AI80115
18I0746-02	1.04 g / 50.0 mL	SW6010C	BBI0576	SBI0775	AI80115
18I0746-03	1.07 g / 50.0 mL	SW6010C	BBI0576	SBI0775	AI80115
18I0746-04	1.07 g / 50.0 mL	SW6010C	BBI0576	SBI0775	AI80115
18I0746-05	1.07 g / 50.0 mL	SW6010C	BBI0576	SBI0775	AI80115
18I0746-06	1.08 g / 50.0 mL	SW6010C	BBI0576	SBI0775	AI80115

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Organochlorine Herbicides by GC/ECD

Preparation Method: SW3510C

18I0746-01	30.1 g / 5.00 mL	SW8151A	BBI0701	SBJ0125	AG80138
18I0746-01RE1	30.1 g / 5.00 mL	SW8151A	BBI0701	SBJ0145	AG80138
18I0746-02	31.1 g / 5.00 mL	SW8151A	BBI0701	SBJ0125	AG80138



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I0746-03	31.2 g / 5.00 mL	SW8151A	BBI0701	SBJ0125	AG80138
18I0746-03RE1	31.2 g / 5.00 mL	SW8151A	BBI0701	SBJ0145	AG80138
18I0746-03RE2	31.2 g / 5.00 mL	SW8151A	BBI0701	SBJ0145	AG80138
18I0746-04	30.5 g / 5.00 mL	SW8151A	BBI0701	SBJ0125	AG80138
18I0746-04RE1	30.5 g / 5.00 mL	SW8151A	BBI0701	SBJ0145	AG80138
18I0746-05	30.0 g / 5.00 mL	SW8151A	BBI0701	SBJ0125	AG80138
18I0746-05RE1	30.0 g / 5.00 mL	SW8151A	BBI0701	SBJ0145	AG80138
18I0746-05RE2	30.0 g / 5.00 mL	SW8151A	BBI0701	SBJ0145	AG80138
18I0746-06	30.4 g / 5.00 mL	SW8151A	BBI0701	SBJ0125	AG80138
18I0746-06RE1	30.4 g / 5.00 mL	SW8151A	BBI0701	SBJ0145	AG80138
18I0746-06RE2	30.4 g / 5.00 mL	SW8151A	BBI0701	SBJ0145	AG80138

Organochlorine Pesticides and PCBs by GC/ECD	Preparation Method:	SW3510C
18I0746-01	30.2 g / 5.00 mL	SW8081B
18I0746-02	30.4 g / 5.00 mL	SW8081B
18I0746-03	30.2 g / 5.00 mL	SW8081B
18I0746-04	30.1 g / 5.00 mL	SW8081B
18I0746-05	31.1 g / 5.00 mL	SW8081B
18I0746-06	30.5 g / 5.00 mL	SW8081B

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Hydrocarbons by GC		Preparation Method:		SW3550C	
18I0746-01	54.1 g / 5.00 mL	SW8015C	BBI0753	SBI0735	AH80136
18I0746-01RE1	54.1 g / 5.00 mL	SW8015C	BBI0753	SBI0745	AH80136
18I0746-02	51.8 g / 1.00 mL	SW8015C	BBI0753	SBI0735	AH80136
18I0746-02RE1	51.8 g / 1.00 mL	SW8015C	BBI0753	SBI0745	AH80136
18I0746-03	54.4 g / 5.00 mL	SW8015C	BBI0753	SBI0735	AH80136
18I0746-03RE1	54.4 g / 5.00 mL	SW8015C	BBI0753	SBI0745	AH80136
18I0746-04	50.2 g / 1.00 mL	SW8015C	BBI0753	SBI0735	AH80136
18I0746-05	51.6 g / 5.00 mL	SW8015C	BBI0753	SBI0735	AH80136
18I0746-05RE1	51.6 g / 5.00 mL	SW8015C	BBI0753	SBI0745	AH80136
18I0746-06	53.6 g / 5.00 mL	SW8015C	BBI0753	SBI0735	AH80136
18I0746-06RE1	53.6 g / 5.00 mL	SW8015C	BBI0753	SBI0745	AH80136

Semivolatile Hydrocarbons by GC	Preparation Method:	SW3550C
18I0746-01	51.2 g / 1.00 mL	SW8015C



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
1810746-01RE1	51.2 g / 1.00 mL	SW8015C	BB10790	SBI0792	AH80058
1810746-02	51.3 g / 1.00 mL	SW8015C	BB10790	SBI0774	AH80058
1810746-02RE1	51.3 g / 1.00 mL	SW8015C	BB10790	SBI0792	AH80058
1810746-03	51.0 g / 1.00 mL	SW8015C	BB10790	SBI0774	AH80058
1810746-03RE1	51.0 g / 1.00 mL	SW8015C	BB10790	SBI0792	AH80058
1810746-04	50.4 g / 1.00 mL	SW8015C	BB10790	SBI0774	AH80058
1810746-04RE1	50.4 g / 1.00 mL	SW8015C	BB10790	SBI0792	AH80058
1810746-05	51.5 g / 1.00 mL	SW8015C	BB10790	SBI0774	AH80058
1810746-05RE1	51.5 g / 1.00 mL	SW8015C	BB10790	SBI0792	AH80058
1810746-06	51.4 g / 1.00 mL	SW8015C	BB10790	SBI0774	AH80058

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC		Preparation Method: SW5030B			
1810746-01	5.01 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021
1810746-01RE1	1.00 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021
1810746-02	5.00 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021
1810746-02RE1	1.00 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021
1810746-03	5.00 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021
1810746-03RE1	1.00 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021
1810746-04	5.01 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021
1810746-05	5.00 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021
1810746-06	5.00 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021
1810746-06RE1	1.00 g / 5.00 mL	SW8015C	BB10595	SBI0567	AF80021

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW7471B			
1810746-01	0.545 g / 20.0 mL	SW7471B	BB10763	SBI0781	AI80121
1810746-02	0.528 g / 20.0 mL	SW7471B	BB10763	SBI0781	AI80121
1810746-03	0.513 g / 20.0 mL	SW7471B	BB10763	SBI0781	AI80121
1810746-04	0.512 g / 20.0 mL	SW7471B	BB10763	SBI0781	AI80121
1810746-05	0.512 g / 20.0 mL	SW7471B	BB10763	SBI0781	AI80121
1810746-06	0.508 g / 20.0 mL	SW7471B	BB10763	SBI0781	AI80121



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0576 - SW3050B

Blank (BBI0576-BLK1)

Prepared: 09/20/2018 Analyzed: 09/27/2018

Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet
Copper	<2.50 mg/kg wet	2.50	mg/kg wet
Silver	<0.500 mg/kg wet	0.500	mg/kg wet
Aluminum	<2.50 mg/kg wet	2.50	mg/kg wet
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet
Lead	<0.500 mg/kg wet	0.500	mg/kg wet
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet
Potassium	<25.0 mg/kg wet	25.0	mg/kg wet
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet
Calcium	<5.00 mg/kg wet	5.00	mg/kg wet
Iron	<2.50 mg/kg wet	2.50	mg/kg wet
Magnesium	<2.50 mg/kg wet	2.50	mg/kg wet
Barium	<0.500 mg/kg wet	0.500	mg/kg wet
Sodium	<25.0 mg/kg wet	25.0	mg/kg wet
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet
Manganese	<0.500 mg/kg wet	0.500	mg/kg wet
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet
Nickel	<0.500 mg/kg wet	0.500	mg/kg wet
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet

LCS (BBI0576-BS1)

Prepared: 09/20/2018 Analyzed: 09/27/2018

Selenium	87.8 mg/kg wet	2.50	mg/kg wet	96.0	mg/kg wet	91.4	80-120
Potassium	248 mg/kg wet	25.0	mg/kg wet	240	mg/kg wet	104	80-120
Zinc	93.7 mg/kg wet	0.500	mg/kg wet	96.0	mg/kg wet	97.7	80-120
Aluminum	102 mg/kg wet	2.50	mg/kg wet	96.0	mg/kg wet	106	80-120
Cadmium	92.9 mg/kg wet	0.200	mg/kg wet	96.0	mg/kg wet	96.8	80-120
Calcium	96.7 mg/kg wet	5.00	mg/kg wet	96.0	mg/kg wet	101	80-120
Antimony	93.3 mg/kg wet	5.00	mg/kg wet	96.0	mg/kg wet	97.3	80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0576 - SW3050B

LCS (BBI0576-BS1)

Prepared: 09/20/2018 Analyzed: 09/27/2018

Iron	94.6 mg/kg wet	2.50	mg/kg wet	96.0	mg/kg wet	98.6	80-120			
Barium	98.3 mg/kg wet	0.500	mg/kg wet	96.0	mg/kg wet	102	80-120			
Magnesium	95.6 mg/kg wet	2.50	mg/kg wet	96.0	mg/kg wet	99.6	80-120			
Vanadium	95.3 mg/kg wet	0.500	mg/kg wet	96.0	mg/kg wet	99.3	80-120			
Lead	93.7 mg/kg wet	0.500	mg/kg wet	96.0	mg/kg wet	97.6	80-120			
Chromium	96.9 mg/kg wet	0.500	mg/kg wet	96.0	mg/kg wet	101	80-120			
Cobalt	95.8 mg/kg wet	0.200	mg/kg wet	96.0	mg/kg wet	99.9	80-120			
Thallium	87.6 mg/kg wet	2.50	mg/kg wet	96.0	mg/kg wet	91.3	80-120			
Arsenic	90.5 mg/kg wet	1.00	mg/kg wet	96.0	mg/kg wet	94.3	80-120			
Nickel	94.4 mg/kg wet	0.500	mg/kg wet	96.0	mg/kg wet	98.3	80-120			
Sodium	251 mg/kg wet	25.0	mg/kg wet	240	mg/kg wet	105	80-120			
Copper	97.2 mg/kg wet	2.50	mg/kg wet	96.0	mg/kg wet	101	80-120			
Beryllium	91.3 mg/kg wet	0.200	mg/kg wet	96.0	mg/kg wet	95.2	80-120			
Manganese	101 mg/kg wet	0.500	mg/kg wet	96.0	mg/kg wet	105	80-120			
Silver	4.69 mg/kg wet	0.500	mg/kg wet	4.80	mg/kg wet	97.7	80-120			

LCS Dup (BBI0576-BSD1)

Prepared: 09/20/2018 Analyzed: 09/27/2018

Potassium	246 mg/kg wet	25.0	mg/kg wet	231	mg/kg wet	107	80-120	0.849	20	
Vanadium	94.2 mg/kg wet	0.500	mg/kg wet	92.3	mg/kg wet	102	80-120	1.23	20	
Lead	91.9 mg/kg wet	0.500	mg/kg wet	92.3	mg/kg wet	99.5	80-120	1.92	20	
Copper	94.7 mg/kg wet	2.50	mg/kg wet	92.3	mg/kg wet	103	80-120	2.65	20	
Barium	97.5 mg/kg wet	0.500	mg/kg wet	92.3	mg/kg wet	106	80-120	0.781	20	
Antimony	91.8 mg/kg wet	5.00	mg/kg wet	92.3	mg/kg wet	99.4	80-120	1.66	20	
Selenium	86.3 mg/kg wet	2.50	mg/kg wet	92.3	mg/kg wet	93.4	80-120	1.70	20	
Manganese	98.2 mg/kg wet	0.500	mg/kg wet	92.3	mg/kg wet	106	80-120	2.82	20	
Calcium	94.6 mg/kg wet	5.00	mg/kg wet	92.3	mg/kg wet	103	80-120	2.10	20	
Zinc	92.3 mg/kg wet	0.500	mg/kg wet	92.3	mg/kg wet	100	80-120	1.50	20	
Nickel	92.3 mg/kg wet	0.500	mg/kg wet	92.3	mg/kg wet	100	80-120	2.24	20	
Thallium	85.6 mg/kg wet	2.50	mg/kg wet	92.3	mg/kg wet	92.8	80-120	2.24	20	
Cobalt	94.1 mg/kg wet	0.200	mg/kg wet	92.3	mg/kg wet	102	80-120	1.85	20	
Iron	92.9 mg/kg wet	2.50	mg/kg wet	92.3	mg/kg wet	101	80-120	1.86	20	
Arsenic	88.6 mg/kg wet	1.00	mg/kg wet	92.3	mg/kg wet	96.0	80-120	2.11	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0576 - SW3050B

LCS Dup (BBI0576-BSD1)

Prepared: 09/20/2018 Analyzed: 09/27/2018

Chromium	94.9 mg/kg wet	0.500	mg/kg wet	92.3	mg/kg wet	103	80-120	2.11	20	
Beryllium	89.6 mg/kg wet	0.200	mg/kg wet	92.3	mg/kg wet	97.0	80-120	1.95	20	
Aluminum	99.6 mg/kg wet	2.50	mg/kg wet	92.3	mg/kg wet	108	80-120	2.14	20	
Cadmium	90.8 mg/kg wet	0.200	mg/kg wet	92.3	mg/kg wet	98.4	80-120	2.19	20	
Silver	4.75 mg/kg wet	0.500	mg/kg wet	4.62	mg/kg wet	103	80-120	1.33	20	
Magnesium	92.9 mg/kg wet	2.50	mg/kg wet	92.3	mg/kg wet	101	80-120	2.90	20	
Sodium	248 mg/kg wet	25.0	mg/kg wet	231	mg/kg wet	107	80-120	1.17	20	

Matrix Spike (BBI0576-MS1)

Source: 18I0746-01

Prepared: 09/20/2018 Analyzed: 09/27/2018

Sodium	7970 mg/kg dry	4860	mg/kg dry	243	7710 mg/kg dry	109	75-125			
Nickel	112 mg/kg dry	9.73	mg/kg dry	97.3	17.4 mg/kg dry	97.2	75-125			
Lead	1420 mg/kg dry	97.3	mg/kg dry	97.3	1520 mg/kg dry	-99.5	75-125			M2
Magnesium	14100 mg/kg dry	486	mg/kg dry	97.3	11700 mg/kg dry	2440	75-125			M2
Potassium	4500 mg/kg dry	486	mg/kg dry	243	4080 mg/kg dry	174	75-125			M2
Iron	29700 mg/kg dry	486	mg/kg dry	97.3	25800 mg/kg dry	4090	75-125			M2
Manganese	642 mg/kg dry	97.3	mg/kg dry	97.3	337 mg/kg dry	313	75-125			M2
Antimony	14.8 mg/kg dry	5.00	mg/kg dry	97.3	<5.00 mg/kg dry	15.2	75-125			M
Chromium	119 mg/kg dry	9.73	mg/kg dry	97.3	19.4 mg/kg dry	103	75-125			
Thallium	68.9 mg/kg dry	2.50	mg/kg dry	97.3	<2.50 mg/kg dry	70.8	75-125			M
Cobalt	104 mg/kg dry	3.89	mg/kg dry	97.3	8.76 mg/kg dry	98.2	75-125			
Cadmium	81.1 mg/kg dry	0.200	mg/kg dry	97.3	1.84 mg/kg dry	81.5	75-125			
Calcium	74200 mg/kg dry	973	mg/kg dry	97.3	71100 mg/kg dry	3180	75-125			M2
Beryllium	97.7 mg/kg dry	0.200	mg/kg dry	97.3	1.05 mg/kg dry	99.4	75-125			
Barium	395 mg/kg dry	97.3	mg/kg dry	97.3	236 mg/kg dry	163	75-125			M2
Arsenic	89.3 mg/kg dry	1.00	mg/kg dry	97.3	2.86 mg/kg dry	88.9	75-125			
Aluminum	29900 mg/kg dry	486	mg/kg dry	97.3	20200 mg/kg dry	9920	75-125			M2
Silver	<0.500 mg/kg dry	0.500	mg/kg dry	4.86	<0.500 mg/kg dry		75-125			M
Copper	120 mg/kg dry	2.50	mg/kg dry	97.3	31.9 mg/kg dry	90.1	75-125			
Vanadium	130 mg/kg dry	9.73	mg/kg dry	97.3	30.4 mg/kg dry	102	75-125			
Zinc	820 mg/kg dry	97.3	mg/kg dry	97.3	600 mg/kg dry	226	75-125			M2
Selenium	79.6 mg/kg dry	2.50	mg/kg dry	97.3	<2.50 mg/kg dry	81.8	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0576 - SW3050B

Matrix Spike Dup (BBI0576-MSD1)	Source: 1810746-01			Prepared: 09/20/2018 Analyzed: 09/27/2018						
Beryllium	99.5 mg/kg dry	0.200	mg/kg dry	98.9	1.05 mg/kg dry	99.5	75-125	1.75	20	
Vanadium	131 mg/kg dry	9.89	mg/kg dry	98.9	30.4 mg/kg dry	102	75-125	1.20	20	
Magnesium	9460 mg/kg dry	495	mg/kg dry	98.9	11700 mg/kg dry	334	75-125	39.5	20	M2, P
Lead	1850 mg/kg dry	98.9	mg/kg dry	98.9	1520 mg/kg dry	334	75-125	26.1	20	M2, P
Iron	27700 mg/kg dry	495	mg/kg dry	98.9	25800 mg/kg dry	1990	75-125	6.96	20	M2
Selenium	81.5 mg/kg dry	2.50	mg/kg dry	98.9	<2.50 mg/kg dry	82.4	75-125	2.44	20	
Barium	367 mg/kg dry	98.9	mg/kg dry	98.9	236 mg/kg dry	132	75-125	7.23	20	M2
Chromium	121 mg/kg dry	9.89	mg/kg dry	98.9	19.4 mg/kg dry	103	75-125	1.57	20	
Cadmium	83.6 mg/kg dry	0.200	mg/kg dry	98.9	1.84 mg/kg dry	82.7	75-125	3.10	20	
Antimony	16.1 mg/kg dry	5.00	mg/kg dry	98.9	<5.00 mg/kg dry	16.3	75-125	8.97	20	M
Copper	124 mg/kg dry	2.50	mg/kg dry	98.9	31.9 mg/kg dry	93.1	75-125	3.67	20	
Zinc	669 mg/kg dry	98.9	mg/kg dry	98.9	600 mg/kg dry	69.9	75-125	20.3	20	M2, P
Nickel	110 mg/kg dry	9.89	mg/kg dry	98.9	17.4 mg/kg dry	93.2	75-125	2.12	20	
Thallium	70.5 mg/kg dry	2.50	mg/kg dry	98.9	<2.50 mg/kg dry	71.3	75-125	2.30	20	M
Arsenic	91.4 mg/kg dry	1.00	mg/kg dry	98.9	2.86 mg/kg dry	89.5	75-125	2.29	20	
Aluminum	28900 mg/kg dry	495	mg/kg dry	98.9	20200 mg/kg dry	8840	75-125	3.07	20	M2
Manganese	474 mg/kg dry	98.9	mg/kg dry	98.9	337 mg/kg dry	138	75-125	30.1	20	M2, P
Silver	<0.500 mg/kg dry	0.500	mg/kg dry	4.95	<0.500 mg/kg dry		75-125		20	M
Cobalt	104 mg/kg dry	3.96	mg/kg dry	98.9	8.76 mg/kg dry	96.4	75-125	0.147	20	
Potassium	4780 mg/kg dry	495	mg/kg dry	247	4080 mg/kg dry	284	75-125	6.06	20	M2
Sodium	12400 mg/kg dry	4950	mg/kg dry	247	7710 mg/kg dry	1900	75-125	43.5	20	M2, P
Calcium	58300 mg/kg dry	989	mg/kg dry	98.9	71100 mg/kg dry	12900	75-125	24.0	20	M2, P

Batch BBI0763 - SW7471B

Blank (BBI0763-BLK1)	Prepared: 09/27/2018 Analyzed: 09/28/2018									
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/4/2018 17:08
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0763 - SW7471B

LCS (BBI0763-BS1)

Prepared: 09/27/2018 Analyzed: 09/28/2018

Mercury	0.089 mg/kg wet	0.008	mg/kg wet	0.0958	mg/kg wet	93.3	80-120			
---------	-----------------	-------	-----------	--------	-----------	------	--------	--	--	--

LCS Dup (BBI0763-BSD1)

Prepared: 09/27/2018 Analyzed: 09/28/2018

Mercury	0.093 mg/kg wet	0.008	mg/kg wet	0.0978	mg/kg wet	94.6	80-120	3.53	20	
---------	-----------------	-------	-----------	--------	-----------	------	--------	------	----	--

Matrix Spike (BBI0763-MS1)

Source: 18I0746-01

Prepared: 09/27/2018 Analyzed: 09/28/2018

Mercury	0.135 mg/kg dry	0.008	mg/kg dry	0.0974	0.036 mg/kg dry	101	80-120			
---------	-----------------	-------	-----------	--------	-----------------	-----	--------	--	--	--

Matrix Spike Dup (BBI0763-MSD1)

Source: 18I0746-01

Prepared: 09/27/2018 Analyzed: 09/28/2018

Mercury	0.129 mg/kg dry	0.008	mg/kg dry	0.101	0.036 mg/kg dry	92.0	80-120	4.31	20	
---------	-----------------	-------	-----------	-------	-----------------	------	--------	------	----	--



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0595 - SW5030B

Blank (BBI0595-BLK1)

Prepared & Analyzed: 09/20/2018

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet							
Surr: 2,5-Dibromotoluene (Surr FID)	99.2		ug/L	100		99.2	80-120			

LCS (BBI0595-BS1)

Prepared & Analyzed: 09/20/2018

TPH-Volatiles (GRO)	0.97 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	97.0	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	107		ug/L	100	ug/L	107	80-120			

Matrix Spike (BBI0595-MS1)

Source: 18I0771-01

Prepared & Analyzed: 09/20/2018

TPH-Volatiles (GRO)	0.44 mg/kg dry	0.10	mg/kg dry	1.01	<0.10 mg/kg dry	43.5	70-130			M
Surr: 2,5-Dibromotoluene (Surr FID)	478		ug/L	100	ug/L	478	80-120			S

Matrix Spike Dup (BBI0595-MSD1)

Source: 18I0771-01

Prepared & Analyzed: 09/20/2018

TPH-Volatiles (GRO)	0.31 mg/kg dry	0.10	mg/kg dry	1.01	<0.10 mg/kg dry	30.3	70-130	35.7	20	M, P
Surr: 2,5-Dibromotoluene (Surr FID)	489		ug/L	100	ug/L	489	80-120			S



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0753 - SW3550C

Blank (BBI0753-BLK1)						Prepared & Analyzed: 09/26/2018				
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg wet	10.0	mg/kg wet							
LCS (BBI0753-BS1)						Prepared & Analyzed: 09/26/2018				
TPH-Semi-Volatiles (ORO)	53.6 mg/kg wet	10.0	mg/kg wet	95.4	mg/kg wet	56.1	40-160			
Matrix Spike (BBI0753-MS2)						Source: 18I0647-02 Prepared: 09/26/2018 Analyzed: 09/27/2018				
TPH-Semi-Volatiles (ORO)	70.6 mg/kg dry	14.1	mg/kg dry	141	<14.1 mg/kg dry	50.1	40-160			
Matrix Spike (BBI0753-MS3)						Source: 18I0746-01RE1 Prepared: 09/26/2018 Analyzed: 09/27/2018				
TPH-Semi-Volatiles (ORO)	6920 mg/kg dry	500	mg/kg dry	99.9	13700 mg/kg dry-6810	40-160				M2
Matrix Spike Dup (BBI0753-MSD2)						Source: 18I0647-02 Prepared: 09/26/2018 Analyzed: 09/27/2018				
TPH-Semi-Volatiles (ORO)	74.5 mg/kg dry	14.1	mg/kg dry	141	<14.1 mg/kg dry	52.8	40-160	5.33	20	
Matrix Spike Dup (BBI0753-MSD3)						Source: 18I0746-01RE1 Prepared: 09/26/2018 Analyzed: 09/27/2018				
TPH-Semi-Volatiles (ORO)	6660 mg/kg dry	523	mg/kg dry	105	13700 mg/kg dry-6750	40-160		3.88	20	M2

Batch BBI0790 - SW3550C

Blank (BBI0790-BLK1)						Prepared: 09/26/2018 Analyzed: 09/27/2018				
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet							
<hr style="border-top: 1px dashed #000;"/>										
Surr: Pentacosane (Surr)	3.10		mg/kg wet	5.01		61.9	40-160			
LCS (BBI0790-BS1)						Prepared: 09/26/2018 Analyzed: 09/27/2018				
TPH-Semi-Volatiles (DRO)	79.2 mg/kg wet	10.0	mg/kg wet	98.4	mg/kg wet	80.5	40-160			
<hr style="border-top: 1px dashed #000;"/>										
Surr: Pentacosane (Surr)	3.01		mg/kg wet	4.96	mg/kg wet	60.7	40-160			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/4/2018 17:08
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0790 - SW3550C

Matrix Spike (BBI0790-MS1)

Source: 18I0647-02

Prepared: 09/26/2018 Analyzed: 09/27/2018

TPH-Semi-Volatiles (DRO)	104 mg/kg dry	13.7	mg/kg dry	137	<13.7 mg/kg dry	76.1	40-160			
<i>Surr: Pentacosane (Surr)</i>	4.52		mg/kg dry	6.89	mg/kg dry	65.5	40-160			

Matrix Spike Dup (BBI0790-MSD1)

Source: 18I0647-02

Prepared: 09/26/2018 Analyzed: 09/27/2018

TPH-Semi-Volatiles (DRO)	109 mg/kg dry	13.6	mg/kg dry	136	<13.6 mg/kg dry	80.4	40-160	4.69	20	
<i>Surr: Pentacosane (Surr)</i>	4.73		mg/kg dry	6.84	mg/kg dry	69.2	40-160			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0785 - SW3510C

Blank (BBI0785-BLK1)

Prepared: 09/26/2018 Analyzed: 10/01/2018

4,4'-DDD	<6.00 ug/kg wet	6.00	ug/kg wet
4,4'-DDE	<4.00 ug/kg wet	4.00	ug/kg wet
4,4'-DDT	<4.00 ug/kg wet	4.00	ug/kg wet
Aldrin	<2.00 ug/kg wet	2.00	ug/kg wet
alpha-BHC	<2.00 ug/kg wet	2.00	ug/kg wet
beta-BHC	<2.00 ug/kg wet	2.00	ug/kg wet
Chlordane	<42.0 ug/kg wet	42.0	ug/kg wet
delta-BHC	<4.00 ug/kg wet	4.00	ug/kg wet
Dieldrin	<4.00 ug/kg wet	4.00	ug/kg wet
Endosulfan I	<4.00 ug/kg wet	4.00	ug/kg wet
Endosulfan II	<6.00 ug/kg wet	6.00	ug/kg wet
Endosulfan sulfate	<2.00 ug/kg wet	2.00	ug/kg wet
Endrin	<4.00 ug/kg wet	4.00	ug/kg wet
Endrin aldehyde	<8.00 ug/kg wet	8.00	ug/kg wet
Endrin ketone	<2.00 ug/kg wet	2.00	ug/kg wet
gamma-BHC (Lindane)	<2.00 ug/kg wet	2.00	ug/kg wet
Heptachlor	<2.00 ug/kg wet	2.00	ug/kg wet
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet
Mirex	<6.00 ug/kg wet	6.00	ug/kg wet
Toxaphene	<42.0 ug/kg wet	42.0	ug/kg wet

Surr: TCMX	16.6	ug/kg wet	33.1	50.0	30-105
Surr: DCB	28.1	ug/kg wet	33.1	85.0	30-105

LCS (BBI0785-BS1)

Prepared: 09/26/2018 Analyzed: 10/01/2018

4,4'-DDD	16.4 ug/kg wet	6.00	ug/kg wet	16.4	ug/kg wet	100	23-134
4,4'-DDE	13.2 ug/kg wet	4.00	ug/kg wet	16.4	ug/kg wet	80.0	23-134
4,4'-DDT	13.2 ug/kg wet	4.00	ug/kg wet	16.4	ug/kg wet	80.0	23-134
Aldrin	9.87 ug/kg wet	2.00	ug/kg wet	16.4	ug/kg wet	60.0	23-134
alpha-BHC	9.87 ug/kg wet	2.00	ug/kg wet	16.4	ug/kg wet	60.0	23-134
beta-BHC	14.8 ug/kg wet	2.00	ug/kg wet	16.4	ug/kg wet	90.0	23-134



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0785 - SW3510C

LCS (BBI0785-BS1)

Prepared: 09/26/2018 Analyzed: 10/01/2018

delta-BHC	14.8 ug/kg wet	4.00	ug/kg wet	16.4	ug/kg wet	90.0	23-134		
Dieldrin	14.8 ug/kg wet	4.00	ug/kg wet	16.4	ug/kg wet	90.0	23-134		
Endosulfan I	14.8 ug/kg wet	4.00	ug/kg wet	16.4	ug/kg wet	90.0	23-134		
Endosulfan II	14.8 ug/kg wet	6.00	ug/kg wet	16.4	ug/kg wet	90.0	23-134		
Endosulfan sulfate	14.8 ug/kg wet	2.00	ug/kg wet	16.4	ug/kg wet	90.0	23-134		
Endrin	16.4 ug/kg wet	4.00	ug/kg wet	16.4	ug/kg wet	100	23-134		
Endrin aldehyde	9.87 ug/kg wet	8.00	ug/kg wet	16.4	ug/kg wet	60.0	23-134		
Endrin ketone	16.4 ug/kg wet	2.00	ug/kg wet	16.4	ug/kg wet	100	23-134		
gamma-BHC (Lindane)	11.5 ug/kg wet	2.00	ug/kg wet	16.4	ug/kg wet	70.0	23-134		
Heptachlor	11.5 ug/kg wet	2.00	ug/kg wet	16.4	ug/kg wet	70.0	23-134		
Heptachlor epoxide	<40.0 ug/kg wet	40.0	ug/kg wet	16.4	ug/kg wet	80.0	23-134		
Methoxychlor	<40.0 ug/kg wet	40.0	ug/kg wet	16.4	ug/kg wet	90.0	23-134		
Mirex	13.2 ug/kg wet	6.00	ug/kg wet	16.4	ug/kg wet	80.0	23-134		
<hr style="border-top: 1px dashed black;"/>									
Surr: TCMX	18.1		ug/kg wet	32.9	ug/kg wet	55.0	30-105		
Surr: DCB	28.0		ug/kg wet	32.9	ug/kg wet	85.0	30-105		

LCS (BBI0785-BS2)

Prepared: 09/26/2018 Analyzed: 10/01/2018

Toxaphene	290 ug/kg wet	42.0	ug/kg wet	417	ug/kg wet	69.6	23-134		
-----------	---------------	------	-----------	-----	-----------	------	--------	--	--

LCS (BBI0785-BS3)

Prepared: 09/26/2018 Analyzed: 10/01/2018

Chlordane	297 ug/kg wet	42.0	ug/kg wet	417	ug/kg wet	71.2	23-134		
-----------	---------------	------	-----------	-----	-----------	------	--------	--	--

Matrix Spike (BBI0785-MS1)

Source: 1810746-01

Prepared: 09/26/2018 Analyzed: 10/01/2018

4,4'-DDD	34.7 ug/kg dry	6.00	ug/kg dry	17.4	<6.00 ug/kg dry	200	23-134		M2
4,4'-DDE	43.4 ug/kg dry	20.8	ug/kg dry	17.4	<20.8 ug/kg dry	250	23-134		M2
4,4'-DDT	43.4 ug/kg dry	20.8	ug/kg dry	17.4	<20.8 ug/kg dry	250	23-134		M2
Aldrin	17.4 ug/kg dry	10.4	ug/kg dry	17.4	<10.4 ug/kg dry	100	23-134		
alpha-BHC	17.4 ug/kg dry	10.4	ug/kg dry	17.4	<10.4 ug/kg dry	100	23-134		
beta-BHC	26.0 ug/kg dry	10.4	ug/kg dry	17.4	<10.4 ug/kg dry	150	23-134		M2
delta-BHC	17.4 ug/kg dry	5.21	ug/kg dry	17.4	<5.21 ug/kg dry	100	23-134		
Dieldrin	26.0 ug/kg dry	20.8	ug/kg dry	17.4	<20.8 ug/kg dry	150	23-134		M2
Endosulfan I	26.0 ug/kg dry	20.8	ug/kg dry	17.4	<20.8 ug/kg dry	150	23-134		M2

Page 33 of 42



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0785 - SW3510C

Matrix Spike (BBI0785-MS1)

Source: 1810746-01

Prepared: 09/26/2018 Analyzed: 10/01/2018

Endosulfan II	8.68 ug/kg dry	6.00	ug/kg dry	17.4	<6.00 ug/kg dry	50.0	23-134			
Endosulfan sulfate	43.4 ug/kg dry	10.4	ug/kg dry	17.4	<10.4 ug/kg dry	250	23-134			M2
Endrin	43.4 ug/kg dry	20.8	ug/kg dry	17.4	<20.8 ug/kg dry	250	23-134			M2
Endrin aldehyde	43.4 ug/kg dry	8.00	ug/kg dry	17.4	<8.00 ug/kg dry	250	23-134			M2
Endrin ketone	52.1 ug/kg dry	10.4	ug/kg dry	17.4	<10.4 ug/kg dry	300	23-134			M2
gamma-BHC (Lindane)	8.68 ug/kg dry	2.60	ug/kg dry	17.4	<2.60 ug/kg dry	50.0	23-134			
Heptachlor	8.68 ug/kg dry	2.60	ug/kg dry	17.4	<2.60 ug/kg dry	50.0	23-134			
Heptachlor epoxide	<208 ug/kg dry	208	ug/kg dry	17.4	<208 ug/kg dry	150	23-134			M2
Methoxychlor	<208 ug/kg dry	208	ug/kg dry	17.4	<208 ug/kg dry	350	23-134			M2
Mirex	60.7 ug/kg dry	31.2	ug/kg dry	17.4	<31.2 ug/kg dry	350	23-134			M2
Surr: TCMX	8.68		ug/kg dry	34.7	ug/kg dry	25.0	30-105			DS
Surr: DCB	34.7		ug/kg dry	34.7	ug/kg dry	100	30-105			

Matrix Spike Dup (BBI0785-MSD1)

Source: 1810746-01

Prepared: 09/26/2018 Analyzed: 10/01/2018

4,4'-DDD	25.8 ug/kg dry	6.00	ug/kg dry	17.2	<6.00 ug/kg dry	150	23-134	29.5	20	M2, P
4,4'-DDE	51.6 ug/kg dry	20.6	ug/kg dry	17.2	<20.6 ug/kg dry	300	23-134	17.2	20	M2
4,4'-DDT	68.7 ug/kg dry	20.6	ug/kg dry	17.2	<20.6 ug/kg dry	400	23-134	45.2	20	P, M2
Aldrin	25.8 ug/kg dry	10.3	ug/kg dry	17.2	<10.3 ug/kg dry	150	23-134	39.1	20	M2, P
alpha-BHC	17.2 ug/kg dry	10.3	ug/kg dry	17.2	<10.3 ug/kg dry	100	23-134	0.982	20	
beta-BHC	34.4 ug/kg dry	10.3	ug/kg dry	17.2	<10.3 ug/kg dry	200	23-134	27.6	20	M2, P
delta-BHC	25.8 ug/kg dry	5.16	ug/kg dry	17.2	<5.16 ug/kg dry	150	23-134		20	M2
Dieldrin	43.0 ug/kg dry	20.6	ug/kg dry	17.2	<20.6 ug/kg dry	250	23-134	49.1	20	M2, P
Endosulfan I	34.4 ug/kg dry	20.6	ug/kg dry	17.2	<20.6 ug/kg dry	200	23-134	27.6	20	M2, P
Endosulfan II	17.2 ug/kg dry	6.00	ug/kg dry	17.2	<6.00 ug/kg dry	100	23-134		20	
Endosulfan sulfate	68.7 ug/kg dry	10.3	ug/kg dry	17.2	<10.3 ug/kg dry	400	23-134	45.2	20	M2, P
Endrin	25.8 ug/kg dry	20.6	ug/kg dry	17.2	<20.6 ug/kg dry	150	23-134	50.9	20	M2, P
Endrin aldehyde	25.8 ug/kg dry	8.00	ug/kg dry	17.2	<8.00 ug/kg dry	150	23-134	50.9	20	M2, P
Endrin ketone	51.6 ug/kg dry	10.3	ug/kg dry	17.2	<10.3 ug/kg dry	300	23-134	0.982	20	M2
gamma-BHC (Lindane)	34.4 ug/kg dry	2.58	ug/kg dry	17.2	<2.58 ug/kg dry	200	23-134		20	M2
Heptachlor	8.59 ug/kg dry	2.58	ug/kg dry	17.2	<2.58 ug/kg dry	50.0	23-134		20	
Heptachlor epoxide	<206 ug/kg dry	206	ug/kg dry	17.2	<206 ug/kg dry	200	23-134	27.6	20	M2, P



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/4/2018 17:08
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0785 - SW3510C

Matrix Spike Dup (BBI0785-MSD1)

Source: 18I0746-01

Prepared: 09/26/2018 Analyzed: 10/01/2018

Methoxychlor	<206 ug/kg dry	206	ug/kg dry	17.2	<206 ug/kg dry	450	23-134	24.0	20	P, M2
Mirex	60.2 ug/kg dry	30.9	ug/kg dry	17.2	<30.9 ug/kg dry	350	23-134	0.982	20	M2
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	17.2		ug/kg dry	34.4	ug/kg dry	50.0	30-105			
Surr: DCB	60.2		ug/kg dry	34.4	ug/kg dry	175	30-105			DS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Herbicides by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0701 - SW3510C

Blank (BBI0701-BLK1)

Prepared: 10/02/2018 Analyzed: 10/03/2018

2,4,5-T	<150 ug/kg wet	150	ug/kg wet							
2,4,5-TP (Silvex)	<150 ug/kg wet	150	ug/kg wet							
2,4-D	<150 ug/kg wet	150	ug/kg wet							
Dinoseb	<150 ug/kg wet	150	ug/kg wet							
Pentachlorophenol	<150 ug/kg wet	150	ug/kg wet							
Surr: DCAA (Surr)	25.0		ug/kg wet	33.3		75.0	31-87			

LCS (BBI0701-BS1)

Prepared: 10/02/2018 Analyzed: 10/03/2018

2,4,5-T	<143 ug/kg wet	143	ug/kg wet	15.9	ug/kg wet	90.0	62-98			
2,4,5-TP (Silvex)	<143 ug/kg wet	143	ug/kg wet	15.9	ug/kg wet	80.0	55-106			
2,4-D	<143 ug/kg wet	143	ug/kg wet	15.9	ug/kg wet	100	57-114			
Dinoseb	<143 ug/kg wet	143	ug/kg wet	15.9	ug/kg wet	90.0	53-111			
Pentachlorophenol	<143 ug/kg wet	143	ug/kg wet	15.9	ug/kg wet	80.0	50-96			
Surr: DCAA (Surr)	22.3		ug/kg wet	31.8	ug/kg wet	70.0	31-87			

Matrix Spike (BBI0701-MS1)

Source: 18I0746-06

Prepared: 10/02/2018 Analyzed: 10/03/2018

2,4,5-T	2820 ug/kg dry	681	ug/kg dry	18.9	3310 ug/kg dry	-2570	50-130			M2
2,4,5-TP (Silvex)	<681 ug/kg dry	681	ug/kg dry	18.9	<681 ug/kg dry	80.0	55-106			
2,4-D	28700 ug/kg dry	681	ug/kg dry	18.9	28000 ug/kg dry	3460	57-114			M2
Dinoseb	<681 ug/kg dry	681	ug/kg dry	18.9	<681 ug/kg dry	120	60-130			
Pentachlorophenol	<681 ug/kg dry	681	ug/kg dry	18.9	<681 ug/kg dry	80.0	50-96			
Surr: DCAA (Surr)	37.8		ug/kg dry	37.8	ug/kg dry	100	31-87			DS

Matrix Spike Dup (BBI0701-MSD1)

Source: 18I0746-06

Prepared: 10/02/2018 Analyzed: 10/03/2018

2,4,5-T	2770 ug/kg dry	678	ug/kg dry	18.8	3310 ug/kg dry	-2830	50-130	1.68	20	M2
2,4,5-TP (Silvex)	<678 ug/kg dry	678	ug/kg dry	18.8	<678 ug/kg dry	120	55-106	39.7	20	M2, P
2,4-D	23900 ug/kg dry	678	ug/kg dry	18.8	28000 ug/kg dry	21800	57-114	18.1	20	M2
Dinoseb	<678 ug/kg dry	678	ug/kg dry	18.8	<678 ug/kg dry	80.0	60-130	40.3	20	P
Pentachlorophenol	<678 ug/kg dry	678	ug/kg dry	18.8	<678 ug/kg dry	120	50-96	39.7	20	M2, P
Surr: DCAA (Surr)	22.6		ug/kg dry	37.7	ug/kg dry	60.0	31-87			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0638 - No Prep Wet Chem

Blank (BBI0638-BLK1)		Prepared & Analyzed: 09/21/2018							
Percent Solids	99.9 %	0.10	%						
Duplicate (BBI0638-DUP1)		Source: 18I0773-01		Prepared & Analyzed: 09/21/2018					
Percent Solids	30.8 %	0.10	%	29.5 %			4.35	20	

Batch BBJ0031 - No Prep Wet Chem

Blank (BBJ0031-BLK1)		Prepared: 09/27/2018 Analyzed: 10/01/2018							
Chromium, Hexavalent	<0.20 mg/kg wet	0.20	mg/kg wet						
LCS (BBJ0031-BS1)		Prepared: 09/27/2018 Analyzed: 10/01/2018							
Chromium, Hexavalent	3.40 mg/kg wet	0.20	mg/kg wet	3.96	mg/kg wet	86.0	80-120		
Matrix Spike (BBJ0031-MS1)		Source: 18I0511-15		Prepared: 09/27/2018 Analyzed: 10/01/2018					
Chromium, Hexavalent	3.70 mg/kg dry	0.22	mg/kg dry	4.40	<0.22 mg/kg dry	84.0	80-120		
Matrix Spike Dup (BBJ0031-MSD1)		Source: 18I0511-15		Prepared: 09/27/2018 Analyzed: 10/01/2018					
Chromium, Hexavalent	3.70 mg/kg dry	0.22	mg/kg dry	4.40	<0.22 mg/kg dry	84.0	80-120	0.0797	20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Aluminum	VELAP
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Calcium	VELAP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Magnesium	VELAP
Manganese	VELAP
Nickel	VELAP
Potassium	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7196A in Solids	
Chromium, Hexavalent	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8015C in Solids	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
TPH-Volatiles (GRO)	VELAP,NC,WVDEP
SW8081B in Solids	
alpha-BHC	NC,VELAP
beta-BHC	NC,VELAP
Chlordane	NC,VELAP
delta-BHC	NC,VELAP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/4/2018 17:08
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Dieldrin	NC,VELAP
Endosulfan I	NC,VELAP
Endosulfan II	NC,VELAP
Endosulfan sulfate	NC,VELAP
Endrin	NC,VELAP
Endrin aldehyde	NC,VELAP
Endrin ketone	NC,VELAP
gamma-BHC (Lindane)	NC,VELAP
Heptachlor	NC,VELAP
Heptachlor epoxide	NC,VELAP
Methoxychlor	NC,VELAP
Mirex	NC,VELAP
Toxaphene	NC,VELAP
SW8151A in Solids	
2,4,5-T	NC,VELAP
2,4,5-TP (Silvex)	NC,VELAP
2,4-D	NC,VELAP
Dinoseb	NC,VELAP
Pentachlorophenol	NC,VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/4/2018 17:08
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

DS Surrogate concentration reflects a dilution factor.

H Analysis was performed outside of the method prescribed holding time.

M Matrix spike recovery is outside established acceptance limits

M2 Sample was diluted due to matrix interference.

P Duplicate analysis does not meet the acceptance criteria for precision

S Surrogate recovery was outside acceptance criteria

RPD Relative Percent Difference

Qual Qualifiers

-RE Denotes sample was re-analyzed

D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: <u>EEE Consulting</u>	INVOICE TO: <u>Same</u>	PROJECT NAME/Quote #: <u>CVTC</u>
CONTACT: <u>Jeff Fisher</u>	INVOICE CONTACT:	SITE NAME: <u>CVTC</u>
ADDRESS: <u>201 Church ST</u>	INVOICE ADDRESS:	PROJECT NUMBER: <u>18-760</u>
PHONE #: <u>540 953 0170</u>	INVOICE PHONE #:	P.O. #: <u>18-760</u>
FAX #: <u>540 953 0171</u>	EMAIL: <u>jfisher@eee-consulting.com</u>	Pretreatment Program: <u>-</u>
Is sample for compliance reporting? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Is sample from a chlorinated supply? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	PWS I.D. #: <u>-</u>
SAMPLER NAME (PRINT): <u>Josh Hepler / Jeff Fisher</u>	SAMPLER SIGNATURE:	Turn Around Time: Circle: <u>10</u> 5 Days or <u>-</u> Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)					COMMENTS
											TPH-GR0/DR0/0R0	Pesticides	Herbicides	Total TAL Metals	Hex Chrome 7196A	
1) Task 2.9 39-A	X					9-12-18	1415		S	1	X	X	X	X		Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)
2) 39-B	X						1420									
3) 39-C	X						1433									
4) 39-D	X						1445									
5) 39-E	X						1450									
6) 39-F	X						1500									
7)																
8)																
9)																
10)																

RELINQUISHED:	DATE / TIME: <u>9-19 11:30</u>	RECEIVED:	DATE / TIME: <u>9-19 11:50</u>	QC Data Package Level III <input type="checkbox"/>	LAB USE ONLY	COOLER TEMP <u>08</u> °C
RECEIVED:	DATE / TIME: <u>9/20/18 8:00</u>	RECEIVED:	DATE / TIME: <u>9/20/18 8:00</u>	QC Data Package Level IV <input type="checkbox"/>	EEE-Blacksburg	1810746
RELINQUISHED: <u>Courier</u>	DATE / TIME:	RECEIVED:	DATE / TIME:		CVTC	
				Recd: 09/20/2018 Due: 10/04/2018		

Page 41 of 42



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/4/2018 17:08
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	0.80°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 1811024

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg, VA 24060

Date Received: September 27, 2018 8:00

Date Issued: October 11, 2018 14:04

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 09/27/2018 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 1811024

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
16-S13	1811024-01	Soil	09/25/2018 16:00	09/27/2018 08:00
16-S14	1811024-02	Soil	09/25/2018 16:07	09/27/2018 08:00
16-S15	1811024-03	Soil	09/25/2018 16:12	09/27/2018 08:00
16-S16	1811024-04	Soil	09/25/2018 16:16	09/27/2018 08:00
16-S17	1811024-05	Soil	09/25/2018 16:22	09/27/2018 08:00
16-S18	1811024-06	Soil	09/25/2018 16:30	09/27/2018 08:00
16-S19	1811024-07	Soil	09/25/2018 16:36	09/27/2018 08:00
16-S20	1811024-08	Soil	09/25/2018 16:43	09/27/2018 08:00
16-S21	1811024-09	Soil	09/25/2018 16:50	09/27/2018 08:00
16-S22	1811024-10	Soil	09/25/2018 16:54	09/27/2018 08:00
16-S23	1811024-11	Soil	09/25/2018 17:00	09/27/2018 08:00
16-S24	1811024-12	Soil	09/25/2018 17:05	09/27/2018 08:00

Results have been calculated based on dry weight.



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 14:04

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S13

Laboratory Sample ID: 1811024-01

Grab Date/Time: 09/25/2018 16:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.667 mg/kg dry		0.667	1	09/27/18 12:20	10/01/18 13:53	BG
Aluminum	01	SW6010C	9290 mg/kg dry		667	200	09/27/18 12:20	10/01/18 12:09	BG
Arsenic	01	SW6010C	4.83 mg/kg dry		1.33	1	09/27/18 12:20	10/01/18 13:53	BG
Barium	01	SW6010C	53.9 mg/kg dry		13.3	20	09/27/18 12:20	10/01/18 13:05	BG
Beryllium	01	SW6010C	1.08 mg/kg dry		0.267	1	09/27/18 12:20	10/01/18 13:53	BG
Calcium	01	SW6010C	92800 mg/kg dry		1330	200	09/27/18 12:20	10/01/18 12:09	BG
Cadmium	01	SW6010C	0.412 mg/kg dry		0.267	1	09/27/18 12:20	10/01/18 13:53	BG
Cobalt	01	SW6010C	6.82 mg/kg dry		5.33	20	09/27/18 12:20	10/01/18 13:05	BG
Chromium	01	SW6010C	11.8 mg/kg dry		0.667	1	09/27/18 12:20	10/01/18 13:53	BG
Copper	01	SW6010C	10.4 mg/kg dry		3.33	1	09/27/18 12:20	10/01/18 13:53	BG
Iron	01	SW6010C	12600 mg/kg dry		667	200	09/27/18 12:20	10/01/18 12:09	BG
Mercury	01	SW7471B	0.050 mg/kg dry		0.011	1	10/02/18 10:00	10/03/18 13:41	MWL
Potassium	01	SW6010C	2780 mg/kg dry		667	20	09/27/18 12:20	10/01/18 13:05	BG
Magnesium	01	SW6010C	7610 mg/kg dry		667	200	09/27/18 12:20	10/01/18 12:09	BG
Manganese	01	SW6010C	180 mg/kg dry		133	200	09/27/18 12:20	10/01/18 12:09	BG
Sodium	01	SW6010C	50.7 mg/kg dry		33.3	1	09/27/18 12:20	10/01/18 13:53	BG
Nickel	01	SW6010C	13.6 mg/kg dry		13.3	20	09/27/18 12:20	10/01/18 13:05	BG
Lead	01	SW6010C	8.84 mg/kg dry		0.667	1	09/27/18 12:20	10/01/18 13:53	BG
Antimony	01	SW6010C	<6.67 mg/kg dry		6.67	1	09/27/18 12:20	10/01/18 13:53	BG
Selenium	01	SW6010C	<3.33 mg/kg dry		3.33	1	09/27/18 12:20	10/01/18 13:53	BG
Thallium	01	SW6010C	<3.33 mg/kg dry		3.33	1	09/27/18 12:20	10/01/18 13:53	BG
Vanadium	01	SW6010C	15.5 mg/kg dry		13.3	20	09/27/18 12:20	10/01/18 13:05	BG
Zinc	01	SW6010C	44.0 mg/kg dry		13.3	20	09/27/18 12:20	10/01/18 13:05	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	01	SW8015C	<0.13 mg/kg dry		0.13	1	09/28/18 03:04	09/28/18 03:04	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S13	Laboratory Sample ID: 181024-01
Grab Date/Time: 09/25/2018 16:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	01	SW8015C	107 %		80-120		09/28/18 03:04	09/28/18 03:04	DFH
--	----	---------	-------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	01	SW8270D SIM	Not Detected			1	10/04/18 15:00	10/05/18 11:49	SKS
1,2,4,5-Tetrachlorobenzene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
1,2,4-Trichlorobenzene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
1,2-Dichlorobenzene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
1,2-Diphenylhydrazine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
1,3-Dichlorobenzene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
1,4-Dichlorobenzene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
1-Chloronaphthalene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
1-Naphthylamine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,3,4,6-Tetrachlorophenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,4,5-Trichlorophenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,4,6-Trichlorophenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,4-Dichlorophenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,4-Dimethylphenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,4-Dinitrophenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,4-Dinitrotoluene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,6-Dichlorophenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,6-Dinitrotoluene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2-Chloronaphthalene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2-Chlorophenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2-Methylnaphthalene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2-Naphthylamine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S13 **Laboratory Sample ID:** 181024-01

Grab Date/Time: 09/25/2018 16:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
2-Nitrophenol	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
3,3'-Dichlorobenzidine	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
3-Methylcholanthrene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
3-Nitroaniline	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
4,6-Dinitro-2-methylphenol	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
4-Aminobiphenyl	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
4-Bromophenyl phenyl ether	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
4-Chloroaniline	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
4-Chlorophenyl phenyl ether	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
4-Nitroaniline	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
4-Nitrophenol	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
7,12-Dimethylbenz (a) anthracene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Acenaphthene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Acenaphthylene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Acetophenone	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Aniline	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Anthracene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Benzidine	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Benzo (a) anthracene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Benzo (a) pyrene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Benzo (b) fluoranthene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Benzo (g,h,i) perylene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Benzo (k) fluoranthene	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	
Benzoic acid	01	SW8270D	<112 ug/kg dry	112	1	10/04/18 15:00	10/05/18 02:11	SKS	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S13 **Laboratory Sample ID:** 1811024-01

Grab Date/Time: 09/25/2018 16:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
2,2'-Oxybis (1-chloropropane)	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Butyl benzyl phthalate	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Chrysene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Dibenz (a,h) anthracene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Dibenz (a,j) acridine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Dibenzofuran	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Diethyl phthalate	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Dimethyl phthalate	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Di-n-butyl phthalate	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Di-n-octyl phthalate	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Diphenylamine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Ethyl methanesulfonate	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Fluoranthene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Fluorene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Hexachlorobenzene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Hexachlorobutadiene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Hexachlorocyclopentadiene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Hexachloroethane	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Isophorone	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
m+p-Cresols	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S13	Laboratory Sample ID: 1811024-01
Grab Date/Time: 09/25/2018 16:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Naphthalene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Nitrobenzene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
n-Nitrosodimethylamine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
n-Nitrosodi-n-butylamine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
n-Nitrosodiphenylamine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
n-Nitrosopiperidine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
o+m+p-Cresols	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
o-Cresol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
p-(Dimethylamino) azobenzene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
p-Chloro-m-cresol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Pentachloronitrobenzene (quintozene)	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Pentachlorophenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Phenacetin	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Phenanthrene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Phenol	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Pronamide	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Pyrene	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Pyridine	01	SW8270D	<112 ug/kg dry		112	1	10/04/18 15:00	10/05/18 02:11	SKS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270D	83.3 %		35-125		10/04/18 15:00	10/05/18 02:11	SKS
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270D	88.6 %		45-105		10/04/18 15:00	10/05/18 02:11	SKS
Surr: 2-Fluorophenol (Surr)	01	SW8270D	65.5 %		35-105		10/04/18 15:00	10/05/18 02:11	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S13	Laboratory Sample ID: 1811024-01
Grab Date/Time: 09/25/2018 16:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	01	SW8270D	78.0 %		35-100		10/04/18 15:00	10/05/18 02:11	SKS
Surr: Phenol-d5 (Surr)	01	SW8270D	67.3 %		40-100		10/04/18 15:00	10/05/18 02:11	SKS
Surr: p-Terphenyl-d14 (Surr)	01	SW8270D	80.4 %		30-125		10/04/18 15:00	10/05/18 02:11	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	<13.5 mg/kg dry		13.5	1	10/08/18 13:30	10/09/18 16:03	HLM
Surr: Pentacosane (Surr)	01	SW8015C	48.5 %		40-160		10/08/18 13:30	10/09/18 16:03	HLM
TPH-Semi-Volatiles (ORO)	01	SW8015C	<13.1 mg/kg dry		13.1	1	10/08/18 15:05	10/09/18 16:05	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 11:43	HLM
PCB as Aroclor 1221	01	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 11:43	HLM
PCB as Aroclor 1232	01	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 11:43	HLM
PCB as Aroclor 1242	01	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 11:43	HLM
PCB as Aroclor 1248	01	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 11:43	HLM
PCB as Aroclor 1254	01	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 11:43	HLM
PCB as Aroclor 1260	01	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 11:43	HLM
Surr: DCB	01	SW8082A	65.0 %		30-105		10/09/18 14:02	10/10/18 11:43	HLM
Surr: TCMX	01	SW8082A	70.0 %		30-105		10/09/18 14:02	10/10/18 11:43	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	01	SW7196A	<0.27 mg/kg dry		0.27	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	01	SM18 2540G	73.6 %		0.10	1	10/01/18 10:55	10/01/18 10:55	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S14	Laboratory Sample ID: 1811024-02
Grab Date/Time: 09/25/2018 16:07	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	<0.726 mg/kg dry		0.726	1	09/27/18 12:20	10/01/18 14:16	BG
Aluminum	02	SW6010C	17200 mg/kg dry		726	200	09/27/18 12:20	10/01/18 12:17	BG
Arsenic	02	SW6010C	1.94 mg/kg dry		1.45	1	09/27/18 12:20	10/01/18 14:16	BG
Barium	02	SW6010C	70.0 mg/kg dry		14.5	20	09/27/18 12:20	10/01/18 13:13	BG
Beryllium	02	SW6010C	1.48 mg/kg dry		0.290	1	09/27/18 12:20	10/01/18 14:16	BG
Calcium	02	SW6010C	121000 mg/kg dry		1450	200	09/27/18 12:20	10/01/18 12:17	BG
Cadmium	02	SW6010C	0.808 mg/kg dry		0.290	1	09/27/18 12:20	10/01/18 14:16	BG
Cobalt	02	SW6010C	11.4 mg/kg dry		5.81	20	09/27/18 12:20	10/01/18 13:13	BG
Chromium	02	SW6010C	18.2 mg/kg dry		14.5	20	09/27/18 12:20	10/01/18 13:13	BG
Copper	02	SW6010C	15.0 mg/kg dry		3.63	1	09/27/18 12:20	10/01/18 14:16	BG
Iron	02	SW6010C	23300 mg/kg dry		726	200	09/27/18 12:20	10/01/18 12:17	BG
Mercury	02	SW7471B	<0.011 mg/kg dry		0.011	1	10/02/18 10:00	10/03/18 13:45	MWL
Potassium	02	SW6010C	5130 mg/kg dry		726	20	09/27/18 12:20	10/01/18 13:13	BG
Magnesium	02	SW6010C	11500 mg/kg dry		726	200	09/27/18 12:20	10/01/18 12:17	BG
Manganese	02	SW6010C	294 mg/kg dry		145	200	09/27/18 12:20	10/01/18 12:17	BG
Sodium	02	SW6010C	61.7 mg/kg dry		36.3	1	09/27/18 12:20	10/01/18 14:16	BG
Nickel	02	SW6010C	17.5 mg/kg dry		14.5	20	09/27/18 12:20	10/01/18 13:13	BG
Lead	02	SW6010C	46.3 mg/kg dry		14.5	20	09/27/18 12:20	10/01/18 13:13	BG
Antimony	02	SW6010C	<7.26 mg/kg dry		7.26	1	09/27/18 12:20	10/01/18 14:16	BG
Selenium	02	SW6010C	<3.63 mg/kg dry		3.63	1	09/27/18 12:20	10/01/18 14:16	BG
Thallium	02	SW6010C	<3.63 mg/kg dry		3.63	1	09/27/18 12:20	10/01/18 14:16	BG
Vanadium	02	SW6010C	19.2 mg/kg dry		14.5	20	09/27/18 12:20	10/01/18 13:13	BG
Zinc	02	SW6010C	123 mg/kg dry		14.5	20	09/27/18 12:20	10/01/18 13:13	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	02	SW8015C	<0.14 mg/kg dry		0.14	1	09/28/18 03:27	09/28/18 03:27	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S14	Laboratory Sample ID: 1811024-02
Grab Date/Time: 09/25/2018 16:07	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	02	SW8015C	109 %		80-120		09/28/18 03:27	09/28/18 03:27	DFH
--	----	---------	-------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	02	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
1,2,4-Trichlorobenzene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
1,2-Dichlorobenzene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
1,2-Diphenylhydrazine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
1,3-Dichlorobenzene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
1,4-Dichlorobenzene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
1-Chloronaphthalene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
1-Naphthylamine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,3,4,6-Tetrachlorophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,4,5-Trichlorophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,4,6-Trichlorophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,4-Dichlorophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,4-Dimethylphenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,4-Dinitrophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,4-Dinitrotoluene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,6-Dichlorophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,6-Dinitrotoluene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2-Chloronaphthalene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2-Chlorophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2-Methylnaphthalene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2-Naphthylamine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S14	Laboratory Sample ID: 1811024-02
Grab Date/Time: 09/25/2018 16:07	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2-Nitrophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
3-Methylcholanthrene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
3-Nitroaniline	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
4,6-Dinitro-2-methylphenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
4-Aminobiphenyl	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
4-Bromophenyl phenyl ether	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
4-Chloroaniline	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
4-Chlorophenyl phenyl ether	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
4-Nitroaniline	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
4-Nitrophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
7,12-Dimethylbenz (a) anthracene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Acenaphthene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Acenaphthylene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Acetophenone	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Aniline	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Anthracene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Benzidine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Benzo (a) anthracene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Benzo (a) pyrene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Benzo (b) fluoranthene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Benzo (g,h,i) perylene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Benzo (k) fluoranthene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Benzoic acid	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S14 **Laboratory Sample ID:** 1811024-02

Grab Date/Time: 09/25/2018 16:07

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
2,2'-Oxybis (1-chloropropane)	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<237 ug/kg dry	C	237	2	10/08/18 10:10	10/09/18 14:18	SKS
Butyl benzyl phthalate	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Chrysene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Dibenz (a,h) anthracene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Dibenz (a,j) acridine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Dibenzofuran	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Diethyl phthalate	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Dimethyl phthalate	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Di-n-butyl phthalate	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Di-n-octyl phthalate	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Diphenylamine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Ethyl methanesulfonate	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Fluoranthene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Fluorene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Hexachlorobenzene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Hexachlorobutadiene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Hexachlorocyclopentadiene	02	SW8270D	<237 ug/kg dry	C	237	2	10/08/18 10:10	10/09/18 14:18	SKS
Hexachloroethane	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Isophorone	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
m+p-Cresols	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S14	Laboratory Sample ID: 1811024-02
Grab Date/Time: 09/25/2018 16:07	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Naphthalene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Nitrobenzene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
n-Nitrosodimethylamine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
n-Nitrosodi-n-butylamine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
n-Nitrosodiphenylamine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
n-Nitrosopiperidine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
o+m+p-Cresols	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
o-Cresol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
p-(Dimethylamino) azobenzene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
p-Chloro-m-cresol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Pentachloronitrobenzene (quintozene)	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Pentachlorophenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Phenacetin	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Phenanthrene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Phenol	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Pronamide	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Pyrene	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Pyridine	02	SW8270D	<237 ug/kg dry		237	2	10/08/18 10:10	10/09/18 14:18	SKS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270D	39.0 %		35-125		10/08/18 10:10	10/09/18 14:18	SKS
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270D	32.3 %	DS	45-105		10/08/18 10:10	10/09/18 14:18	SKS
Surr: 2-Fluorophenol (Surr)	02	SW8270D	26.4 %	DS	35-105		10/08/18 10:10	10/09/18 14:18	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S14	Laboratory Sample ID: 1811024-02
Grab Date/Time: 09/25/2018 16:07	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	02	SW8270D	30.1 %	DS	35-100		10/08/18 10:10	10/09/18 14:18	SKS
Surr: Phenol-d5 (Surr)	02	SW8270D	28.3 %	DS	40-100		10/08/18 10:10	10/09/18 14:18	SKS
Surr: p-Terphenyl-d14 (Surr)	02	SW8270D	39.3 %		30-125		10/08/18 10:10	10/09/18 14:18	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<14.3 mg/kg dry		14.3	1	10/08/18 13:30	10/09/18 16:29	HLM
Surr: Pentacosane (Surr)	02	SW8015C	50.0 %		40-160		10/08/18 13:30	10/09/18 16:29	HLM
TPH-Semi-Volatiles (ORO)	02	SW8015C	<13.6 mg/kg dry		13.6	1	10/08/18 15:05	10/09/18 16:30	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 12:04	HLM
PCB as Aroclor 1221	02	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 12:04	HLM
PCB as Aroclor 1232	02	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 12:04	HLM
PCB as Aroclor 1242	02	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 12:04	HLM
PCB as Aroclor 1248	02	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 12:04	HLM
PCB as Aroclor 1254	02	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 12:04	HLM
PCB as Aroclor 1260	02	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 12:04	HLM
Surr: DCB	02	SW8082A	65.0 %		30-105		10/09/18 14:02	10/10/18 12:04	HLM
Surr: TCMX	02	SW8082A	80.0 %		30-105		10/09/18 14:02	10/10/18 12:04	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	02	SW7196A	<0.29 mg/kg dry		0.29	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	02	SM18 2540G	68.9 %		0.10	1	10/01/18 10:55	10/01/18 10:55	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S15	Laboratory Sample ID: 181024-03
Grab Date/Time: 09/25/2018 16:12	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03	SW6010C	<0.698 mg/kg dry		0.698	1	09/27/18 12:20	10/01/18 14:19	BG
Aluminum	03	SW6010C	13100 mg/kg dry		698	200	09/27/18 12:20	10/01/18 12:20	BG
Arsenic	03	SW6010C	1.67 mg/kg dry		1.40	1	09/27/18 12:20	10/01/18 14:19	BG
Barium	03	SW6010C	82.2 mg/kg dry		14.0	20	09/27/18 12:20	10/01/18 13:16	BG
Beryllium	03	SW6010C	1.00 mg/kg dry		0.279	1	09/27/18 12:20	10/01/18 14:19	BG
Calcium	03	SW6010C	235000 mg/kg dry		1400	200	09/27/18 12:20	10/01/18 12:20	BG
Cadmium	03	SW6010C	0.714 mg/kg dry		0.279	1	09/27/18 12:20	10/01/18 14:19	BG
Cobalt	03	SW6010C	6.61 mg/kg dry		5.59	20	09/27/18 12:20	10/01/18 13:16	BG
Chromium	03	SW6010C	12.7 mg/kg dry		0.698	1	09/27/18 12:20	10/01/18 14:19	BG
Copper	03	SW6010C	10.6 mg/kg dry		3.49	1	09/27/18 12:20	10/01/18 14:19	BG
Iron	03	SW6010C	18300 mg/kg dry		698	200	09/27/18 12:20	10/01/18 12:20	BG
Mercury	03	SW7471B	0.057 mg/kg dry		0.011	1	10/02/18 10:00	10/03/18 13:48	MWL
Potassium	03	SW6010C	2940 mg/kg dry		698	20	09/27/18 12:20	10/01/18 13:16	BG
Magnesium	03	SW6010C	12100 mg/kg dry		698	200	09/27/18 12:20	10/01/18 12:20	BG
Manganese	03	SW6010C	365 mg/kg dry		140	200	09/27/18 12:20	10/01/18 12:20	BG
Sodium	03	SW6010C	225 mg/kg dry		34.9	1	09/27/18 12:20	10/01/18 14:19	BG
Nickel	03	SW6010C	9.67 mg/kg dry		0.698	1	09/27/18 12:20	10/01/18 14:19	BG
Lead	03	SW6010C	21.2 mg/kg dry		14.0	20	09/27/18 12:20	10/01/18 13:16	BG
Antimony	03	SW6010C	<6.98 mg/kg dry		6.98	1	09/27/18 12:20	10/01/18 14:19	BG
Selenium	03	SW6010C	<3.49 mg/kg dry		3.49	1	09/27/18 12:20	10/01/18 14:19	BG
Thallium	03	SW6010C	<3.49 mg/kg dry		3.49	1	09/27/18 12:20	10/01/18 14:19	BG
Vanadium	03	SW6010C	22.9 mg/kg dry		14.0	20	09/27/18 12:20	10/01/18 13:16	BG
Zinc	03	SW6010C	71.0 mg/kg dry		14.0	20	09/27/18 12:20	10/01/18 13:16	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	03	SW8015C	<0.14 mg/kg dry		0.14	1	09/28/18 03:50	09/28/18 03:50	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S15	Laboratory Sample ID: 1811024-03
Grab Date/Time: 09/25/2018 16:12	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	03	SW8015C	95.5 %		80-120		09/28/18 03:50	09/28/18 03:50	DFH
--	----	---------	--------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	03	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
1,2,4-Trichlorobenzene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
1,2-Dichlorobenzene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
1,2-Diphenylhydrazine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
1,3-Dichlorobenzene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
1,4-Dichlorobenzene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
1-Chloronaphthalene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
1-Naphthylamine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,3,4,6-Tetrachlorophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,4,5-Trichlorophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,4,6-Trichlorophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,4-Dichlorophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,4-Dimethylphenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,4-Dinitrophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,4-Dinitrotoluene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,6-Dichlorophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,6-Dinitrotoluene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2-Chloronaphthalene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2-Chlorophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2-Methylnaphthalene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2-Naphthylamine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S15	Laboratory Sample ID: 1811024-03
Grab Date/Time: 09/25/2018 16:12	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2-Nitrophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
3,3'-Dichlorobenzidine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
3-Methylcholanthrene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
3-Nitroaniline	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
4,6-Dinitro-2-methylphenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
4-Aminobiphenyl	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
4-Bromophenyl phenyl ether	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
4-Chloroaniline	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
4-Chlorophenyl phenyl ether	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
4-Nitroaniline	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
4-Nitrophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
7,12-Dimethylbenz (a) anthracene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Acenaphthene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Acenaphthylene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Acetophenone	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Aniline	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Anthracene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Benzidine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Benzo (a) anthracene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Benzo (a) pyrene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Benzo (b) fluoranthene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Benzo (g,h,i) perylene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Benzo (k) fluoranthene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Benzoic acid	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S15 **Laboratory Sample ID:** 1811024-03

Grab Date/Time: 09/25/2018 16:12

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
bis (2-Chloroethoxy) methane	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
bis (2-Chloroethyl) ether	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
2,2'-Oxybis (1-chloropropane)	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
bis (2-Ethylhexyl) phthalate	03	SW8270D	<455 ug/kg dry	C	455	4	10/08/18 10:10	10/09/18 14:50	SKS
Butyl benzyl phthalate	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Chrysene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Dibenz (a,h) anthracene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Dibenz (a,j) acridine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Dibenzofuran	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Diethyl phthalate	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Dimethyl phthalate	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Di-n-butyl phthalate	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Di-n-octyl phthalate	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Diphenylamine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Ethyl methanesulfonate	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Fluoranthene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Fluorene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Hexachlorobenzene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Hexachlorobutadiene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Hexachlorocyclopentadiene	03	SW8270D	<455 ug/kg dry	C	455	4	10/08/18 10:10	10/09/18 14:50	SKS
Hexachloroethane	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Indeno (1,2,3-cd) pyrene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Isophorone	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
m+p-Cresols	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S15	Laboratory Sample ID: 1811024-03
Grab Date/Time: 09/25/2018 16:12	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Naphthalene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Nitrobenzene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
n-Nitrosodimethylamine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
n-Nitrosodi-n-butylamine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
n-Nitrosodi-n-propylamine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
n-Nitrosodiphenylamine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
n-Nitrosopiperidine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
o+m+p-Cresols	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
o-Cresol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
p-(Dimethylamino) azobenzene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
p-Chloro-m-cresol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Pentachloronitrobenzene (quintozene)	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Pentachlorophenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Phenacetin	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Phenanthrene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Phenol	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Pronamide	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Pyrene	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Pyridine	03	SW8270D	<455 ug/kg dry		455	4	10/08/18 10:10	10/09/18 14:50	SKS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270D	38.4 %		35-125		10/08/18 10:10	10/09/18 14:50	SKS
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270D	30.6 %	DS	45-105		10/08/18 10:10	10/09/18 14:50	SKS
Surr: 2-Fluorophenol (Surr)	03	SW8270D	31.8 %	DS	35-105		10/08/18 10:10	10/09/18 14:50	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S15	Laboratory Sample ID: 1811024-03
Grab Date/Time: 09/25/2018 16:12	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	03	SW8270D	37.5 %		35-100		10/08/18 10:10	10/09/18 14:50	SKS
Surr: Phenol-d5 (Surr)	03	SW8270D	34.6 %	DS	40-100		10/08/18 10:10	10/09/18 14:50	SKS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270D	40.8 %		30-125		10/08/18 10:10	10/09/18 14:50	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03	SW8015C	16.3 mg/kg dry		14.2	1	10/08/18 13:30	10/09/18 16:55	HLM
Surr: Pentacosane (Surr)	03	SW8015C	50.6 %		40-160		10/08/18 13:30	10/09/18 16:55	HLM
TPH-Semi-Volatiles (ORO)	03	SW8015C	<13.9 mg/kg dry		13.9	1	10/08/18 15:05	10/09/18 16:54	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.138 mg/kg dry		0.138	1	10/09/18 14:02	10/10/18 12:26	HLM
PCB as Aroclor 1221	03	SW8082A	<0.138 mg/kg dry		0.138	1	10/09/18 14:02	10/10/18 12:26	HLM
PCB as Aroclor 1232	03	SW8082A	<0.138 mg/kg dry		0.138	1	10/09/18 14:02	10/10/18 12:26	HLM
PCB as Aroclor 1242	03	SW8082A	<0.138 mg/kg dry		0.138	1	10/09/18 14:02	10/10/18 12:26	HLM
PCB as Aroclor 1248	03	SW8082A	<0.138 mg/kg dry		0.138	1	10/09/18 14:02	10/10/18 12:26	HLM
PCB as Aroclor 1254	03	SW8082A	<0.138 mg/kg dry		0.138	1	10/09/18 14:02	10/10/18 12:26	HLM
PCB as Aroclor 1260	03	SW8082A	<0.138 mg/kg dry		0.138	1	10/09/18 14:02	10/10/18 12:26	HLM
Surr: DCB	03	SW8082A	55.0 %		30-105		10/09/18 14:02	10/10/18 12:26	HLM
Surr: TCMX	03	SW8082A	55.0 %		30-105		10/09/18 14:02	10/10/18 12:26	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	03	SW7196A	0.29 mg/kg dry		0.29	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	03	SM18 2540G	69.9 %		0.10	1	10/01/18 10:55	10/01/18 10:55	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S16	Laboratory Sample ID: 181024-04
Grab Date/Time: 09/25/2018 16:16	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04	SW6010C	<0.590 mg/kg dry		0.590	1	09/27/18 12:20	10/01/18 14:21	BG
Aluminum	04	SW6010C	11600 mg/kg dry		590	200	09/27/18 12:20	10/01/18 12:22	BG
Arsenic	04	SW6010C	5.06 mg/kg dry		1.18	1	09/27/18 12:20	10/01/18 14:21	BG
Barium	04	SW6010C	119 mg/kg dry		11.8	20	09/27/18 12:20	10/01/18 13:18	BG
Beryllium	04	SW6010C	1.94 mg/kg dry		0.236	1	09/27/18 12:20	10/01/18 14:21	BG
Calcium	04	SW6010C	58000 mg/kg dry		1180	200	09/27/18 12:20	10/01/18 12:22	BG
Cadmium	04	SW6010C	1.77 mg/kg dry		0.236	1	09/27/18 12:20	10/01/18 14:21	BG
Cobalt	04	SW6010C	11.0 mg/kg dry		4.72	20	09/27/18 12:20	10/01/18 13:18	BG
Chromium	04	SW6010C	21.8 mg/kg dry		11.8	20	09/27/18 12:20	10/01/18 13:18	BG
Copper	04	SW6010C	25.4 mg/kg dry		2.95	1	09/27/18 12:20	10/01/18 14:21	BG
Iron	04	SW6010C	29300 mg/kg dry		590	200	09/27/18 12:20	10/01/18 12:22	BG
Mercury	04	SW7471B	0.043 mg/kg dry		0.010	1	10/02/18 10:00	10/03/18 13:56	MWL
Potassium	04	SW6010C	3120 mg/kg dry		590	20	09/27/18 12:20	10/01/18 13:18	BG
Magnesium	04	SW6010C	9230 mg/kg dry		590	200	09/27/18 12:20	10/01/18 12:22	BG
Manganese	04	SW6010C	277 mg/kg dry		118	200	09/27/18 12:20	10/01/18 12:22	BG
Sodium	04	SW6010C	134 mg/kg dry		29.5	1	09/27/18 12:20	10/01/18 14:21	BG
Nickel	04	SW6010C	21.1 mg/kg dry		11.8	20	09/27/18 12:20	10/01/18 13:18	BG
Lead	04	SW6010C	80.0 mg/kg dry		11.8	20	09/27/18 12:20	10/01/18 13:18	BG
Antimony	04	SW6010C	<5.90 mg/kg dry		5.90	1	09/27/18 12:20	10/01/18 14:21	BG
Selenium	04	SW6010C	<2.95 mg/kg dry		2.95	1	09/27/18 12:20	10/01/18 14:21	BG
Thallium	04	SW6010C	<2.95 mg/kg dry		2.95	1	09/27/18 12:20	10/01/18 14:21	BG
Vanadium	04	SW6010C	35.5 mg/kg dry		11.8	20	09/27/18 12:20	10/01/18 13:18	BG
Zinc	04	SW6010C	231 mg/kg dry		118	200	09/27/18 12:20	10/01/18 12:22	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	04	SW8015C	<0.13 mg/kg dry		0.13	1	09/28/18 04:13	09/28/18 04:13	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S16	Laboratory Sample ID: 181024-04
Grab Date/Time: 09/25/2018 16:16	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	04	SW8015C	105 %		80-120		09/28/18 04:13	09/28/18 04:13	DFH
--	----	---------	-------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	04	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
1,2,4-Trichlorobenzene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
1,2-Dichlorobenzene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
1,2-Diphenylhydrazine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
1,3-Dichlorobenzene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
1,4-Dichlorobenzene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
1-Chloronaphthalene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
1-Naphthylamine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,3,4,6-Tetrachlorophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,4,5-Trichlorophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,4,6-Trichlorophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,4-Dichlorophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,4-Dimethylphenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,4-Dinitrophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,4-Dinitrotoluene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,6-Dichlorophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,6-Dinitrotoluene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2-Chloronaphthalene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2-Chlorophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2-Methylnaphthalene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2-Naphthylamine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 14:04

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S16

Laboratory Sample ID: 1811024-04

Grab Date/Time: 09/25/2018 16:16

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2-Nitrophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
3,3'-Dichlorobenzidine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
3-Methylcholanthrene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
3-Nitroaniline	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
4,6-Dinitro-2-methylphenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
4-Aminobiphenyl	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
4-Bromophenyl phenyl ether	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
4-Chloroaniline	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
4-Chlorophenyl phenyl ether	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
4-Nitroaniline	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
4-Nitrophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
7,12-Dimethylbenz (a) anthracene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Acenaphthene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Acenaphthylene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Acetophenone	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Aniline	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Anthracene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Benzidine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Benzo (a) anthracene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Benzo (a) pyrene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Benzo (b) fluoranthene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Benzo (g,h,i) perylene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Benzo (k) fluoranthene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Benzoic acid	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S16	Laboratory Sample ID: 1811024-04
Grab Date/Time: 09/25/2018 16:16	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
bis (2-Chloroethoxy) methane	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
bis (2-Chloroethyl) ether	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
2,2'-Oxybis (1-chloropropane)	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
bis (2-Ethylhexyl) phthalate	04	SW8270D	<412 ug/kg dry	C	412	4	10/08/18 10:10	10/09/18 15:22	SKS
Butyl benzyl phthalate	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Chrysene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Dibenz (a,h) anthracene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Dibenz (a,j) acridine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Dibenzofuran	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Diethyl phthalate	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Dimethyl phthalate	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Di-n-butyl phthalate	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Di-n-octyl phthalate	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Diphenylamine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Ethyl methanesulfonate	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Fluoranthene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Fluorene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Hexachlorobenzene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Hexachlorobutadiene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Hexachlorocyclopentadiene	04	SW8270D	<412 ug/kg dry	C	412	4	10/08/18 10:10	10/09/18 15:22	SKS
Hexachloroethane	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Indeno (1,2,3-cd) pyrene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Isophorone	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
m+p-Cresols	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S16	Laboratory Sample ID: 1811024-04
Grab Date/Time: 09/25/2018 16:16	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Naphthalene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Nitrobenzene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
n-Nitrosodimethylamine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
n-Nitrosodi-n-butylamine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
n-Nitrosodi-n-propylamine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
n-Nitrosodiphenylamine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
n-Nitrosopiperidine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
o+m+p-Cresols	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
o-Cresol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
p-(Dimethylamino) azobenzene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
p-Chloro-m-cresol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Pentachloronitrobenzene (quintozene)	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Pentachlorophenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Phenacetin	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Phenanthrene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Phenol	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Pronamide	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Pyrene	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Pyridine	04	SW8270D	<412 ug/kg dry		412	4	10/08/18 10:10	10/09/18 15:22	SKS
Surr: 2,4,6-Tribromophenol (Surr)	04	SW8270D	37.5 %		35-125		10/08/18 10:10	10/09/18 15:22	SKS
Surr: 2-Fluorobiphenyl (Surr)	04	SW8270D	33.5 %	DS	45-105		10/08/18 10:10	10/09/18 15:22	SKS
Surr: 2-Fluorophenol (Surr)	04	SW8270D	28.8 %	DS	35-105		10/08/18 10:10	10/09/18 15:22	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D.	16-S16		Laboratory Sample ID:	1811024-04					
Grab Date/Time:	09/25/2018 16:16								
Field Residual Cl:	Field pH:								
Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	04	SW8270D	35.9 %		35-100		10/08/18 10:10	10/09/18 15:22	SKS
Surr: Phenol-d5 (Surr)	04	SW8270D	33.2 %	DS	40-100		10/08/18 10:10	10/09/18 15:22	SKS
Surr: p-Terphenyl-d14 (Surr)	04	SW8270D	39.6 %		30-125		10/08/18 10:10	10/09/18 15:22	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04	SW8015C	17.2 mg/kg dry		12.6	1	10/08/18 13:30	10/09/18 17:20	HLM
Surr: Pentacosane (Surr)	04	SW8015C	54.5 %		40-160		10/08/18 13:30	10/09/18 17:20	HLM
TPH-Semi-Volatiles (ORO)	04	SW8015C	<12.6 mg/kg dry		12.6	1	10/08/18 15:05	10/09/18 17:19	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	04	SW8082A	<0.122 mg/kg dry		0.122	1	10/09/18 14:02	10/10/18 12:47	HLM
PCB as Aroclor 1221	04	SW8082A	<0.122 mg/kg dry		0.122	1	10/09/18 14:02	10/10/18 12:47	HLM
PCB as Aroclor 1232	04	SW8082A	<0.122 mg/kg dry		0.122	1	10/09/18 14:02	10/10/18 12:47	HLM
PCB as Aroclor 1242	04	SW8082A	<0.122 mg/kg dry		0.122	1	10/09/18 14:02	10/10/18 12:47	HLM
PCB as Aroclor 1248	04	SW8082A	<0.122 mg/kg dry		0.122	1	10/09/18 14:02	10/10/18 12:47	HLM
PCB as Aroclor 1254	04	SW8082A	<0.122 mg/kg dry		0.122	1	10/09/18 14:02	10/10/18 12:47	HLM
PCB as Aroclor 1260	04	SW8082A	<0.122 mg/kg dry		0.122	1	10/09/18 14:02	10/10/18 12:47	HLM
Surr: DCB	04	SW8082A	55.0 %		30-105		10/09/18 14:02	10/10/18 12:47	HLM
Surr: TCMX	04	SW8082A	65.0 %		30-105		10/09/18 14:02	10/10/18 12:47	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	04	SW7196A	<0.25 mg/kg dry		0.25	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	04	SM18 2540G	79.4 %		0.10	1	10/01/18 10:55	10/01/18 10:55	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S17	Laboratory Sample ID: 181024-05
Grab Date/Time: 09/25/2018 16:22	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05	SW6010C	<0.684 mg/kg dry		0.684	1	09/27/18 12:20	10/01/18 14:24	BG
Aluminum	05	SW6010C	22000 mg/kg dry		684	200	09/27/18 12:20	10/01/18 12:25	BG
Arsenic	05	SW6010C	2.57 mg/kg dry		1.37	1	09/27/18 12:20	10/01/18 14:24	BG
Barium	05	SW6010C	103 mg/kg dry		13.7	20	09/27/18 12:20	10/01/18 13:21	BG
Beryllium	05	SW6010C	1.60 mg/kg dry		0.274	1	09/27/18 12:20	10/01/18 14:24	BG
Calcium	05	SW6010C	4330 mg/kg dry		1370	200	09/27/18 12:20	10/01/18 12:25	BG
Cadmium	05	SW6010C	0.811 mg/kg dry		0.274	1	09/27/18 12:20	10/01/18 14:24	BG
Cobalt	05	SW6010C	17.3 mg/kg dry		5.47	20	09/27/18 12:20	10/01/18 13:21	BG
Chromium	05	SW6010C	23.2 mg/kg dry		13.7	20	09/27/18 12:20	10/01/18 13:21	BG
Copper	05	SW6010C	18.7 mg/kg dry		3.42	1	09/27/18 12:20	10/01/18 14:24	BG
Iron	05	SW6010C	24700 mg/kg dry		684	200	09/27/18 12:20	10/01/18 12:25	BG
Mercury	05	SW7471B	0.030 mg/kg dry		0.011	1	10/02/18 10:00	10/03/18 13:57	MWL
Potassium	05	SW6010C	8690 mg/kg dry		6840	200	09/27/18 12:20	10/01/18 12:25	BG
Magnesium	05	SW6010C	6940 mg/kg dry		684	200	09/27/18 12:20	10/01/18 12:25	BG
Manganese	05	SW6010C	476 mg/kg dry		137	200	09/27/18 12:20	10/01/18 12:25	BG
Sodium	05	SW6010C	45.3 mg/kg dry		34.2	1	09/27/18 12:20	10/01/18 14:24	BG
Nickel	05	SW6010C	9.66 mg/kg dry		0.684	1	09/27/18 12:20	10/01/18 14:24	BG
Lead	05	SW6010C	9.24 mg/kg dry		0.684	1	09/27/18 12:20	10/01/18 14:24	BG
Antimony	05	SW6010C	<6.84 mg/kg dry		6.84	1	09/27/18 12:20	10/01/18 14:24	BG
Selenium	05	SW6010C	<3.42 mg/kg dry		3.42	1	09/27/18 12:20	10/01/18 14:24	BG
Thallium	05	SW6010C	<3.42 mg/kg dry		3.42	1	09/27/18 12:20	10/01/18 14:24	BG
Vanadium	05	SW6010C	25.5 mg/kg dry		13.7	20	09/27/18 12:20	10/01/18 13:21	BG
Zinc	05	SW6010C	103 mg/kg dry		13.7	20	09/27/18 12:20	10/01/18 13:21	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	05	SW8015C	<0.14 mg/kg dry		0.14	1	09/28/18 04:36	09/28/18 04:36	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S17	Laboratory Sample ID: 181024-05
Grab Date/Time: 09/25/2018 16:22	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	05	SW8015C	99.0 %		80-120		09/28/18 04:36	09/28/18 04:36	DFH
--	----	---------	--------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	05	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
1,2,4-Trichlorobenzene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
1,2-Dichlorobenzene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
1,2-Diphenylhydrazine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
1,3-Dichlorobenzene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
1,4-Dichlorobenzene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
1-Chloronaphthalene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
1-Naphthylamine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,3,4,6-Tetrachlorophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,4,5-Trichlorophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,4,6-Trichlorophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,4-Dichlorophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,4-Dimethylphenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,4-Dinitrophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,4-Dinitrotoluene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,6-Dichlorophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,6-Dinitrotoluene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2-Chloronaphthalene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2-Chlorophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2-Methylnaphthalene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2-Naphthylamine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S17 **Laboratory Sample ID:** 1811024-05

Grab Date/Time: 09/25/2018 16:22

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2-Nitrophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
3,3'-Dichlorobenzidine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
3-Methylcholanthrene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
3-Nitroaniline	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
4,6-Dinitro-2-methylphenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
4-Aminobiphenyl	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
4-Bromophenyl phenyl ether	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
4-Chloroaniline	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
4-Chlorophenyl phenyl ether	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
4-Nitroaniline	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
4-Nitrophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
7,12-Dimethylbenz (a) anthracene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Acenaphthene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Acenaphthylene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Acetophenone	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Aniline	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Anthracene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Benzidine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Benzo (a) anthracene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Benzo (a) pyrene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Benzo (b) fluoranthene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Benzo (g,h,i) perylene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Benzo (k) fluoranthene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Benzoic acid	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S17 **Laboratory Sample ID:** 1811024-05

Grab Date/Time: 09/25/2018 16:22

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
bis (2-Chloroethoxy) methane	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
bis (2-Chloroethyl) ether	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
2,2'-Oxybis (1-chloropropane)	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
bis (2-Ethylhexyl) phthalate	05	SW8270D	<114 ug/kg dry	C	114	1	10/08/18 10:10	10/09/18 15:53	SKS
Butyl benzyl phthalate	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Chrysene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Dibenz (a,h) anthracene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Dibenz (a,j) acridine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Dibenzofuran	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Diethyl phthalate	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Dimethyl phthalate	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Di-n-butyl phthalate	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Di-n-octyl phthalate	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Diphenylamine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Ethyl methanesulfonate	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Fluoranthene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Fluorene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Hexachlorobenzene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Hexachlorobutadiene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Hexachlorocyclopentadiene	05	SW8270D	<114 ug/kg dry	C	114	1	10/08/18 10:10	10/09/18 15:53	SKS
Hexachloroethane	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Indeno (1,2,3-cd) pyrene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Isophorone	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
m+p-Cresols	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S17	Laboratory Sample ID: 1811024-05
Grab Date/Time: 09/25/2018 16:22	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Naphthalene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Nitrobenzene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
n-Nitrosodimethylamine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
n-Nitrosodi-n-butylamine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
n-Nitrosodi-n-propylamine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
n-Nitrosodiphenylamine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
n-Nitrosopiperidine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
o+m+p-Cresols	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
o-Cresol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
p-(Dimethylamino) azobenzene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
p-Chloro-m-cresol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Pentachloronitrobenzene (quintozene)	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Pentachlorophenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Phenacetin	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Phenanthrene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Phenol	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Pronamide	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Pyrene	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Pyridine	05	SW8270D	<114 ug/kg dry		114	1	10/08/18 10:10	10/09/18 15:53	SKS
Surr: 2,4,6-Tribromophenol (Surr)	05	SW8270D	33.6 %	S	35-125		10/08/18 10:10	10/09/18 15:53	SKS
Surr: 2-Fluorobiphenyl (Surr)	05	SW8270D	30.5 %	S	45-105		10/08/18 10:10	10/09/18 15:53	SKS
Surr: 2-Fluorophenol (Surr)	05	SW8270D	21.9 %	S	35-105		10/08/18 10:10	10/09/18 15:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S17	Laboratory Sample ID: 1811024-05
Grab Date/Time: 09/25/2018 16:22	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	05	SW8270D	27.1 %	S	35-100		10/08/18 10:10	10/09/18 15:53	SKS
Surr: Phenol-d5 (Surr)	05	SW8270D	25.0 %	S	40-100		10/08/18 10:10	10/09/18 15:53	SKS
Surr: p-Terphenyl-d14 (Surr)	05	SW8270D	32.0 %		30-125		10/08/18 10:10	10/09/18 15:53	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05	SW8015C	<13.6 mg/kg dry		13.6	1	10/08/18 13:30	10/09/18 17:46	HLM
Surr: Pentacosane (Surr)	05	SW8015C	43.7 %		40-160		10/08/18 13:30	10/09/18 17:46	HLM
TPH-Semi-Volatiles (ORO)	05	SW8015C	<13.7 mg/kg dry		13.7	1	10/08/18 15:05	10/09/18 17:43	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	05	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 13:09	HLM
PCB as Aroclor 1221	05	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 13:09	HLM
PCB as Aroclor 1232	05	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 13:09	HLM
PCB as Aroclor 1242	05	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 13:09	HLM
PCB as Aroclor 1248	05	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 13:09	HLM
PCB as Aroclor 1254	05	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 13:09	HLM
PCB as Aroclor 1260	05	SW8082A	<0.134 mg/kg dry		0.134	1	10/09/18 14:02	10/10/18 13:09	HLM
Surr: DCB	05	SW8082A	70.0 %		30-105		10/09/18 14:02	10/10/18 13:09	HLM
Surr: TCMX	05	SW8082A	70.0 %		30-105		10/09/18 14:02	10/10/18 13:09	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	05	SW7196A	<0.28 mg/kg dry		0.28	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	05	SM18 2540G	72.3 %		0.10	1	10/01/18 10:55	10/01/18 10:55	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S18	Laboratory Sample ID: 181024-06
Grab Date/Time: 09/25/2018 16:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06	SW6010C	<0.622 mg/kg dry		0.622	1	09/27/18 12:20	10/01/18 14:27	BG
Aluminum	06	SW6010C	19700 mg/kg dry		622	200	09/27/18 12:20	10/01/18 12:32	BG
Arsenic	06	SW6010C	2.84 mg/kg dry		1.24	1	09/27/18 12:20	10/01/18 14:27	BG
Barium	06	SW6010C	159 mg/kg dry		124	200	09/27/18 12:20	10/01/18 12:32	BG
Beryllium	06	SW6010C	1.52 mg/kg dry		0.249	1	09/27/18 12:20	10/01/18 14:27	BG
Calcium	06	SW6010C	1230 mg/kg dry		124	20	09/27/18 12:20	10/01/18 13:23	BG
Cadmium	06	SW6010C	0.963 mg/kg dry		0.249	1	09/27/18 12:20	10/01/18 14:27	BG
Cobalt	06	SW6010C	13.0 mg/kg dry		4.98	20	09/27/18 12:20	10/01/18 13:23	BG
Chromium	06	SW6010C	35.3 mg/kg dry		12.4	20	09/27/18 12:20	10/01/18 13:23	BG
Copper	06	SW6010C	14.3 mg/kg dry		3.11	1	09/27/18 12:20	10/01/18 14:27	BG
Iron	06	SW6010C	22200 mg/kg dry		622	200	09/27/18 12:20	10/01/18 12:32	BG
Mercury	06	SW7471B	0.044 mg/kg dry		0.010	1	10/02/18 10:00	10/03/18 14:00	MWL
Potassium	06	SW6010C	2580 mg/kg dry		622	20	09/27/18 12:20	10/01/18 13:23	BG
Magnesium	06	SW6010C	3160 mg/kg dry		622	200	09/27/18 12:20	10/01/18 12:32	BG
Manganese	06	SW6010C	562 mg/kg dry		124	200	09/27/18 12:20	10/01/18 12:32	BG
Sodium	06	SW6010C	31.6 mg/kg dry		31.1	1	09/27/18 12:20	10/01/18 14:27	BG
Nickel	06	SW6010C	11.1 mg/kg dry		0.622	1	09/27/18 12:20	10/01/18 14:27	BG
Lead	06	SW6010C	36.8 mg/kg dry		12.4	20	09/27/18 12:20	10/01/18 13:23	BG
Antimony	06	SW6010C	<6.22 mg/kg dry		6.22	1	09/27/18 12:20	10/01/18 14:27	BG
Selenium	06	SW6010C	<3.11 mg/kg dry		3.11	1	09/27/18 12:20	10/01/18 14:27	BG
Thallium	06	SW6010C	<3.11 mg/kg dry		3.11	1	09/27/18 12:20	10/01/18 14:27	BG
Vanadium	06	SW6010C	36.1 mg/kg dry		12.4	20	09/27/18 12:20	10/01/18 13:23	BG
Zinc	06	SW6010C	127 mg/kg dry		12.4	20	09/27/18 12:20	10/01/18 13:23	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	06	SW8015C	<0.13 mg/kg dry		0.13	1	09/28/18 04:58	09/28/18 04:58	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S18	Laboratory Sample ID: 1811024-06
Grab Date/Time: 09/25/2018 16:30	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	06	SW8015C	108 %		80-120		09/28/18 04:58	09/28/18 04:58	DFH
--	----	---------	-------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	06	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
1,2,4-Trichlorobenzene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
1,2-Dichlorobenzene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
1,2-Diphenylhydrazine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
1,3-Dichlorobenzene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
1,4-Dichlorobenzene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
1-Chloronaphthalene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
1-Naphthylamine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,3,4,6-Tetrachlorophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,4,5-Trichlorophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,4,6-Trichlorophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,4-Dichlorophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,4-Dimethylphenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,4-Dinitrophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,4-Dinitrotoluene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,6-Dichlorophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,6-Dinitrotoluene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2-Chloronaphthalene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2-Chlorophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2-Methylnaphthalene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2-Naphthylamine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 14:04

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S18

Laboratory Sample ID: 1811024-06

Grab Date/Time: 09/25/2018 16:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2-Nitrophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
3,3'-Dichlorobenzidine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
3-Methylcholanthrene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
3-Nitroaniline	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
4,6-Dinitro-2-methylphenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
4-Aminobiphenyl	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
4-Bromophenyl phenyl ether	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
4-Chloroaniline	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
4-Chlorophenyl phenyl ether	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
4-Nitroaniline	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
4-Nitrophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
7,12-Dimethylbenz (a) anthracene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Acenaphthene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Acenaphthylene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Acetophenone	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Aniline	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Anthracene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Benzidine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Benzo (a) anthracene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Benzo (a) pyrene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Benzo (b) fluoranthene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Benzo (g,h,i) perylene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Benzo (k) fluoranthene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Benzoic acid	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S18 **Laboratory Sample ID:** 1811024-06

Grab Date/Time: 09/25/2018 16:30

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
bis (2-Chloroethoxy) methane	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
bis (2-Chloroethyl) ether	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
2,2'-Oxybis (1-chloropropane)	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
bis (2-Ethylhexyl) phthalate	06	SW8270D	<205 ug/kg dry	C	205	2	10/08/18 10:10	10/09/18 16:25	SKS
Butyl benzyl phthalate	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Chrysene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Dibenz (a,h) anthracene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Dibenz (a,j) acridine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Dibenzofuran	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Diethyl phthalate	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Dimethyl phthalate	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Di-n-butyl phthalate	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Di-n-octyl phthalate	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Diphenylamine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Ethyl methanesulfonate	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Fluoranthene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Fluorene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Hexachlorobenzene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Hexachlorobutadiene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Hexachlorocyclopentadiene	06	SW8270D	<205 ug/kg dry	C	205	2	10/08/18 10:10	10/09/18 16:25	SKS
Hexachloroethane	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Indeno (1,2,3-cd) pyrene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Isophorone	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
m+p-Cresols	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S18	Laboratory Sample ID: 1811024-06
Grab Date/Time: 09/25/2018 16:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Naphthalene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Nitrobenzene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
n-Nitrosodimethylamine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
n-Nitrosodi-n-butylamine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
n-Nitrosodi-n-propylamine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
n-Nitrosodiphenylamine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
n-Nitrosopiperidine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
o+m+p-Cresols	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
o-Cresol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
p-(Dimethylamino) azobenzene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
p-Chloro-m-cresol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Pentachloronitrobenzene (quintozene)	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Pentachlorophenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Phenacetin	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Phenanthrene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Phenol	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Pronamide	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Pyrene	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Pyridine	06	SW8270D	<205 ug/kg dry		205	2	10/08/18 10:10	10/09/18 16:25	SKS
Surr: 2,4,6-Tribromophenol (Surr)	06	SW8270D	36.2 %		35-125		10/08/18 10:10	10/09/18 16:25	SKS
Surr: 2-Fluorobiphenyl (Surr)	06	SW8270D	32.7 %	DS	45-105		10/08/18 10:10	10/09/18 16:25	SKS
Surr: 2-Fluorophenol (Surr)	06	SW8270D	25.3 %	DS	35-105		10/08/18 10:10	10/09/18 16:25	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S18	Laboratory Sample ID: 1811024-06
Grab Date/Time: 09/25/2018 16:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	06	SW8270D	31.9 %	DS	35-100		10/08/18 10:10	10/09/18 16:25	SKS
Surr: Phenol-d5 (Surr)	06	SW8270D	29.0 %	DS	40-100		10/08/18 10:10	10/09/18 16:25	SKS
Surr: p-Terphenyl-d14 (Surr)	06	SW8270D	39.7 %		30-125		10/08/18 10:10	10/09/18 16:25	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	06	SW8015C	<12.9 mg/kg dry		12.9	1	10/08/18 13:30	10/09/18 18:12	HLM
Surr: Pentacosane (Surr)	06	SW8015C	44.8 %		40-160		10/08/18 13:30	10/09/18 18:12	HLM
TPH-Semi-Volatiles (ORO)	06	SW8015C	13.8 mg/kg dry		13.3	1	10/08/18 15:05	10/09/18 18:08	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	06	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 13:30	HLM
PCB as Aroclor 1221	06	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 13:30	HLM
PCB as Aroclor 1232	06	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 13:30	HLM
PCB as Aroclor 1242	06	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 13:30	HLM
PCB as Aroclor 1248	06	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 13:30	HLM
PCB as Aroclor 1254	06	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 13:30	HLM
PCB as Aroclor 1260	06	SW8082A	<0.129 mg/kg dry		0.129	1	10/09/18 14:02	10/10/18 13:30	HLM
Surr: DCB	06	SW8082A	70.0 %		30-105		10/09/18 14:02	10/10/18 13:30	HLM
Surr: TCMX	06	SW8082A	60.0 %		30-105		10/09/18 14:02	10/10/18 13:30	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	06	SW7196A	<0.26 mg/kg dry		0.26	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	06	SM18 2540G	74.9 %		0.10	1	10/01/18 10:55	10/01/18 10:55	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S19 Laboratory Sample ID: 1811024-07

Grab Date/Time: 09/25/2018 16:36

Field Residual Cl: Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	07	SW6010C	<0.630 mg/kg dry		0.630	1	09/27/18 12:20	10/01/18 14:29	BG
Aluminum	07	SW6010C	25900 mg/kg dry		630	200	09/27/18 12:20	10/01/18 12:35	BG
Arsenic	07	SW6010C	3.49 mg/kg dry		1.26	1	09/27/18 12:20	10/01/18 14:29	BG
Barium	07	SW6010C	141 mg/kg dry		126	200	09/27/18 12:20	10/01/18 12:35	BG
Beryllium	07	SW6010C	1.78 mg/kg dry		0.252	1	09/27/18 12:20	10/01/18 14:29	BG
Calcium	07	SW6010C	894 mg/kg dry		126	20	09/27/18 12:20	10/01/18 13:26	BG
Cadmium	07	SW6010C	1.14 mg/kg dry		0.252	1	09/27/18 12:20	10/01/18 14:29	BG
Cobalt	07	SW6010C	19.6 mg/kg dry		5.04	20	09/27/18 12:20	10/01/18 13:26	BG
Chromium	07	SW6010C	30.4 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:26	BG
Copper	07	SW6010C	9.51 mg/kg dry		3.15	1	09/27/18 12:20	10/01/18 14:29	BG
Iron	07	SW6010C	28900 mg/kg dry		630	200	09/27/18 12:20	10/01/18 12:35	BG
Mercury	07	SW7471B	0.041 mg/kg dry		0.010	1	10/02/18 10:00	10/03/18 14:02	MWL
Potassium	07	SW6010C	8280 mg/kg dry		6300	200	09/27/18 12:20	10/01/18 12:35	BG
Magnesium	07	SW6010C	8910 mg/kg dry		630	200	09/27/18 12:20	10/01/18 12:35	BG
Manganese	07	SW6010C	596 mg/kg dry		126	200	09/27/18 12:20	10/01/18 12:35	BG
Sodium	07	SW6010C	49.9 mg/kg dry		31.5	1	09/27/18 12:20	10/01/18 14:29	BG
Nickel	07	SW6010C	24.3 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:26	BG
Lead	07	SW6010C	33.8 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:26	BG
Antimony	07	SW6010C	<6.30 mg/kg dry		6.30	1	09/27/18 12:20	10/01/18 14:29	BG
Selenium	07	SW6010C	<3.15 mg/kg dry		3.15	1	09/27/18 12:20	10/01/18 14:29	BG
Thallium	07	SW6010C	<3.15 mg/kg dry		3.15	1	09/27/18 12:20	10/01/18 14:29	BG
Vanadium	07	SW6010C	31.1 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:26	BG
Zinc	07	SW6010C	141 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:26	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	07	SW8015C	<0.13 mg/kg dry	0.13	1	09/28/18 05:21	09/28/18 05:21	DFH
---------------------	----	---------	-----------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S19	Laboratory Sample ID: 1811024-07
Grab Date/Time: 09/25/2018 16:36	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	07	SW8015C	110 %		80-120		09/28/18 05:21	09/28/18 05:21	DFH
--	----	---------	-------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	07	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
1,2,4-Trichlorobenzene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
1,2-Dichlorobenzene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
1,2-Diphenylhydrazine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
1,3-Dichlorobenzene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
1,4-Dichlorobenzene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
1-Chloronaphthalene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
1-Naphthylamine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,3,4,6-Tetrachlorophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,4,5-Trichlorophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,4,6-Trichlorophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,4-Dichlorophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,4-Dimethylphenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,4-Dinitrophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,4-Dinitrotoluene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,6-Dichlorophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,6-Dinitrotoluene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2-Chloronaphthalene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2-Chlorophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2-Methylnaphthalene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2-Naphthylamine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 14:04

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S19

Laboratory Sample ID: 1811024-07

Grab Date/Time: 09/25/2018 16:36

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2-Nitrophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
3,3'-Dichlorobenzidine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
3-Methylcholanthrene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
3-Nitroaniline	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
4,6-Dinitro-2-methylphenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
4-Aminobiphenyl	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
4-Bromophenyl phenyl ether	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
4-Chloroaniline	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
4-Chlorophenyl phenyl ether	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
4-Nitroaniline	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
4-Nitrophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
7,12-Dimethylbenz (a) anthracene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Acenaphthene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Acenaphthylene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Acetophenone	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Aniline	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Anthracene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Benzidine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Benzo (a) anthracene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Benzo (a) pyrene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Benzo (b) fluoranthene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Benzo (g,h,i) perylene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Benzo (k) fluoranthene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Benzoic acid	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S19 **Laboratory Sample ID:** 1811024-07

Grab Date/Time: 09/25/2018 16:36

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
bis (2-Chloroethoxy) methane	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
bis (2-Chloroethyl) ether	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
2,2'-Oxybis (1-chloropropane)	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
bis (2-Ethylhexyl) phthalate	07	SW8270D	<107 ug/kg dry	C	107	1	10/08/18 10:10	10/09/18 16:56	SKS
Butyl benzyl phthalate	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Chrysene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Dibenz (a,h) anthracene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Dibenz (a,j) acridine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Dibenzofuran	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Diethyl phthalate	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Dimethyl phthalate	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Di-n-butyl phthalate	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Di-n-octyl phthalate	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Diphenylamine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Ethyl methanesulfonate	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Fluoranthene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Fluorene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Hexachlorobenzene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Hexachlorobutadiene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Hexachlorocyclopentadiene	07	SW8270D	<107 ug/kg dry	C	107	1	10/08/18 10:10	10/09/18 16:56	SKS
Hexachloroethane	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Indeno (1,2,3-cd) pyrene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Isophorone	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
m+p-Cresols	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S19	Laboratory Sample ID: 1811024-07
Grab Date/Time: 09/25/2018 16:36	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Naphthalene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Nitrobenzene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
n-Nitrosodimethylamine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
n-Nitrosodi-n-butylamine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
n-Nitrosodi-n-propylamine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
n-Nitrosodiphenylamine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
n-Nitrosopiperidine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
o+m+p-Cresols	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
o-Cresol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
p-(Dimethylamino) azobenzene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
p-Chloro-m-cresol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Pentachloronitrobenzene (quintozene)	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Pentachlorophenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Phenacetin	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Phenanthrene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Phenol	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Pronamide	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Pyrene	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Pyridine	07	SW8270D	<107 ug/kg dry		107	1	10/08/18 10:10	10/09/18 16:56	SKS
Surr: 2,4,6-Tribromophenol (Surr)	07	SW8270D	38.2 %		35-125		10/08/18 10:10	10/09/18 16:56	SKS
Surr: 2-Fluorobiphenyl (Surr)	07	SW8270D	35.2 %	S	45-105		10/08/18 10:10	10/09/18 16:56	SKS
Surr: 2-Fluorophenol (Surr)	07	SW8270D	27.1 %	S	35-105		10/08/18 10:10	10/09/18 16:56	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S19	Laboratory Sample ID: 1811024-07
Grab Date/Time: 09/25/2018 16:36	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	07	SW8270D	31.0 %	S	35-100		10/08/18 10:10	10/09/18 16:56	SKS
Surr: Phenol-d5 (Surr)	07	SW8270D	28.5 %	S	40-100		10/08/18 10:10	10/09/18 16:56	SKS
Surr: p-Terphenyl-d14 (Surr)	07	SW8270D	37.5 %		30-125		10/08/18 10:10	10/09/18 16:56	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	07	SW8015C	<12.8 mg/kg dry		12.8	1	10/08/18 13:30	10/09/18 18:38	HLM
Surr: Pentacosane (Surr)	07	SW8015C	59.4 %		40-160		10/08/18 13:30	10/09/18 18:38	HLM
TPH-Semi-Volatiles (ORO)	07	SW8015C	<12.9 mg/kg dry		12.9	1	10/08/18 15:05	10/09/18 18:33	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	07	SW8082A	<0.126 mg/kg dry		0.126	1	10/09/18 14:02	10/10/18 13:52	HLM
PCB as Aroclor 1221	07	SW8082A	<0.126 mg/kg dry		0.126	1	10/09/18 14:02	10/10/18 13:52	HLM
PCB as Aroclor 1232	07	SW8082A	<0.126 mg/kg dry		0.126	1	10/09/18 14:02	10/10/18 13:52	HLM
PCB as Aroclor 1242	07	SW8082A	<0.126 mg/kg dry		0.126	1	10/09/18 14:02	10/10/18 13:52	HLM
PCB as Aroclor 1248	07	SW8082A	<0.126 mg/kg dry		0.126	1	10/09/18 14:02	10/10/18 13:52	HLM
PCB as Aroclor 1254	07	SW8082A	<0.126 mg/kg dry		0.126	1	10/09/18 14:02	10/10/18 13:52	HLM
PCB as Aroclor 1260	07	SW8082A	<0.126 mg/kg dry		0.126	1	10/09/18 14:02	10/10/18 13:52	HLM
Surr: DCB	07	SW8082A	75.0 %		30-105		10/09/18 14:02	10/10/18 13:52	HLM
Surr: TCMX	07	SW8082A	90.0 %		30-105		10/09/18 14:02	10/10/18 13:52	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	07	SW7196A	<0.26 mg/kg dry		0.26	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	07	SM18 2540G	77.1 %		0.10	1	10/01/18 10:55	10/01/18 10:55	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S20	Laboratory Sample ID: 181024-08
Grab Date/Time: 09/25/2018 16:43	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	08	SW6010C	<0.630 mg/kg dry		0.630	1	09/27/18 12:20	10/01/18 14:32	BG
Aluminum	08	SW6010C	19800 mg/kg dry		630	200	09/27/18 12:20	10/01/18 12:38	BG
Arsenic	08	SW6010C	<1.26 mg/kg dry		1.26	1	09/27/18 12:20	10/01/18 14:32	BG
Barium	08	SW6010C	91.3 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:28	BG
Beryllium	08	SW6010C	1.57 mg/kg dry		0.252	1	09/27/18 12:20	10/01/18 14:32	BG
Calcium	08	SW6010C	1020 mg/kg dry		126	20	09/27/18 12:20	10/01/18 13:28	BG
Cadmium	08	SW6010C	0.925 mg/kg dry		0.252	1	09/27/18 12:20	10/01/18 14:32	BG
Cobalt	08	SW6010C	14.2 mg/kg dry		5.04	20	09/27/18 12:20	10/01/18 13:28	BG
Chromium	08	SW6010C	22.1 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:28	BG
Copper	08	SW6010C	27.9 mg/kg dry		3.15	1	09/27/18 12:20	10/01/18 14:32	BG
Iron	08	SW6010C	23900 mg/kg dry		630	200	09/27/18 12:20	10/01/18 12:38	BG
Mercury	08	SW7471B	0.014 mg/kg dry		0.010	1	10/02/18 10:00	10/03/18 14:04	MWL
Potassium	08	SW6010C	8410 mg/kg dry		6300	200	09/27/18 12:20	10/01/18 12:38	BG
Magnesium	08	SW6010C	7650 mg/kg dry		630	200	09/27/18 12:20	10/01/18 12:38	BG
Manganese	08	SW6010C	371 mg/kg dry		126	200	09/27/18 12:20	10/01/18 12:38	BG
Sodium	08	SW6010C	45.9 mg/kg dry		31.5	1	09/27/18 12:20	10/01/18 14:32	BG
Nickel	08	SW6010C	13.4 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:28	BG
Lead	08	SW6010C	8.65 mg/kg dry		0.630	1	09/27/18 12:20	10/01/18 14:32	BG
Antimony	08	SW6010C	<6.30 mg/kg dry		6.30	1	09/27/18 12:20	10/01/18 14:32	BG
Selenium	08	SW6010C	<3.15 mg/kg dry		3.15	1	09/27/18 12:20	10/01/18 14:32	BG
Thallium	08	SW6010C	<3.15 mg/kg dry		3.15	1	09/27/18 12:20	10/01/18 14:32	BG
Vanadium	08	SW6010C	24.7 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:28	BG
Zinc	08	SW6010C	106 mg/kg dry		12.6	20	09/27/18 12:20	10/01/18 13:28	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	08	SW8015C	<0.13 mg/kg dry		0.13	1	09/28/18 05:44	09/28/18 05:44	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S20	Laboratory Sample ID: 181024-08
Grab Date/Time: 09/25/2018 16:43	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	08	SW8015C	108 %		80-120		09/28/18 05:44	09/28/18 05:44	DFH
--	----	---------	-------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	08	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
1,2,4-Trichlorobenzene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
1,2-Dichlorobenzene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
1,2-Diphenylhydrazine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
1,3-Dichlorobenzene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
1,4-Dichlorobenzene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
1-Chloronaphthalene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
1-Naphthylamine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,3,4,6-Tetrachlorophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,4,5-Trichlorophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,4,6-Trichlorophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,4-Dichlorophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,4-Dimethylphenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,4-Dinitrophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,4-Dinitrotoluene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,6-Dichlorophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,6-Dinitrotoluene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2-Chloronaphthalene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2-Chlorophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2-Methylnaphthalene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2-Naphthylamine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S20 **Laboratory Sample ID:** 1811024-08

Grab Date/Time: 09/25/2018 16:43

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2-Nitrophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
3,3'-Dichlorobenzidine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
3-Methylcholanthrene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
3-Nitroaniline	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
4,6-Dinitro-2-methylphenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
4-Aminobiphenyl	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
4-Bromophenyl phenyl ether	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
4-Chloroaniline	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
4-Chlorophenyl phenyl ether	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
4-Nitroaniline	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
4-Nitrophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
7,12-Dimethylbenz (a) anthracene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Acenaphthene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Acenaphthylene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Acetophenone	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Aniline	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Anthracene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Benzidine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Benzo (a) anthracene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Benzo (a) pyrene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Benzo (b) fluoranthene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Benzo (g,h,i) perylene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Benzo (k) fluoranthene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Benzoic acid	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S20	Laboratory Sample ID: 1811024-08
Grab Date/Time: 09/25/2018 16:43	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
bis (2-Chloroethoxy) methane	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
bis (2-Chloroethyl) ether	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
2,2'-Oxybis (1-chloropropane)	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
bis (2-Ethylhexyl) phthalate	08	SW8270D	<104 ug/kg dry	C	104	1	10/08/18 10:10	10/09/18 17:28	SKS
Butyl benzyl phthalate	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Chrysene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Dibenz (a,h) anthracene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Dibenz (a,j) acridine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Dibenzofuran	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Diethyl phthalate	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Dimethyl phthalate	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Di-n-butyl phthalate	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Di-n-octyl phthalate	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Diphenylamine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Ethyl methanesulfonate	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Fluoranthene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Fluorene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Hexachlorobenzene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Hexachlorobutadiene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Hexachlorocyclopentadiene	08	SW8270D	<104 ug/kg dry	C	104	1	10/08/18 10:10	10/09/18 17:28	SKS
Hexachloroethane	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Indeno (1,2,3-cd) pyrene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Isophorone	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
m+p-Cresols	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S20	Laboratory Sample ID: 1811024-08
Grab Date/Time: 09/25/2018 16:43	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Naphthalene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Nitrobenzene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
n-Nitrosodimethylamine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
n-Nitrosodi-n-butylamine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
n-Nitrosodi-n-propylamine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
n-Nitrosodiphenylamine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
n-Nitrosopiperidine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
o+m+p-Cresols	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
o-Cresol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
p-(Dimethylamino) azobenzene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
p-Chloro-m-cresol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Pentachloronitrobenzene (quintozene)	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Pentachlorophenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Phenacetin	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Phenanthrene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Phenol	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Pronamide	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Pyrene	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Pyridine	08	SW8270D	<104 ug/kg dry		104	1	10/08/18 10:10	10/09/18 17:28	SKS
Surr: 2,4,6-Tribromophenol (Surr)	08	SW8270D	39.2 %		35-125		10/08/18 10:10	10/09/18 17:28	SKS
Surr: 2-Fluorobiphenyl (Surr)	08	SW8270D	35.4 %	S	45-105		10/08/18 10:10	10/09/18 17:28	SKS
Surr: 2-Fluorophenol (Surr)	08	SW8270D	28.1 %	S	35-105		10/08/18 10:10	10/09/18 17:28	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S20	Laboratory Sample ID: 1811024-08
Grab Date/Time: 09/25/2018 16:43	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	08	SW8270D	31.5 %	S	35-100		10/08/18 10:10	10/09/18 17:28	SKS
Surr: Phenol-d5 (Surr)	08	SW8270D	29.4 %	S	40-100		10/08/18 10:10	10/09/18 17:28	SKS
Surr: p-Terphenyl-d14 (Surr)	08	SW8270D	38.1 %		30-125		10/08/18 10:10	10/09/18 17:28	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	08	SW8015C	<12.9 mg/kg dry		12.9	1	10/08/18 13:30	10/09/18 19:03	HLM
Surr: Pentacosane (Surr)	08	SW8015C	47.1 %		40-160		10/08/18 13:30	10/09/18 19:03	HLM
TPH-Semi-Volatiles (ORO)	08	SW8015C	<12.9 mg/kg dry		12.9	1	10/08/18 15:05	10/09/18 18:57	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	08	SW8082A	<0.114 mg/kg dry		0.114	1	10/09/18 14:02	10/10/18 14:14	HLM
PCB as Aroclor 1221	08	SW8082A	<0.114 mg/kg dry		0.114	1	10/09/18 14:02	10/10/18 14:14	HLM
PCB as Aroclor 1232	08	SW8082A	<0.114 mg/kg dry		0.114	1	10/09/18 14:02	10/10/18 14:14	HLM
PCB as Aroclor 1242	08	SW8082A	<0.114 mg/kg dry		0.114	1	10/09/18 14:02	10/10/18 14:14	HLM
PCB as Aroclor 1248	08	SW8082A	<0.114 mg/kg dry		0.114	1	10/09/18 14:02	10/10/18 14:14	HLM
PCB as Aroclor 1254	08	SW8082A	<0.114 mg/kg dry		0.114	1	10/09/18 14:02	10/10/18 14:14	HLM
PCB as Aroclor 1260	08	SW8082A	<0.114 mg/kg dry		0.114	1	10/09/18 14:02	10/10/18 14:14	HLM
Surr: DCB	08	SW8082A	70.0 %		30-105		10/09/18 14:02	10/10/18 14:14	HLM
Surr: TCMX	08	SW8082A	70.0 %		30-105		10/09/18 14:02	10/10/18 14:14	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	08	SW7196A	<0.26 mg/kg dry		0.26	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	08	SM18 2540G	76.9 %		0.10	1	10/02/18 10:37	10/02/18 10:37	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S21	Laboratory Sample ID: 181024-09
Grab Date/Time: 09/25/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	09	SW6010C	<0.679 mg/kg dry		0.679	1	09/27/18 12:20	10/01/18 14:35	BG
Aluminum	09	SW6010C	19200 mg/kg dry		679	200	09/27/18 12:20	10/01/18 12:40	BG
Arsenic	09	SW6010C	1.85 mg/kg dry		1.36	1	09/27/18 12:20	10/01/18 14:35	BG
Barium	09	SW6010C	118 mg/kg dry		13.6	20	09/27/18 12:20	10/01/18 13:36	BG
Beryllium	09	SW6010C	1.53 mg/kg dry		0.272	1	09/27/18 12:20	10/01/18 14:35	BG
Calcium	09	SW6010C	2170 mg/kg dry		1360	200	09/27/18 12:20	10/01/18 12:40	BG
Cadmium	09	SW6010C	0.879 mg/kg dry		0.272	1	09/27/18 12:20	10/01/18 14:35	BG
Cobalt	09	SW6010C	17.9 mg/kg dry		5.43	20	09/27/18 12:20	10/01/18 13:36	BG
Chromium	09	SW6010C	20.1 mg/kg dry		13.6	20	09/27/18 12:20	10/01/18 13:36	BG
Copper	09	SW6010C	15.8 mg/kg dry		3.40	1	09/27/18 12:20	10/01/18 14:35	BG
Iron	09	SW6010C	21500 mg/kg dry		679	200	09/27/18 12:20	10/01/18 12:40	BG
Mercury	09	SW7471B	0.033 mg/kg dry		0.010	1	10/02/18 10:00	10/03/18 14:07	MWL
Potassium	09	SW6010C	7340 mg/kg dry		679	20	09/27/18 12:20	10/01/18 13:36	BG
Magnesium	09	SW6010C	6040 mg/kg dry		679	200	09/27/18 12:20	10/01/18 12:40	BG
Manganese	09	SW6010C	612 mg/kg dry		136	200	09/27/18 12:20	10/01/18 12:40	BG
Sodium	09	SW6010C	44.2 mg/kg dry		34.0	1	09/27/18 12:20	10/01/18 14:35	BG
Nickel	09	SW6010C	10.2 mg/kg dry		0.679	1	09/27/18 12:20	10/01/18 14:35	BG
Lead	09	SW6010C	18.1 mg/kg dry		13.6	20	09/27/18 12:20	10/01/18 13:36	BG
Antimony	09	SW6010C	<6.79 mg/kg dry		6.79	1	09/27/18 12:20	10/01/18 14:35	BG
Selenium	09	SW6010C	<3.40 mg/kg dry		3.40	1	09/27/18 12:20	10/01/18 14:35	BG
Thallium	09	SW6010C	<3.40 mg/kg dry		3.40	1	09/27/18 12:20	10/01/18 14:35	BG
Vanadium	09	SW6010C	27.0 mg/kg dry		13.6	20	09/27/18 12:20	10/01/18 13:36	BG
Zinc	09	SW6010C	106 mg/kg dry		13.6	20	09/27/18 12:20	10/01/18 13:36	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	09	SW8015C	<0.14 mg/kg dry		0.14	1	09/28/18 06:07	09/28/18 06:07	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S21	Laboratory Sample ID: 181024-09
Grab Date/Time: 09/25/2018 16:50	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	09	SW8015C	102 %		80-120		09/28/18 06:07	09/28/18 06:07	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	09	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
1,2,4-Trichlorobenzene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
1,2-Dichlorobenzene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
1,2-Diphenylhydrazine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
1,3-Dichlorobenzene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
1,4-Dichlorobenzene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
1-Chloronaphthalene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
1-Naphthylamine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,3,4,6-Tetrachlorophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,4,5-Trichlorophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,4,6-Trichlorophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,4-Dichlorophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,4-Dimethylphenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,4-Dinitrophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,4-Dinitrotoluene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,6-Dichlorophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,6-Dinitrotoluene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2-Chloronaphthalene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2-Chlorophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2-Methylnaphthalene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2-Naphthylamine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 14:04

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S21

Laboratory Sample ID: 1811024-09

Grab Date/Time: 09/25/2018 16:50

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2-Nitrophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
3,3'-Dichlorobenzidine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
3-Methylcholanthrene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
3-Nitroaniline	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
4,6-Dinitro-2-methylphenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
4-Aminobiphenyl	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
4-Bromophenyl phenyl ether	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
4-Chloroaniline	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
4-Chlorophenyl phenyl ether	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
4-Nitroaniline	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
4-Nitrophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
7,12-Dimethylbenz (a) anthracene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Acenaphthene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Acenaphthylene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Acetophenone	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Aniline	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Anthracene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Benzidine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Benzo (a) anthracene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Benzo (a) pyrene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Benzo (b) fluoranthene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Benzo (g,h,i) perylene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Benzo (k) fluoranthene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Benzoic acid	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S21	Laboratory Sample ID: 1811024-09
Grab Date/Time: 09/25/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
bis (2-Chloroethoxy) methane	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
bis (2-Chloroethyl) ether	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
2,2'-Oxybis (1-chloropropane)	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
bis (2-Ethylhexyl) phthalate	09	SW8270D	<219 ug/kg dry	C	219	2	10/08/18 10:10	10/09/18 18:00	SKS
Butyl benzyl phthalate	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Chrysene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Dibenz (a,h) anthracene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Dibenz (a,j) acridine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Dibenzofuran	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Diethyl phthalate	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Dimethyl phthalate	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Di-n-butyl phthalate	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Di-n-octyl phthalate	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Diphenylamine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Ethyl methanesulfonate	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Fluoranthene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Fluorene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Hexachlorobenzene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Hexachlorobutadiene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Hexachlorocyclopentadiene	09	SW8270D	<219 ug/kg dry	C	219	2	10/08/18 10:10	10/09/18 18:00	SKS
Hexachloroethane	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Indeno (1,2,3-cd) pyrene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Isophorone	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
m+p-Cresols	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S21	Laboratory Sample ID: 1811024-09
Grab Date/Time: 09/25/2018 16:50	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Naphthalene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Nitrobenzene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
n-Nitrosodimethylamine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
n-Nitrosodi-n-butylamine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
n-Nitrosodi-n-propylamine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
n-Nitrosodiphenylamine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
n-Nitrosopiperidine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
o+m+p-Cresols	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
o-Cresol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
p-(Dimethylamino) azobenzene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
p-Chloro-m-cresol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Pentachloronitrobenzene (quintozene)	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Pentachlorophenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Phenacetin	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Phenanthrene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Phenol	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Pronamide	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Pyrene	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Pyridine	09	SW8270D	<219 ug/kg dry		219	2	10/08/18 10:10	10/09/18 18:00	SKS
Surr: 2,4,6-Tribromophenol (Surr)	09	SW8270D	35.7 %		35-125		10/08/18 10:10	10/09/18 18:00	SKS
Surr: 2-Fluorobiphenyl (Surr)	09	SW8270D	33.7 %	DS	45-105		10/08/18 10:10	10/09/18 18:00	SKS
Surr: 2-Fluorophenol (Surr)	09	SW8270D	28.7 %	DS	35-105		10/08/18 10:10	10/09/18 18:00	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S21	Laboratory Sample ID: 1811024-09
Grab Date/Time: 09/25/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
<i>Surr: Nitrobenzene-d5 (Surr)</i>	09	SW8270D	33.0 %	DS	35-100		10/08/18 10:10	10/09/18 18:00	SKS
<i>Surr: Phenol-d5 (Surr)</i>	09	SW8270D	30.7 %	DS	40-100		10/08/18 10:10	10/09/18 18:00	SKS
<i>Surr: p-Terphenyl-d14 (Surr)</i>	09	SW8270D	35.6 %		30-125		10/08/18 10:10	10/09/18 18:00	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	09	SW8015C	<14.2 mg/kg dry		14.2	1	10/08/18 13:30	10/09/18 19:29	HLM
<i>Surr: Pentacosane (Surr)</i>	09	SW8015C	58.7 %		40-160		10/08/18 13:30	10/09/18 19:29	HLM
TPH-Semi-Volatiles (ORO)	09	SW8015C	<14.3 mg/kg dry		14.3	1	10/08/18 15:05	10/09/18 19:22	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	09	SW8082A	<0.136 mg/kg dry		0.136	1	10/09/18 14:02	10/10/18 14:35	HLM
PCB as Aroclor 1221	09	SW8082A	<0.136 mg/kg dry		0.136	1	10/09/18 14:02	10/10/18 14:35	HLM
PCB as Aroclor 1232	09	SW8082A	<0.136 mg/kg dry		0.136	1	10/09/18 14:02	10/10/18 14:35	HLM
PCB as Aroclor 1242	09	SW8082A	<0.136 mg/kg dry		0.136	1	10/09/18 14:02	10/10/18 14:35	HLM
PCB as Aroclor 1248	09	SW8082A	<0.136 mg/kg dry		0.136	1	10/09/18 14:02	10/10/18 14:35	HLM
PCB as Aroclor 1254	09	SW8082A	<0.136 mg/kg dry		0.136	1	10/09/18 14:02	10/10/18 14:35	HLM
PCB as Aroclor 1260	09	SW8082A	<0.136 mg/kg dry		0.136	1	10/09/18 14:02	10/10/18 14:35	HLM
<i>Surr: DCB</i>	09	SW8082A	75.0 %		30-105		10/09/18 14:02	10/10/18 14:35	HLM
<i>Surr: TCMX</i>	09	SW8082A	90.0 %		30-105		10/09/18 14:02	10/10/18 14:35	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	09	SW7196A	<0.28 mg/kg dry		0.28	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	09	SM18 2540G	70.0 %		0.10	1	10/02/18 10:37	10/02/18 10:37	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S22	Laboratory Sample ID: 1811024-10
Grab Date/Time: 09/25/2018 16:54	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	10	SW6010C	<0.751 mg/kg dry		0.751	1	09/27/18 12:20	10/01/18 14:53	BG
Aluminum	10	SW6010C	19700 mg/kg dry		751	200	09/27/18 12:20	10/01/18 12:43	BG
Arsenic	10	SW6010C	1.60 mg/kg dry		1.50	1	09/27/18 12:20	10/01/18 14:53	BG
Barium	10	SW6010C	164 mg/kg dry		150	200	09/27/18 12:20	10/01/18 12:43	BG
Beryllium	10	SW6010C	1.74 mg/kg dry		0.300	1	09/27/18 12:20	10/01/18 14:53	BG
Calcium	10	SW6010C	2750 mg/kg dry		1500	200	09/27/18 12:20	10/01/18 12:43	BG
Cadmium	10	SW6010C	1.08 mg/kg dry		0.300	1	09/27/18 12:20	10/01/18 14:53	BG
Cobalt	10	SW6010C	16.2 mg/kg dry		6.01	20	09/27/18 12:20	10/01/18 13:38	BG
Chromium	10	SW6010C	21.0 mg/kg dry		15.0	20	09/27/18 12:20	10/01/18 13:38	BG
Copper	10	SW6010C	16.5 mg/kg dry		3.75	1	09/27/18 12:20	10/01/18 14:53	BG
Iron	10	SW6010C	26700 mg/kg dry		751	200	09/27/18 12:20	10/01/18 12:43	BG
Mercury	10	SW7471B	0.038 mg/kg dry		0.011	1	10/02/18 10:00	10/03/18 14:09	MWL
Potassium	10	SW6010C	7970 mg/kg dry		7510	200	09/27/18 12:20	10/01/18 12:43	BG
Magnesium	10	SW6010C	7100 mg/kg dry		751	200	09/27/18 12:20	10/01/18 12:43	BG
Manganese	10	SW6010C	518 mg/kg dry		150	200	09/27/18 12:20	10/01/18 12:43	BG
Sodium	10	SW6010C	58.0 mg/kg dry		37.5	1	09/27/18 12:20	10/01/18 14:53	BG
Nickel	10	SW6010C	12.3 mg/kg dry		0.751	1	09/27/18 12:20	10/01/18 14:53	BG
Lead	10	SW6010C	28.2 mg/kg dry		15.0	20	09/27/18 12:20	10/01/18 13:38	BG
Antimony	10	SW6010C	<7.51 mg/kg dry		7.51	1	09/27/18 12:20	10/01/18 14:53	BG
Selenium	10	SW6010C	<3.75 mg/kg dry		3.75	1	09/27/18 12:20	10/01/18 14:53	BG
Thallium	10	SW6010C	<3.75 mg/kg dry		3.75	1	09/27/18 12:20	10/01/18 14:53	BG
Vanadium	10	SW6010C	36.8 mg/kg dry		15.0	20	09/27/18 12:20	10/01/18 13:38	BG
Zinc	10	SW6010C	133 mg/kg dry		15.0	20	09/27/18 12:20	10/01/18 13:38	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	10	SW8015C	<0.15 mg/kg dry		0.15	1	09/28/18 06:30	09/28/18 06:30	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S22	Laboratory Sample ID: 1811024-10
Grab Date/Time: 09/25/2018 16:54	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	10	SW8015C	94.1 %		80-120		09/28/18 06:30	09/28/18 06:30	DFH
--	----	---------	--------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	10	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
1,2,4-Trichlorobenzene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
1,2-Dichlorobenzene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
1,2-Diphenylhydrazine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
1,3-Dichlorobenzene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
1,4-Dichlorobenzene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
1-Chloronaphthalene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
1-Naphthylamine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,3,4,6-Tetrachlorophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,4,5-Trichlorophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,4,6-Trichlorophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,4-Dichlorophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,4-Dimethylphenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,4-Dinitrophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,4-Dinitrotoluene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,6-Dichlorophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,6-Dinitrotoluene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2-Chloronaphthalene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2-Chlorophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2-Methylnaphthalene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2-Naphthylamine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S22	Laboratory Sample ID: 1811024-10
Grab Date/Time: 09/25/2018 16:54	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2-Nitrophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
3,3'-Dichlorobenzidine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
3-Methylcholanthrene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
3-Nitroaniline	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
4,6-Dinitro-2-methylphenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
4-Aminobiphenyl	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
4-Bromophenyl phenyl ether	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
4-Chloroaniline	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
4-Chlorophenyl phenyl ether	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
4-Nitroaniline	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
4-Nitrophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
7,12-Dimethylbenz (a) anthracene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Acenaphthene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Acenaphthylene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Acetophenone	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Aniline	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Anthracene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Benzidine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Benzo (a) anthracene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Benzo (a) pyrene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Benzo (b) fluoranthene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Benzo (g,h,i) perylene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Benzo (k) fluoranthene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Benzoic acid	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S22 **Laboratory Sample ID:** 1811024-10

Grab Date/Time: 09/25/2018 16:54

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
bis (2-Chloroethoxy) methane	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
bis (2-Chloroethyl) ether	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
2,2'-Oxybis (1-chloropropane)	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
bis (2-Ethylhexyl) phthalate	10	SW8270D	<480 ug/kg dry	C	480	4	10/08/18 10:10	10/09/18 18:31	SKS
Butyl benzyl phthalate	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Chrysene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Dibenz (a,h) anthracene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Dibenz (a,j) acridine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Dibenzofuran	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Diethyl phthalate	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Dimethyl phthalate	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Di-n-butyl phthalate	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Di-n-octyl phthalate	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Diphenylamine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Ethyl methanesulfonate	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Fluoranthene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Fluorene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Hexachlorobenzene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Hexachlorobutadiene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Hexachlorocyclopentadiene	10	SW8270D	<480 ug/kg dry	C	480	4	10/08/18 10:10	10/09/18 18:31	SKS
Hexachloroethane	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Indeno (1,2,3-cd) pyrene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Isophorone	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
m+p-Cresols	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S22	Laboratory Sample ID: 1811024-10
Grab Date/Time: 09/25/2018 16:54	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Naphthalene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Nitrobenzene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
n-Nitrosodimethylamine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
n-Nitrosodi-n-butylamine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
n-Nitrosodi-n-propylamine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
n-Nitrosodiphenylamine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
n-Nitrosopiperidine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
o+m+p-Cresols	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
o-Cresol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
p-(Dimethylamino) azobenzene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
p-Chloro-m-cresol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Pentachloronitrobenzene (quintozene)	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Pentachlorophenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Phenacetin	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Phenanthrene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Phenol	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Pronamide	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Pyrene	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Pyridine	10	SW8270D	<480 ug/kg dry		480	4	10/08/18 10:10	10/09/18 18:31	SKS
Surr: 2,4,6-Tribromophenol (Surr)	10	SW8270D	37.3 %		35-125		10/08/18 10:10	10/09/18 18:31	SKS
Surr: 2-Fluorobiphenyl (Surr)	10	SW8270D	29.5 %	DS	45-105		10/08/18 10:10	10/09/18 18:31	SKS
Surr: 2-Fluorophenol (Surr)	10	SW8270D	31.7 %	DS	35-105		10/08/18 10:10	10/09/18 18:31	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S22	Laboratory Sample ID: 1811024-10
Grab Date/Time: 09/25/2018 16:54	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	10	SW8270D	35.8 %		35-100		10/08/18 10:10	10/09/18 18:31	SKS
Surr: Phenol-d5 (Surr)	10	SW8270D	33.6 %	DS	40-100		10/08/18 10:10	10/09/18 18:31	SKS
Surr: p-Terphenyl-d14 (Surr)	10	SW8270D	39.6 %		30-125		10/08/18 10:10	10/09/18 18:31	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	10	SW8015C	<15.1 mg/kg dry		15.1	1	10/08/18 13:30	10/09/18 19:55	HLM
Surr: Pentacosane (Surr)	10	SW8015C	57.5 %		40-160		10/08/18 13:30	10/09/18 19:55	HLM
TPH-Semi-Volatiles (ORO)	10	SW8015C	<15.0 mg/kg dry		15.0	1	10/08/18 15:05	10/09/18 19:47	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	10	SW8082A	<0.146 mg/kg dry		0.146	1	10/09/18 14:02	10/10/18 14:57	HLM
PCB as Aroclor 1221	10	SW8082A	<0.146 mg/kg dry		0.146	1	10/09/18 14:02	10/10/18 14:57	HLM
PCB as Aroclor 1232	10	SW8082A	<0.146 mg/kg dry		0.146	1	10/09/18 14:02	10/10/18 14:57	HLM
PCB as Aroclor 1242	10	SW8082A	<0.146 mg/kg dry		0.146	1	10/09/18 14:02	10/10/18 14:57	HLM
PCB as Aroclor 1248	10	SW8082A	<0.146 mg/kg dry		0.146	1	10/09/18 14:02	10/10/18 14:57	HLM
PCB as Aroclor 1254	10	SW8082A	<0.146 mg/kg dry		0.146	1	10/09/18 14:02	10/10/18 14:57	HLM
PCB as Aroclor 1260	10	SW8082A	<0.146 mg/kg dry		0.146	1	10/09/18 14:02	10/10/18 14:57	HLM
Surr: DCB	10	SW8082A	75.0 %		30-105		10/09/18 14:02	10/10/18 14:57	HLM
Surr: TCMX	10	SW8082A	90.0 %		30-105		10/09/18 14:02	10/10/18 14:57	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	10	SW7196A	<0.30 mg/kg dry		0.30	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	10	SM18 2540G	65.9 %		0.10	1	10/02/18 10:37	10/02/18 10:37	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S23	Laboratory Sample ID: 1811024-11
Grab Date/Time: 09/25/2018 17:00	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	11	SW6010C	<0.689 mg/kg dry		0.689	1	09/27/18 12:20	10/01/18 14:56	BG
Aluminum	11	SW6010C	27500 mg/kg dry		689	200	09/27/18 12:20	10/01/18 12:45	BG
Arsenic	11	SW6010C	<1.38 mg/kg dry		1.38	1	09/27/18 12:20	10/01/18 14:56	BG
Barium	11	SW6010C	130 mg/kg dry		13.8	20	09/27/18 12:20	10/01/18 13:41	BG
Beryllium	11	SW6010C	1.84 mg/kg dry		0.276	1	09/27/18 12:20	10/01/18 14:56	BG
Calcium	11	SW6010C	2430 mg/kg dry		1380	200	09/27/18 12:20	10/01/18 12:45	BG
Cadmium	11	SW6010C	0.939 mg/kg dry		0.276	1	09/27/18 12:20	10/01/18 14:56	BG
Cobalt	11	SW6010C	14.9 mg/kg dry		5.51	20	09/27/18 12:20	10/01/18 13:41	BG
Chromium	11	SW6010C	19.4 mg/kg dry		13.8	20	09/27/18 12:20	10/01/18 13:41	BG
Copper	11	SW6010C	11.8 mg/kg dry		3.44	1	09/27/18 12:20	10/01/18 14:56	BG
Iron	11	SW6010C	25800 mg/kg dry		689	200	09/27/18 12:20	10/01/18 12:45	BG
Mercury	11	SW7471B	0.041 mg/kg dry		0.011	1	10/02/18 10:00	10/03/18 14:11	MWL
Potassium	11	SW6010C	8060 mg/kg dry		6890	200	09/27/18 12:20	10/01/18 12:45	BG
Magnesium	11	SW6010C	7240 mg/kg dry		689	200	09/27/18 12:20	10/01/18 12:45	BG
Manganese	11	SW6010C	441 mg/kg dry		138	200	09/27/18 12:20	10/01/18 12:45	BG
Sodium	11	SW6010C	46.1 mg/kg dry		34.4	1	09/27/18 12:20	10/01/18 14:56	BG
Nickel	11	SW6010C	12.3 mg/kg dry		0.689	1	09/27/18 12:20	10/01/18 14:56	BG
Lead	11	SW6010C	8.52 mg/kg dry		0.689	1	09/27/18 12:20	10/01/18 14:56	BG
Antimony	11	SW6010C	<6.89 mg/kg dry		6.89	1	09/27/18 12:20	10/01/18 14:56	BG
Selenium	11	SW6010C	<3.44 mg/kg dry		3.44	1	09/27/18 12:20	10/01/18 14:56	BG
Thallium	11	SW6010C	<3.44 mg/kg dry		3.44	1	09/27/18 12:20	10/01/18 14:56	BG
Vanadium	11	SW6010C	32.3 mg/kg dry		13.8	20	09/27/18 12:20	10/01/18 13:41	BG
Zinc	11	SW6010C	110 mg/kg dry		13.8	20	09/27/18 12:20	10/01/18 13:41	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	11	SW8015C	<0.15 mg/kg dry		0.15	1	09/28/18 06:53	09/28/18 06:53	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S23	Laboratory Sample ID: 181024-11
Grab Date/Time: 09/25/2018 17:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

Surr: 2,5-Dibromotoluene (Surr FID)	11	SW8015C	93.9 %		80-120		09/28/18 06:53	09/28/18 06:53	DFH
--	----	---------	--------	--	--------	--	----------------	----------------	-----

Semivolatile Organic Compounds by GCMS

2,3,7,8-TCDD (SIM)	11	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
1,2,4-Trichlorobenzene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
1,2-Dichlorobenzene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
1,2-Diphenylhydrazine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
1,3-Dichlorobenzene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
1,4-Dichlorobenzene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
1-Chloronaphthalene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
1-Naphthylamine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,3,4,6-Tetrachlorophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,4,5-Trichlorophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,4,6-Trichlorophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,4-Dichlorophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,4-Dimethylphenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,4-Dinitrophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,4-Dinitrotoluene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,6-Dichlorophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,6-Dinitrotoluene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2-Chloronaphthalene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2-Chlorophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2-Methylnaphthalene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2-Naphthylamine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 14:04

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S23

Laboratory Sample ID: 1811024-11

Grab Date/Time: 09/25/2018 17:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2-Nitrophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
3,3'-Dichlorobenzidine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
3-Methylcholanthrene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
3-Nitroaniline	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
4,6-Dinitro-2-methylphenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
4-Aminobiphenyl	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
4-Bromophenyl phenyl ether	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
4-Chloroaniline	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
4-Chlorophenyl phenyl ether	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
4-Nitroaniline	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
4-Nitrophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
7,12-Dimethylbenz (a) anthracene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Acenaphthene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Acenaphthylene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Acetophenone	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Aniline	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Anthracene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Benzidine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Benzo (a) anthracene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Benzo (a) pyrene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Benzo (b) fluoranthene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Benzo (g,h,i) perylene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Benzo (k) fluoranthene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Benzoic acid	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S23 **Laboratory Sample ID:** 1811024-11

Grab Date/Time: 09/25/2018 17:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
bis (2-Chloroethoxy) methane	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
bis (2-Chloroethyl) ether	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
2,2'-Oxybis (1-chloropropane)	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
bis (2-Ethylhexyl) phthalate	11	SW8270D	<456 ug/kg dry	C	456	4	10/08/18 10:10	10/09/18 19:03	SKS
Butyl benzyl phthalate	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Chrysene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Dibenz (a,h) anthracene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Dibenz (a,j) acridine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Dibenzofuran	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Diethyl phthalate	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Dimethyl phthalate	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Di-n-butyl phthalate	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Di-n-octyl phthalate	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Diphenylamine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Ethyl methanesulfonate	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Fluoranthene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Fluorene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Hexachlorobenzene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Hexachlorobutadiene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Hexachlorocyclopentadiene	11	SW8270D	<456 ug/kg dry	C	456	4	10/08/18 10:10	10/09/18 19:03	SKS
Hexachloroethane	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Indeno (1,2,3-cd) pyrene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Isophorone	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
m+p-Cresols	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S23	Laboratory Sample ID: 1811024-11
Grab Date/Time: 09/25/2018 17:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Naphthalene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Nitrobenzene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
n-Nitrosodimethylamine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
n-Nitrosodi-n-butylamine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
n-Nitrosodi-n-propylamine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
n-Nitrosodiphenylamine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
n-Nitrosopiperidine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
o+m+p-Cresols	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
o-Cresol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
p-(Dimethylamino) azobenzene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
p-Chloro-m-cresol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Pentachloronitrobenzene (quintozene)	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Pentachlorophenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Phenacetin	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Phenanthrene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Phenol	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Pronamide	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Pyrene	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Pyridine	11	SW8270D	<456 ug/kg dry		456	4	10/08/18 10:10	10/09/18 19:03	SKS
Surr: 2,4,6-Tribromophenol (Surr)	11	SW8270D	35.8 %		35-125		10/08/18 10:10	10/09/18 19:03	SKS
Surr: 2-Fluorobiphenyl (Surr)	11	SW8270D	26.4 %	DS	45-105		10/08/18 10:10	10/09/18 19:03	SKS
Surr: 2-Fluorophenol (Surr)	11	SW8270D	28.9 %	DS	35-105		10/08/18 10:10	10/09/18 19:03	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S23	Laboratory Sample ID: 1811024-11
Grab Date/Time: 09/25/2018 17:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	11	SW8270D	34.1 %	DS	35-100		10/08/18 10:10	10/09/18 19:03	SKS
Surr: Phenol-d5 (Surr)	11	SW8270D	30.5 %	DS	40-100		10/08/18 10:10	10/09/18 19:03	SKS
Surr: p-Terphenyl-d14 (Surr)	11	SW8270D	38.9 %		30-125		10/08/18 10:10	10/09/18 19:03	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	11	SW8015C	<14.5 mg/kg dry		14.5	1	10/08/18 13:30	10/09/18 20:20	HLM
Surr: Pentacosane (Surr)	11	SW8015C	52.9 %		40-160		10/08/18 13:30	10/09/18 20:20	HLM
TPH-Semi-Volatiles (ORO)	11	SW8015C	<14.4 mg/kg dry		14.4	1	10/08/18 15:05	10/09/18 20:11	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	11	SW8082A	<0.130 mg/kg dry		0.130	1	10/09/18 14:02	10/10/18 15:18	HLM
PCB as Aroclor 1221	11	SW8082A	<0.130 mg/kg dry		0.130	1	10/09/18 14:02	10/10/18 15:18	HLM
PCB as Aroclor 1232	11	SW8082A	<0.130 mg/kg dry		0.130	1	10/09/18 14:02	10/10/18 15:18	HLM
PCB as Aroclor 1242	11	SW8082A	<0.130 mg/kg dry		0.130	1	10/09/18 14:02	10/10/18 15:18	HLM
PCB as Aroclor 1248	11	SW8082A	<0.130 mg/kg dry		0.130	1	10/09/18 14:02	10/10/18 15:18	HLM
PCB as Aroclor 1254	11	SW8082A	<0.130 mg/kg dry		0.130	1	10/09/18 14:02	10/10/18 15:18	HLM
PCB as Aroclor 1260	11	SW8082A	<0.130 mg/kg dry		0.130	1	10/09/18 14:02	10/10/18 15:18	HLM
Surr: DCB	11	SW8082A	75.0 %		30-105		10/09/18 14:02	10/10/18 15:18	HLM
Surr: TCMX	11	SW8082A	85.0 %		30-105		10/09/18 14:02	10/10/18 15:18	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	11	SW7196A	<0.29 mg/kg dry		0.29	1	10/08/18 10:05	10/10/18 15:19	MWL
Percent Solids	11	SM18 2540G	68.5 %		0.10	1	10/02/18 10:37	10/02/18 10:37	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S24	Laboratory Sample ID: 1811024-12
Grab Date/Time: 09/25/2018 17:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	12	SW6010C	<0.677 mg/kg dry		0.677	1	09/27/18 12:20	10/01/18 14:59	BG
Aluminum	12	SW6010C	26900 mg/kg dry		677	200	09/27/18 12:20	10/01/18 12:48	BG
Arsenic	12	SW6010C	1.93 mg/kg dry		1.35	1	09/27/18 12:20	10/01/18 14:59	BG
Barium	12	SW6010C	163 mg/kg dry		135	200	09/27/18 12:20	10/01/18 12:48	BG
Beryllium	12	SW6010C	1.84 mg/kg dry		0.271	1	09/27/18 12:20	10/01/18 14:59	BG
Calcium	12	SW6010C	3460 mg/kg dry		1350	200	09/27/18 12:20	10/01/18 12:48	BG
Cadmium	12	SW6010C	1.14 mg/kg dry		0.271	1	09/27/18 12:20	10/01/18 14:59	BG
Cobalt	12	SW6010C	19.4 mg/kg dry		5.41	20	09/27/18 12:20	10/01/18 13:43	BG
Chromium	12	SW6010C	20.6 mg/kg dry		13.5	20	09/27/18 12:20	10/01/18 13:43	BG
Copper	12	SW6010C	14.2 mg/kg dry		3.38	1	09/27/18 12:20	10/01/18 14:59	BG
Iron	12	SW6010C	26200 mg/kg dry		677	200	09/27/18 12:20	10/01/18 12:48	BG
Mercury	12	SW7471B	0.044 mg/kg dry		0.011	1	10/02/18 10:00	10/03/18 14:13	MWL
Potassium	12	SW6010C	8620 mg/kg dry		6770	200	09/27/18 12:20	10/01/18 12:48	BG
Magnesium	12	SW6010C	7610 mg/kg dry		677	200	09/27/18 12:20	10/01/18 12:48	BG
Manganese	12	SW6010C	682 mg/kg dry		135	200	09/27/18 12:20	10/01/18 12:48	BG
Sodium	12	SW6010C	44.5 mg/kg dry		33.8	1	09/27/18 12:20	10/01/18 14:59	BG
Nickel	12	SW6010C	15.3 mg/kg dry		13.5	20	09/27/18 12:20	10/01/18 13:43	BG
Lead	12	SW6010C	28.9 mg/kg dry		13.5	20	09/27/18 12:20	10/01/18 13:43	BG
Antimony	12	SW6010C	<6.77 mg/kg dry		6.77	1	09/27/18 12:20	10/01/18 14:59	BG
Selenium	12	SW6010C	<3.38 mg/kg dry		3.38	1	09/27/18 12:20	10/01/18 14:59	BG
Thallium	12	SW6010C	<3.38 mg/kg dry		3.38	1	09/27/18 12:20	10/01/18 14:59	BG
Vanadium	12	SW6010C	33.1 mg/kg dry		13.5	20	09/27/18 12:20	10/01/18 13:43	BG
Zinc	12	SW6010C	176 mg/kg dry		13.5	20	09/27/18 12:20	10/01/18 13:43	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	12	SW8015C	<0.14 mg/kg dry		0.14	1	09/28/18 07:16	09/28/18 07:16	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 181024

Analytical Results

Sample I.D. 16-S24	Laboratory Sample ID: 181024-12
Grab Date/Time: 09/25/2018 17:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	12	SW8015C	87.8 %		80-120		09/28/18 07:16	09/28/18 07:16	DFH
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	12	SW8270D SIM	Not Detected			1	10/08/18 10:10	10/10/18 12:09	SKS
1,2,4,5-Tetrachlorobenzene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
1,2,4-Trichlorobenzene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
1,2-Dichlorobenzene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
1,2-Diphenylhydrazine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
1,3-Dichlorobenzene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
1,4-Dichlorobenzene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
1-Chloronaphthalene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
1-Naphthylamine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,3,4,6-Tetrachlorophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,4,5-Trichlorophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,4,6-Trichlorophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,4-Dichlorophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,4-Dimethylphenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,4-Dinitrophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,4-Dinitrotoluene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,6-Dichlorophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,6-Dinitrotoluene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2-Chloronaphthalene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2-Chlorophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2-Methylnaphthalene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2-Naphthylamine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 14:04

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S24

Laboratory Sample ID: 1811024-12

Grab Date/Time: 09/25/2018 17:05

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Nitroaniline	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2-Nitrophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
3,3'-Dichlorobenzidine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
3-Methylcholanthrene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
3-Nitroaniline	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
4,6-Dinitro-2-methylphenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
4-Aminobiphenyl	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
4-Bromophenyl phenyl ether	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
4-Chloroaniline	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
4-Chlorophenyl phenyl ether	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
4-Nitroaniline	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
4-Nitrophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
7,12-Dimethylbenz (a) anthracene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Acenaphthene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Acenaphthylene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Acetophenone	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Aniline	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Anthracene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Benzidine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Benzo (a) anthracene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Benzo (a) pyrene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Benzo (b) fluoranthene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Benzo (g,h,i) perylene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Benzo (k) fluoranthene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Benzoic acid	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S24	Laboratory Sample ID: 1811024-12
Grab Date/Time: 09/25/2018 17:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzyl alcohol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
bis (2-Chloroethoxy) methane	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
bis (2-Chloroethyl) ether	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
2,2'-Oxybis (1-chloropropane)	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
bis (2-Ethylhexyl) phthalate	12	SW8270D	<236 ug/kg dry	C	236	2	10/08/18 10:10	10/09/18 19:34	SKS
Butyl benzyl phthalate	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Chrysene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Dibenz (a,h) anthracene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Dibenz (a,j) acridine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Dibenzofuran	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Diethyl phthalate	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Dimethyl phthalate	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Di-n-butyl phthalate	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Di-n-octyl phthalate	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Diphenylamine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Ethyl methanesulfonate	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Fluoranthene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Fluorene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Hexachlorobenzene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Hexachlorobutadiene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Hexachlorocyclopentadiene	12	SW8270D	<236 ug/kg dry	C	236	2	10/08/18 10:10	10/09/18 19:34	SKS
Hexachloroethane	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Indeno (1,2,3-cd) pyrene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Isophorone	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
m+p-Cresols	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S24	Laboratory Sample ID: 1811024-12
Grab Date/Time: 09/25/2018 17:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Methyl methanesulfonate	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Naphthalene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Nitrobenzene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
n-Nitrosodimethylamine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
n-Nitrosodi-n-butylamine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
n-Nitrosodi-n-propylamine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
n-Nitrosodiphenylamine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
n-Nitrosopiperidine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
o+m+p-Cresols	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
o-Cresol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
p-(Dimethylamino) azobenzene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
p-Chloro-m-cresol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Pentachloronitrobenzene (quintozene)	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Pentachlorophenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Phenacetin	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Phenanthrene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Phenol	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Pronamide	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Pyrene	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Pyridine	12	SW8270D	<236 ug/kg dry		236	2	10/08/18 10:10	10/09/18 19:34	SKS
Surr: 2,4,6-Tribromophenol (Surr)	12	SW8270D	41.4 %		35-125		10/08/18 10:10	10/09/18 19:34	SKS
Surr: 2-Fluorobiphenyl (Surr)	12	SW8270D	37.7 %	DS	45-105		10/08/18 10:10	10/09/18 19:34	SKS
Surr: 2-Fluorophenol (Surr)	12	SW8270D	31.8 %	DS	35-105		10/08/18 10:10	10/09/18 19:34	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811024

Analytical Results

Sample I.D. 16-S24	Laboratory Sample ID: 1811024-12
Grab Date/Time: 09/25/2018 17:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: Nitrobenzene-d5 (Surr)	12	SW8270D	36.0 %		35-100		10/08/18 10:10	10/09/18 19:34	SKS
Surr: Phenol-d5 (Surr)	12	SW8270D	33.4 %	DS	40-100		10/08/18 10:10	10/09/18 19:34	SKS
Surr: p-Terphenyl-d14 (Surr)	12	SW8270D	39.7 %		30-125		10/08/18 10:10	10/09/18 19:34	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	12	SW8015C	<13.2 mg/kg dry		13.2	1	10/08/18 13:30	10/09/18 20:46	HLM
Surr: Pentacosane (Surr)	12	SW8015C	61.0 %		40-160		10/08/18 13:30	10/09/18 20:46	HLM
TPH-Semi-Volatiles (ORO)	12	SW8015C	15.5 mg/kg dry		14.1	1	10/08/18 15:05	10/09/18 20:36	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	12	SW8082A	<0.142 mg/kg dry		0.142	1	10/09/18 14:02	10/10/18 15:40	HLM
PCB as Aroclor 1221	12	SW8082A	<0.142 mg/kg dry		0.142	1	10/09/18 14:02	10/10/18 15:40	HLM
PCB as Aroclor 1232	12	SW8082A	<0.142 mg/kg dry		0.142	1	10/09/18 14:02	10/10/18 15:40	HLM
PCB as Aroclor 1242	12	SW8082A	<0.142 mg/kg dry		0.142	1	10/09/18 14:02	10/10/18 15:40	HLM
PCB as Aroclor 1248	12	SW8082A	<0.142 mg/kg dry		0.142	1	10/09/18 14:02	10/10/18 15:40	HLM
PCB as Aroclor 1254	12	SW8082A	<0.142 mg/kg dry		0.142	1	10/09/18 14:02	10/10/18 15:40	HLM
PCB as Aroclor 1260	12	SW8082A	<0.142 mg/kg dry		0.142	1	10/09/18 14:02	10/10/18 15:40	HLM
Surr: DCB	12	SW8082A	70.0 %		30-105		10/09/18 14:02	10/10/18 15:40	HLM
Surr: TCMX	12	SW8082A	80.0 %		30-105		10/09/18 14:02	10/10/18 15:40	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	12RE1	SW7196A	30.6 mg/kg dry		2.83	1	10/08/18 10:05	10/11/18 08:07	MWL
Percent Solids	12	SM18 2540G	69.5 %		0.10	1	10/02/18 10:37	10/02/18 10:37	RLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 14:04

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Analytical Summary

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I1024-01	1.00 g / 1.00 mL	SM18 2540G	BBJ0009	SBJ0005	
18I1024-02	1.00 g / 1.00 mL	SM18 2540G	BBJ0009	SBJ0005	
18I1024-03	1.00 g / 1.00 mL	SM18 2540G	BBJ0009	SBJ0005	
18I1024-04	1.00 g / 1.00 mL	SM18 2540G	BBJ0009	SBJ0005	
18I1024-05	1.00 g / 1.00 mL	SM18 2540G	BBJ0009	SBJ0005	
18I1024-06	1.00 g / 1.00 mL	SM18 2540G	BBJ0009	SBJ0005	
18I1024-07	1.00 g / 1.00 mL	SM18 2540G	BBJ0009	SBJ0005	
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I1024-08	1.00 g / 1.00 mL	SM18 2540G	BBJ0046	SBJ0041	
18I1024-09	1.00 g / 1.00 mL	SM18 2540G	BBJ0046	SBJ0041	
18I1024-10	1.00 g / 1.00 mL	SM18 2540G	BBJ0046	SBJ0041	
18I1024-11	1.00 g / 1.00 mL	SM18 2540G	BBJ0046	SBJ0041	
18I1024-12	1.00 g / 1.00 mL	SM18 2540G	BBJ0046	SBJ0041	
Wet Chemistry Analysis		Preparation Method:		No Prep Wet Chem	
18I1024-01	2.50 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-02	2.51 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-03	2.50 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-04	2.52 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-05	2.51 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-06	2.57 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-07	2.51 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-08	2.53 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-09	2.52 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-10	2.54 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-11	2.51 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-12	2.54 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063
18I1024-12RE1	0.254 g / 100 mL	SW7196A	BBJ0332	SBJ0339	AJ80063

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method: SW3050B



1941 Reymet Road ● Richmond, Virginia 23230 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I1024-01	1.02 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-02	1.00 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-03	1.02 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-04	1.07 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-05	1.01 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-06	1.07 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-07	1.03 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-08	1.03 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-09	1.05 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-10	1.01 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-11	1.06 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002
18I1024-12	1.06 g / 50.0 mL	SW6010C	BBI0815	SBJ0022	AJ80002

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method: SW3510C			
18I1024-01	30.5 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-02	33.8 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-03	31.2 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-04	31.1 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-05	31.0 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-06	31.1 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-07	30.9 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-08	34.3 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-09	31.5 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-10	31.2 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-11	33.8 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049
18I1024-12	30.4 g / 5.00 mL	SW8082A	BBJ0302	SBJ0367	AH80049

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS		Preparation Method: SW3550C			
18I1024-01	30.2 g / 1.00 mL	SW8270D	BBJ0181	SBJ0190	AF80080
18I1024-01	30.2 g / 1.00 mL	SW8270D SIM	BBJ0181	SBJ0190	AF80080
Semivolatile Organic Compounds by GCMS		Preparation Method: SW3550C			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I1024-02	30.6 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-03	31.4 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-04	30.6 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-05	30.2 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-06	32.6 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-07	30.4 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-08	31.3 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-09	32.6 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-10	31.6 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-11	32.0 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-12	30.5 g / 1.00 mL	SW8270D	BBJ0247	SBJ0285	AF80080
18I1024-02	30.6 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-03	31.4 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-04	30.6 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-05	30.2 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-06	32.6 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-07	30.4 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-08	31.3 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-09	32.6 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-10	31.6 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-11	32.0 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
18I1024-12	30.5 g / 1.00 mL	SW8270D SIM	BBJ0247	SBJ0285	AF80080
Semivolatile Hydrocarbons by GC		Preparation Method: SW3550C			
18I1024-01	50.4 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-02	50.9 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-03	50.5 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-04	50.1 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-05	50.9 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-06	51.6 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-07	50.8 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-08	50.4 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-09	50.5 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-10	50.3 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-11	50.2 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
18I1024-12	54.5 g / 1.00 mL	SW8015C	BBJ0264	SBJ0332	AH80058
Semivolatile Hydrocarbons by GC		Preparation Method: SW3550C			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18I1024-01	51.8 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-02	53.4 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-03	51.3 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-04	50.1 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-05	50.3 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-06	50.3 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-07	50.4 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-08	50.5 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-09	50.1 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-10	50.5 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-11	50.8 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136
18I1024-12	51.0 g / 1.00 mL	SW8015C	BBJ0265	SBJ0308	AH80136

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC		Preparation Method: SW5030B			
18I1024-01	5.05 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-02	5.05 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-03	5.05 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-04	5.03 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-05	5.03 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-06	5.00 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-07	5.03 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-08	5.01 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-09	5.04 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-10	5.05 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-11	5.01 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070
18I1024-12	5.01 g / 5.00 mL	SW8015C	BBI0809	SBI0766	AF80070

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW7471A			
18I1024-01	0.514 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
18I1024-02	0.542 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
18I1024-03	0.516 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/11/2018 14:04
201 Church Street
Blacksburg VA, 24060
Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
1811024-04	0.517 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
1811024-05	0.510 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
1811024-06	0.541 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
1811024-07	0.545 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
1811024-08	0.512 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
1811024-09	0.545 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
1811024-10	0.544 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
1811024-11	0.540 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022
1811024-12	0.517 g / 20.0 mL	SW7471B	BBJ0056	SBJ0133	AJ80022



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 14:04

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0815 - SW3050B

Blank (BBI0815-BLK1)

Prepared: 09/27/2018 Analyzed: 10/01/2018

Nickel	<0.500 mg/kg wet	0.500	mg/kg wet						
Chromium	<0.500 mg/kg wet	0.500	mg/kg wet						
Copper	<2.50 mg/kg wet	2.50	mg/kg wet						
Iron	<2.50 mg/kg wet	2.50	mg/kg wet						
Beryllium	<0.200 mg/kg wet	0.200	mg/kg wet						
Barium	<0.500 mg/kg wet	0.500	mg/kg wet						
Calcium	5.20 mg/kg wet	5.00	mg/kg wet						B
Cadmium	<0.200 mg/kg wet	0.200	mg/kg wet						
Arsenic	<1.00 mg/kg wet	1.00	mg/kg wet						
Potassium	<25.0 mg/kg wet	25.0	mg/kg wet						
Cobalt	<0.200 mg/kg wet	0.200	mg/kg wet						
Magnesium	<2.50 mg/kg wet	2.50	mg/kg wet						
Sodium	<25.0 mg/kg wet	25.0	mg/kg wet						
Lead	<0.500 mg/kg wet	0.500	mg/kg wet						
Aluminum	4.72 mg/kg wet	2.50	mg/kg wet						B
Selenium	<2.50 mg/kg wet	2.50	mg/kg wet						
Zinc	<0.500 mg/kg wet	0.500	mg/kg wet						
Manganese	<0.500 mg/kg wet	0.500	mg/kg wet						
Silver	<0.500 mg/kg wet	0.500	mg/kg wet						
Antimony	<5.00 mg/kg wet	5.00	mg/kg wet						
Vanadium	<0.500 mg/kg wet	0.500	mg/kg wet						
Thallium	<2.50 mg/kg wet	2.50	mg/kg wet						

LCS (BBI0815-BS1)

Prepared: 09/27/2018 Analyzed: 10/01/2018

Sodium	247 mg/kg wet	25.0	mg/kg wet	246	mg/kg wet	100	80-120
Zinc	92.6 mg/kg wet	0.500	mg/kg wet	98.3	mg/kg wet	94.2	80-120
Chromium	96.0 mg/kg wet	0.500	mg/kg wet	98.3	mg/kg wet	97.6	80-120
Copper	97.9 mg/kg wet	2.50	mg/kg wet	98.3	mg/kg wet	99.5	80-120
Vanadium	96.7 mg/kg wet	0.500	mg/kg wet	98.3	mg/kg wet	98.3	80-120
Iron	97.4 mg/kg wet	2.50	mg/kg wet	98.3	mg/kg wet	99.1	80-120
Potassium	245 mg/kg wet	25.0	mg/kg wet	246	mg/kg wet	99.8	80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBI0815 - SW3050B

LCS (BBI0815-BS1)

Prepared: 09/27/2018 Analyzed: 10/01/2018

Beryllium	90.5 mg/kg wet	0.200	mg/kg wet	98.3	mg/kg wet	92.0	80-120		
Magnesium	97.2 mg/kg wet	2.50	mg/kg wet	98.3	mg/kg wet	98.8	80-120		
Calcium	98.9 mg/kg wet	5.00	mg/kg wet	98.3	mg/kg wet	101	80-120		
Cadmium	92.7 mg/kg wet	0.200	mg/kg wet	98.3	mg/kg wet	94.3	80-120		
Cobalt	94.8 mg/kg wet	0.200	mg/kg wet	98.3	mg/kg wet	96.4	80-120		
Manganese	96.9 mg/kg wet	0.500	mg/kg wet	98.3	mg/kg wet	98.5	80-120		
Thallium	86.1 mg/kg wet	2.50	mg/kg wet	98.3	mg/kg wet	87.6	80-120		
Selenium	85.7 mg/kg wet	2.50	mg/kg wet	98.3	mg/kg wet	87.2	80-120		
Lead	95.1 mg/kg wet	0.500	mg/kg wet	98.3	mg/kg wet	96.7	80-120		
Antimony	92.1 mg/kg wet	5.00	mg/kg wet	98.3	mg/kg wet	93.7	80-120		
Nickel	94.5 mg/kg wet	0.500	mg/kg wet	98.3	mg/kg wet	96.1	80-120		
Silver	4.85 mg/kg wet	0.500	mg/kg wet	4.92	mg/kg wet	98.6	80-120		
Barium	98.3 mg/kg wet	0.500	mg/kg wet	98.3	mg/kg wet	100	80-120		
Arsenic	90.3 mg/kg wet	1.00	mg/kg wet	98.3	mg/kg wet	91.8	80-120		
Aluminum	103 mg/kg wet	2.50	mg/kg wet	98.3	mg/kg wet	105	80-120		

LCS Dup (BBI0815-BSD1)

Prepared: 09/27/2018 Analyzed: 10/01/2018

Nickel	96.2 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	97.0	80-120	1.73	20
Antimony	94.2 mg/kg wet	5.00	mg/kg wet	99.1	mg/kg wet	95.0	80-120	2.23	20
Selenium	87.6 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	88.4	80-120	2.14	20
Chromium	98.0 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	98.9	80-120	2.07	20
Thallium	88.2 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	89.0	80-120	2.44	20
Aluminum	104 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	105	80-120	0.859	20
Potassium	250 mg/kg wet	25.0	mg/kg wet	248	mg/kg wet	101	80-120	1.88	20
Cadmium	94.6 mg/kg wet	0.200	mg/kg wet	99.1	mg/kg wet	95.5	80-120	2.03	20
Arsenic	92.2 mg/kg wet	1.00	mg/kg wet	99.1	mg/kg wet	93.0	80-120	2.08	20
Silver	5.00 mg/kg wet	0.500	mg/kg wet	4.96	mg/kg wet	101	80-120	3.23	20
Sodium	254 mg/kg wet	25.0	mg/kg wet	248	mg/kg wet	103	80-120	2.86	20
Magnesium	98.7 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	99.5	80-120	1.50	20
Zinc	94.7 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	95.6	80-120	2.25	20
Vanadium	99.2 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	100	80-120	2.63	20
Cobalt	96.4 mg/kg wet	0.200	mg/kg wet	99.1	mg/kg wet	97.3	80-120	1.70	20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0815 - SW3050B

LCS Dup (BBI0815-BSD1)

Prepared: 09/27/2018 Analyzed: 10/01/2018

Copper	99.4 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	100	80-120	1.55	20	
Calcium	99.1 mg/kg wet	5.00	mg/kg wet	99.1	mg/kg wet	99.9	80-120	0.119	20	
Barium	101 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	102	80-120	2.42	20	
Beryllium	91.5 mg/kg wet	0.200	mg/kg wet	99.1	mg/kg wet	92.3	80-120	1.14	20	
Manganese	98.1 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	99.0	80-120	1.27	20	
Lead	97.2 mg/kg wet	0.500	mg/kg wet	99.1	mg/kg wet	98.0	80-120	2.16	20	
Iron	98.2 mg/kg wet	2.50	mg/kg wet	99.1	mg/kg wet	99.1	80-120	0.789	20	

Matrix Spike (BBI0815-MS1)

Source: 1811024-01

Prepared: 09/27/2018 Analyzed: 10/01/2018

Sodium	323 mg/kg dry	31.5	mg/kg dry	315	50.7 mg/kg dry	86.3	75-125			
Antimony	27.5 mg/kg dry	6.30	mg/kg dry	126	<6.30 mg/kg dry	21.8	75-125			M
Aluminum	13900 mg/kg dry	630	mg/kg dry	126	9290 mg/kg dry	3680	75-125			M2
Nickel	113 mg/kg dry	12.6	mg/kg dry	126	13.6 mg/kg dry	78.8	75-125			
Copper	107 mg/kg dry	3.15	mg/kg dry	126	10.4 mg/kg dry	76.5	75-125			
Silver	<0.630 mg/kg dry	0.630	mg/kg dry	6.30	<0.630 mg/kg dry		75-125			M
Calcium	93700 mg/kg dry	1260	mg/kg dry	126	92800 mg/kg dry	752	75-125			M2
Chromium	104 mg/kg dry	0.630	mg/kg dry	126	11.8 mg/kg dry	72.9	75-125			M
Magnesium	10300 mg/kg dry	630	mg/kg dry	126	7610 mg/kg dry	2100	75-125			M2
Cobalt	105 mg/kg dry	5.04	mg/kg dry	126	6.82 mg/kg dry	78.2	75-125			
Lead	97.4 mg/kg dry	0.630	mg/kg dry	126	8.84 mg/kg dry	70.3	75-125			M
Thallium	77.4 mg/kg dry	3.15	mg/kg dry	126	<3.15 mg/kg dry	61.4	75-125			M
Iron	15100 mg/kg dry	630	mg/kg dry	126	12600 mg/kg dry	1980	75-125			M2
Potassium	3450 mg/kg dry	630	mg/kg dry	315	2780 mg/kg dry	215	75-125			M2
Barium	169 mg/kg dry	12.6	mg/kg dry	126	53.9 mg/kg dry	91.1	75-125			
Selenium	86.6 mg/kg dry	3.15	mg/kg dry	126	<3.15 mg/kg dry	68.7	75-125			M
Vanadium	121 mg/kg dry	12.6	mg/kg dry	126	15.5 mg/kg dry	83.4	75-125			
Manganese	300 mg/kg dry	126	mg/kg dry	126	180 mg/kg dry	95.1	75-125			
Arsenic	99.1 mg/kg dry	1.26	mg/kg dry	126	4.83 mg/kg dry	74.8	75-125			M
Beryllium	97.2 mg/kg dry	0.252	mg/kg dry	126	1.08 mg/kg dry	76.2	75-125			
Zinc	156 mg/kg dry	12.6	mg/kg dry	126	44.0 mg/kg dry	88.6	75-125			
Cadmium	88.4 mg/kg dry	0.252	mg/kg dry	126	0.412 mg/kg dry	69.8	75-125			M



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-----------	--------	-----	-----------	------

Batch BBI0815 - SW3050B

Matrix Spike (BBI0815-MS2)

Source: 1811024-12

Prepared: 09/27/2018 Analyzed: 10/01/2018

Silver	<0.657 mg/kg dry	0.657	mg/kg dry	6.57	<0.657 mg/kg dry	75-125				M
Iron	26800 mg/kg dry	657	mg/kg dry	131	26200 mg/kg dry 518	75-125				M2
Lead	145 mg/kg dry	13.1	mg/kg dry	131	28.9 mg/kg dry 88.2	75-125				
Nickel	133 mg/kg dry	13.1	mg/kg dry	131	15.3 mg/kg dry 89.2	75-125				
Thallium	88.0 mg/kg dry	3.29	mg/kg dry	131	<3.29 mg/kg dry 66.9	75-125				M
Sodium	308 mg/kg dry	32.9	mg/kg dry	329	44.5 mg/kg dry 80.3	75-125				
Selenium	90.8 mg/kg dry	3.29	mg/kg dry	131	<3.29 mg/kg dry 69.1	75-125				M
Manganese	644 mg/kg dry	131	mg/kg dry	131	682 mg/kg dry -29.1	75-125				M2
Vanadium	151 mg/kg dry	13.1	mg/kg dry	131	33.1 mg/kg dry 90.0	75-125				
Antimony	15.7 mg/kg dry	6.57	mg/kg dry	131	<6.57 mg/kg dry 11.9	75-125				M
Chromium	143 mg/kg dry	13.1	mg/kg dry	131	20.6 mg/kg dry 93.4	75-125				
Cadmium	102 mg/kg dry	0.263	mg/kg dry	131	1.14 mg/kg dry 76.9	75-125				
Zinc	289 mg/kg dry	13.1	mg/kg dry	131	176 mg/kg dry 86.1	75-125				
Beryllium	107 mg/kg dry	0.263	mg/kg dry	131	1.84 mg/kg dry 80.2	75-125				
Barium	274 mg/kg dry	131	mg/kg dry	131	163 mg/kg dry 84.0	75-125				
Potassium	8620 mg/kg dry	6570	mg/kg dry	329	8620 mg/kg dry 1.95	75-125				M2
Arsenic	102 mg/kg dry	1.31	mg/kg dry	131	1.93 mg/kg dry 76.2	75-125				
Cobalt	133 mg/kg dry	5.26	mg/kg dry	131	19.4 mg/kg dry 86.1	75-125				
Copper	124 mg/kg dry	3.29	mg/kg dry	131	14.2 mg/kg dry 83.2	75-125				
Calcium	3660 mg/kg dry	1310	mg/kg dry	131	3460 mg/kg dry 151	75-125				M2
Magnesium	7320 mg/kg dry	657	mg/kg dry	131	7610 mg/kg dry -220	75-125				M2
Aluminum	33100 mg/kg dry	657	mg/kg dry	131	26900 mg/kg dry 4710	75-125				M2

Matrix Spike Dup (BBI0815-MSD1)

Source: 1811024-01

Prepared: 09/27/2018 Analyzed: 10/01/2018

Barium	211 mg/kg dry	13.5	mg/kg dry	135	53.9 mg/kg dry 116	75-125	22.0	20		P
Calcium	126000 mg/kg dry	1350	mg/kg dry	135	92800 mg/kg dry 24900	75-125	29.6	20		M2, P
Cadmium	109 mg/kg dry	0.269	mg/kg dry	135	0.412 mg/kg dry 80.9	75-125	21.1	20		P
Zinc	194 mg/kg dry	13.5	mg/kg dry	135	44.0 mg/kg dry 112	75-125	22.1	20		P
Cobalt	138 mg/kg dry	5.38	mg/kg dry	135	6.82 mg/kg dry 97.7	75-125	27.0	20		P
Beryllium	130 mg/kg dry	0.269	mg/kg dry	135	1.08 mg/kg dry 95.7	75-125	28.8	20		P
Lead	116 mg/kg dry	0.673	mg/kg dry	135	8.84 mg/kg dry 79.9	75-125	17.7	20		
Vanadium	152 mg/kg dry	13.5	mg/kg dry	135	15.5 mg/kg dry 101	75-125	23.1	20		P



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0815 - SW3050B

Matrix Spike Dup (BBI0815-MSD1)

Source: 1811024-01

Prepared: 09/27/2018 Analyzed: 10/01/2018

Manganese	387 mg/kg dry	135	mg/kg dry	135	180 mg/kg dry	154	75-125	25.2	20	M2, P
Aluminum	16800 mg/kg dry	673	mg/kg dry	135	9290 mg/kg dry	5550	75-125	18.4	20	M2
Chromium	133 mg/kg dry	0.673	mg/kg dry	135	11.8 mg/kg dry	90.0	75-125	24.7	20	P
Selenium	109 mg/kg dry	3.36	mg/kg dry	135	<3.36 mg/kg dry	81.0	75-125	22.9	20	P
Antimony	38.1 mg/kg dry	6.73	mg/kg dry	135	<6.73 mg/kg dry	28.3	75-125	32.1	20	M, P
Arsenic	126 mg/kg dry	1.35	mg/kg dry	135	4.83 mg/kg dry	90.1	75-125	23.9	20	P
Sodium	397 mg/kg dry	33.6	mg/kg dry	336	50.7 mg/kg dry	103	75-125	20.7	20	P
Iron	18300 mg/kg dry	673	mg/kg dry	135	12600 mg/kg dry	4240	75-125	19.2	20	M2
Magnesium	12200 mg/kg dry	673	mg/kg dry	135	7610 mg/kg dry	3440	75-125	17.6	20	M2
Potassium	4040 mg/kg dry	673	mg/kg dry	336	2780 mg/kg dry	376	75-125	15.7	20	M2
Copper	137 mg/kg dry	3.36	mg/kg dry	135	10.4 mg/kg dry	94.3	75-125	24.9	20	P
Silver	<0.673 mg/kg dry	0.673	mg/kg dry	6.73	<0.673 mg/kg dry		75-125		20	M
Thallium	92.6 mg/kg dry	3.36	mg/kg dry	135	<3.36 mg/kg dry	68.8	75-125	17.9	20	M
Nickel	147 mg/kg dry	13.5	mg/kg dry	135	13.6 mg/kg dry	99.5	75-125	26.5	20	P

Matrix Spike Dup (BBI0815-MSD2)

Source: 1811024-12

Prepared: 09/27/2018 Analyzed: 10/01/2018

Antimony	15.1 mg/kg dry	6.88	mg/kg dry	138	<6.88 mg/kg dry	11.0	75-125	3.74	20	M
Thallium	93.9 mg/kg dry	3.44	mg/kg dry	138	<3.44 mg/kg dry	68.2	75-125	6.50	20	M
Zinc	268 mg/kg dry	13.8	mg/kg dry	138	176 mg/kg dry	66.9	75-125	7.58	20	M2
Selenium	94.5 mg/kg dry	3.44	mg/kg dry	138	<3.44 mg/kg dry	68.7	75-125	4.00	20	M
Vanadium	136 mg/kg dry	13.8	mg/kg dry	138	33.1 mg/kg dry	74.7	75-125	10.8	20	M2
Cadmium	106 mg/kg dry	0.275	mg/kg dry	138	1.14 mg/kg dry	76.1	75-125	3.46	20	
Calcium	3610 mg/kg dry	1380	mg/kg dry	138	3460 mg/kg dry	103	75-125	1.56	20	
Cobalt	122 mg/kg dry	5.51	mg/kg dry	138	19.4 mg/kg dry	74.8	75-125	8.08	20	M2
Chromium	125 mg/kg dry	13.8	mg/kg dry	138	20.6 mg/kg dry	75.5	75-125	14.1	20	
Barium	250 mg/kg dry	138	mg/kg dry	138	163 mg/kg dry	63.1	75-125	9.00	20	M2
Arsenic	103 mg/kg dry	1.38	mg/kg dry	138	1.93 mg/kg dry	73.2	75-125	0.504	20	M
Beryllium	102 mg/kg dry	0.275	mg/kg dry	138	1.84 mg/kg dry	72.9	75-125	4.84	20	M
Copper	119 mg/kg dry	3.44	mg/kg dry	138	14.2 mg/kg dry	75.9	75-125	4.04	20	
Iron	22600 mg/kg dry	688	mg/kg dry	138	26200 mg/kg dry	2570	75-125	17.1	20	M2
Aluminum	27800 mg/kg dry	688	mg/kg dry	138	26900 mg/kg dry	596	75-125	17.7	20	M2
Potassium	7910 mg/kg dry	6880	mg/kg dry	344	8620 mg/kg dry	-206	75-125	8.65	20	M2



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0815 - SW3050B

Matrix Spike Dup (BBI0815-MSD2)	Source: 1811024-12		Prepared: 09/27/2018 Analyzed: 10/01/2018							
Manganese	571 mg/kg dry	138	mg/kg dry	138	682 mg/kg dry	-80.2	75-125	11.9	20	M2
Sodium	314 mg/kg dry	34.4	mg/kg dry	344	44.5 mg/kg dry	78.3	75-125	1.81	20	
Nickel	120 mg/kg dry	13.8	mg/kg dry	138	15.3 mg/kg dry	76.4	75-125	9.60	20	
Lead	141 mg/kg dry	13.8	mg/kg dry	138	28.9 mg/kg dry	81.3	75-125	2.90	20	
Silver	<0.688 mg/kg dry	0.688	mg/kg dry	6.88	<0.688 mg/kg dry		75-125		20	M
Magnesium	6450 mg/kg dry	688	mg/kg dry	138	7610 mg/kg dry	-841	75-125	12.6	20	M2

Batch BBJ0056 - SW7471A

Blank (BBJ0056-BLK1)	Prepared: 10/02/2018 Analyzed: 10/03/2018										
Mercury	<0.008 mg/kg wet	0.008	mg/kg wet								
LCS (BBJ0056-BS1)	Prepared: 10/02/2018 Analyzed: 10/03/2018										
Mercury	0.095 mg/kg wet	0.008	mg/kg wet	0.0980	mg/kg wet	96.5	80-120				
LCS Dup (BBJ0056-BSD1)	Prepared: 10/02/2018 Analyzed: 10/03/2018										
Mercury	0.092 mg/kg wet	0.008	mg/kg wet	0.0994	mg/kg wet	92.9	80-120	2.41	20		
Matrix Spike (BBJ0056-MS1)	Source: 1811024-12		Prepared: 10/02/2018 Analyzed: 10/03/2018								
Mercury	0.196 mg/kg dry	0.011	mg/kg dry	0.140	0.044 mg/kg dry	109	80-120				
Matrix Spike Dup (BBJ0056-MSD1)	Source: 1811024-12		Prepared: 10/02/2018 Analyzed: 10/03/2018								
Mercury	0.167 mg/kg dry	0.011	mg/kg dry	0.133	0.044 mg/kg dry	92.4	80-120	16.0	20		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0809 - SW5030B

Blank (BBI0809-BLK1)

Prepared & Analyzed: 09/27/2018

TPH-Volatiles (GRO)	<0.10 mg/kg wet	0.10	mg/kg wet							
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,5-Dibromotoluene (Surr FID)	104		ug/L	100		104	80-120			

LCS (BBI0809-BS1)

Prepared & Analyzed: 09/27/2018

TPH-Volatiles (GRO)	0.92 mg/kg wet	0.10	mg/kg wet	1.00	mg/kg wet	91.9	70-130			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,5-Dibromotoluene (Surr FID)	107		ug/L	100	ug/L	107	80-120			

Matrix Spike (BBI0809-MS1)

Source: 18I0907-18RE1

Prepared & Analyzed: 09/27/2018

TPH-Volatiles (GRO)	0.86 mg/kg wet	0.10	mg/kg wet	0.992	<0.10 mg/kg wet	86.5	70-130			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,5-Dibromotoluene (Surr FID)	116		ug/L	100	ug/L	116	80-120			

Matrix Spike Dup (BBI0809-MSD1)

Source: 18I0907-18RE1

Prepared & Analyzed: 09/27/2018

TPH-Volatiles (GRO)	0.79 mg/kg wet	0.10	mg/kg wet	0.990	<0.10 mg/kg wet	79.5	70-130	8.60	20	
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,5-Dibromotoluene (Surr FID)	104		ug/L	100	ug/L	104	80-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0181 - SW3550C

Blank (BBJ0181-BLK1)

Prepared: 10/04/2018 Analyzed: 10/05/2018

2,3,7,8-TCDD (SIM)	Not Detected - wet		- wet							
1,2,4,5-Tetrachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,2,4-Trichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,2-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,2-Diphenylhydrazine	<83.3 ug/kg wet	83.3	ug/kg wet							
1,3-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,4-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet							
1-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet							
2,3,4,6-Tetrachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4,5-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4,6-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4-Dimethylphenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4-Dinitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,4-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet							
2,6-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2,6-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Chlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Methylnaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet							
2-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet							
3,3'-Dichlorobenzidine	<83.3 ug/kg wet	83.3	ug/kg wet							
3-Methylcholanthrene	<83.3 ug/kg wet	83.3	ug/kg wet							
3-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet							
4,6-Dinitro-2-methylphenol	<83.3 ug/kg wet	83.3	ug/kg wet							
4-Aminobiphenyl	<83.3 ug/kg wet	83.3	ug/kg wet							
4-Bromophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet							
4-Chloroaniline	<83.3 ug/kg wet	83.3	ug/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0181 - SW3550C

Blank (BBJ0181-BLK1)

Prepared & Analyzed: 10/04/2018

4-Chlorophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
7,12-Dimethylbenz (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acetophenone	<83.3 ug/kg wet	83.3	ug/kg wet						
Aniline	<83.3 ug/kg wet	83.3	ug/kg wet						
Anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzidine	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (b) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (g,h,i) perylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (k) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzoic acid	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzyl alcohol	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethoxy) methane	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethyl) ether	<83.3 ug/kg wet	83.3	ug/kg wet						
2,2'-Oxybis (1-chloropropane)	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Ethylhexyl) phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Butyl benzyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Chrysene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,h) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,j) acridine	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenzofuran	<83.3 ug/kg wet	83.3	ug/kg wet						
Diethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Dimethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-butyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-octyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Diphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0181 - SW3550C

Blank (BBJ0181-BLK1)

Prepared & Analyzed: 10/04/2018

Ethyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluorene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobutadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorocyclopentadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachloroethane	<83.3 ug/kg wet	83.3	ug/kg wet						
Indeno (1,2,3-cd) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Isophorone	<83.3 ug/kg wet	83.3	ug/kg wet						
m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet						
Methyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet						
Naphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
Nitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodimethylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodi-n-butylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodi-n-propylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodiphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosopiperidine	<83.3 ug/kg wet	83.3	ug/kg wet						
o+m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet						
o-Cresol	<83.3 ug/kg wet	83.3	ug/kg wet						
p-(Dimethylamino) azobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
p-Chloro-m-cresol	<83.3 ug/kg wet	83.3	ug/kg wet						
Pentachloronitrobenzene (quintozene)	<83.3 ug/kg wet	83.3	ug/kg wet						
Pentachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenacetin	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenanthrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenol	<83.3 ug/kg wet	83.3	ug/kg wet						
Pronamide	<83.3 ug/kg wet	83.3	ug/kg wet						
Pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Pyridine	<83.3 ug/kg wet	83.3	ug/kg wet						
Surr: 2,4,6-Tribromophenol (Surr)	1740		ug/kg wet	6410		27.2	35-125		S



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0181 - SW3550C

Blank (BBJ0181-BLK1)

Prepared & Analyzed: 10/04/2018

Surr: 2-Fluorobiphenyl (Surr)	1380		ug/kg wet	3210		43.1	45-105			S
Surr: 2-Fluorophenol (Surr)	2420		ug/kg wet	6410		37.7	35-105			
Surr: Nitrobenzene-d5 (Surr)	1240		ug/kg wet	3210		38.7	35-100			
Surr: Phenol-d5 (Surr)	2270		ug/kg wet	6410		35.4	40-100			S
Surr: p-Terphenyl-d14 (Surr)	1350		ug/kg wet	3210		42.1	30-125			

LCS (BBJ0181-BS1)

Prepared: 10/04/2018 Analyzed: 10/05/2018

1,2,4-Trichlorobenzene	1090 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	65.5	21.8-66.7			
1,2-Dichlorobenzene	1070 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	64.4	22-60			L
1,3-Dichlorobenzene	1020 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	61.5	22-60			L
1,4-Dichlorobenzene	1020 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	61.3	13-68			
1-Chloronaphthalene	1170 ug/kg wet	83.3	ug/kg wet		ug/kg wet		0-200			
2,4,6-Trichlorophenol	1100 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	66.0	50-115			
2,4-Dichlorophenol	1150 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	69.5	50-105			
2,4-Dimethylphenol	1080 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	64.9	30-110			
2,4-Dinitrophenol	980 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	59.0	15-140			
2,4-Dinitrotoluene	1370 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	82.7	21-99			
2,6-Dinitrotoluene	1180 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	71.0	15-140			
2-Chloronaphthalene	1120 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	67.6	45-105			
2-Chlorophenol	1100 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	66.0	15-74			
2-Nitrophenol	1110 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	66.9	40-115			
3,3'-Dichlorobenzidine	1310 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	79.0	20-110			
4,6-Dinitro-2-methylphenol	974 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	58.7	40-130			
4-Bromophenyl phenyl ether	1280 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	77.2	15-110			
4-Chlorophenyl phenyl ether	1170 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	70.4	15-110			
4-Nitrophenol	1010 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	60.6	0-125			
Acenaphthene	1180 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	71.0	27.7-85.5			
Acenaphthylene	1240 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	74.7	50-105			
Acetophenone	933 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	56.2	0-200			
Anthracene	1260 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	75.8	55-110			
Benzo (a) anthracene	1340 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	80.6	55-110			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0181 - SW3550C

LCS (BBJ0181-BS1)

Prepared: 10/04/2018 Analyzed: 10/05/2018

Benzo (a) pyrene	1250 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	75.4	55-110			
Benzo (b) fluoranthene	1280 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	77.3	45-120			
Benzo (g,h,i) perylene	1140 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	68.7	40-125			
Benzo (k) fluoranthene	1350 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	81.5	45-125			
bis (2-Chloroethoxy) methane	1140 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	68.4	40-125			
bis (2-Chloroethyl) ether	1010 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	60.8	40-125			
2,2'-Oxybis (1-chloropropane)	961 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	57.8	40-125			
bis (2-Ethylhexyl) phthalate	1010 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	60.8	40-125			
Butyl benzyl phthalate	1440 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	86.9	45-115			
Chrysene	1550 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	93.1	55-110			
Dibenz (a,h) anthracene	1210 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	73.0	40-125			
Diethyl phthalate	1310 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	78.8	40-120			
Dimethyl phthalate	1230 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	74.1	25-125			
Di-n-butyl phthalate	1430 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	86.2	55-115			
Di-n-octyl phthalate	1280 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	77.0	35-135			
Fluoranthene	1360 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	81.9	55-115			
Fluorene	1280 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	76.9	50-110			
Hexachlorobenzene	1400 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	84.1	25-125			
Hexachlorobutadiene	1280 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	76.8	25-125			
Hexachlorocyclopentadiene	463 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	27.9	25-125			
Hexachloroethane	1030 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	62.1	25-125			
Indeno (1,2,3-cd) pyrene	1200 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	72.1	45-125			
Isophorone	1100 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	66.0	10-110			
Naphthalene	1150 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	69.4	40-100			
Nitrobenzene	1040 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	62.5	40-100			
n-Nitrosodimethylamine	861 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	51.9	25-110			
n-Nitrosodi-n-propylamine	1010 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	61.0	12-97			
n-Nitrosodiphenylamine	1000 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	60.4	12-97			
p-Chloro-m-cresol	1170 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	70.7	10-91			
Pentachlorophenol	774 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	46.6	30-109			
Phenanthrene	1270 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	76.6	50-115			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0181 - SW3550C

LCS (BBJ0181-BS1)

Prepared: 10/04/2018 Analyzed: 10/05/2018

Phenol	1070 ug/kg wet	83.3	ug/kg wet	1680	ug/kg wet	64.0	0-115			
Pyrene	1400 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	84.2	27-110			
Pyridine	782 ug/kg wet	83.3	ug/kg wet	1660	ug/kg wet	47.1	0-200			
<hr style="border-top: 1px dashed black;"/>										
<i>Surr: 2,4,6-Tribromophenol (Surr)</i>	2560		ug/kg wet	6640	ug/kg wet	38.6	35-125			
<i>Surr: 2-Fluorobiphenyl (Surr)</i>	1180		ug/kg wet	3320	ug/kg wet	35.6	45-105			S
<i>Surr: 2-Fluorophenol (Surr)</i>	1960		ug/kg wet	6640	ug/kg wet	29.6	35-105			S
<i>Surr: Nitrobenzene-d5 (Surr)</i>	1110		ug/kg wet	3320	ug/kg wet	33.3	35-100			S
<i>Surr: Phenol-d5 (Surr)</i>	2060		ug/kg wet	6640	ug/kg wet	30.9	40-100			S
<i>Surr: p-Terphenyl-d14 (Surr)</i>	1480		ug/kg wet	3320	ug/kg wet	44.5	30-125			

Matrix Spike (BBJ0181-MS1)

Source: 1811024-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

1,2,4-Trichlorobenzene	1430 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	66.7	21.8-66.7			M
1,2-Dichlorobenzene	1390 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	64.9	22-60			M
1,3-Dichlorobenzene	1330 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	62.2	22-60			M
1,4-Dichlorobenzene	1320 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	61.8	22-60			M
1-Chloronaphthalene	1550 ug/kg dry	107	ug/kg dry		<107 ug/kg dry		0-200			
2,4,6-Trichlorophenol	1510 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	70.7	50-115			
2,4-Dichlorophenol	1510 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	70.5	50-105			
2,4-Dimethylphenol	1440 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	67.6	30-110			
2,4-Dinitrophenol	851 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	39.8	15-140			
2,4-Dinitrotoluene	1790 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	83.7	17-111			
2,6-Dinitrotoluene	1490 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	69.8	15-140			
2-Chloronaphthalene	1490 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	69.7	45-105			
2-Chlorophenol	1420 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	66.3	19-64			M
2-Nitrophenol	1560 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	72.9	40-115			
3,3'-Dichlorobenzidine	1840 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	86.3	20-110			
4,6-Dinitro-2-methylphenol	1540 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	72.3	40-130			
4-Bromophenyl phenyl ether	1720 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	80.3	15-110			
4-Chlorophenyl phenyl ether	1530 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	71.5	15-110			
4-Nitrophenol	1480 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	69.4	0-125			
Acenaphthene	1530 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	71.7	24-90			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0181 - SW3550C

Matrix Spike (BBJ0181-MS1)

Source: 1811024-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

Acenaphthylene	1640 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	76.8	50-105			
Acetophenone	1250 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	58.7	0-200			
Anthracene	1740 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	81.2	55-110			
Benzo (a) anthracene	1810 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	84.7	55-110			
Benzo (a) pyrene	1700 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	79.7	55-110			
Benzo (b) fluoranthene	1670 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	78.3	45-120			
Benzo (g,h,i) perylene	1510 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	70.9	40-125			
Benzo (k) fluoranthene	1880 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	88.2	45-125			
bis (2-Chloroethoxy) methane	1510 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	70.9	40-125			
bis (2-Chloroethyl) ether	1380 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	64.4	40-125			
2,2'-Oxybis (1-chloropropane)	1280 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	59.9	40-125			
bis (2-Ethylhexyl) phthalate	1370 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	64.0	40-125			
Butyl benzyl phthalate	1940 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	90.8	45-115			
Chrysene	2130 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	99.6	55-110			
Dibenz (a,h) anthracene	1630 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	76.2	40-125			
Diethyl phthalate	1690 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	78.9	40-120			
Dimethyl phthalate	1570 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	73.6	25-125			
Di-n-butyl phthalate	1940 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	90.7	55-115			
Di-n-octyl phthalate	1810 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	84.6	35-135			
Fluoranthene	1810 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	84.5	55-115			
Fluorene	1650 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	77.2	50-110			
Hexachlorobenzene	1800 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	84.4	25-125			
Hexachlorobutadiene	1680 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	78.7	25-125			
Hexachlorocyclopentadiene	935 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	43.8	25-125			
Hexachloroethane	1350 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	63.3	25-125			
Indeno (1,2,3-cd) pyrene	1590 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	74.5	45-125			
Isophorone	1420 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	66.4	10-110			
Naphthalene	1520 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	71.2	40-100			
Nitrobenzene	1420 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	66.2	40-100			
n-Nitrosodimethylamine	1090 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	51.0	25-110			
n-Nitrosodi-n-propylamine	1360 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	63.7	12-97			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0181 - SW3550C

Matrix Spike (BBJ0181-MS1)

Source: 1811024-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

n-Nitrosodiphenylamine	1320 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	61.9	12-97			
p-Chloro-m-cresol	1600 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	75.0	10-91			
Pentachlorophenol	1130 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	52.7	27-109			
Phenanthrene	1740 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	81.5	50-115			
Phenol	1310 ug/kg dry	107	ug/kg dry	2160	<107 ug/kg dry	60.9	0-115			
Pyrene	1800 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	84.2	23-110			
Pyridine	1190 ug/kg dry	107	ug/kg dry	2140	<107 ug/kg dry	55.5	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	3750		ug/kg dry	8550	ug/kg dry	43.9	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1560		ug/kg dry	4270	ug/kg dry	36.4	45-105			S
Surr: 2-Fluorophenol (Surr)	2620		ug/kg dry	8550	ug/kg dry	30.7	35-105			S
Surr: Nitrobenzene-d5 (Surr)	1490		ug/kg dry	4270	ug/kg dry	35.0	35-100			S
Surr: Phenol-d5 (Surr)	2610		ug/kg dry	8550	ug/kg dry	30.6	40-100			S
Surr: p-Terphenyl-d14 (Surr)	1930		ug/kg dry	4270	ug/kg dry	45.1	30-125			

Matrix Spike Dup (BBJ0181-MSD1)

Source: 1811024-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

1,2,4-Trichlorobenzene	1550 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	70.3	21.8-66.7	8.06	20	M
1,2-Dichlorobenzene	1510 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	68.7	22-60	8.50	20	M
1,3-Dichlorobenzene	1430 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	65.0	22-60	7.21	20	M
1,4-Dichlorobenzene	1430 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	64.8	22-60	7.67	20	M
1-Chloronaphthalene	1720 ug/kg dry	110	ug/kg dry		<110 ug/kg dry		0-200	10.2	20	
2,4,6-Trichlorophenol	1640 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	74.5	50-115	8.13	20	
2,4-Dichlorophenol	1650 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	75.1	50-105	9.10	20	
2,4-Dimethylphenol	1570 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	71.3	30-110	8.20	20	
2,4-Dinitrophenol	1090 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	49.6	15-140	24.6	20	P
2,4-Dinitrotoluene	1960 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	89.3	17-111	9.29	20	
2,6-Dinitrotoluene	1660 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	75.4	15-140	10.6	20	
2-Chloronaphthalene	1650 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	75.0	45-105	10.2	20	
2-Chlorophenol	1500 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	68.0	19-64	5.43	20	M
2-Nitrophenol	1690 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	76.9	40-115	8.26	20	
3,3'-Dichlorobenzidine	1900 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	86.6	20-110	3.13	20	
4,6-Dinitro-2-methylphenol	1740 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	79.1	40-130	11.9	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0181 - SW3550C

Matrix Spike Dup (BBJ0181-MSD1)

Source: 1811024-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

4-Bromophenyl phenyl ether	1880 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	85.3	15-110	8.90	20	
4-Chlorophenyl phenyl ether	1690 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	77.0	15-110	10.3	20	
4-Nitrophenol	1530 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	69.6	0-125	3.16	20	
Acenaphthene	1730 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	78.5	24-90	12.0	20	
Acenaphthylene	1830 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	83.2	50-105	10.9	20	
Acetophenone	1340 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	60.7	0-200	6.25	20	
Anthracene	1860 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	84.7	55-110	7.09	20	
Benzo (a) anthracene	1920 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	87.3	55-110	5.87	20	
Benzo (a) pyrene	1780 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	80.9	55-110	4.34	20	
Benzo (b) fluoranthene	1800 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	81.9	45-120	7.29	20	
Benzo (g,h,i) perylene	1520 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	69.1	40-125	0.270	20	
Benzo (k) fluoranthene	1960 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	89.2	45-125	4.09	20	
bis (2-Chloroethoxy) methane	1640 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	74.4	40-125	7.69	20	
bis (2-Chloroethyl) ether	1440 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	65.5	40-125	4.50	20	
2,2'-Oxybis (1-chloropropane)	1370 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	62.4	40-125	6.86	20	
bis (2-Ethylhexyl) phthalate	1440 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	65.7	40-125	5.40	20	
Butyl benzyl phthalate	2030 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	92.3	45-115	4.53	20	
Chrysene	2170 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	98.7	55-110	1.94	20	
Dibenz (a,h) anthracene	1670 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	75.8	40-125	2.32	20	
Diethyl phthalate	1860 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	84.5	40-120	9.75	20	
Dimethyl phthalate	1760 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	80.1	25-125	11.3	20	
Di-n-butyl phthalate	2080 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	94.8	55-115	7.31	20	
Di-n-octyl phthalate	1910 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	86.7	35-135	5.28	20	
Fluoranthene	1910 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	86.7	55-115	5.37	20	
Fluorene	1840 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	83.6	50-110	10.9	20	
Hexachlorobenzene	1960 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	89.2	25-125	8.44	20	
Hexachlorobutadiene	1830 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	83.3	25-125	8.60	20	
Hexachlorocyclopentadiene	998 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	45.4	25-125	6.55	20	
Hexachloroethane	1460 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	66.3	25-125	7.56	20	
Indeno (1,2,3-cd) pyrene	1630 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	74.0	45-125	2.28	20	
Isophorone	1590 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	72.2	10-110	11.2	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0181 - SW3550C

Matrix Spike Dup (BBJ0181-MSD1)

Source: 1811024-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

Naphthalene	1620 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	73.7	40-100	6.32	20	
Nitrobenzene	1490 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	67.9	40-100	5.29	20	
n-Nitrosodimethylamine	1170 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	53.0	25-110	6.67	20	
n-Nitrosodi-n-propylamine	1450 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	66.0	12-97	6.39	20	
n-Nitrosodiphenylamine	1450 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	66.1	12-97	9.49	20	
p-Chloro-m-cresol	1750 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	79.7	10-91	8.97	20	
Pentachlorophenol	1220 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	55.3	27-109	7.61	20	
Phenanthrene	1880 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	85.7	50-115	7.92	20	
Phenol	1480 ug/kg dry	110	ug/kg dry	2220	<110 ug/kg dry	66.7	0-115	11.9	20	
Pyrene	1930 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	87.6	23-110	6.83	20	
Pyridine	1280 ug/kg dry	110	ug/kg dry	2200	<110 ug/kg dry	58.1	0-200	7.48	20	
<hr/>										
Surr: 2,4,6-Tribromophenol (Surr)	3890		ug/kg dry	8800	ug/kg dry	44.2	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1710		ug/kg dry	4400	ug/kg dry	38.8	45-105			S
Surr: 2-Fluorophenol (Surr)	2710		ug/kg dry	8800	ug/kg dry	30.8	35-105			S
Surr: Nitrobenzene-d5 (Surr)	1580		ug/kg dry	4400	ug/kg dry	35.8	35-100			
Surr: Phenol-d5 (Surr)	2790		ug/kg dry	8800	ug/kg dry	31.7	40-100			S
Surr: p-Terphenyl-d14 (Surr)	2050		ug/kg dry	4400	ug/kg dry	46.6	30-125			

Batch BBJ0247 - SW3550C

Blank (BBJ0247-BLK1)

Prepared: 10/08/2018 Analyzed: 10/10/2018

2,3,7,8-TCDD (SIM)	Not Detected - wet		- wet							
1,2,4,5-Tetrachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,2,4-Trichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,2-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,2-Diphenylhydrazine	<83.3 ug/kg wet	83.3	ug/kg wet							
1,3-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1,4-Dichlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet							
1-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet							
1-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet							
2,3,4,6-Tetrachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0247 - SW3550C

Blank (BBJ0247-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

2,4,5-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4,6-Trichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dimethylphenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dinitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,4-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet						
2,6-Dichlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2,6-Dinitrotoluene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Chloronaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Chlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Methylnaphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Naphthylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
2-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
3,3'-Dichlorobenzidine	<83.3 ug/kg wet	83.3	ug/kg wet						
3-Methylcholanthrene	<83.3 ug/kg wet	83.3	ug/kg wet						
3-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4,6-Dinitro-2-methylphenol	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Aminobiphenyl	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Bromophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Chloroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Chlorophenyl phenyl ether	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitroaniline	<83.3 ug/kg wet	83.3	ug/kg wet						
4-Nitrophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
7,12-Dimethylbenz (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acenaphthylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Acetophenone	<83.3 ug/kg wet	83.3	ug/kg wet						
Aniline	<83.3 ug/kg wet	83.3	ug/kg wet						
Anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzidine	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0247 - SW3550C

Blank (BBJ0247-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

Benzo (a) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (a) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (b) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (g,h,i) perylene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzo (k) fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzoic acid	<83.3 ug/kg wet	83.3	ug/kg wet						
Benzyl alcohol	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethoxy) methane	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Chloroethyl) ether	<83.3 ug/kg wet	83.3	ug/kg wet						
2,2'-Oxybis (1-chloropropane)	<83.3 ug/kg wet	83.3	ug/kg wet						
bis (2-Ethylhexyl) phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Butyl benzyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Chrysene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,h) anthracene	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenz (a,j) acridine	<83.3 ug/kg wet	83.3	ug/kg wet						
Dibenzofuran	<83.3 ug/kg wet	83.3	ug/kg wet						
Diethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Dimethyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-butyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Di-n-octyl phthalate	<83.3 ug/kg wet	83.3	ug/kg wet						
Diphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
Ethyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluoranthene	<83.3 ug/kg wet	83.3	ug/kg wet						
Fluorene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorobutadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachlorocyclopentadiene	<83.3 ug/kg wet	83.3	ug/kg wet						
Hexachloroethane	<83.3 ug/kg wet	83.3	ug/kg wet						
Indeno (1,2,3-cd) pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Isophorone	<83.3 ug/kg wet	83.3	ug/kg wet						
m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0247 - SW3550C

Blank (BBJ0247-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

Methyl methanesulfonate	<83.3 ug/kg wet	83.3	ug/kg wet						
Naphthalene	<83.3 ug/kg wet	83.3	ug/kg wet						
Nitrobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodimethylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodi-n-butylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodi-n-propylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosodiphenylamine	<83.3 ug/kg wet	83.3	ug/kg wet						
n-Nitrosopiperidine	<83.3 ug/kg wet	83.3	ug/kg wet						
o+m+p-Cresols	<83.3 ug/kg wet	83.3	ug/kg wet						
o-Cresol	<83.3 ug/kg wet	83.3	ug/kg wet						
p-(Dimethylamino) azobenzene	<83.3 ug/kg wet	83.3	ug/kg wet						
p-Chloro-m-cresol	<83.3 ug/kg wet	83.3	ug/kg wet						
Pentachloronitrobenzene (quintozene)	<83.3 ug/kg wet	83.3	ug/kg wet						
Pentachlorophenol	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenacetin	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenanthrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Phenol	<83.3 ug/kg wet	83.3	ug/kg wet						
Pronamide	<83.3 ug/kg wet	83.3	ug/kg wet						
Pyrene	<83.3 ug/kg wet	83.3	ug/kg wet						
Pyridine	<83.3 ug/kg wet	83.3	ug/kg wet						

Surr: 2,4,6-Tribromophenol (Surr)

Surr: 2,4,6-Tribromophenol (Surr)	2230		ug/kg wet	6450		34.6	35-125		S
Surr: 2-Fluorobiphenyl (Surr)	1120		ug/kg wet	3230		34.7	45-105		S
Surr: 2-Fluorophenol (Surr)	1890		ug/kg wet	6450		29.2	35-105		S
Surr: Nitrobenzene-d5 (Surr)	1040		ug/kg wet	3230		32.1	35-100		S
Surr: Phenol-d5 (Surr)	1970		ug/kg wet	6450		30.6	40-100		S
Surr: p-Terphenyl-d14 (Surr)	1500		ug/kg wet	3230		46.5	30-125		

LCS (BBJ0247-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

1,2,4-Trichlorobenzene	961 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	58.2	21.8-66.7		
1,2-Dichlorobenzene	919 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	55.7	22-60		
1,3-Dichlorobenzene	888 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	53.8	22-60		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0247 - SW3550C

LCS (BBJ0247-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

1,4-Dichlorobenzene	875 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	53.0	13-68			
1-Chloronaphthalene	1190 ug/kg wet	83.3	ug/kg wet		ug/kg wet		0-200			
2,4,6-Trichlorophenol	1150 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	69.9	50-115			
2,4-Dichlorophenol	1100 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	66.4	50-105			
2,4-Dimethylphenol	1010 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	61.2	30-110			
2,4-Dinitrophenol	1720 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	104	15-140			
2,4-Dinitrotoluene	1530 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	92.6	21-99			
2,6-Dinitrotoluene	1200 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	72.7	15-140			
2-Chloronaphthalene	1140 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	69.0	45-105			
2-Chlorophenol	939 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	56.9	15-74			
2-Nitrophenol	1080 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	65.5	40-115			
3,3'-Dichlorobenzidine	1500 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	90.7	20-110			
4,6-Dinitro-2-methylphenol	1490 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	90.0	40-130			
4-Bromophenyl phenyl ether	1240 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	75.3	15-110			
4-Chlorophenyl phenyl ether	1190 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	72.3	15-110			
4-Nitrophenol	1400 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	84.7	0-125			
Acenaphthene	1200 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	72.9	27.7-85.5			
Acenaphthylene	1260 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	76.6	50-105			
Acetophenone	931 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	56.4	0-200			
Anthracene	1200 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	73.0	55-110			
Benzo (a) anthracene	1480 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	89.7	55-110			
Benzo (a) pyrene	1410 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	85.4	55-110			
Benzo (b) fluoranthene	1540 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	93.2	45-120			
Benzo (g,h,i) perylene	1360 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	82.5	40-125			
Benzo (k) fluoranthene	1320 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	80.2	45-125			
bis (2-Chloroethoxy) methane	1030 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	62.6	40-125			
bis (2-Chloroethyl) ether	787 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	47.7	40-125			
2,2'-Oxybis (1-chloropropane)	785 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	47.6	40-125			
bis (2-Ethylhexyl) phthalate	1090 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	66.0	40-125			
Butyl benzyl phthalate	1460 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	88.4	45-115			
Chrysene	1340 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	81.0	55-110			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0247 - SW3550C

LCS (BBJ0247-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

Dibenz (a,h) anthracene	1470 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	89.3	40-125			
Diethyl phthalate	1360 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	82.6	40-120			
Dimethyl phthalate	1250 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	76.0	25-125			
Di-n-butyl phthalate	1380 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	83.7	55-115			
Di-n-octyl phthalate	1520 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	92.0	35-135			
Fluoranthene	1350 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	82.0	55-115			
Fluorene	1320 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	79.9	50-110			
Hexachlorobenzene	1320 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	80.2	25-125			
Hexachlorobutadiene	1060 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	64.4	25-125			
Hexachlorocyclopentadiene	704 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	42.7	25-125			
Hexachloroethane	882 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	53.4	25-125			
Indeno (1,2,3-cd) pyrene	1410 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	85.7	45-125			
Isophorone	1040 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	63.3	10-110			
Naphthalene	1010 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	61.4	40-100			
Nitrobenzene	941 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	57.0	40-100			
n-Nitrosodimethylamine	650 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	39.4	25-110			
n-Nitrosodi-n-propylamine	1000 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	60.9	12-97			
n-Nitrosodiphenylamine	1090 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	66.0	12-97			
p-Chloro-m-cresol	1220 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	74.0	10-91			
Pentachlorophenol	1120 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	67.7	30-109			
Phenanthrene	1150 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	70.0	50-115			
Phenol	962 ug/kg wet	83.3	ug/kg wet	1670	ug/kg wet	57.7	0-115			
Pyrene	1310 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	79.3	27-110			
Pyridine	484 ug/kg wet	83.3	ug/kg wet	1650	ug/kg wet	29.4	0-200			
<hr style="border-top: 1px dashed #000;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	2720		ug/kg wet	6600	ug/kg wet	41.2	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1190		ug/kg wet	3300	ug/kg wet	36.1	45-105			S
Surr: 2-Fluorophenol (Surr)	1800		ug/kg wet	6600	ug/kg wet	27.2	35-105			S
Surr: Nitrobenzene-d5 (Surr)	1000		ug/kg wet	3300	ug/kg wet	30.3	35-100			S
Surr: Phenol-d5 (Surr)	1870		ug/kg wet	6600	ug/kg wet	28.3	40-100			S
Surr: p-Terphenyl-d14 (Surr)	1430		ug/kg wet	3300	ug/kg wet	43.2	30-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0247 - SW3550C

Matrix Spike (BBJ0247-MS1)

Source: 1811024-12

Prepared: 10/08/2018 Analyzed: 10/09/2018

1,2,4-Trichlorobenzene	1520 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	65.2	21.8-66.7			
1,2-Dichlorobenzene	1410 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	60.2	22-60			M2
1,3-Dichlorobenzene	1330 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	57.0	22-60			
1,4-Dichlorobenzene	1340 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	57.4	22-60			
1-Chloronaphthalene	1750 ug/kg dry	233	ug/kg dry		<233 ug/kg dry		0-200			
2,4,6-Trichlorophenol	1840 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	78.6	50-115			
2,4-Dichlorophenol	1720 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	73.6	50-105			
2,4-Dimethylphenol	1580 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	67.8	30-110			
2,4-Dinitrophenol	2340 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	100	15-140			
2,4-Dinitrotoluene	2160 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	92.4	17-111			
2,6-Dinitrotoluene	1750 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	74.9	15-140			
2-Chloronaphthalene	1700 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	72.6	45-105			
2-Chlorophenol	1460 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	62.6	19-64			
2-Nitrophenol	1750 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	75.0	40-115			
3,3'-Dichlorobenzidine	1410 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	60.6	20-110			
4,6-Dinitro-2-methylphenol	2160 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	92.5	40-130			
4-Bromophenyl phenyl ether	1770 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	75.7	15-110			
4-Chlorophenyl phenyl ether	1740 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	74.4	15-110			
4-Nitrophenol	1900 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	81.4	0-125			
Acenaphthene	1790 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	76.8	24-90			
Acenaphthylene	1930 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	82.6	50-105			
Acetophenone	1420 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	60.9	0-200			
Anthracene	1630 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	70.0	55-110			
Benzo (a) anthracene	1980 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	84.9	55-110			
Benzo (a) pyrene	1900 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	81.2	55-110			
Benzo (b) fluoranthene	2170 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	92.8	45-120			
Benzo (g,h,i) perylene	1850 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	79.3	40-125			
Benzo (k) fluoranthene	1900 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	81.5	45-125			
bis (2-Chloroethoxy) methane	1640 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	70.1	40-125			
bis (2-Chloroethyl) ether	1340 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	57.3	40-125			
2,2'-Oxybis (1-chloropropane)	1320 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	56.6	40-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0247 - SW3550C

Matrix Spike (BBJ0247-MS1)

Source: 1811024-12

Prepared: 10/08/2018 Analyzed: 10/09/2018

bis (2-Ethylhexyl) phthalate	1780 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	76.0	40-125			
Butyl benzyl phthalate	2200 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	94.3	45-115			
Chrysene	2040 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	87.4	55-110			
Dibenz (a,h) anthracene	2040 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	87.2	40-125			
Diethyl phthalate	1970 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	84.4	40-120			
Dimethyl phthalate	1820 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	77.8	25-125			
Di-n-butyl phthalate	1910 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	81.6	55-115			
Di-n-octyl phthalate	2290 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	98.0	35-135			
Fluoranthene	1810 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	77.7	55-115			
Fluorene	1950 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	83.5	50-110			
Hexachlorobenzene	1850 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	79.0	25-125			
Hexachlorobutadiene	1770 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	75.6	25-125			
Hexachlorocyclopentadiene	749 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	32.1	25-125			
Hexachloroethane	1300 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	55.8	25-125			
Indeno (1,2,3-cd) pyrene	1950 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	83.7	45-125			
Isophorone	1560 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	66.7	10-110			
Naphthalene	1670 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	71.6	40-100			
Nitrobenzene	1510 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	64.7	40-100			
n-Nitrosodimethylamine	1080 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	46.3	25-110			
n-Nitrosodi-n-propylamine	1560 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	66.8	12-97			
n-Nitrosodiphenylamine	1570 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	67.4	12-97			
p-Chloro-m-cresol	1860 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	79.5	10-91			
Pentachlorophenol	1360 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	58.3	27-109			
Phenanthrene	1650 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	70.8	50-115			
Phenol	1550 ug/kg dry	233	ug/kg dry	2360	<233 ug/kg dry	65.6	0-115			
Pyrene	1930 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	82.7	23-110			
Pyridine	1100 ug/kg dry	233	ug/kg dry	2340	<233 ug/kg dry	47.2	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	4320		ug/kg dry	9340	ug/kg dry	46.3	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1750		ug/kg dry	4670	ug/kg dry	37.5	45-105			DS
Surr: 2-Fluorophenol (Surr)	2790		ug/kg dry	9340	ug/kg dry	29.8	35-105			DS
Surr: Nitrobenzene-d5 (Surr)	1670		ug/kg dry	4670	ug/kg dry	35.7	35-100			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0247 - SW3550C

Matrix Spike (BBJ0247-MS1)

Source: 1811024-12

Prepared: 10/08/2018 Analyzed: 10/09/2018

Surr: Phenol-d5 (Surr)	3170	ug/kg dry	9340	ug/kg dry	33.9	40-100			DS
Surr: p-Terphenyl-d14 (Surr)	2110	ug/kg dry	4670	ug/kg dry	45.2	30-125			

Matrix Spike Dup (BBJ0247-MSD1)

Source: 1811024-12

Prepared: 10/08/2018 Analyzed: 10/09/2018

1,2,4-Trichlorobenzene	1410 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	60.4	21.8-66.7	8.03	20	
1,2-Dichlorobenzene	1310 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	56.3	22-60	7.05	20	
1,3-Dichlorobenzene	1240 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	53.2	22-60	7.30	20	
1,4-Dichlorobenzene	1240 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	53.3	22-60	7.77	20	
1-Chloronaphthalene	1590 ug/kg dry	233	ug/kg dry		<233 ug/kg dry		0-200	9.80	20	
2,4,6-Trichlorophenol	1640 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	70.5	50-115	11.2	20	
2,4-Dichlorophenol	1560 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	67.2	50-105	9.41	20	
2,4-Dimethylphenol	1420 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	60.9	30-110	11.0	20	
2,4-Dinitrophenol	2140 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	91.8	15-140	8.99	20	
2,4-Dinitrotoluene	1780 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	76.6	17-111	19.1	20	
2,6-Dinitrotoluene	1490 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	64.2	15-140	15.7	20	
2-Chloronaphthalene	1540 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	66.1	45-105	9.73	20	
2-Chlorophenol	1370 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	58.8	19-64	6.45	20	
2-Nitrophenol	1630 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	70.0	40-115	7.27	20	
3,3'-Dichlorobenzidine	893 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	38.4	20-110	45.2	20	P
4,6-Dinitro-2-methylphenol	1930 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	82.9	40-130	11.2	20	
4-Bromophenyl phenyl ether	1530 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	65.8	15-110	14.3	20	
4-Chlorophenyl phenyl ether	1490 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	64.1	15-110	15.2	20	
4-Nitrophenol	1590 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	68.2	0-125	18.0	20	
Acenaphthene	1550 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	66.4	24-90	14.8	20	
Acenaphthylene	1670 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	71.8	50-105	14.3	20	
Acetophenone	1290 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	55.4	0-200	9.74	20	
Anthracene	1350 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	58.1	55-110	18.9	20	
Benzo (a) anthracene	1610 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	69.2	55-110	20.7	20	P
Benzo (a) pyrene	1530 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	65.6	55-110	21.7	20	P
Benzo (b) fluoranthene	1790 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	76.8	45-120	19.2	20	
Benzo (g,h,i) perylene	1480 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	63.5	40-125	22.4	20	P



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0247 - SW3550C

Matrix Spike Dup (BBJ0247-MSD1)

Source: 1811024-12

Prepared: 10/08/2018 Analyzed: 10/09/2018

Benzo (k) fluoranthene	1540 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	66.2	45-125	21.1	20	P
bis (2-Chloroethoxy) methane	1470 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	63.1	40-125	10.8	20	
bis (2-Chloroethyl) ether	1280 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	54.8	40-125	4.75	20	
2,2'-Oxybis (1-chloropropane)	1220 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	52.2	40-125	8.41	20	
bis (2-Ethylhexyl) phthalate	1510 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	64.8	40-125	16.2	20	
Butyl benzyl phthalate	1820 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	78.1	45-115	19.1	20	
Chrysene	1680 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	72.3	55-110	19.2	20	
Dibenz (a,h) anthracene	1630 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	69.9	40-125	22.4	20	P
Diethyl phthalate	1630 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	70.1	40-120	18.8	20	
Dimethyl phthalate	1540 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	66.4	25-125	16.2	20	
Di-n-butyl phthalate	1610 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	69.1	55-115	17.0	20	
Di-n-octyl phthalate	1870 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	80.3	35-135	20.2	20	P
Fluoranthene	1500 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	64.3	55-115	19.1	20	
Fluorene	1680 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	72.0	50-110	15.1	20	
Hexachlorobenzene	1540 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	66.1	25-125	18.2	20	
Hexachlorobutadiene	1610 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	69.3	25-125	9.10	20	
Hexachlorocyclopentadiene	733 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	31.5	25-125	2.21	20	
Hexachloroethane	1220 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	52.5	25-125	6.38	20	
Indeno (1,2,3-cd) pyrene	1570 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	67.2	45-125	22.1	20	P
Isophorone	1400 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	60.1	10-110	10.8	20	
Naphthalene	1510 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	65.0	40-100	10.0	20	
Nitrobenzene	1410 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	60.7	40-100	6.71	20	
n-Nitrosodimethylamine	1000 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	43.1	25-110	7.39	20	
n-Nitrosodi-n-propylamine	1420 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	60.8	12-97	9.79	20	
n-Nitrosodiphenylamine	1290 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	55.5	12-97	19.6	20	
p-Chloro-m-cresol	1610 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	69.1	10-91	14.3	20	
Pentachlorophenol	1310 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	56.1	27-109	4.10	20	
Phenanthrene	1380 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	59.2	50-115	18.2	20	
Phenol	1430 ug/kg dry	233	ug/kg dry	2350	<233 ug/kg dry	61.0	0-115	7.71	20	
Pyrene	1640 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	70.4	23-110	16.4	20	
Pyridine	1030 ug/kg dry	233	ug/kg dry	2330	<233 ug/kg dry	44.2	0-200	6.89	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0247 - SW3550C

Matrix Spike Dup (BBJ0247-MSD1)

Source: 1811024-12

Prepared: 10/08/2018 Analyzed: 10/09/2018

Surr: 2,4,6-Tribromophenol (Surr)	3510		ug/kg dry	9310	ug/kg dry	37.7	35-125			
Surr: 2-Fluorobiphenyl (Surr)	1460		ug/kg dry	4660	ug/kg dry	31.4	45-105			DS
Surr: 2-Fluorophenol (Surr)	2460		ug/kg dry	9310	ug/kg dry	26.4	35-105			DS
Surr: Nitrobenzene-d5 (Surr)	1500		ug/kg dry	4660	ug/kg dry	32.3	35-100			DS
Surr: Phenol-d5 (Surr)	2780		ug/kg dry	9310	ug/kg dry	29.8	40-100			DS
Surr: p-Terphenyl-d14 (Surr)	1700		ug/kg dry	4660	ug/kg dry	36.6	30-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0264 - SW3550C

Blank (BBJ0264-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

TPH-Semi-Volatiles (DRO)	<10.0 mg/kg wet	10.0	mg/kg wet						
Surr: Pentacosane (Surr)	2.13		mg/kg wet	5.00		42.6	40-160		

LCS (BBJ0264-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

TPH-Semi-Volatiles (DRO)	68.4 mg/kg wet	10.0	mg/kg wet	100	mg/kg wet	68.4	40-160		
Surr: Pentacosane (Surr)	2.54		mg/kg wet	5.04	mg/kg wet	50.5	40-160		

Matrix Spike (BBJ0264-MS1)

Source: 18I1024-12

Prepared: 10/08/2018 Analyzed: 10/10/2018

TPH-Semi-Volatiles (DRO)	95.2 mg/kg dry	14.3	mg/kg dry	143	<14.3 mg/kg dry	66.5	40-160		
Surr: Pentacosane (Surr)	3.64		mg/kg dry	7.22	mg/kg dry	50.3	40-160		

Matrix Spike Dup (BBJ0264-MSD1)

Source: 18I1024-12

Prepared: 10/08/2018 Analyzed: 10/10/2018

TPH-Semi-Volatiles (DRO)	105 mg/kg dry	14.2	mg/kg dry	142	<14.2 mg/kg dry	74.2	40-160	9.83	20
Surr: Pentacosane (Surr)	4.10		mg/kg dry	7.14	mg/kg dry	57.4	40-160		

Batch BBJ0265 - SW3550C

Blank (BBJ0265-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

TPH-Semi-Volatiles (ORO)	<10.0 mg/kg wet	10.0	mg/kg wet						
--------------------------	-----------------	------	-----------	--	--	--	--	--	--

LCS (BBJ0265-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

TPH-Semi-Volatiles (ORO)	40.1 mg/kg wet	10.0	mg/kg wet	99.4	mg/kg wet	40.3	40-160		
--------------------------	----------------	------	-----------	------	-----------	------	--------	--	--

Matrix Spike (BBJ0265-MS1)

Source: 18J0011-03

Prepared: 10/08/2018 Analyzed: 10/10/2018

TPH-Semi-Volatiles (ORO)	67.9 mg/kg dry	12.9	mg/kg dry	129	<12.9 mg/kg dry	52.5	40-160		
--------------------------	----------------	------	-----------	-----	-----------------	------	--------	--	--

Matrix Spike Dup (BBJ0265-MSD1)

Source: 18J0011-03

Prepared: 10/08/2018 Analyzed: 10/10/2018

TPH-Semi-Volatiles (ORO)	73.8 mg/kg dry	13.5	mg/kg dry	135	<13.5 mg/kg dry	54.6	40-160	8.32	20
--------------------------	----------------	------	-----------	-----	-----------------	------	--------	------	----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0302 - SW3510C

Blank (BBJ0302-BLK1)

Prepared: 10/09/2018 Analyzed: 10/10/2018

PCB as Aroclor 1016	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1221	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1232	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1242	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1248	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1254	<0.100 mg/kg wet	0.100	mg/kg wet							
PCB as Aroclor 1260	<0.100 mg/kg wet	0.100	mg/kg wet							
<hr/>										
Surr: DCB	0.0245		mg/kg wet	0.0327		75.0	30-105			
Surr: TCMX	0.0245		mg/kg wet	0.0327		75.0	30-105			

LCS (BBJ0302-BS1)

Prepared: 10/09/2018 Analyzed: 10/10/2018

PCB as Aroclor 1016	0.168 mg/kg wet	0.100	mg/kg wet	0.163	mg/kg wet	103	60-140			
PCB as Aroclor 1260	0.127 mg/kg wet	0.100	mg/kg wet	0.163	mg/kg wet	78.0	60-140			
<hr/>										
Surr: DCB	0.0244		mg/kg wet	0.0326	mg/kg wet	75.0	30-105			
Surr: TCMX	0.0244		mg/kg wet	0.0326	mg/kg wet	75.0	30-105			

Matrix Spike (BBJ0302-MS1)

Source: 1811024-12

Prepared: 10/09/2018 Analyzed: 10/10/2018

PCB as Aroclor 1016	0.166 mg/kg dry	0.138	mg/kg dry	0.231	<0.138 mg/kg dry	72.0	60-140			
PCB as Aroclor 1260	0.173 mg/kg dry	0.138	mg/kg dry	0.231	<0.138 mg/kg dry	75.0	60-140			
<hr/>										
Surr: DCB	0.0323		mg/kg dry	0.0461	mg/kg dry	70.0	30-105			
Surr: TCMX	0.0323		mg/kg dry	0.0461	mg/kg dry	70.0	30-105			

Matrix Spike Dup (BBJ0302-MSD1)

Source: 1811024-12

Prepared: 10/09/2018 Analyzed: 10/10/2018

PCB as Aroclor 1016	0.181 mg/kg dry	0.134	mg/kg dry	0.223	<0.134 mg/kg dry	81.0	60-140	8.62	20	
PCB as Aroclor 1260	0.174 mg/kg dry	0.134	mg/kg dry	0.223	<0.134 mg/kg dry	78.0	60-140	0.767	20	
<hr/>										
Surr: DCB	0.0313		mg/kg dry	0.0447	mg/kg dry	70.0	30-105			
Surr: TCMX	0.0357		mg/kg dry	0.0447	mg/kg dry	80.0	30-105			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0009 - No Prep Wet Chem

Blank (BBJ0009-BLK1) Prepared & Analyzed: 10/01/2018										
Percent Solids	100 %	0.10	%							
Duplicate (BBJ0009-DUP1) Source: 1811024-07 Prepared & Analyzed: 10/01/2018										
Percent Solids	77.2 %	0.10	%		77.1 %			0.193	20	

Batch BBJ0046 - No Prep Wet Chem

Blank (BBJ0046-BLK1) Prepared & Analyzed: 10/02/2018										
Percent Solids	100 %	0.10	%							
Duplicate (BBJ0046-DUP1) Source: 18J0014-01 Prepared & Analyzed: 10/02/2018										
Percent Solids	71.6 %	0.10	%		68.1 %			4.96	20	

Batch BBJ0332 - No Prep Wet Chem

Blank (BBJ0332-BLK1) Prepared: 10/08/2018 Analyzed: 10/10/2018										
Chromium, Hexavalent	<0.19 mg/kg wet	0.19	mg/kg wet							
LCS (BBJ0332-BS1) Prepared: 10/08/2018 Analyzed: 10/10/2018										
Chromium, Hexavalent	3.35 mg/kg wet	0.19	mg/kg wet	3.90	mg/kg wet	86.0	80-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Solids	
Aluminum	VELAP
Antimony	VELAP
Arsenic	VELAP
Barium	VELAP,WVDEP
Beryllium	VELAP
Cadmium	VELAP,WVDEP
Calcium	VELAP
Chromium	VELAP
Cobalt	VELAP
Copper	VELAP
Iron	VELAP
Lead	VELAP,WVDEP
Magnesium	VELAP
Manganese	VELAP
Nickel	VELAP
Potassium	VELAP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP
Thallium	VELAP
Vanadium	VELAP
Zinc	VELAP
SW7196A in Solids	
Chromium, Hexavalent	VELAP
SW7471B in Solids	
Mercury	VELAP,WVDEP
SW8015C in Solids	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
TPH-Volatiles (GRO)	VELAP,NC,WVDEP
SW8082A in Solids	
PCB as Aroclor 1016	VELAP,NC
PCB as Aroclor 1221	VELAP,NC
PCB as Aroclor 1232	VELAP,NC
PCB as Aroclor 1242	VELAP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
PCB as Aroclor 1248	VELAP,NC
PCB as Aroclor 1254	VELAP,NC
PCB as Aroclor 1260	VELAP,NC
SW8270D in Solids	
1,2,4,5-Tetrachlorobenzene	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,2-Diphenylhydrazine	NC,VELAP,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
1-Chloronaphthalene	NC,VELAP,WVDEP
1-Naphthylamine	NC,VELAP,WVDEP
2,3,4,6-Tetrachlorophenol	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dichlorophenol	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Chloronaphthalene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
2-Naphthylamine	NC,VELAP,WVDEP
2-Nitroaniline	NC,VELAP,WVDEP
2-Nitrophenol	NC,VELAP,WVDEP
3-Methylcholanthrene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4,6-Dinitro-2-methylphenol	NC,VELAP,WVDEP
4-Aminobiphenyl	NC,VELAP,WVDEP
4-Bromophenyl phenyl ether	NC,VELAP,WVDEP
4-Chloroaniline	NC,VELAP,WVDEP
4-Chlorophenyl phenyl ether	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
4-Nitrophenol	NC,VELAP,WVDEP
7,12-Dimethylbenz (a) anthracene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/11/2018 14:04
201 Church Street
Blacksburg VA, 24060
Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Acenaphthene	NC,VELAP,WVDEP
Acenaphthylene	NC,VELAP,WVDEP
Acetophenone	NC,VELAP,WVDEP
Aniline	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzidine	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (g,h,i) perylene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
Benzoic acid	NC,VELAP,WVDEP
Benzyl alcohol	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Dibenz (a,j) acridine	NC,VELAP,WVDEP
Dibenzofuran	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP
Di-n-octyl phthalate	NC,VELAP,WVDEP
Diphenylamine	NC,VELAP,WVDEP
Ethyl methanesulfonate	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP
Hexachloroethane	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Methyl methanesulfonate	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 14:04
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Naphthalene	NC,VELAP,WVDEP
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodimethylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-butylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
n-Nitrosopiperidine	NC,VELAP,WVDEP
o+m+p-Cresols	NC,VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
p-(Dimethylamino) azobenzene	NC,VELAP,WVDEP
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachloronitrobenzene (quintozene)	NC,WVDEP
Pentachlorophenol	NC,VELAP,WVDEP
Phenacetin	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Pronamide	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
Pyridine	NC,VELAP,WVDEP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

- B Blank contamination. The recorded result is associated with a contaminated blank.
 - C Continuing calibration verification response for this analyte is outside specifications.
 - DND Not Detected
 - DS Surrogate concentration reflects a dilution factor.
 - L LCS recovery is outside of established acceptance limits
 - M Matrix spike recovery is outside established acceptance limits
 - M2 Sample was diluted due to matrix interference.
 - P Duplicate analysis does not meet the acceptance criteria for precision
 - S Surrogate recovery was outside acceptance criteria
 - RPD Relative Percent Difference
 - Qual Qualifiers
 - RE Denotes sample was re-analyzed
 - D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
 - TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
- PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 2

COMPANY NAME: <u>EEE Consulting</u>	INVOICE TO: <u>same</u>	PROJECT NAME/Quote #: <u>18-760</u>
CONTACT: <u>Jeff Fisher</u>	INVOICE CONTACT:	SITE NAME: <u>CVTC</u>
ADDRESS: <u>201 Church Street</u>	INVOICE ADDRESS:	PROJECT NUMBER: <u>18-760</u>
PHONE #: <u>540 953 0170</u>	INVOICE PHONE #:	P.O. #: <u>18-760</u>
FAX #: <u>540 953 0171</u>	EMAIL: <u>j.fisher@eee-consulting.com</u>	Pretreatment Program: <u>NA</u>
Is sample for compliance reporting? YES NO <u>NA</u>	Is sample from a chlorinated supply? YES <u>NO</u>	PWS I.D. #: <u>NA</u>
SAMPLER NAME (PRINT): <u>Josh Hepler</u>	SAMPLER SIGNATURE:	Turn Around Time: Circle: <u>10</u> 5 Days or <u> </u> Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)						COMMENTS
											TPH - GRO	TPH - DRO	TPH - ORO	2,3,7,8-TCDD SIM	SVOC's by 8270	PCB	
1) <u>16-S13</u>	X	X			9/25/18	<u>9/25/18</u>	<u>1600</u>	<u>NA</u>	<u>S</u>	<u>2</u>	X	X	X	X	X	X	
2) <u>16-S14</u>							<u>1607</u>										
3) <u>16-S15</u>							<u>1612</u>										
4) <u>16-S16</u>							<u>1616</u>										
5) <u>16-S17</u>							<u>1622</u>										
6) <u>16-S18</u>							<u>1630</u>										
7) <u>16-S19</u>							<u>1636</u>										
8) <u>16-S20</u>							<u>1643</u>										
9) <u>16-S21</u>							<u>1650</u>										
10) <u>16-S22</u>							<u>1654</u>										<u>2.7°C</u>

INQUIRED:	DATE / TIME: <u>9/26/18 1400</u>	RECEIVED: <u>Michael Foyard</u>	DATE / TIME: <u>9/26/18 14:05</u>	QC Data Package Level III <input type="checkbox"/>	LAB USE ONLY Custody Seals used and intact? (Y/N) <u>Y</u>	COOLER TEMP. Received on ice? (Y/N) <u>Y</u>
INQUIRED: <u>Cowier</u>	DATE / TIME:	RECEIVED:	DATE / TIME: <u>9/27/18 8:00</u>	QC Data Package Level IV <input type="checkbox"/>	EEE-Blacksburg 1811024 CVTC Recd: 09/27/2018 Due: 10/11/2018	

Page 115 of 117

CHAIN OF CUSTODY

COMPANY NAME: <u>EEE Consulting</u>	INVOICE TO: <u>same</u>	PROJECT NAME/Quote #: <u>18-760</u>
CONTACT: <u>Jeff Fisher</u>	INVOICE CONTACT:	SITE NAME: <u>CVTC</u>
ADDRESS: <u>201 Church Street</u>	INVOICE ADDRESS:	PROJECT NUMBER: <u>18-760</u>
PHONE #: <u>540 953 0170</u>	INVOICE PHONE #:	P.O. #: <u>18-760</u>
FAX #: <u>540 953 0171</u>	EMAIL: <u>jfisher@eee-consulting.com</u>	Pretreatment Program: <u>NA</u>
Is sample for compliance reporting? YES NO <u>NA</u>	Is sample from a chlorinated supply? YES <u>NO</u>	PWS I.D. #: <u>NA</u>
SAMPLER NAME (PRINT): <u>Josh Hepler</u>	SAMPLER SIGNATURE:	Turn Around Time: Circle: <u>10</u> 5 Days or ___ Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)						COMMENTS
											TPH - GPO	TPH - DRO	TPH - ORO	2,3,7,8-TCDD SIM	8270 SIM	SVOC's 8270	
1) <u>16-S23</u>	X					<u>9/25/18</u>	<u>1700</u>	<u>NA</u>	<u>S</u>	<u>2</u>	X	X	X	X	X	X	
2) <u>16-S24</u>	X					<u>9/25/18</u>	<u>1705</u>	<u>NA</u>	<u>S</u>	<u>2</u>	X	X	X	X	X	X	
3)																	
4)																	
5)																	
6)																	
7)																	
8)																	
9)																	
10)																	

Preservative Codes: N=Nitric Acid
 C=Hydrochloric Acid S=Sulfuric Acid
 H=Sodium Hydroxide A=Ascorbic Acid
 Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol

PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)

NQUISHED: DATE / TIME: <u>9/26/18 17:00</u>	RECEIVED: <u>Michael Forand</u> DATE / TIME:	QC Data Package Level III <input type="checkbox"/> Level IV <input type="checkbox"/>	LAB USE ONLY Custody Seals used and intact? (Y/N) <input checked="" type="checkbox"/>	COOLER TEMP. °C Received on ice? (Y/N) <input checked="" type="checkbox"/>
NQUISHED: DATE / TIME:	RECEIVED: <u>9/26/18 14:05</u>			
NQUISHED: <u>Cover</u> DATE / TIME:	RECEIVED: <u>9/27/18</u>			

EEE-Blacksburg 18I1024
CVTC
Recd: 09/27/2018 Due: 10/11/2018

2.7°C

8:00



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 14:04
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	2.70°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 1811066

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg, VA 24060

Date Received: September 28, 2018 8:00

Date Issued: October 10, 2018 16:28

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 09/28/2018 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/10/2018 16:28
201 Church Street
Blacksburg VA, 24060

Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 1811066

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW 77-1	1811066-01	Ground Water	09/27/2018 12:00	09/28/2018 08:00
MW 77-2	1811066-02	Ground Water	09/27/2018 14:40	09/28/2018 08:00
Trip Blank	1811066-03	Non-Potable Water	09/23/2018 14:10	09/28/2018 08:00



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-1	Laboratory Sample ID: 1811066-01
Grab Date/Time: 09/27/2018 12:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.0100 mg/L		0.0100	1	09/28/18 10:15	10/01/18 16:58	BG
Aluminum	01	SW6010C	9.70 mg/L		0.0500	1	09/28/18 10:15	10/01/18 16:58	BG
Arsenic	01	SW6020A	1.9 ug/L		1.0	1	09/28/18 10:15	09/28/18 16:50	RCV
Barium	01	SW6010C	0.322 mg/L		0.0100	1	09/28/18 10:15	10/01/18 16:58	BG
Beryllium	01RE1	SW6010C	<0.0040 mg/L		0.0040	1	09/28/18 10:15	10/03/18 11:49	BG
Calcium	01RE1	SW6010C	39.5 mg/L		0.500	10	09/28/18 10:15	10/03/18 11:47	BG
Cadmium	01RE1	SW6010C	<0.0040 mg/L		0.0040	1	09/28/18 10:15	10/03/18 11:49	BG
Cobalt	01RE1	SW6010C	0.0204 mg/L		0.0040	1	09/28/18 10:15	10/03/18 11:49	BG
Chromium	01RE1	SW6010C	0.0145 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:49	BG
Copper	01RE1	SW6010C	0.0170 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:49	BG
Iron	01RE1	SW6010C	23.8 mg/L		0.100	10	09/28/18 10:15	10/03/18 11:47	BG
Mercury	01	SW7470A	<0.00020 mg/L		0.00020	1	10/05/18 15:41	10/08/18 13:51	MWL
Potassium	01RE1	SW6010C	8.66 mg/L		0.50	1	09/28/18 10:15	10/03/18 11:49	BG
Magnesium	01RE1	SW6010C	9.91 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:49	BG
Manganese	01RE1	SW6010C	0.753 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:49	BG
Sodium	01RE1	SW6010C	17.3 mg/L		0.50	1	09/28/18 10:15	10/03/18 11:49	BG
Nickel	01RE1	SW6010C	<0.0100 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:49	BG
Lead	01RE1	SW6010C	0.0203 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:49	BG
Antimony	01	SW6020A	<1.00 ug/L		1.00	1	09/28/18 10:15	09/28/18 16:50	RCV
Selenium	01	SW6020A	1.54 ug/L		1.00	1	09/28/18 10:15	09/28/18 16:50	RCV
Thallium	01	SW6020A	<1.00 ug/L		1.00	1	09/28/18 10:15	10/03/18 10:55	BG
Vanadium	01	SW6010C	0.0503 mg/L		0.0100	1	09/28/18 10:15	10/01/18 16:58	BG
Zinc	01	SW6010C	0.0481 mg/L		0.0100	1	09/28/18 10:15	10/01/18 16:58	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	01	SW8015C	<0.10 mg/L		0.10	1	09/28/18 11:41	09/28/18 11:41	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-1	Laboratory Sample ID: 1811066-01
Grab Date/Time: 09/27/2018 12:00	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	01	SW8015C	113 %		80-120		09/28/18 11:41	09/28/18 11:41	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	09/28/18 12:18	09/28/18 12:18	KCS
1,1,1-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,1,2,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	09/28/18 12:18	09/28/18 12:18	KCS
1,1,2-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,1-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,1-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,1-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,2,3-Trichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,2,3-Trichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,2,4-Trichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,2,4-Trimethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8260B	<4.00 ug/L		4.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,2-Dibromoethane (EDB)	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,2-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,2-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,2-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,3,5-Trimethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,3-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,3-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
1,4-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
2,2-Dichloropropane	01	SW8260B	<2.00 ug/L		2.00	1	09/28/18 12:18	09/28/18 12:18	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-1 **Laboratory Sample ID:** 1811066-01

Grab Date/Time: 09/27/2018 12:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	01	SW8260B	<10.0 ug/L		10.0	1	09/28/18 12:18	09/28/18 12:18	KCS
2-Chlorotoluene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
2-Hexanone (MBK)	01	SW8260B	<5.00 ug/L		5.00	1	09/28/18 12:18	09/28/18 12:18	KCS
4-Chlorotoluene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
4-Isopropyltoluene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
4-Methyl-2-pentanone (MIBK)	01	SW8260B	<5.00 ug/L		5.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Acetone	01	SW8260B	<10.0 ug/L		10.0	1	09/28/18 12:18	09/28/18 12:18	KCS
Benzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Bromobenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Bromochloromethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Bromodichloromethane	01	SW8260B	<0.50 ug/L		0.50	1	09/28/18 12:18	09/28/18 12:18	KCS
Bromoform	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Bromomethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Carbon disulfide	01	SW8260B	<10.0 ug/L		10.0	1	09/28/18 12:18	09/28/18 12:18	KCS
Carbon tetrachloride	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Chlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Chloroethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Chloroform	01	SW8260B	<0.50 ug/L		0.50	1	09/28/18 12:18	09/28/18 12:18	KCS
Chloromethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
cis-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
cis-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Dibromochloromethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Dibromomethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Dichlorodifluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Di-isopropyl ether (DIPE)	01	SW8260B	<5.00 ug/L		5.00	1	09/28/18 12:18	09/28/18 12:18	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-1	Laboratory Sample ID: 1811066-01
Grab Date/Time: 09/27/2018 12:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Ethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Hexachlorobutadiene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Iodomethane	01	SW8260B	<10.0 ug/L		10.0	1	09/28/18 12:18	09/28/18 12:18	KCS
Isopropylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
m+p-Xylenes	01	SW8260B	<2.00 ug/L		2.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Methylene chloride	01	SW8260B	<4.00 ug/L		4.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Methyl-t-butyl ether (MTBE)	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Naphthalene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
n-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
n-Propylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
o-Xylene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
sec-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Styrene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
tert-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Tetrachloroethylene (PCE)	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Toluene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
trans-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
trans-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Trichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Trichlorofluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Vinyl acetate	01	SW8260B	<10.0 ug/L	C	10.0	1	09/28/18 12:18	09/28/18 12:18	KCS
Vinyl chloride	01	SW8260B	<0.50 ug/L		0.50	1	09/28/18 12:18	09/28/18 12:18	KCS
Xylenes, Total	01	SW8260B	<3.00 ug/L		3.00	1	09/28/18 12:18	09/28/18 12:18	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	01	SW8260B	105 %		70-120		09/28/18 12:18	09/28/18 12:18	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-1	Laboratory Sample ID: 1811066-01
Grab Date/Time: 09/27/2018 12:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260B	108 %		75-120		09/28/18 12:18	09/28/18 12:18	KCS
Surr: Dibromofluoromethane (Surr)	01	SW8260B	106 %		70-130		09/28/18 12:18	09/28/18 12:18	KCS
Surr: Toluene-d8 (Surr)	01	SW8260B	94.8 %		70-130		09/28/18 12:18	09/28/18 12:18	KCS
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
1,2,4-Trichlorobenzene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
1,2-Dichlorobenzene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
1,2-Diphenylhydrazine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
1,3-Dichlorobenzene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
1,3-Dinitrobenzene	01	SW8270D	<2.60 ug/L		2.60	1	10/01/18 09:15	10/02/18 14:00	SKS
1,4-Dichlorobenzene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
1-Naphthylamine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2,3,4,6-Tetrachlorophenol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2,4,5-Trichlorophenol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2,4,6-Trichlorophenol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2,4-Dichlorophenol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2,4-Dimethylphenol	01	SW8270D	<0.52 ug/L		0.52	1	10/01/18 09:15	10/02/18 14:00	SKS
2,4-Dinitrophenol	01	SW8270D	<52.1 ug/L		52.1	1	10/01/18 09:15	10/02/18 14:00	SKS
2,4-Dinitrotoluene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2,6-Dichlorophenol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2,6-Dinitrotoluene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2-Chloronaphthalene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2-Chlorophenol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-1 **Laboratory Sample ID:** 1811066-01

Grab Date/Time: 09/27/2018 12:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Methylnaphthalene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2-Naphthylamine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2-Nitroaniline	01	SW8270D	<20.8 ug/L		20.8	1	10/01/18 09:15	10/02/18 14:00	SKS
2-Nitrophenol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
3,3'-Dichlorobenzidine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
3-Methylcholanthrene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
3-Nitroaniline	01	SW8270D	<20.8 ug/L		20.8	1	10/01/18 09:15	10/02/18 14:00	SKS
4,6-Dinitro-2-methylphenol	01	SW8270D	<52.1 ug/L		52.1	1	10/01/18 09:15	10/02/18 14:00	SKS
4-Aminobiphenyl	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
4-Bromophenyl phenyl ether	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
4-Chloroaniline	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
4-Chlorophenyl phenyl ether	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
4-Nitroaniline	01	SW8270D	<20.8 ug/L		20.8	1	10/01/18 09:15	10/02/18 14:00	SKS
4-Nitrophenol	01	SW8270D	<52.1 ug/L		52.1	1	10/01/18 09:15	10/02/18 14:00	SKS
7,12-Dimethylbenz (a) anthracene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Acenaphthene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Acenaphthylene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Acetophenone	01	SW8270D	<20.8 ug/L		20.8	1	10/01/18 09:15	10/02/18 14:00	SKS
Aniline	01	SW8270D	<52.1 ug/L		52.1	1	10/01/18 09:15	10/02/18 14:00	SKS
Anthracene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Benzidine	01	SW8270D	<52.1 ug/L		52.1	1	10/01/18 09:15	10/02/18 14:00	SKS
Benzo (a) anthracene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Benzo (a) pyrene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Benzo (b) fluoranthene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Benzo (g,h,i) perylene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-1 **Laboratory Sample ID:** 1811066-01

Grab Date/Time: 09/27/2018 12:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzo (k) fluoranthene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Benzoic acid	01	SW8270D	<52.1 ug/L		52.1	1	10/01/18 09:15	10/02/18 14:00	SKS
Benzyl alcohol	01	SW8270D	<20.8 ug/L		20.8	1	10/01/18 09:15	10/02/18 14:00	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
2,2'-Oxybis (1-chloropropane)	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Butyl benzyl phthalate	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Chrysene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Dibenz (a,h) anthracene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Dibenz (a,j) acridine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Dibenzofuran	01	SW8270D	<5.21 ug/L		5.21	1	10/01/18 09:15	10/02/18 14:00	SKS
Diethyl phthalate	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Dimethyl phthalate	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Di-n-butyl phthalate	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Di-n-octyl phthalate	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Diphenylamine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Ethyl methanesulfonate	01	SW8270D	<20.8 ug/L		20.8	1	10/01/18 09:15	10/02/18 14:00	SKS
Fluoranthene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Fluorene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Hexachlorobenzene	01	SW8270D	<1.04 ug/L		1.04	1	10/01/18 09:15	10/02/18 14:00	SKS
Hexachlorobutadiene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Hexachlorocyclopentadiene	01	SW8270D	<10.4 ug/L	C	10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Hexachloroethane	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-1	Laboratory Sample ID: 1811066-01
Grab Date/Time: 09/27/2018 12:00	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Isophorone	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
m+p-Cresols	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Methyl methanesulfonate	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Naphthalene	01	SW8270D	<5.21 ug/L		5.21	1	10/01/18 09:15	10/02/18 14:00	SKS
Nitrobenzene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
n-Nitrosodimethylamine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
n-Nitrosodi-n-butylamine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
n-Nitrosodiphenylamine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
n-Nitrosopiperidine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
o+m+p-Cresols	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
o-Cresol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
p-(Dimethylamino) azobenzene	01	SW8270D	<2.60 ug/L		2.60	1	10/01/18 09:15	10/02/18 14:00	SKS
p-Chloro-m-cresol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Pentachloronitrobenzene (quintozene)	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Pentachlorophenol	01	SW8270D	<20.8 ug/L		20.8	1	10/01/18 09:15	10/02/18 14:00	SKS
Phenacetin	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Phenanthrene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Phenol	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Pronamide	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Pyrene	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Pyridine	01	SW8270D	<10.4 ug/L		10.4	1	10/01/18 09:15	10/02/18 14:00	SKS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270D	61.2 %		10-86		10/01/18 09:15	10/02/18 14:00	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-1	Laboratory Sample ID: 1811066-01
Grab Date/Time: 09/27/2018 12:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270D	60.1 %		9-87		10/01/18 09:15	10/02/18 14:00	SKS
Surr: 2-Fluorophenol (Surr)	01	SW8270D	34.9 %		10-52		10/01/18 09:15	10/02/18 14:00	SKS
Surr: Nitrobenzene-d5 (Surr)	01	SW8270D	57.6 %		10-98.5		10/01/18 09:15	10/02/18 14:00	SKS
Surr: Phenol-d5 (Surr)	01	SW8270D	24.4 %		5-33		10/01/18 09:15	10/02/18 14:00	SKS
Surr: p-Terphenyl-d14 (Surr)	01	SW8270D	92.4 %		27-133		10/01/18 09:15	10/02/18 14:00	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	<0.617 mg/L		0.617	1	10/01/18 13:30	10/02/18 02:20	HLM
Surr: Pentacosane (Surr)	01	SW8015C	101 %		40-160		10/01/18 13:30	10/02/18 02:20	HLM
TPH-Semi-Volatiles (ORO)	01	SW8015C	<1.1 mg/L		1.1	1	10/03/18 10:00	10/03/18 18:02	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	01	SW7196A	<0.005 mg/L		0.005	1	09/28/18 09:30	09/28/18 11:29	MWL



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-2 **Laboratory Sample ID:** 1811066-02

Grab Date/Time: 09/27/2018 14:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	<0.0100 mg/L		0.0100	1	09/28/18 10:15	10/01/18 17:01	BG
Aluminum	02	SW6010C	0.329 mg/L		0.0500	1	09/28/18 10:15	10/01/18 17:01	BG
Arsenic	02	SW6020A	<1.0 ug/L		1.0	1	09/28/18 10:15	09/28/18 16:55	RCV
Barium	02	SW6010C	0.0930 mg/L		0.0100	1	09/28/18 10:15	10/01/18 17:01	BG
Beryllium	02RE1	SW6010C	<0.0040 mg/L		0.0040	1	09/28/18 10:15	10/03/18 11:54	BG
Calcium	02RE1	SW6010C	37.3 mg/L		0.500	10	09/28/18 10:15	10/03/18 11:52	BG
Cadmium	02RE1	SW6010C	<0.0040 mg/L		0.0040	1	09/28/18 10:15	10/03/18 11:54	BG
Cobalt	02RE1	SW6010C	<0.0040 mg/L		0.0040	1	09/28/18 10:15	10/03/18 11:54	BG
Chromium	02RE1	SW6010C	<0.0100 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:54	BG
Copper	02RE1	SW6010C	<0.0100 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:54	BG
Iron	02	SW6010C	0.928 mg/L		0.0100	1	09/28/18 10:15	10/01/18 17:01	BG
Mercury	02	SW7470A	<0.00020 mg/L		0.00020	1	10/05/18 15:41	10/08/18 13:54	MWL
Potassium	02RE1	SW6010C	3.81 mg/L		0.50	1	09/28/18 10:15	10/03/18 11:54	BG
Magnesium	02RE1	SW6010C	6.42 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:54	BG
Manganese	02RE1	SW6010C	0.540 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:54	BG
Sodium	02RE1	SW6010C	14.2 mg/L		0.50	1	09/28/18 10:15	10/03/18 11:54	BG
Nickel	02RE1	SW6010C	<0.0100 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:54	BG
Lead	02RE1	SW6010C	<0.0100 mg/L		0.0100	1	09/28/18 10:15	10/03/18 11:54	BG
Antimony	02	SW6020A	<1.00 ug/L		1.00	1	09/28/18 10:15	09/28/18 16:55	RCV
Selenium	02	SW6020A	<1.00 ug/L		1.00	1	09/28/18 10:15	09/28/18 16:55	RCV
Thallium	02	SW6020A	<1.00 ug/L		1.00	1	09/28/18 10:15	10/03/18 11:01	BG
Vanadium	02	SW6010C	<0.0100 mg/L		0.0100	1	09/28/18 10:15	10/01/18 17:01	BG
Zinc	02	SW6010C	<0.0100 mg/L		0.0100	1	09/28/18 10:15	10/01/18 17:01	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	02	SW8015C	<0.10 mg/L	0.10	1	09/28/18 12:04	09/28/18 12:04	DFH
---------------------	----	---------	------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-2	Laboratory Sample ID: 1811066-02
Grab Date/Time: 09/27/2018 14:40	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	02	SW8015C	104 %		80-120		09/28/18 12:04	09/28/18 12:04	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	09/28/18 12:41	09/28/18 12:41	KCS
1,1,1-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,1,2,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	09/28/18 12:41	09/28/18 12:41	KCS
1,1,2-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,1-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,1-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,1-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,2,3-Trichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,2,3-Trichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,2,4-Trichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,2,4-Trimethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,2-Dibromo-3-chloropropane (DBCP)	02	SW8260B	<4.00 ug/L		4.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,2-Dibromoethane (EDB)	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,2-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,2-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,2-Dichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,3,5-Trimethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,3-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,3-Dichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
1,4-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
2,2-Dichloropropane	02	SW8260B	<2.00 ug/L		2.00	1	09/28/18 12:41	09/28/18 12:41	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-2	Laboratory Sample ID: 1811066-02
Grab Date/Time: 09/27/2018 14:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	02	SW8260B	<10.0 ug/L		10.0	1	09/28/18 12:41	09/28/18 12:41	KCS
2-Chlorotoluene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
2-Hexanone (MBK)	02	SW8260B	<5.00 ug/L		5.00	1	09/28/18 12:41	09/28/18 12:41	KCS
4-Chlorotoluene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
4-Isopropyltoluene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
4-Methyl-2-pentanone (MIBK)	02	SW8260B	<5.00 ug/L		5.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Acetone	02	SW8260B	<10.0 ug/L		10.0	1	09/28/18 12:41	09/28/18 12:41	KCS
Benzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Bromobenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Bromochloromethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Bromodichloromethane	02	SW8260B	<0.50 ug/L		0.50	1	09/28/18 12:41	09/28/18 12:41	KCS
Bromoform	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Bromomethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Carbon disulfide	02	SW8260B	<10.0 ug/L		10.0	1	09/28/18 12:41	09/28/18 12:41	KCS
Carbon tetrachloride	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Chlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Chloroethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Chloroform	02	SW8260B	<0.50 ug/L		0.50	1	09/28/18 12:41	09/28/18 12:41	KCS
Chloromethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
cis-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
cis-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Dibromochloromethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Dibromomethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Dichlorodifluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Di-isopropyl ether (DIPE)	02	SW8260B	<5.00 ug/L		5.00	1	09/28/18 12:41	09/28/18 12:41	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-2	Laboratory Sample ID: 1811066-02
Grab Date/Time: 09/27/2018 14:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Ethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Hexachlorobutadiene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Iodomethane	02	SW8260B	<10.0 ug/L		10.0	1	09/28/18 12:41	09/28/18 12:41	KCS
Isopropylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
m+p-Xylenes	02	SW8260B	<2.00 ug/L		2.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Methylene chloride	02	SW8260B	<4.00 ug/L		4.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Methyl-t-butyl ether (MTBE)	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Naphthalene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
n-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
n-Propylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
o-Xylene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
sec-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Styrene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
tert-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Tetrachloroethylene (PCE)	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Toluene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
trans-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
trans-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Trichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Trichlorofluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Vinyl acetate	02	SW8260B	<10.0 ug/L	C	10.0	1	09/28/18 12:41	09/28/18 12:41	KCS
Vinyl chloride	02	SW8260B	<0.50 ug/L		0.50	1	09/28/18 12:41	09/28/18 12:41	KCS
Xylenes, Total	02	SW8260B	<3.00 ug/L		3.00	1	09/28/18 12:41	09/28/18 12:41	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	02	SW8260B	106 %		70-120		09/28/18 12:41	09/28/18 12:41	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-2	Laboratory Sample ID: 1811066-02
Grab Date/Time: 09/27/2018 14:40	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	02	SW8260B	91.5 %		75-120		09/28/18 12:41	09/28/18 12:41	KCS
Surr: Dibromofluoromethane (Surr)	02	SW8260B	96.4 %		70-130		09/28/18 12:41	09/28/18 12:41	KCS
Surr: Toluene-d8 (Surr)	02	SW8260B	103 %		70-130		09/28/18 12:41	09/28/18 12:41	KCS
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
1,2,4-Trichlorobenzene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
1,2-Dichlorobenzene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
1,2-Diphenylhydrazine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
1,3-Dichlorobenzene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
1,3-Dinitrobenzene	02	SW8270D	<2.78 ug/L		2.78	1	10/01/18 09:15	10/02/18 14:32	SKS
1,4-Dichlorobenzene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
1-Naphthylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2,3,4,6-Tetrachlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2,4,5-Trichlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2,4,6-Trichlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2,4-Dichlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2,4-Dimethylphenol	02	SW8270D	<0.56 ug/L		0.56	1	10/01/18 09:15	10/02/18 14:32	SKS
2,4-Dinitrophenol	02	SW8270D	<55.6 ug/L		55.6	1	10/01/18 09:15	10/02/18 14:32	SKS
2,4-Dinitrotoluene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2,6-Dichlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2,6-Dinitrotoluene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2-Chloronaphthalene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2-Chlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-2	Laboratory Sample ID: 1811066-02
Grab Date/Time: 09/27/2018 14:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Methylnaphthalene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2-Naphthylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2-Nitroaniline	02	SW8270D	<22.2 ug/L		22.2	1	10/01/18 09:15	10/02/18 14:32	SKS
2-Nitrophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
3-Methylcholanthrene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
3-Nitroaniline	02	SW8270D	<22.2 ug/L		22.2	1	10/01/18 09:15	10/02/18 14:32	SKS
4,6-Dinitro-2-methylphenol	02	SW8270D	<55.6 ug/L		55.6	1	10/01/18 09:15	10/02/18 14:32	SKS
4-Aminobiphenyl	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
4-Bromophenyl phenyl ether	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
4-Chloroaniline	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
4-Chlorophenyl phenyl ether	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
4-Nitroaniline	02	SW8270D	<22.2 ug/L		22.2	1	10/01/18 09:15	10/02/18 14:32	SKS
4-Nitrophenol	02	SW8270D	<55.6 ug/L		55.6	1	10/01/18 09:15	10/02/18 14:32	SKS
7,12-Dimethylbenz (a) anthracene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Acenaphthene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Acenaphthylene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Acetophenone	02	SW8270D	<22.2 ug/L		22.2	1	10/01/18 09:15	10/02/18 14:32	SKS
Aniline	02	SW8270D	<55.6 ug/L		55.6	1	10/01/18 09:15	10/02/18 14:32	SKS
Anthracene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Benzidine	02	SW8270D	<55.6 ug/L		55.6	1	10/01/18 09:15	10/02/18 14:32	SKS
Benzo (a) anthracene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Benzo (a) pyrene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Benzo (b) fluoranthene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Benzo (g,h,i) perylene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-2 **Laboratory Sample ID:** 1811066-02

Grab Date/Time: 09/27/2018 14:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzo (k) fluoranthene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Benzoic acid	02	SW8270D	<55.6 ug/L		55.6	1	10/01/18 09:15	10/02/18 14:32	SKS
Benzyl alcohol	02	SW8270D	<22.2 ug/L		22.2	1	10/01/18 09:15	10/02/18 14:32	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
2,2'-Oxybis (1-chloropropane)	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Butyl benzyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Chrysene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Dibenz (a,h) anthracene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Dibenz (a,j) acridine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Dibenzofuran	02	SW8270D	<5.56 ug/L		5.56	1	10/01/18 09:15	10/02/18 14:32	SKS
Diethyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Dimethyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Di-n-butyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Di-n-octyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Diphenylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Ethyl methanesulfonate	02	SW8270D	<22.2 ug/L		22.2	1	10/01/18 09:15	10/02/18 14:32	SKS
Fluoranthene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Fluorene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Hexachlorobenzene	02	SW8270D	<1.11 ug/L		1.11	1	10/01/18 09:15	10/02/18 14:32	SKS
Hexachlorobutadiene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Hexachlorocyclopentadiene	02	SW8270D	<11.1 ug/L	C	11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Hexachloroethane	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-2	Laboratory Sample ID: 1811066-02
Grab Date/Time: 09/27/2018 14:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Isophorone	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
m+p-Cresols	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Methyl methanesulfonate	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Naphthalene	02	SW8270D	<5.56 ug/L		5.56	1	10/01/18 09:15	10/02/18 14:32	SKS
Nitrobenzene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
n-Nitrosodimethylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
n-Nitrosodi-n-butylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
n-Nitrosodiphenylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
n-Nitrosopiperidine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
o+m+p-Cresols	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
o-Cresol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
p-(Dimethylamino) azobenzene	02	SW8270D	<2.78 ug/L		2.78	1	10/01/18 09:15	10/02/18 14:32	SKS
p-Chloro-m-cresol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Pentachloronitrobenzene (quintozene)	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Pentachlorophenol	02	SW8270D	<22.2 ug/L		22.2	1	10/01/18 09:15	10/02/18 14:32	SKS
Phenacetin	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Phenanthrene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Phenol	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Pronamide	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Pyrene	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Pyridine	02	SW8270D	<11.1 ug/L		11.1	1	10/01/18 09:15	10/02/18 14:32	SKS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270D	86.1 %	S	10-86		10/01/18 09:15	10/02/18 14:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. MW 77-2	Laboratory Sample ID: 1811066-02
Grab Date/Time: 09/27/2018 14:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270D	88.0 %	S	9-87		10/01/18 09:15	10/02/18 14:32	SKS
Surr: 2-Fluorophenol (Surr)	02	SW8270D	51.4 %		10-52		10/01/18 09:15	10/02/18 14:32	SKS
Surr: Nitrobenzene-d5 (Surr)	02	SW8270D	81.9 %		10-98.5		10/01/18 09:15	10/02/18 14:32	SKS
Surr: Phenol-d5 (Surr)	02	SW8270D	33.7 %	S	5-33		10/01/18 09:15	10/02/18 14:32	SKS
Surr: p-Terphenyl-d14 (Surr)	02	SW8270D	86.1 %		27-133		10/01/18 09:15	10/02/18 14:32	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<0.532 mg/L		0.532	1	10/03/18 10:00	10/03/18 13:30	HLM
Surr: Pentacosane (Surr)	02	SW8015C	51.4 %		40-160		10/03/18 10:00	10/03/18 13:30	HLM
TPH-Semi-Volatiles (ORO)	02	SW8015C	<1.1 mg/L		1.1	1	10/03/18 10:00	10/03/18 18:27	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	02	SW7196A	<0.005 mg/L		0.005	1	09/28/18 09:30	09/28/18 11:29	MWL



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. Trip Blank	Laboratory Sample ID: 1811066-03
Grab Date/Time: 09/23/2018 14:10	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	03	SW8015C	<0.10 mg/L		0.10	1	09/28/18 11:18	09/28/18 11:18	DFH
Surr: 2,5-Dibromotoluene (Surr FID)	03	SW8015C	113 %		80-120		09/28/18 11:18	09/28/18 11:18	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	09/28/18 11:55	09/28/18 11:55	KCS
1,1,1-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,1,2,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	09/28/18 11:55	09/28/18 11:55	KCS
1,1,2-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,1-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,1-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,1-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,2,3-Trichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,2,3-Trichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,2,4-Trichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,2,4-Trimethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,2-Dibromo-3-chloropropane (DBCP)	03	SW8260B	<4.00 ug/L		4.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,2-Dibromoethane (EDB)	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,2-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,2-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,2-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,3,5-Trimethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,3-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,3-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
1,4-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. Trip Blank **Laboratory Sample ID:** 1811066-03

Grab Date/Time: 09/23/2018 14:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2,2-Dichloropropane	03	SW8260B	<2.00 ug/L		2.00	1	09/28/18 11:55	09/28/18 11:55	KCS
2-Butanone (MEK)	03	SW8260B	<10.0 ug/L		10.0	1	09/28/18 11:55	09/28/18 11:55	KCS
2-Chlorotoluene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
2-Hexanone (MBK)	03	SW8260B	<5.00 ug/L		5.00	1	09/28/18 11:55	09/28/18 11:55	KCS
4-Chlorotoluene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
4-Isopropyltoluene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
4-Methyl-2-pentanone (MIBK)	03	SW8260B	<5.00 ug/L		5.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Acetone	03	SW8260B	<10.0 ug/L		10.0	1	09/28/18 11:55	09/28/18 11:55	KCS
Benzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Bromobenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Bromochloromethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Bromodichloromethane	03	SW8260B	<0.50 ug/L		0.50	1	09/28/18 11:55	09/28/18 11:55	KCS
Bromoform	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Bromomethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Carbon disulfide	03	SW8260B	<10.0 ug/L		10.0	1	09/28/18 11:55	09/28/18 11:55	KCS
Carbon tetrachloride	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Chlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Chloroethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Chloroform	03	SW8260B	<0.50 ug/L		0.50	1	09/28/18 11:55	09/28/18 11:55	KCS
Chloromethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
cis-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
cis-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Dibromochloromethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Dibromomethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Dichlorodifluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. Trip Blank	Laboratory Sample ID: 1811066-03
Grab Date/Time: 09/23/2018 14:10	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Di-isopropyl ether (DIPE)	03	SW8260B	<5.00 ug/L		5.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Ethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Hexachlorobutadiene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Iodomethane	03	SW8260B	<10.0 ug/L		10.0	1	09/28/18 11:55	09/28/18 11:55	KCS
Isopropylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
m+p-Xylenes	03	SW8260B	<2.00 ug/L		2.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Methylene chloride	03	SW8260B	<4.00 ug/L		4.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Methyl-t-butyl ether (MTBE)	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Naphthalene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
n-Butylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
n-Propylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
o-Xylene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
sec-Butylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Styrene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
tert-Butylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Tetrachloroethylene (PCE)	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Toluene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
trans-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
trans-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Trichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Trichlorofluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	09/28/18 11:55	09/28/18 11:55	KCS
Vinyl acetate	03	SW8260B	<10.0 ug/L	C	10.0	1	09/28/18 11:55	09/28/18 11:55	KCS
Vinyl chloride	03	SW8260B	<0.50 ug/L		0.50	1	09/28/18 11:55	09/28/18 11:55	KCS
Xylenes, Total	03	SW8260B	<3.00 ug/L		3.00	1	09/28/18 11:55	09/28/18 11:55	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 1811066

Analytical Results

Sample I.D. Trip Blank **Laboratory Sample ID:** 1811066-03

Grab Date/Time: 09/23/2018 14:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 1,2-Dichloroethane-d4 (Surr)	03	SW8260B	106 %		70-120		09/28/18 11:55	09/28/18 11:55	KCS
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260B	95.9 %		75-120		09/28/18 11:55	09/28/18 11:55	KCS
Surr: Dibromofluoromethane (Surr)	03	SW8260B	105 %		70-130		09/28/18 11:55	09/28/18 11:55	KCS
Surr: Toluene-d8 (Surr)	03	SW8260B	89.2 %		70-130		09/28/18 11:55	09/28/18 11:55	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.2/R2.8			
1811066-01	50.0 mL / 50.0 mL	SW6010C	BBI0841	SBJ0036	AJ80002
1811066-01RE1	50.0 mL / 50.0 mL	SW6010C	BBI0841	SBJ0101	AJ80018
1811066-02	50.0 mL / 50.0 mL	SW6010C	BBI0841	SBJ0036	AJ80002
1811066-02RE1	50.0 mL / 50.0 mL	SW6010C	BBI0841	SBJ0101	AJ80018

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.8 R5.4			
1811066-01	50.0 mL / 50.0 mL	SW6020A	BBI0842	SBJ0031	AI80120
1811066-01	50.0 mL / 50.0 mL	SW6020A	BBI0842	SBJ0109	AJ80021
1811066-02	50.0 mL / 50.0 mL	SW6020A	BBI0842	SBJ0031	AI80120
1811066-02	50.0 mL / 50.0 mL	SW6020A	BBI0842	SBJ0109	AJ80021

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
1811066-01	100 mL / 100 mL	SW7196A	BBJ0151	SBJ0152	AJ80027
1811066-02	100 mL / 100 mL	SW7196A	BBJ0151	SBJ0152	AJ80027

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Organic Compounds by GCMS		Preparation Method: SW3510C			
1811066-01	960 mL / 1.00 mL	SW8270D	BBJ0010	SBJ0129	AF80080
1811066-02	900 mL / 1.00 mL	SW8270D	BBJ0010	SBJ0129	AF80080
Semivolatile Hydrocarbons by GC		Preparation Method: SW3510C			
1811066-01	810 mL / 1.00 mL	SW8015C	BBJ0019	SBJ0035	AI80038
Semivolatile Hydrocarbons by GC		Preparation Method: SW3510C			
1811066-02	940 mL / 1.00 mL	SW8015C	BBJ0102	SBJ0095	AH80058



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Semivolatile Hydrocarbons by GC

Preparation Method: SW3510C

18I1066-01	910 mL / 1.00 mL	SW8015C	BBJ0103	SBJ0134	AH80136
18I1066-02	870 mL / 1.00 mL	SW8015C	BBJ0103	SBJ0134	AH80136

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Volatile Hydrocarbons by GC

Preparation Method: SW5030B

18I1066-01	5.00 mL / 5.00 mL	SW8015C	BBI0850	SBI0804	AF80070
18I1066-02	5.00 mL / 5.00 mL	SW8015C	BBI0850	SBI0804	AF80070
18I1066-03	5.00 mL / 5.00 mL	SW8015C	BBI0850	SBI0804	AF80070

Volatile Organic Compounds by GCMS

Preparation Method: SW5030B

18I1066-01	5.00 mL / 5.00 mL	SW8260B	BBJ0036	SBJ0034	AH80127
18I1066-02	5.00 mL / 5.00 mL	SW8260B	BBJ0036	SBJ0034	AH80127
18I1066-03	5.00 mL / 5.00 mL	SW8260B	BBJ0036	SBJ0034	AH80127

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method: SW7470A

18I1066-01	20.0 mL / 20.0 mL	SW7470A	BBJ0217	SBJ0250	AJ80047
18I1066-02	20.0 mL / 20.0 mL	SW7470A	BBJ0217	SBJ0250	AJ80047



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBI0841 - EPA200.2/R2.8

Blank (BBI0841-BLK1)

Prepared: 09/28/2018 Analyzed: 10/01/2018

Aluminum	<0.0500 mg/L	0.0500	mg/L						
Barium	<0.0100 mg/L	0.0100	mg/L						
Beryllium	<0.0040 mg/L	0.0040	mg/L						
Cadmium	<0.0040 mg/L	0.0040	mg/L						
Calcium	<0.0500 mg/L	0.0500	mg/L						
Chromium	<0.0100 mg/L	0.0100	mg/L						
Cobalt	<0.0040 mg/L	0.0040	mg/L						
Copper	<0.0100 mg/L	0.0100	mg/L						
Iron	<0.0100 mg/L	0.0100	mg/L						
Lead	<0.0100 mg/L	0.0100	mg/L						
Magnesium	<0.0100 mg/L	0.0100	mg/L						
Manganese	<0.0100 mg/L	0.0100	mg/L						
Nickel	<0.0100 mg/L	0.0100	mg/L						
Potassium	<0.50 mg/L	0.50	mg/L						
Silver	<0.0100 mg/L	0.0100	mg/L						
Sodium	<0.50 mg/L	0.50	mg/L						
Vanadium	<0.0100 mg/L	0.0100	mg/L						
Zinc	<0.0100 mg/L	0.0100	mg/L						

LCS (BBI0841-BS1)

Prepared: 09/28/2018 Analyzed: 10/01/2018

Aluminum	0.490 mg/L	0.0500	mg/L	0.500	mg/L	98.0	80-120
Barium	0.517 mg/L	0.0100	mg/L	0.500	mg/L	103	80-120
Beryllium	0.484 mg/L	0.0040	mg/L	0.500	mg/L	96.7	80-120
Cadmium	0.492 mg/L	0.0040	mg/L	0.500	mg/L	98.5	80-120
Calcium	0.464 mg/L	0.0500	mg/L	0.500	mg/L	92.9	80-120
Chromium	0.493 mg/L	0.0100	mg/L	0.500	mg/L	98.6	80-120
Cobalt	0.497 mg/L	0.0040	mg/L	0.500	mg/L	99.5	80-120
Copper	0.495 mg/L	0.0100	mg/L	0.500	mg/L	98.9	80-120
Iron	0.501 mg/L	0.0100	mg/L	0.500	mg/L	100	80-120
Lead	0.504 mg/L	0.0100	mg/L	0.500	mg/L	101	80-120
Magnesium	0.489 mg/L	0.0100	mg/L	0.500	mg/L	97.7	80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0841 - EPA200.2/R2.8

LCS (BBI0841-BS1)

Prepared: 09/28/2018 Analyzed: 10/01/2018

Manganese	0.496 mg/L	0.0100	mg/L	0.500	mg/L	99.2	80-120			
Nickel	0.5009 mg/L	0.0100	mg/L	0.500	mg/L	100	80-120			
Potassium	4.91 mg/L	0.50	mg/L	5.00	mg/L	98.1	80-120			
Silver	0.103 mg/L	0.0100	mg/L	0.100	mg/L	103	80-120			E
Sodium	4.88 mg/L	0.50	mg/L	5.00	mg/L	97.5	80-120			
Vanadium	0.502 mg/L	0.0100	mg/L	0.500	mg/L	100	80-120			
Zinc	0.505 mg/L	0.0100	mg/L	0.500	mg/L	101	80-120			

LCS Dup (BBI0841-BSD1)

Prepared: 09/28/2018 Analyzed: 10/01/2018

Aluminum	0.505 mg/L	0.0500	mg/L	0.500	mg/L	101	80-120	3.00	20	
Barium	0.513 mg/L	0.0100	mg/L	0.500	mg/L	103	80-120	0.858	20	
Beryllium	0.479 mg/L	0.0040	mg/L	0.500	mg/L	95.8	80-120	1.02	20	
Cadmium	0.489 mg/L	0.0040	mg/L	0.500	mg/L	97.9	80-120	0.573	20	
Calcium	0.459 mg/L	0.0500	mg/L	0.500	mg/L	91.9	80-120	1.06	20	
Chromium	0.487 mg/L	0.0100	mg/L	0.500	mg/L	97.5	80-120	1.12	20	
Cobalt	0.494 mg/L	0.0040	mg/L	0.500	mg/L	98.8	80-120	0.669	20	
Copper	0.489 mg/L	0.0100	mg/L	0.500	mg/L	97.8	80-120	1.17	20	
Iron	0.495 mg/L	0.0100	mg/L	0.500	mg/L	99.1	80-120	1.10	20	
Lead	0.500 mg/L	0.0100	mg/L	0.500	mg/L	100	80-120	0.683	20	
Magnesium	0.480 mg/L	0.0100	mg/L	0.500	mg/L	96.1	80-120	1.74	20	
Manganese	0.491 mg/L	0.0100	mg/L	0.500	mg/L	98.2	80-120	1.04	20	
Nickel	0.4971 mg/L	0.0100	mg/L	0.500	mg/L	99.4	80-120	0.759	20	
Potassium	4.88 mg/L	0.50	mg/L	5.00	mg/L	97.5	80-120	0.620	20	
Silver	0.103 mg/L	0.0100	mg/L	0.100	mg/L	103	80-120	0.372	20	E
Sodium	4.88 mg/L	0.50	mg/L	5.00	mg/L	97.5	80-120	0.0127	20	
Vanadium	0.495 mg/L	0.0100	mg/L	0.500	mg/L	99.0	80-120	1.32	20	
Zinc	0.502 mg/L	0.0100	mg/L	0.500	mg/L	100	80-120	0.639	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0841 - EPA200.2/R2.8

Matrix Spike (BBI0841-MS1)

Source: 1811041-01

Prepared: 09/28/2018 Analyzed: 10/01/2018

Aluminum	<0.500 mg/L	0.500	mg/L	0.500	<0.500 mg/L	90.5	75-125			
Barium	0.512 mg/L	0.100	mg/L	0.500	<0.100 mg/L	102	75-125			
Beryllium	0.475 mg/L	0.0400	mg/L	0.500	<0.0400 mg/L	94.9	75-125			
Cadmium	0.482 mg/L	0.0400	mg/L	0.500	<0.0400 mg/L	96.4	75-125			
Calcium	67.7 mg/L	0.500	mg/L	0.500	63.6 mg/L	803	75-125			M2
Chromium	0.469 mg/L	0.100	mg/L	0.500	<0.100 mg/L	93.9	75-125			
Cobalt	0.488 mg/L	0.0400	mg/L	0.500	<0.0400 mg/L	97.6	75-125			
Copper	0.479 mg/L	0.100	mg/L	0.500	<0.100 mg/L	95.8	75-125			
Iron	0.510 mg/L	0.100	mg/L	0.500	<0.100 mg/L	102	75-125			
Lead	0.497 mg/L	0.100	mg/L	0.500	<0.100 mg/L	99.4	75-125			
Magnesium	8.44 mg/L	0.100	mg/L	0.500	7.58 mg/L	172	75-125			M2
Manganese	0.533 mg/L	0.100	mg/L	0.500	<0.100 mg/L	97.3	75-125			
Nickel	0.4875 mg/L	0.1000	mg/L	0.500	<0.1000 mg/L	97.5	75-125			
Potassium	11.7 mg/L	5.00	mg/L	5.00	7.91 mg/L	74.9	75-125			M2
Silver	0.108 mg/L	0.100	mg/L	0.100	<0.100 mg/L	108	75-125			
Sodium	46.7 mg/L	5.00	mg/L	5.00	41.1 mg/L	112	75-125			
Vanadium	0.489 mg/L	0.100	mg/L	0.500	<0.100 mg/L	97.8	75-125			
Zinc	0.449 mg/L	0.100	mg/L	0.500	<0.100 mg/L	89.7	75-125			

Matrix Spike (BBI0841-MS2)

Source: 1811044-01

Prepared: 09/28/2018 Analyzed: 10/01/2018

Aluminum	0.660 mg/L	0.0500	mg/L	0.500	0.0549 mg/L	121	75-125			
Barium	0.542 mg/L	0.0100	mg/L	0.500	0.0169 mg/L	105	75-125			
Beryllium	0.504 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125			
Cadmium	0.496 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	99.1	75-125			
Calcium	16.4 mg/L	0.0500	mg/L	0.500	15.6 mg/L	157	75-125			M
Chromium	0.523 mg/L	0.0100	mg/L	0.500	0.0192 mg/L	101	75-125			
Cobalt	0.502 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	100	75-125			
Copper	0.536 mg/L	0.0100	mg/L	0.500	0.0269 mg/L	102	75-125			
Iron	0.953 mg/L	0.0100	mg/L	0.500	0.342 mg/L	122	75-125			
Lead	0.506 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Magnesium	2.11 mg/L	0.0100	mg/L	0.500	1.58 mg/L	108	75-125			
Manganese	0.523 mg/L	0.0100	mg/L	0.500	0.0172 mg/L	101	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0841 - EPA200.2/R2.8

Matrix Spike (BBI0841-MS2)

Source: 1811044-01

Prepared: 09/28/2018 Analyzed: 10/01/2018

Nickel	0.5015 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	100	75-125			
Potassium	10.3 mg/L	0.50	mg/L	5.00	5.34 mg/L	99.7	75-125			
Silver	0.106 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	106	75-125			E
Sodium	8.18 mg/L	0.50	mg/L	5.00	3.07 mg/L	102	75-125			
Vanadium	0.520 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	104	75-125			
Zinc	0.781 mg/L	0.0100	mg/L	0.500	0.262 mg/L	104	75-125			

Matrix Spike Dup (BBI0841-MSD1)

Source: 1811041-01

Prepared: 09/28/2018 Analyzed: 10/01/2018

Aluminum	0.747 mg/L	0.500	mg/L	0.500	<0.500 mg/L	149	75-125	49.2	20	M2, P
Barium	0.507 mg/L	0.100	mg/L	0.500	<0.100 mg/L	101	75-125	1.13	20	
Beryllium	0.464 mg/L	0.0400	mg/L	0.500	<0.0400 mg/L	92.8	75-125	2.29	20	
Cadmium	0.478 mg/L	0.0400	mg/L	0.500	<0.0400 mg/L	95.7	75-125	0.800	20	
Calcium	67.2 mg/L	0.500	mg/L	0.500	63.6 mg/L	703	75-125	0.742	20	M2
Chromium	0.464 mg/L	0.100	mg/L	0.500	<0.100 mg/L	92.9	75-125	1.05	20	
Cobalt	0.481 mg/L	0.0400	mg/L	0.500	<0.0400 mg/L	96.2	75-125	1.37	20	
Copper	0.467 mg/L	0.100	mg/L	0.500	<0.100 mg/L	93.5	75-125	2.48	20	
Iron	0.514 mg/L	0.100	mg/L	0.500	<0.100 mg/L	103	75-125	0.708	20	
Lead	0.473 mg/L	0.100	mg/L	0.500	<0.100 mg/L	94.6	75-125	4.95	20	
Magnesium	8.40 mg/L	0.100	mg/L	0.500	7.58 mg/L	164	75-125	0.439	20	M2
Manganese	0.522 mg/L	0.100	mg/L	0.500	<0.100 mg/L	95.1	75-125	2.05	20	
Nickel	0.4785 mg/L	0.1000	mg/L	0.500	<0.1000 mg/L	95.7	75-125	1.86	20	
Potassium	11.9 mg/L	5.00	mg/L	5.00	7.91 mg/L	79.4	75-125	1.92	20	
Silver	<0.100 mg/L	0.100	mg/L	0.100	<0.100 mg/L	95.3	75-125	12.7	20	
Sodium	46.2 mg/L	5.00	mg/L	5.00	41.1 mg/L	102	75-125	1.10	20	
Vanadium	0.491 mg/L	0.100	mg/L	0.500	<0.100 mg/L	98.3	75-125	0.468	20	
Zinc	0.445 mg/L	0.100	mg/L	0.500	<0.100 mg/L	88.9	75-125	0.925	20	

Matrix Spike Dup (BBI0841-MSD2)

Source: 1811044-01

Prepared: 09/28/2018 Analyzed: 10/01/2018

Aluminum	0.634 mg/L	0.0500	mg/L	0.500	0.0549 mg/L	116	75-125	4.06	20	
Barium	0.517 mg/L	0.0100	mg/L	0.500	0.0169 mg/L	100	75-125	4.77	20	
Beryllium	0.485 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	97.1	75-125	3.79	20	
Cadmium	0.477 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	95.4	75-125	3.81	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0841 - EPA200.2/R2.8

Matrix Spike Dup (BBI0841-MSD2)

Source: 1811044-01

Prepared: 09/28/2018 Analyzed: 10/01/2018

Calcium	15.7 mg/L	0.0500	mg/L	0.500	15.6 mg/L	23.2	75-125	4.16	20	M
Chromium	0.504 mg/L	0.0100	mg/L	0.500	0.0192 mg/L	96.9	75-125	3.84	20	
Cobalt	0.482 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	96.3	75-125	4.08	20	
Copper	0.519 mg/L	0.0100	mg/L	0.500	0.0269 mg/L	98.5	75-125	3.24	20	
Iron	0.981 mg/L	0.0100	mg/L	0.500	0.342 mg/L	128	75-125	2.99	20	M
Lead	0.490 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	98.0	75-125	3.24	20	
Magnesium	2.03 mg/L	0.0100	mg/L	0.500	1.58 mg/L	91.2	75-125	3.97	20	
Manganese	0.504 mg/L	0.0100	mg/L	0.500	0.0172 mg/L	97.4	75-125	3.59	20	
Nickel	0.4826 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	96.5	75-125	3.85	20	
Potassium	9.98 mg/L	0.50	mg/L	5.00	5.34 mg/L	92.9	75-125	3.36	20	
Silver	0.0999 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	99.9	75-125	5.56	20	
Sodium	7.78 mg/L	0.50	mg/L	5.00	3.07 mg/L	94.1	75-125	5.07	20	
Vanadium	0.498 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.5	75-125	4.47	20	
Zinc	0.749 mg/L	0.0100	mg/L	0.500	0.262 mg/L	97.5	75-125	4.05	20	

Batch BBI0842 - EPA200.8 R5.4

Blank (BBI0842-BLK1)

Prepared & Analyzed: 09/28/2018

Antimony	<1.00 ug/L	1.00	ug/L
Arsenic	<1.0 ug/L	1.0	ug/L
Selenium	<1.00 ug/L	1.00	ug/L

Blank (BBI0842-BLK2)

Prepared: 09/28/2018 Analyzed: 10/03/2018

Thallium	<1.00 ug/L	1.00	ug/L
----------	------------	------	------

LCS (BBI0842-BS1)

Prepared & Analyzed: 09/28/2018

Antimony	53.0 ug/L	1.00	ug/L	50.0 ug/L	106	80-120
Arsenic	51 ug/L	1.0	ug/L	50.0 ug/L	101	80-120
Selenium	48.1 ug/L	1.00	ug/L	50.0 ug/L	96.1	80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0842 - EPA200.8 R5.4

LCS (BBI0842-BS2)

Prepared: 09/28/2018 Analyzed: 10/03/2018

Thallium	51.8 ug/L	1.00	ug/L	50.0	ug/L	104	80-120
----------	-----------	------	------	------	------	-----	--------

LCS Dup (BBI0842-BSD1)

Prepared & Analyzed: 09/28/2018

Antimony	51.6 ug/L	1.00	ug/L	50.0	ug/L	103	80-120	2.78	20
Arsenic	51 ug/L	1.0	ug/L	50.0	ug/L	102	80-120	0.470	20
Selenium	48.7 ug/L	1.00	ug/L	50.0	ug/L	97.4	80-120	1.29	20

LCS Dup (BBI0842-BSD2)

Prepared: 09/28/2018 Analyzed: 10/03/2018

Thallium	50.3 ug/L	1.00	ug/L	50.0	ug/L	101	80-120	2.84	20
----------	-----------	------	------	------	------	-----	--------	------	----

Matrix Spike (BBI0842-MS1)

Source: 1811041-01

Prepared & Analyzed: 09/28/2018

Antimony	56.8 ug/L	1.00	ug/L	50.0	4.24 ug/L	105	75-125
Arsenic	54 ug/L	1.0	ug/L	50.0	<1.0 ug/L	108	75-125
Selenium	56.1 ug/L	1.00	ug/L	50.0	6.20 ug/L	99.7	75-125

Matrix Spike (BBI0842-MS2)

Source: 1811041-01

Prepared: 09/28/2018 Analyzed: 10/03/2018

Thallium	49.3 ug/L	1.00	ug/L	50.0	<1.00 ug/L	98.6	75-125
----------	-----------	------	------	------	------------	------	--------

Matrix Spike Dup (BBI0842-MSD1)

Source: 1811041-01

Prepared & Analyzed: 09/28/2018

Antimony	56.9 ug/L	1.00	ug/L	50.0	4.24 ug/L	105	75-125	0.265	20
Arsenic	52 ug/L	1.0	ug/L	50.0	<1.0 ug/L	103	75-125	4.01	20
Selenium	55.1 ug/L	1.00	ug/L	50.0	6.20 ug/L	97.9	75-125	1.69	20

Matrix Spike Dup (BBI0842-MSD2)

Source: 1811041-01

Prepared: 09/28/2018 Analyzed: 10/03/2018

Thallium	49.3 ug/L	1.00	ug/L	50.0	<1.00 ug/L	98.5	75-125	0.0260	20
----------	-----------	------	------	------	------------	------	--------	--------	----

Batch BBJ0217 - SW7470A

Blank (BBJ0217-BLK1)

Prepared: 10/05/2018 Analyzed: 10/08/2018

Mercury	<0.00020 mg/L	0.00020	mg/L
---------	---------------	---------	------



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qual
Batch BBJ0217 - SW7470A										
LCS (BBJ0217-BS1) Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00254 mg/L	0.00020	mg/L	0.00250 mg/L		102	80-120			
LCS Dup (BBJ0217-BSD1) Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00254 mg/L	0.00020	mg/L	0.00250 mg/L		102	80-120	0.146	20	
Matrix Spike (BBJ0217-MS1) Prepared: 10/05/2018 Analyzed: 10/08/2018										
	Source: 1811076-02									
Mercury	0.00241 mg/L	0.00020	mg/L	0.00250 < 0.00020 mg/L		96.6	80-120			
Matrix Spike (BBJ0217-MS2) Prepared: 10/05/2018 Analyzed: 10/08/2018										
	Source: 1811081-01									
Mercury	0.00182 mg/L	0.00020	mg/L	0.00250 < 0.00020 mg/L		72.7	80-120			M
Matrix Spike (BBJ0217-MS3) Prepared: 10/05/2018 Analyzed: 10/08/2018										
	Source: 1811110-05									
Mercury	0.00256 mg/L	0.00020	mg/L	0.00250 < 0.00020 mg/L		103	80-120			
Matrix Spike Dup (BBJ0217-MSD1) Prepared: 10/05/2018 Analyzed: 10/08/2018										
	Source: 1811076-02									
Mercury	0.00238 mg/L	0.00020	mg/L	0.00250 < 0.00020 mg/L		95.3	80-120	1.30	20	
Matrix Spike Dup (BBJ0217-MSD2) Prepared: 10/05/2018 Analyzed: 10/08/2018										
	Source: 1811081-01									
Mercury	0.00176 mg/L	0.00020	mg/L	0.00250 < 0.00020 mg/L		70.3	80-120	3.32	20	M
Matrix Spike Dup (BBJ0217-MSD3) Prepared: 10/05/2018 Analyzed: 10/08/2018										
	Source: 1811110-05									
Mercury	0.00272 mg/L	0.00020	mg/L	0.00250 < 0.00020 mg/L		109	80-120	5.83	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBI0850 - SW5030B

Blank (BBI0850-BLK1)

Prepared & Analyzed: 09/28/2018

TPH-Volatiles (GRO)	<0.10 mg/L	0.10	mg/L							
Surr: 2,5-Dibromotoluene (Surr FID)	110		ug/L	100		110	80-120			

LCS (BBI0850-BS1)

Prepared & Analyzed: 09/28/2018

TPH-Volatiles (GRO)	0.92 mg/L	0.10	mg/L	1.00	mg/L	92.4	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	115		ug/L	100	ug/L	115	80-120			

Matrix Spike (BBI0850-MS1)

Source: 18I1066-01

Prepared & Analyzed: 09/28/2018

TPH-Volatiles (GRO)	0.85 mg/L	0.10	mg/L	1.00	<0.10 mg/L	84.9	70-130			
Surr: 2,5-Dibromotoluene (Surr FID)	148		ug/L	100	ug/L	148	80-120			S

Matrix Spike Dup (BBI0850-MSD1)

Source: 18I1066-01

Prepared & Analyzed: 09/28/2018

TPH-Volatiles (GRO)	0.85 mg/L	0.10	mg/L	1.00	<0.10 mg/L	84.7	70-130	0.193	20	
Surr: 2,5-Dibromotoluene (Surr FID)	141		ug/L	100	ug/L	141	80-120			S



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0036 - SW5030B

Blank (BBJ0036-BLK1)

Prepared & Analyzed: 09/28/2018

1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L							
1,2,3-Trichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L							
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2,4-Trimethylbenzene	<1.00 ug/L	1.00	ug/L							
1,2-Dibromo-3-chloropropane (DBCP)	<4.00 ug/L	4.00	ug/L							
1,2-Dibromoethane (EDB)	<1.00 ug/L	1.00	ug/L							
1,2-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,2-Dichloropropane	<1.00 ug/L	1.00	ug/L							
1,3,5-Trimethylbenzene	<1.00 ug/L	1.00	ug/L							
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L							
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
2,2-Dichloropropane	<2.00 ug/L	2.00	ug/L							
2-Butanone (MEK)	<10.0 ug/L	10.0	ug/L							
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L							
4-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
4-Isopropyltoluene	<1.00 ug/L	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L							
Acetone	<10.0 ug/L	10.0	ug/L							
Benzene	<1.00 ug/L	1.00	ug/L							
Bromobenzene	<1.00 ug/L	1.00	ug/L							
Bromochloromethane	<1.00 ug/L	1.00	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0036 - SW5030B

Blank (BBJ0036-BLK1)

Prepared & Analyzed: 09/28/2018

Bromodichloromethane	<0.50 ug/L	0.50	ug/L							
Bromoform	<1.00 ug/L	1.00	ug/L							
Bromomethane	<1.00 ug/L	1.00	ug/L							
Carbon disulfide	<10.0 ug/L	10.0	ug/L							
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L							
Chlorobenzene	<1.00 ug/L	1.00	ug/L							
Chloroethane	<1.00 ug/L	1.00	ug/L							
Chloroform	<0.50 ug/L	0.50	ug/L							
Chloromethane	<1.00 ug/L	1.00	ug/L							
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
Dibromochloromethane	<1.00 ug/L	1.00	ug/L							
Dibromomethane	<1.00 ug/L	1.00	ug/L							
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L							
Di-isopropyl ether (DIPE)	<5.00 ug/L	5.00	ug/L							
Ethylbenzene	<1.00 ug/L	1.00	ug/L							
Hexachlorobutadiene	<1.00 ug/L	1.00	ug/L							
Iodomethane	<10.0 ug/L	10.0	ug/L							
Isopropylbenzene	<1.00 ug/L	1.00	ug/L							
m+p-Xylenes	<2.00 ug/L	2.00	ug/L							
Methylene chloride	4.67 ug/L	4.00	ug/L							B
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L							
Naphthalene	<1.00 ug/L	1.00	ug/L							
n-Butylbenzene	<1.00 ug/L	1.00	ug/L							
n-Propylbenzene	<1.00 ug/L	1.00	ug/L							
o-Xylene	<1.00 ug/L	1.00	ug/L							
sec-Butylbenzene	<1.00 ug/L	1.00	ug/L							
Styrene	<1.00 ug/L	1.00	ug/L							
tert-Butylbenzene	<1.00 ug/L	1.00	ug/L							
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L							
Toluene	<1.00 ug/L	1.00	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0036 - SW5030B

Blank (BBJ0036-BLK1)

Prepared & Analyzed: 09/28/2018

trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L						
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L						
Trichloroethylene	<1.00 ug/L	1.00	ug/L						
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L						
Vinyl acetate	<10.0 ug/L	10.0	ug/L						
Vinyl chloride	<0.50 ug/L	0.50	ug/L						
Xylenes, Total	<3.00 ug/L	3.00	ug/L						
<hr style="border-top: 1px dashed black;"/>									
Surr: 1,2-Dichloroethane-d4 (Surr)	54.8		ug/L	50.0		110	70-120		
Surr: 4-Bromofluorobenzene (Surr)	43.2		ug/L	50.0		86.3	75-120		
Surr: Dibromofluoromethane (Surr)	57.0		ug/L	50.0		114	70-130		
Surr: Toluene-d8 (Surr)	52.7		ug/L	50.0		105	70-130		

LCS (BBJ0036-BS1)

Prepared & Analyzed: 09/28/2018

1,1,1,2-Tetrachloroethane	57.9 ug/L	0.4	ug/L	50.0	ug/L	116	80-130		
1,1,1-Trichloroethane	48.3 ug/L	1	ug/L	50.0	ug/L	96.6	65-130		
1,1,2,2-Tetrachloroethane	51.5 ug/L	0.4	ug/L	50.0	ug/L	103	65-130		
1,1,2-Trichloroethane	47.7 ug/L	1	ug/L	50.0	ug/L	95.5	75-125		
1,1-Dichloroethane	53.4 ug/L	1	ug/L	50.0	ug/L	107	70-135		
1,1-Dichloroethylene	48.1 ug/L	1	ug/L	50.0	ug/L	96.2	70-130		
1,1-Dichloropropene	48.9 ug/L	1	ug/L	50.0	ug/L	97.8	75-135		
1,2,3-Trichlorobenzene	55.8 ug/L	1	ug/L	50.0	ug/L	112	55-140		
1,2,3-Trichloropropane	52.8 ug/L	1	ug/L	50.0	ug/L	106	75-125		
1,2,4-Trichlorobenzene	56.6 ug/L	1	ug/L	50.0	ug/L	113	65-135		
1,2,4-Trimethylbenzene	55.4 ug/L	1	ug/L	50.0	ug/L	111	75-130		
1,2-Dibromo-3-chloropropane (DBCP)	44.0 ug/L	4	ug/L	50.0	ug/L	88.0	50-130		
1,2-Dibromoethane (EDB)	56.9 ug/L	1	ug/L	50.0	ug/L	114	80-120		
1,2-Dichlorobenzene	52.9 ug/L	1	ug/L	50.0	ug/L	106	70-120		
1,2-Dichloroethane	41.5 ug/L	1	ug/L	50.0	ug/L	83.1	70-130		
1,2-Dichloropropane	47.4 ug/L	1	ug/L	50.0	ug/L	94.9	75-125		
1,3,5-Trimethylbenzene	54.3 ug/L	1	ug/L	50.0	ug/L	109	75-125		
1,3-Dichlorobenzene	55.9 ug/L	1	ug/L	50.0	ug/L	112	75-125		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0036 - SW5030B

LCS (BBJ0036-BS1)

Prepared & Analyzed: 09/28/2018

1,3-Dichloropropane	47.4 ug/L	1	ug/L	50.0	ug/L	94.9	75-125			
1,4-Dichlorobenzene	53.5 ug/L	1	ug/L	50.0	ug/L	107	75-125			
2,2-Dichloropropane	50.0 ug/L	2	ug/L	50.0	ug/L	100	70-135			
2-Butanone (MEK)	46.5 ug/L	10	ug/L	50.0	ug/L	93.1	30-150			
2-Chlorotoluene	55.5 ug/L	1	ug/L	50.0	ug/L	111	75-125			
2-Hexanone (MBK)	55.2 ug/L	5	ug/L	50.0	ug/L	110	55-130			
4-Chlorotoluene	53.1 ug/L	1	ug/L	50.0	ug/L	106	75-130			
4-Isopropyltoluene	55.4 ug/L	1	ug/L	50.0	ug/L	111	75-130			
4-Methyl-2-pentanone (MIBK)	43.8 ug/L	5	ug/L	50.0	ug/L	87.5	60-135			
Acetone	47.0 ug/L	10	ug/L	50.0	ug/L	94.1	40-140			
Benzene	48.1 ug/L	1	ug/L	50.0	ug/L	96.2	80-120			
Bromobenzene	60.2 ug/L	1	ug/L	50.0	ug/L	120	75-125			
Bromochloromethane	49.2 ug/L	1	ug/L	50.0	ug/L	98.5	65-130			
Bromodichloromethane	50.5 ug/L	0.5	ug/L	50.0	ug/L	101	75-120			
Bromoform	55.2 ug/L	1	ug/L	50.0	ug/L	110	70-130			
Bromomethane	43.0 ug/L	1	ug/L	50.0	ug/L	86.0	30-145			
Carbon disulfide	52.7 ug/L	10	ug/L	50.0	ug/L	105	35-160			
Carbon tetrachloride	49.6 ug/L	1	ug/L	50.0	ug/L	99.1	65-140			
Chlorobenzene	55.5 ug/L	1	ug/L	50.0	ug/L	111	80-120			
Chloroethane	48.2 ug/L	1	ug/L	50.0	ug/L	96.4	60-135			
Chloroform	44.3 ug/L	0.5	ug/L	50.0	ug/L	88.7	65-135			
Chloromethane	41.1 ug/L	1	ug/L	50.0	ug/L	82.2	40-125			
cis-1,2-Dichloroethylene	49.5 ug/L	1	ug/L	50.0	ug/L	99.0	70-125			
cis-1,3-Dichloropropene	50.9 ug/L	1	ug/L	50.0	ug/L	102	70-130			
Dibromochloromethane	51.6 ug/L	1	ug/L	50.0	ug/L	103	60-135			
Dibromomethane	47.2 ug/L	1	ug/L	50.0	ug/L	94.3	75-125			
Dichlorodifluoromethane	37.5 ug/L	1	ug/L	50.0	ug/L	74.9	30-155			
Ethylbenzene	55.4 ug/L	1	ug/L	50.0	ug/L	111	75-125			
Hexachlorobutadiene	55.7 ug/L	1	ug/L	50.0	ug/L	111	50-140			
Isopropylbenzene	62.6 ug/L	1	ug/L	50.0	ug/L	125	75-125			L
m+p-Xylenes	114 ug/L	2	ug/L	100	ug/L	114	75-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0036 - SW5030B

LCS (BBJ0036-BS1)

Prepared & Analyzed: 09/28/2018

Methylene chloride	49.7 ug/L	4	ug/L	50.0	ug/L	99.4	55-140			
Methyl-t-butyl ether (MTBE)	56.4 ug/L	1	ug/L	50.0	ug/L	113	65-125			
Naphthalene	54.4 ug/L	1	ug/L	50.0	ug/L	109	55-140			
n-Butylbenzene	57.8 ug/L	1	ug/L	50.0	ug/L	116	70-135			
n-Propylbenzene	55.4 ug/L	1	ug/L	50.0	ug/L	111	70-130			
o-Xylene	55.3 ug/L	1	ug/L	50.0	ug/L	111	80-120			
sec-Butylbenzene	56.1 ug/L	1	ug/L	50.0	ug/L	112	70-125			
Styrene	58.7 ug/L	1	ug/L	50.0	ug/L	117	65-135			
tert-Butylbenzene	55.6 ug/L	1	ug/L	50.0	ug/L	111	70-130			
Tetrachloroethylene (PCE)	83.4 ug/L	1	ug/L	50.0	ug/L	167	45-150			L
Toluene	47.5 ug/L	1	ug/L	50.0	ug/L	95.0	75-120			
trans-1,2-Dichloroethylene	49.3 ug/L	1	ug/L	50.0	ug/L	98.6	60-140			
trans-1,3-Dichloropropene	42.6 ug/L	1	ug/L	50.0	ug/L	85.3	55-140			
Trichloroethylene	48.4 ug/L	1	ug/L	50.0	ug/L	96.8	70-125			
Trichlorofluoromethane	41.8 ug/L	1	ug/L	50.0	ug/L	83.6	60-145			
Vinyl chloride	39.3 ug/L	0.5	ug/L	50.0	ug/L	78.6	50-145			
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	50.2		ug/L	50.0	ug/L	100	70-120			
Surr: 4-Bromofluorobenzene (Surr)	54.3		ug/L	50.0	ug/L	109	75-120			
Surr: Dibromofluoromethane (Surr)	49.1		ug/L	50.0	ug/L	98.3	70-130			
Surr: Toluene-d8 (Surr)	47.7		ug/L	50.0	ug/L	95.4	70-130			

Matrix Spike (BBJ0036-MS1)

Source: 1811066-02

Prepared & Analyzed: 09/28/2018

1,1,1,2-Tetrachloroethane	52.5 ug/L	0.4	ug/L	50.0	<0.4 ug/L	105	80-130			
1,1,1-Trichloroethane	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.0	65-130			
1,1,2,2-Tetrachloroethane	48.0 ug/L	0.4	ug/L	50.0	<0.4 ug/L	96.0	65-130			
1,1,2-Trichloroethane	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.6	75-125			
1,1-Dichloroethane	49.8 ug/L	1	ug/L	50.0	<1 ug/L	99.6	70-135			
1,1-Dichloroethylene	45.3 ug/L	1	ug/L	50.0	<1 ug/L	90.5	70-130			
1,1-Dichloropropene	47.0 ug/L	1	ug/L	50.0	<1 ug/L	94.1	75-135			
1,2,3-Trichlorobenzene	56.4 ug/L	1	ug/L	50.0	<1 ug/L	113	55-140			
1,2,3-Trichloropropane	49.1 ug/L	1	ug/L	50.0	<1 ug/L	98.2	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0036 - SW5030B

Matrix Spike (BBJ0036-MS1)

Source: 1811066-02

Prepared & Analyzed: 09/28/2018

1,2,4-Trichlorobenzene	57.4 ug/L	1	ug/L	50.0	<1 ug/L	115	65-135			
1,2,4-Trimethylbenzene	55.3 ug/L	1	ug/L	50.0	<1 ug/L	111	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	48.8 ug/L	4	ug/L	50.0	<4 ug/L	97.6	50-130			
1,2-Dibromoethane (EDB)	50.8 ug/L	1	ug/L	50.0	<1 ug/L	102	80-120			
1,2-Dichlorobenzene	54.1 ug/L	1	ug/L	50.0	<1 ug/L	108	70-120			
1,2-Dichloroethane	43.4 ug/L	1	ug/L	50.0	<1 ug/L	86.9	70-130			
1,2-Dichloropropane	46.8 ug/L	1	ug/L	50.0	<1 ug/L	93.6	75-125			
1,3,5-Trimethylbenzene	52.4 ug/L	1	ug/L	50.0	<1 ug/L	105	75-125			
1,3-Dichlorobenzene	56.1 ug/L	1	ug/L	50.0	<1 ug/L	112	75-125			
1,3-Dichloropropane	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.6	75-125			
1,4-Dichlorobenzene	53.6 ug/L	1	ug/L	50.0	<1 ug/L	107	75-125			
2,2-Dichloropropane	48.7 ug/L	2	ug/L	50.0	<2 ug/L	97.4	70-135			
2-Butanone (MEK)	58.6 ug/L	10	ug/L	50.0	<10 ug/L	117	30-150			
2-Chlorotoluene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125			
2-Hexanone (MBK)	51.9 ug/L	5	ug/L	50.0	<5 ug/L	104	55-130			
4-Chlorotoluene	49.8 ug/L	1	ug/L	50.0	<1 ug/L	99.5	75-130			
4-Isopropyltoluene	55.2 ug/L	1	ug/L	50.0	<1 ug/L	110	75-130			
4-Methyl-2-pentanone (MIBK)	44.7 ug/L	5	ug/L	50.0	<5 ug/L	89.5	60-135			
Acetone	47.1 ug/L	10	ug/L	50.0	<10 ug/L	93.1	40-140			
Benzene	47.0 ug/L	1	ug/L	50.0	<1 ug/L	93.9	80-120			
Bromobenzene	49.1 ug/L	1	ug/L	50.0	<1 ug/L	98.2	75-125			
Bromochloromethane	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.8	65-130			
Bromodichloromethane	50.1 ug/L	0.5	ug/L	50.0	<0.5 ug/L	100	75-120			
Bromoform	50.0 ug/L	1	ug/L	50.0	<1 ug/L	100	70-130			
Bromomethane	39.5 ug/L	1	ug/L	50.0	<1 ug/L	79.0	30-145			
Carbon disulfide	48.5 ug/L	10	ug/L	50.0	<10 ug/L	96.7	35-160			
Carbon tetrachloride	47.3 ug/L	1	ug/L	50.0	<1 ug/L	94.5	65-140			
Chlorobenzene	50.1 ug/L	1	ug/L	50.0	<1 ug/L	100	80-120			
Chloroethane	44.3 ug/L	1	ug/L	50.0	<1 ug/L	88.6	60-135			
Chloroform	44.0 ug/L	0.5	ug/L	50.0	<0.5 ug/L	88.0	65-135			
Chloromethane	38.3 ug/L	1	ug/L	50.0	<1 ug/L	76.6	40-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0036 - SW5030B

Matrix Spike (BBJ0036-MS1)

Source: 1811066-02

Prepared & Analyzed: 09/28/2018

cis-1,2-Dichloroethylene	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.9	70-125			
cis-1,3-Dichloropropene	49.0 ug/L	1	ug/L	50.0	<1 ug/L	97.9	70-130			
Dibromochloromethane	50.3 ug/L	1	ug/L	50.0	<1 ug/L	101	60-135			
Dibromomethane	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.0	75-125			
Dichlorodifluoromethane	35.8 ug/L	1	ug/L	50.0	<1 ug/L	71.7	30-155			
Ethylbenzene	49.8 ug/L	1	ug/L	50.0	<1 ug/L	99.6	75-125			
Hexachlorobutadiene	55.0 ug/L	1	ug/L	50.0	<1 ug/L	110	50-140			
Isopropylbenzene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125			
m+p-Xylenes	101 ug/L	2	ug/L	100	<2 ug/L	101	75-130			
Methylene chloride	48.0 ug/L	4	ug/L	50.0	<4 ug/L	89.3	55-140			
Methyl-t-butyl ether (MTBE)	55.3 ug/L	1	ug/L	50.0	<1 ug/L	111	65-125			
Naphthalene	57.2 ug/L	1	ug/L	50.0	<1 ug/L	114	55-140			
n-Butylbenzene	58.2 ug/L	1	ug/L	50.0	<1 ug/L	116	70-135			
n-Propylbenzene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	70-130			
o-Xylene	49.2 ug/L	1	ug/L	50.0	<1 ug/L	98.3	80-120			
sec-Butylbenzene	57.0 ug/L	1	ug/L	50.0	<1 ug/L	114	70-125			
Styrene	52.4 ug/L	1	ug/L	50.0	<1 ug/L	105	65-135			
tert-Butylbenzene	54.3 ug/L	1	ug/L	50.0	<1 ug/L	109	70-130			
Tetrachloroethylene (PCE)	69.3 ug/L	1	ug/L	50.0	<1 ug/L	139	45-150			
Toluene	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.7	75-120			
trans-1,2-Dichloroethylene	46.1 ug/L	1	ug/L	50.0	<1 ug/L	92.3	60-140			
trans-1,3-Dichloropropene	42.5 ug/L	1	ug/L	50.0	<1 ug/L	85.0	55-140			
Trichloroethylene	46.2 ug/L	1	ug/L	50.0	<1 ug/L	92.5	70-125			
Trichlorofluoromethane	39.2 ug/L	1	ug/L	50.0	<1 ug/L	78.3	60-145			
Vinyl chloride	29.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	58.9	50-145			
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	51.1		ug/L	50.0	ug/L	102	70-120			
Surr: 4-Bromofluorobenzene (Surr)	47.0		ug/L	50.0	ug/L	93.9	75-120			
Surr: Dibromofluoromethane (Surr)	50.5		ug/L	50.0	ug/L	101	70-130			
Surr: Toluene-d8 (Surr)	48.6		ug/L	50.0	ug/L	97.2	70-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0036 - SW5030B

Matrix Spike Dup (BBJ0036-MSD1)

Source: 1811066-02

Prepared & Analyzed: 09/28/2018

1,1,1,2-Tetrachloroethane	54.0 ug/L	0.4	ug/L	50.0	<0.4 ug/L	108	80-130	2.70	30	
1,1,1-Trichloroethane	48.3 ug/L	1	ug/L	50.0	<1 ug/L	96.5	65-130	0.540	30	
1,1,1,2,2-Tetrachloroethane	53.7 ug/L	0.4	ug/L	50.0	<0.4 ug/L	107	65-130	11.1	30	
1,1,2-Trichloroethane	46.7 ug/L	1	ug/L	50.0	<1 ug/L	93.5	75-125	4.29	30	
1,1-Dichloroethane	49.8 ug/L	1	ug/L	50.0	<1 ug/L	99.7	70-135	0.100	30	
1,1-Dichloroethylene	44.4 ug/L	1	ug/L	50.0	<1 ug/L	88.7	70-130	2.03	30	
1,1-Dichloropropene	47.1 ug/L	1	ug/L	50.0	<1 ug/L	94.3	75-135	0.170	30	
1,2,3-Trichlorobenzene	55.0 ug/L	1	ug/L	50.0	<1 ug/L	110	55-140	2.55	30	
1,2,3-Trichloropropane	54.9 ug/L	1	ug/L	50.0	<1 ug/L	110	75-125	11.2	30	
1,2,4-Trichlorobenzene	56.5 ug/L	1	ug/L	50.0	<1 ug/L	113	65-135	1.58	30	
1,2,4-Trimethylbenzene	55.2 ug/L	1	ug/L	50.0	<1 ug/L	110	75-130	0.163	30	
1,2-Dibromo-3-chloropropane (DBCP)	49.1 ug/L	4	ug/L	50.0	<4 ug/L	98.1	50-130	0.490	30	
1,2-Dibromoethane (EDB)	52.4 ug/L	1	ug/L	50.0	<1 ug/L	105	80-120	3.12	30	
1,2-Dichlorobenzene	52.8 ug/L	1	ug/L	50.0	<1 ug/L	106	70-120	2.26	30	
1,2-Dichloroethane	42.1 ug/L	1	ug/L	50.0	<1 ug/L	84.2	70-130	3.06	30	
1,2-Dichloropropane	46.3 ug/L	1	ug/L	50.0	<1 ug/L	92.6	75-125	1.03	30	
1,3,5-Trimethylbenzene	55.2 ug/L	1	ug/L	50.0	<1 ug/L	110	75-125	5.20	30	
1,3-Dichlorobenzene	55.7 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125	0.823	30	
1,3-Dichloropropane	45.7 ug/L	1	ug/L	50.0	<1 ug/L	91.4	75-125	4.43	30	
1,4-Dichlorobenzene	53.0 ug/L	1	ug/L	50.0	<1 ug/L	106	75-125	1.24	30	
2,2-Dichloropropane	49.9 ug/L	2	ug/L	50.0	<2 ug/L	99.8	70-135	2.35	30	
2-Butanone (MEK)	47.5 ug/L	10	ug/L	50.0	<10 ug/L	95.0	30-150	20.8	30	
2-Chlorotoluene	55.7 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125	7.12	30	
2-Hexanone (MBK)	55.1 ug/L	5	ug/L	50.0	<5 ug/L	110	55-130	5.87	30	
4-Chlorotoluene	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-130	7.75	30	
4-Isopropyltoluene	55.7 ug/L	1	ug/L	50.0	<1 ug/L	111	75-130	0.902	30	
4-Methyl-2-pentanone (MIBK)	44.6 ug/L	5	ug/L	50.0	<5 ug/L	89.2	60-135	0.336	30	
Acetone	51.9 ug/L	10	ug/L	50.0	<10 ug/L	103	40-140	9.71	30	
Benzene	46.9 ug/L	1	ug/L	50.0	<1 ug/L	93.7	80-120	0.213	30	
Bromobenzene	55.8 ug/L	1	ug/L	50.0	<1 ug/L	112	75-125	12.7	30	
Bromochloromethane	47.4 ug/L	1	ug/L	50.0	<1 ug/L	94.8	65-130	2.09	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0036 - SW5030B

Matrix Spike Dup (BBJ0036-MSD1)

Source: 1811066-02

Prepared & Analyzed: 09/28/2018

Bromodichloromethane	49.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	99.5	75-120	0.761	30	
Bromoform	55.9 ug/L	1	ug/L	50.0	<1 ug/L	112	70-130	11.1	30	
Bromomethane	39.8 ug/L	1	ug/L	50.0	<1 ug/L	79.5	30-145	0.707	30	
Carbon disulfide	46.2 ug/L	10	ug/L	50.0	<10 ug/L	91.9	35-160	5.05	30	
Carbon tetrachloride	48.2 ug/L	1	ug/L	50.0	<1 ug/L	96.3	65-140	1.87	30	
Chlorobenzene	53.0 ug/L	1	ug/L	50.0	<1 ug/L	106	80-120	5.61	30	
Chloroethane	45.3 ug/L	1	ug/L	50.0	<1 ug/L	90.6	60-135	2.28	30	
Chloroform	43.7 ug/L	0.5	ug/L	50.0	<0.5 ug/L	87.4	65-135	0.616	30	
Chloromethane	38.3 ug/L	1	ug/L	50.0	<1 ug/L	76.6	40-125	0.0261	30	
cis-1,2-Dichloroethylene	46.8 ug/L	1	ug/L	50.0	<1 ug/L	93.6	70-125	0.793	30	
cis-1,3-Dichloropropene	47.3 ug/L	1	ug/L	50.0	<1 ug/L	94.7	70-130	3.36	30	
Dibromochloromethane	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.7	60-135	3.05	30	
Dibromomethane	46.3 ug/L	1	ug/L	50.0	<1 ug/L	92.6	75-125	3.56	30	
Dichlorodifluoromethane	34.9 ug/L	1	ug/L	50.0	<1 ug/L	69.9	30-155	2.57	30	
Ethylbenzene	54.9 ug/L	1	ug/L	50.0	<1 ug/L	110	75-125	9.67	30	
Hexachlorobutadiene	54.0 ug/L	1	ug/L	50.0	<1 ug/L	108	50-140	1.72	30	
Isopropylbenzene	59.2 ug/L	1	ug/L	50.0	<1 ug/L	118	75-125	13.1	30	
m+p-Xylenes	115 ug/L	2	ug/L	100	<2 ug/L	115	75-130	12.6	30	
Methylene chloride	47.1 ug/L	4	ug/L	50.0	<4 ug/L	87.5	55-140	1.98	30	
Methyl-t-butyl ether (MTBE)	55.4 ug/L	1	ug/L	50.0	<1 ug/L	111	65-125	0.307	30	
Naphthalene	56.2 ug/L	1	ug/L	50.0	<1 ug/L	112	55-140	1.84	30	
n-Butylbenzene	58.1 ug/L	1	ug/L	50.0	<1 ug/L	116	70-135	0.155	30	
n-Propylbenzene	56.7 ug/L	1	ug/L	50.0	<1 ug/L	113	70-130	8.82	30	
o-Xylene	56.2 ug/L	1	ug/L	50.0	<1 ug/L	112	80-120	13.4	30	
sec-Butylbenzene	56.7 ug/L	1	ug/L	50.0	<1 ug/L	113	70-125	0.528	30	
Styrene	59.5 ug/L	1	ug/L	50.0	<1 ug/L	119	65-135	12.7	30	
tert-Butylbenzene	56.2 ug/L	1	ug/L	50.0	<1 ug/L	112	70-130	3.31	30	
Tetrachloroethylene (PCE)	73.8 ug/L	1	ug/L	50.0	<1 ug/L	148	45-150	6.32	30	
Toluene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.5	75-120	2.45	30	
trans-1,2-Dichloroethylene	45.8 ug/L	1	ug/L	50.0	<1 ug/L	91.7	60-140	0.674	30	
trans-1,3-Dichloropropene	40.4 ug/L	1	ug/L	50.0	<1 ug/L	80.8	55-140	5.14	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBJ0036 - SW5030B

Matrix Spike Dup (BBJ0036-MSD1)

Source: 1811066-02

Prepared & Analyzed: 09/28/2018

Trichloroethylene	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.2	70-125	0.797	30
Trichlorofluoromethane	38.9 ug/L	1	ug/L	50.0	<1 ug/L	77.8	60-145	0.615	30
Vinyl chloride	29.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	58.8	50-145	0.0680	30
<hr style="border-top: 1px dashed black;"/>									
Surr: 1,2-Dichloroethane-d4 (Surr)	52.2		ug/L	50.0	ug/L	104	70-120		
Surr: 4-Bromofluorobenzene (Surr)	54.2		ug/L	50.0	ug/L	108	75-120		
Surr: Dibromofluoromethane (Surr)	50.8		ug/L	50.0	ug/L	102	70-130		
Surr: Toluene-d8 (Surr)	47.5		ug/L	50.0	ug/L	95.0	70-130		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Blank (BBJ0010-BLK1)

Prepared & Analyzed: 10/01/2018

1,2,4,5-Tetrachlorobenzene	<10.0 ug/L	10.0	ug/L							
1,2,4-Trichlorobenzene	<10.0 ug/L	10.0	ug/L							
1,2-Dichlorobenzene	<10.0 ug/L	10.0	ug/L							
1,2-Diphenylhydrazine	<10.0 ug/L	10.0	ug/L							
1,3-Dichlorobenzene	<10.0 ug/L	10.0	ug/L							
1,3-Dinitrobenzene	<2.50 ug/L	2.50	ug/L							
1,4-Dichlorobenzene	<10.0 ug/L	10.0	ug/L							
1-Naphthylamine	<10.0 ug/L	10.0	ug/L							
2,3,4,6-Tetrachlorophenol	<10.0 ug/L	10.0	ug/L							
2,4,5-Trichlorophenol	<10.0 ug/L	10.0	ug/L							
2,4,6-Trichlorophenol	<10.0 ug/L	10.0	ug/L							
2,4-Dichlorophenol	<10.0 ug/L	10.0	ug/L							
2,4-Dimethylphenol	<0.50 ug/L	0.50	ug/L							
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L							
2,4-Dinitrotoluene	<10.0 ug/L	10.0	ug/L							
2,6-Dichlorophenol	<10.0 ug/L	10.0	ug/L							
2,6-Dinitrotoluene	<10.0 ug/L	10.0	ug/L							
2-Chloronaphthalene	<10.0 ug/L	10.0	ug/L							
2-Chlorophenol	<10.0 ug/L	10.0	ug/L							
2-Methylnaphthalene	<10.0 ug/L	10.0	ug/L							
2-Naphthylamine	<10.0 ug/L	10.0	ug/L							
2-Nitroaniline	<20.0 ug/L	20.0	ug/L							
2-Nitrophenol	<10.0 ug/L	10.0	ug/L							
3,3'-Dichlorobenzidine	<10.0 ug/L	10.0	ug/L							
3-Methylcholanthrene	<10.0 ug/L	10.0	ug/L							
3-Nitroaniline	<20.0 ug/L	20.0	ug/L							
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L							
4-Aminobiphenyl	<10.0 ug/L	10.0	ug/L							
4-Bromophenyl phenyl ether	<10.0 ug/L	10.0	ug/L							
4-Chloroaniline	<10.0 ug/L	10.0	ug/L							
4-Chlorophenyl phenyl ether	<10.0 ug/L	10.0	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Blank (BBJ0010-BLK1)

Prepared & Analyzed: 10/01/2018

4-Nitroaniline	<20.0 ug/L	20.0	ug/L						
4-Nitrophenol	<50.0 ug/L	50.0	ug/L						
7,12-Dimethylbenz (a) anthracene	<10.0 ug/L	10.0	ug/L						
Acenaphthene	<10.0 ug/L	10.0	ug/L						
Acenaphthylene	<10.0 ug/L	10.0	ug/L						
Acetophenone	<20.0 ug/L	20.0	ug/L						
Aniline	<50.0 ug/L	50.0	ug/L						
Anthracene	<10.0 ug/L	10.0	ug/L						
Benzidine	<50.0 ug/L	50.0	ug/L						
Benzo (a) anthracene	<10.0 ug/L	10.0	ug/L						
Benzo (a) pyrene	<10.0 ug/L	10.0	ug/L						
Benzo (b) fluoranthene	<10.0 ug/L	10.0	ug/L						
Benzo (g,h,i) perylene	<10.0 ug/L	10.0	ug/L						
Benzo (k) fluoranthene	<10.0 ug/L	10.0	ug/L						
Benzoic acid	<50.0 ug/L	50.0	ug/L						
Benzyl alcohol	<20.0 ug/L	20.0	ug/L						
bis (2-Chloroethoxy) methane	<10.0 ug/L	10.0	ug/L						
bis (2-Chloroethyl) ether	<10.0 ug/L	10.0	ug/L						
2,2'-Oxybis (1-chloropropane)	<10.0 ug/L	10.0	ug/L						
bis (2-Ethylhexyl) phthalate	<10.0 ug/L	10.0	ug/L						
Butyl benzyl phthalate	<10.0 ug/L	10.0	ug/L						
Chrysene	<10.0 ug/L	10.0	ug/L						
Dibenz (a,h) anthracene	<10.0 ug/L	10.0	ug/L						
Dibenz (a,j) acridine	<10.0 ug/L	10.0	ug/L						
Dibenzofuran	<5.00 ug/L	5.00	ug/L						
Diethyl phthalate	<10.0 ug/L	10.0	ug/L						
Dimethyl phthalate	<10.0 ug/L	10.0	ug/L						
Di-n-butyl phthalate	<10.0 ug/L	10.0	ug/L						
Di-n-octyl phthalate	<10.0 ug/L	10.0	ug/L						
Diphenylamine	<10.0 ug/L	10.0	ug/L						
Ethyl methanesulfonate	<20.0 ug/L	20.0	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Blank (BBJ0010-BLK1)

Prepared & Analyzed: 10/01/2018

Fluoranthene	<10.0 ug/L	10.0	ug/L							
Fluorene	<10.0 ug/L	10.0	ug/L							
Hexachlorobenzene	<1.00 ug/L	1.00	ug/L							
Hexachlorobutadiene	<10.0 ug/L	10.0	ug/L							
Hexachlorocyclopentadiene	<10.0 ug/L	10.0	ug/L							
Hexachloroethane	<10.0 ug/L	10.0	ug/L							
Indeno (1,2,3-cd) pyrene	<10.0 ug/L	10.0	ug/L							
Isophorone	<10.0 ug/L	10.0	ug/L							
m+p-Cresols	<10.0 ug/L	10.0	ug/L							
Methyl methanesulfonate	<10.0 ug/L	10.0	ug/L							
Naphthalene	<5.00 ug/L	5.00	ug/L							
Nitrobenzene	<10.0 ug/L	10.0	ug/L							
n-Nitrosodimethylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosodi-n-butylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosodi-n-propylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosodiphenylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosopiperidine	<10.0 ug/L	10.0	ug/L							
o+m+p-Cresols	<10.0 ug/L	10.0	ug/L							
o-Cresol	<10.0 ug/L	10.0	ug/L							
p-(Dimethylamino) azobenzene	<2.50 ug/L	2.50	ug/L							
p-Chloro-m-cresol	<10.0 ug/L	10.0	ug/L							
Pentachloronitrobenzene (quintozene)	<10.0 ug/L	10.0	ug/L							
Pentachlorophenol	<20.0 ug/L	20.0	ug/L							
Phenacetin	<10.0 ug/L	10.0	ug/L							
Phenanthrene	<10.0 ug/L	10.0	ug/L							
Phenol	<10.0 ug/L	10.0	ug/L							
Pronamide	<10.0 ug/L	10.0	ug/L							
Pyrene	<10.0 ug/L	10.0	ug/L							
Pyridine	<10.0 ug/L	10.0	ug/L							
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	85.8		ug/L	100		85.8	10-86			
Surr: 2-Fluorobiphenyl (Surr)	47.2		ug/L	50.0		94.5	9-87			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Blank (BBJ0010-BLK1)

Prepared & Analyzed: 10/01/2018

Surr: 2-Fluorophenol (Surr)	31.6		ug/L	100		31.6	10-52			
Surr: Nitrobenzene-d5 (Surr)	42.7		ug/L	50.0		85.3	10-98.5			
Surr: Phenol-d5 (Surr)	33.2		ug/L	100		33.2	5-33			
Surr: p-Terphenyl-d14 (Surr)	46.7		ug/L	50.0		93.4	27-133			

LCS (BBJ0010-BS1)

Prepared & Analyzed: 10/01/2018

1,2,4-Trichlorobenzene	39.6 ug/L	10.0	ug/L	50.0	ug/L	79.1	21.8-66.7			
1,2-Dichlorobenzene	38.4 ug/L	10.0	ug/L	50.0	ug/L	76.7	22-60			
1,3-Dichlorobenzene	36.6 ug/L	10.0	ug/L	50.0	ug/L	73.1	22-60			
1,4-Dichlorobenzene	36.2 ug/L	10.0	ug/L	50.0	ug/L	72.4	13-68			
1-Chloronaphthalene	44.8 ug/L	10.0	ug/L		ug/L		0-200			
2,4,6-Trichlorophenol	43.5 ug/L	10.0	ug/L	50.0	ug/L	87.0	50-115			
2,4-Dichlorophenol	44.8 ug/L	10.0	ug/L	50.0	ug/L	89.7	50-105			
2,4-Dimethylphenol	40.2 ug/L	0.50	ug/L	50.0	ug/L	80.4	30-110			
2,4-Dinitrophenol	57.6 ug/L	50.0	ug/L	50.0	ug/L	115	15-140			
2,4-Dinitrotoluene	53.4 ug/L	10.0	ug/L	50.0	ug/L	107	21-99			
2,6-Dinitrotoluene	45.2 ug/L	10.0	ug/L	50.0	ug/L	90.3	15-140			
2-Chloronaphthalene	43.0 ug/L	10.0	ug/L	50.0	ug/L	86.0	45-105			
2-Chlorophenol	43.0 ug/L	10.0	ug/L	50.0	ug/L	86.0	15-74			
2-Nitrophenol	46.3 ug/L	10.0	ug/L	50.0	ug/L	92.5	40-115			
3,3'-Dichlorobenzidine	59.1 ug/L	10.0	ug/L	50.0	ug/L	118	25-85			
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	99.2	40-130			
4-Bromophenyl phenyl ether	47.7 ug/L	10.0	ug/L	50.0	ug/L	95.3	15-110			
4-Chlorophenyl phenyl ether	44.2 ug/L	10.0	ug/L	50.0	ug/L	88.5	15-110			
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	37.0	0-125			
Acenaphthene	45.5 ug/L	10.0	ug/L	50.0	ug/L	91.0	27.7-85.5			
Acenaphthylene	49.1 ug/L	10.0	ug/L	50.0	ug/L	98.1	50-105			
Acetophenone	41.0 ug/L	20.0	ug/L	50.0	ug/L	81.9	0-200			
alpha-Terpineol	50.6 ug/L	2.50	ug/L	50.0	ug/L	101	0-200			
Anthracene	49.9 ug/L	10.0	ug/L	50.0	ug/L	99.8	55-110			
Benzo (a) anthracene	47.6 ug/L	10.0	ug/L	50.0	ug/L	95.2	55-110			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

LCS (BBJ0010-BS1)

Prepared & Analyzed: 10/01/2018

Benzo (a) pyrene	49.4 ug/L	10.0	ug/L	50.0	ug/L	98.7	55-110			
Benzo (b) fluoranthene	48.6 ug/L	10.0	ug/L	50.0	ug/L	97.1	45-120			
Benzo (g,h,i) perylene	42.5 ug/L	10.0	ug/L	50.0	ug/L	84.9	40-125			
Benzo (k) fluoranthene	55.8 ug/L	10.0	ug/L	50.0	ug/L	112	45-125			
bis (2-Chloroethoxy) methane	45.8 ug/L	10.0	ug/L	50.0	ug/L	91.6	40-125			
bis (2-Chloroethyl) ether	42.8 ug/L	10.0	ug/L	50.0	ug/L	85.6	40-125			
2,2'-Oxybis (1-chloropropane)	39.0 ug/L	10.0	ug/L	50.0	ug/L	78.1	40-125			
bis (2-Ethylhexyl) phthalate	41.4 ug/L	10.0	ug/L	50.0	ug/L	82.9	40-125			
Butyl benzyl phthalate	53.0 ug/L	10.0	ug/L	50.0	ug/L	106	45-115			
Carbazole	60.1 ug/L	2.50	ug/L	50.0	ug/L	120	0-200			
Chrysene	57.8 ug/L	10.0	ug/L	50.0	ug/L	116	55-110			
Dibenz (a,h) anthracene	50.0 ug/L	10.0	ug/L	50.0	ug/L	100	40-125			
Diethyl phthalate	48.6 ug/L	10.0	ug/L	50.0	ug/L	97.3	40-120			
Dimethyl phthalate	46.4 ug/L	10.0	ug/L	50.0	ug/L	92.7	25-125			
Di-n-butyl phthalate	53.5 ug/L	10.0	ug/L	50.0	ug/L	107	55-115			
Di-n-octyl phthalate	60.3 ug/L	10.0	ug/L	50.0	ug/L	121	35-135			
Fluoranthene	51.6 ug/L	10.0	ug/L	50.0	ug/L	103	55-115			
Fluorene	49.3 ug/L	10.0	ug/L	50.0	ug/L	98.5	50-110			
Hexachlorobenzene	49.0 ug/L	1.00	ug/L	50.0	ug/L	98.0	25-125			
Hexachlorobutadiene	43.4 ug/L	10.0	ug/L	50.0	ug/L	86.9	25-125			
Hexachlorocyclopentadiene	24.6 ug/L	10.0	ug/L	50.0	ug/L	49.3	25-125			
Hexachloroethane	35.6 ug/L	10.0	ug/L	50.0	ug/L	71.3	25-125			
Indeno (1,2,3-cd) pyrene	46.8 ug/L	10.0	ug/L	50.0	ug/L	93.5	45-125			
Isophorone	43.8 ug/L	10.0	ug/L	50.0	ug/L	87.6	10-110			
Naphthalene	43.8 ug/L	5.00	ug/L	50.0	ug/L	87.7	40-100			
Nitrobenzene	42.0 ug/L	10.0	ug/L	50.0	ug/L	84.1	40-100			
n-Nitrosodimethylamine	15.1 ug/L	10.0	ug/L	50.0	ug/L	30.1	25-110			
n-Nitrosodi-n-propylamine	40.0 ug/L	10.0	ug/L	50.0	ug/L	80.1	12-97			
n-Nitrosodiphenylamine	39.2 ug/L	10.0	ug/L	50.0	ug/L	78.3	12-97			
p-Chloro-m-cresol	45.4 ug/L	10.0	ug/L	50.0	ug/L	90.8	10-91			
Pentachlorophenol	48.2 ug/L	20.0	ug/L	50.0	ug/L	96.4	30-109			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

LCS (BBJ0010-BS1)

Prepared & Analyzed: 10/01/2018

Phenanthrene	50.3 ug/L	10.0	ug/L	50.0	ug/L	101	50-115			
Phenol	19.9 ug/L	10.0	ug/L	50.5	ug/L	39.3	0-115			
Pyrene	52.0 ug/L	10.0	ug/L	50.0	ug/L	104	27-110			
Pyridine	14.0 ug/L	10.0	ug/L	50.0	ug/L	27.9	0-200			
<hr style="border-top: 1px dashed black;"/>										
<i>Surr: 2,4,6-Tribromophenol (Surr)</i>	102		ug/L	100	ug/L	102	10-86			
<i>Surr: 2-Fluorobiphenyl (Surr)</i>	47.9		ug/L	50.0	ug/L	95.7	9-87			
<i>Surr: 2-Fluorophenol (Surr)</i>	36.4		ug/L	100	ug/L	36.4	10-52			
<i>Surr: Nitrobenzene-d5 (Surr)</i>	45.1		ug/L	50.0	ug/L	90.2	10-98.5			
<i>Surr: Phenol-d5 (Surr)</i>	37.9		ug/L	100	ug/L	37.9	5-33			S
<i>Surr: p-Terphenyl-d14 (Surr)</i>	57.0		ug/L	50.0	ug/L	114	27-133			

Matrix Spike (BBJ0010-MS1)

Source: 1811081-01

Prepared: 10/01/2018 Analyzed: 10/02/2018

1,2,4-Trichlorobenzene	42.7 ug/L	11.1	ug/L	55.6	<11.1 ug/L	76.8	21.8-66.7			M
1,2-Dichlorobenzene	42.8 ug/L	11.1	ug/L	55.6	<11.1 ug/L	77.0	22-60			M
1,3-Dichlorobenzene	39.2 ug/L	11.1	ug/L	55.6	<11.1 ug/L	70.5	22-60			M
1,4-Dichlorobenzene	42.0 ug/L	11.1	ug/L	55.6	<11.1 ug/L	75.7	22-60			M
1-Chloronaphthalene	48.8 ug/L	11.1	ug/L		<11.1 ug/L		0-200			
2,4,6-Trichlorophenol	47.8 ug/L	11.1	ug/L	55.6	<11.1 ug/L	86.0	50-115			
2,4-Dichlorophenol	48.4 ug/L	11.1	ug/L	55.6	<11.1 ug/L	87.1	50-105			
2,4-Dimethylphenol	40.8 ug/L	0.56	ug/L	55.6	<0.56 ug/L	73.4	30-110			
2,4-Dinitrophenol	85.2 ug/L	55.6	ug/L	55.6	<55.6 ug/L	153	15-140			M
2,4-Dinitrotoluene	58.7 ug/L	11.1	ug/L	55.6	<11.1 ug/L	106	17-111			
2,6-Dinitrotoluene	48.3 ug/L	11.1	ug/L	55.6	<11.1 ug/L	87.0	15-140			
2-Chloronaphthalene	46.8 ug/L	11.1	ug/L	55.6	<11.1 ug/L	84.3	45-105			
2-Chlorophenol	44.9 ug/L	11.1	ug/L	55.6	<11.1 ug/L	80.8	19-64			M
2-Nitrophenol	51.0 ug/L	11.1	ug/L	55.6	<11.1 ug/L	91.8	40-115			
3,3'-Dichlorobenzidine	49.7 ug/L	11.1	ug/L	55.6	<11.1 ug/L	89.5	10-85			M
4,6-Dinitro-2-methylphenol	67.8 ug/L	55.6	ug/L	55.6	<55.6 ug/L	122	40-130			
4-Bromophenyl phenyl ether	54.6 ug/L	11.1	ug/L	55.6	<11.1 ug/L	98.2	15-110			
4-Chlorophenyl phenyl ether	48.1 ug/L	11.1	ug/L	55.6	<11.1 ug/L	86.7	15-110			
4-Nitrophenol	<55.6 ug/L	55.6	ug/L	55.6	<55.6 ug/L	44.1	0-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Matrix Spike (BBJ0010-MS1)

Source: 1811081-01

Prepared: 10/01/2018 Analyzed: 10/02/2018

Acenaphthene	48.1 ug/L	11.1	ug/L	55.6	<11.1 ug/L	86.6	24-90			
Acenaphthylene	51.4 ug/L	11.1	ug/L	55.6	<11.1 ug/L	92.6	50-105			
Acetophenone	43.4 ug/L	22.2	ug/L	55.6	<22.2 ug/L	78.2	0-200			
alpha-Terpineol	53.4 ug/L	2.78	ug/L	55.6	<2.78 ug/L	96.1	0-200			
Anthracene	55.0 ug/L	11.1	ug/L	55.6	<11.1 ug/L	99.0	55-110			
Benzo (a) anthracene	58.1 ug/L	11.1	ug/L	55.6	<11.1 ug/L	105	55-110			
Benzo (a) pyrene	51.5 ug/L	11.1	ug/L	55.6	<11.1 ug/L	92.7	55-110			
Benzo (b) fluoranthene	52.1 ug/L	11.1	ug/L	55.6	<11.1 ug/L	93.8	45-120			
Benzo (g,h,i) perylene	47.3 ug/L	11.1	ug/L	55.6	<11.1 ug/L	85.1	40-125			
Benzo (k) fluoranthene	55.4 ug/L	11.1	ug/L	55.6	<11.1 ug/L	99.7	45-125			
bis (2-Chloroethoxy) methane	48.1 ug/L	11.1	ug/L	55.6	<11.1 ug/L	86.6	40-125			
bis (2-Chloroethyl) ether	44.2 ug/L	11.1	ug/L	55.6	<11.1 ug/L	79.5	40-125			
2,2'-Oxybis (1-chloropropane)	42.4 ug/L	11.1	ug/L	55.6	<11.1 ug/L	76.4	40-125			
bis (2-Ethylhexyl) phthalate	45.8 ug/L	11.1	ug/L	55.6	<11.1 ug/L	82.5	40-125			
Butyl benzyl phthalate	62.0 ug/L	11.1	ug/L	55.6	<11.1 ug/L	112	45-115			
Carbazole	65.6 ug/L	2.78	ug/L	55.6	<2.78 ug/L	118	0-200			
Chrysene	66.6 ug/L	11.1	ug/L	55.6	<11.1 ug/L	120	55-110			M
Dibenz (a,h) anthracene	50.8 ug/L	11.1	ug/L	55.6	<11.1 ug/L	91.4	40-125			
Diethyl phthalate	54.1 ug/L	11.1	ug/L	55.6	<11.1 ug/L	97.3	40-120			
Dimethyl phthalate	49.5 ug/L	11.1	ug/L	55.6	<11.1 ug/L	89.0	25-125			
Di-n-butyl phthalate	60.2 ug/L	11.1	ug/L	55.6	<11.1 ug/L	108	55-115			
Di-n-octyl phthalate	56.4 ug/L	11.1	ug/L	55.6	<11.1 ug/L	101	35-135			
Fluoranthene	56.6 ug/L	11.1	ug/L	55.6	<11.1 ug/L	102	55-115			
Fluorene	51.6 ug/L	11.1	ug/L	55.6	<11.1 ug/L	92.9	50-110			
Hexachlorobenzene	56.7 ug/L	1.11	ug/L	55.6	<1.11 ug/L	102	25-125			
Hexachlorobutadiene	45.9 ug/L	11.1	ug/L	55.6	<11.1 ug/L	82.6	25-125			
Hexachlorocyclopentadiene	24.3 ug/L	11.1	ug/L	55.6	<11.1 ug/L	43.8	10-90			
Hexachloroethane	39.4 ug/L	11.1	ug/L	55.6	<11.1 ug/L	71.0	25-125			
Indeno (1,2,3-cd) pyrene	49.4 ug/L	11.1	ug/L	55.6	<11.1 ug/L	89.0	45-125			
Isophorone	46.9 ug/L	11.1	ug/L	55.6	<11.1 ug/L	84.5	10-110			
Naphthalene	47.2 ug/L	5.56	ug/L	55.6	<5.56 ug/L	84.9	40-100			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Matrix Spike (BBJ0010-MS1)

Source: 1811081-01

Prepared: 10/01/2018 Analyzed: 10/02/2018

Nitrobenzene	45.8 ug/L	11.1	ug/L	55.6	<11.1 ug/L	82.5	40-100			
n-Nitrosodimethylamine	26.7 ug/L	11.1	ug/L	55.6	<11.1 ug/L	48.1	25-110			
n-Nitrosodi-n-propylamine	43.6 ug/L	11.1	ug/L	55.6	<11.1 ug/L	78.5	12-97			
n-Nitrosodiphenylamine	42.3 ug/L	11.1	ug/L	55.6	<11.1 ug/L	76.2	12-97			
p-Chloro-m-cresol	48.6 ug/L	11.1	ug/L	55.6	<11.1 ug/L	87.4	10-91			
Pentachlorophenol	73.7 ug/L	22.2	ug/L	55.6	<22.2 ug/L	133	27-109			M
Phenanthrene	57.6 ug/L	11.1	ug/L	55.6	<11.1 ug/L	104	50-115			
Phenol	21.4 ug/L	11.1	ug/L	56.1	<11.1 ug/L	38.2	0-115			
Pyrene	59.4 ug/L	11.1	ug/L	55.6	<11.1 ug/L	107	23-110			
Pyridine	27.5 ug/L	11.1	ug/L	55.6	<11.1 ug/L	49.5	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	122		ug/L	111	ug/L	109	10-86			S
Surr: 2-Fluorobiphenyl (Surr)	50.0		ug/L	55.6	ug/L	90.0	9-87			S
Surr: 2-Fluorophenol (Surr)	47.8		ug/L	111	ug/L	43.0	10-52			
Surr: Nitrobenzene-d5 (Surr)	49.6		ug/L	55.6	ug/L	89.2	10-98.5			
Surr: Phenol-d5 (Surr)	40.7		ug/L	111	ug/L	36.6	5-33			S
Surr: p-Terphenyl-d14 (Surr)	52.7		ug/L	55.6	ug/L	94.9	27-133			

Matrix Spike (BBJ0010-MS2)

Source: 1810922-01

Prepared & Analyzed: 10/01/2018

1,2,4-Trichlorobenzene	300 ug/L	133	ug/L	667	<133 ug/L	45.1	21.8-66.7			
1,2-Dichlorobenzene	294 ug/L	133	ug/L	667	<133 ug/L	44.2	22-60			
1,3-Dichlorobenzene	272 ug/L	133	ug/L	667	<133 ug/L	40.8	22-60			
1,4-Dichlorobenzene	277 ug/L	133	ug/L	667	<133 ug/L	41.6	22-60			
1-Chloronaphthalene	364 ug/L	133	ug/L		<133 ug/L		0-200			
2,4,6-Trichlorophenol	386 ug/L	133	ug/L	667	<133 ug/L	57.9	50-115			
2,4-Dichlorophenol	365 ug/L	133	ug/L	667	<133 ug/L	54.8	50-105			
2,4-Dimethylphenol	344 ug/L	6.67	ug/L	667	<6.67 ug/L	51.6	30-110			
2,4-Dinitrophenol	708 ug/L	667	ug/L	667	<667 ug/L	106	15-140			
2,4-Dinitrotoluene	599 ug/L	133	ug/L	667	<133 ug/L	89.9	17-111			
2,6-Dinitrotoluene	451 ug/L	133	ug/L	667	<133 ug/L	67.7	15-140			
2-Chloronaphthalene	351 ug/L	133	ug/L	667	<133 ug/L	52.6	45-105			
2-Chlorophenol	354 ug/L	133	ug/L	667	<133 ug/L	53.1	19-64			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Matrix Spike (BBJ0010-MS2)

Source: 1810922-01

Prepared & Analyzed: 10/01/2018

2-Nitrophenol	391 ug/L	133	ug/L	667	<133 ug/L	58.6	40-115			
3,3'-Dichlorobenzidine	679 ug/L	133	ug/L	667	<133 ug/L	102	10-85			
4,6-Dinitro-2-methylphenol	<667 ug/L	667	ug/L	667	<667 ug/L	93.5	40-130			
4-Bromophenyl phenyl ether	478 ug/L	133	ug/L	667	<133 ug/L	71.7	15-110			
4-Chlorophenyl phenyl ether	408 ug/L	133	ug/L	667	<133 ug/L	61.2	15-110			
4-Nitrophenol	<667 ug/L	667	ug/L	667	<667 ug/L	33.5	0-125			
Acenaphthene	385 ug/L	133	ug/L	667	<133 ug/L	57.8	24-90			
Acenaphthylene	414 ug/L	133	ug/L	667	<133 ug/L	62.0	50-105			
Acetophenone	347 ug/L	267	ug/L	667	<267 ug/L	52.1	0-200			
alpha-Terpineol	416 ug/L	33.3	ug/L	667	<33.3 ug/L	62.4	0-200			
Anthracene	523 ug/L	133	ug/L	667	<133 ug/L	78.5	55-110			
Benzo (a) anthracene	566 ug/L	133	ug/L	667	<133 ug/L	84.9	55-110			
Benzo (a) pyrene	571 ug/L	133	ug/L	667	<133 ug/L	85.7	55-110			
Benzo (b) fluoranthene	577 ug/L	133	ug/L	667	<133 ug/L	86.5	45-120			
Benzo (g,h,i) perylene	495 ug/L	133	ug/L	667	<133 ug/L	74.2	40-125			
Benzo (k) fluoranthene	655 ug/L	133	ug/L	667	<133 ug/L	98.2	45-125			
bis (2-Chloroethoxy) methane	375 ug/L	133	ug/L	667	<133 ug/L	56.2	40-125			
bis (2-Chloroethyl) ether	347 ug/L	133	ug/L	667	<133 ug/L	52.1	40-125			
2,2'-Oxybis (1-chloropropane)	315 ug/L	133	ug/L	667	<133 ug/L	47.3	40-125			
bis (2-Ethylhexyl) phthalate	483 ug/L	133	ug/L	667	<133 ug/L	72.5	40-125			
Butyl benzyl phthalate	633 ug/L	133	ug/L	667	<133 ug/L	95.0	45-115			
Carbazole	698 ug/L	33.3	ug/L	667	<33.3 ug/L	105	0-200			
Chrysene	683 ug/L	133	ug/L	667	<133 ug/L	102	55-110			
Dibenz (a,h) anthracene	587 ug/L	133	ug/L	667	<133 ug/L	88.1	40-125			
Diethyl phthalate	531 ug/L	133	ug/L	667	<133 ug/L	79.7	40-120			
Dimethyl phthalate	460 ug/L	133	ug/L	667	<133 ug/L	69.0	25-125			
Di-n-butyl phthalate	633 ug/L	133	ug/L	667	<133 ug/L	94.9	55-115			
Di-n-octyl phthalate	676 ug/L	133	ug/L	667	<133 ug/L	101	35-135			
Fluoranthene	578 ug/L	133	ug/L	667	<133 ug/L	86.8	55-115			
Fluorene	469 ug/L	133	ug/L	667	<133 ug/L	70.4	50-110			
Hexachlorobenzene	538 ug/L	13.3	ug/L	667	<13.3 ug/L	80.6	25-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Matrix Spike (BBJ0010-MS2)

Source: 1810922-01

Prepared & Analyzed: 10/01/2018

Hexachlorobutadiene	319 ug/L	133	ug/L	667	<133 ug/L	47.9	25-125			
Hexachlorocyclopentadiene	180 ug/L	133	ug/L	667	<133 ug/L	27.0	10-90			
Hexachloroethane	265 ug/L	133	ug/L	667	<133 ug/L	39.7	25-125			
Indeno (1,2,3-cd) pyrene	557 ug/L	133	ug/L	667	<133 ug/L	83.5	45-125			
Isophorone	359 ug/L	133	ug/L	667	<133 ug/L	53.8	10-110			
Naphthalene	358 ug/L	66.7	ug/L	667	<66.7 ug/L	53.6	40-100			
Nitrobenzene	354 ug/L	133	ug/L	667	<133 ug/L	53.1	40-100			
n-Nitrosodimethylamine	175 ug/L	133	ug/L	667	<133 ug/L	26.3	25-110			
n-Nitrosodi-n-propylamine	330 ug/L	133	ug/L	667	<133 ug/L	49.6	12-97			
n-Nitrosodiphenylamine	425 ug/L	133	ug/L	667	<133 ug/L	63.8	12-97			
p-Chloro-m-cresol	387 ug/L	133	ug/L	667	<133 ug/L	58.0	10-91			
Pentachlorophenol	560 ug/L	267	ug/L	667	<267 ug/L	84.0	27-109			
Phenanthrene	536 ug/L	133	ug/L	667	<133 ug/L	80.3	50-115			
Phenol	167 ug/L	133	ug/L	673	<133 ug/L	24.8	0-115			
Pyrene	594 ug/L	133	ug/L	667	<133 ug/L	89.1	23-110			
Pyridine	136 ug/L	133	ug/L	667	<133 ug/L	20.4	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	1120		ug/L	1330	ug/L	83.9	10-86			
Surr: 2-Fluorobiphenyl (Surr)	399		ug/L	667	ug/L	59.9	9-87			
Surr: 2-Fluorophenol (Surr)	500		ug/L	1330	ug/L	37.5	10-52			
Surr: Nitrobenzene-d5 (Surr)	382		ug/L	667	ug/L	57.3	10-98.5			
Surr: Phenol-d5 (Surr)	326		ug/L	1330	ug/L	24.5	5-33			
Surr: p-Terphenyl-d14 (Surr)	650		ug/L	667	ug/L	97.5	27-133			

Matrix Spike Dup (BBJ0010-MSD1)

Source: 1811081-01

Prepared: 10/01/2018 Analyzed: 10/02/2018

1,2,4-Trichlorobenzene	31.2 ug/L	11.2	ug/L	56.2	<11.2 ug/L	55.6	21.8-66.7	31.0	20	P
1,2-Dichlorobenzene	31.2 ug/L	11.2	ug/L	56.2	<11.2 ug/L	55.5	22-60	31.3	20	P
1,3-Dichlorobenzene	28.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	51.0	22-60	30.9	20	P
1,4-Dichlorobenzene	30.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	54.6	22-60	31.3	20	P
1-Chloronaphthalene	36.3 ug/L	11.2	ug/L		<11.2 ug/L		0-200	29.5	20	P
2,4,6-Trichlorophenol	37.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	67.0	50-115	23.8	20	P
2,4-Dichlorophenol	36.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	65.2	50-105	27.6	20	P



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Matrix Spike Dup (BBJ0010-MSD1)

Source: 1811081-01

Prepared: 10/01/2018 Analyzed: 10/02/2018

2,4-Dimethylphenol	30.9 ug/L	0.56	ug/L	56.2	<0.56 ug/L	55.0	30-110	27.5	20	P
2,4-Dinitrophenol	69.1 ug/L	56.2	ug/L	56.2	<56.2 ug/L	123	15-140	20.8	20	P
2,4-Dinitrotoluene	45.4 ug/L	11.2	ug/L	56.2	<11.2 ug/L	80.8	17-111	25.5	20	P
2,6-Dinitrotoluene	37.1 ug/L	11.2	ug/L	56.2	<11.2 ug/L	66.0	15-140	26.3	20	P
2-Chloronaphthalene	34.9 ug/L	11.2	ug/L	56.2	<11.2 ug/L	62.0	45-105	29.3	20	P
2-Chlorophenol	33.6 ug/L	11.2	ug/L	56.2	<11.2 ug/L	59.7	19-64	28.9	20	P
2-Nitrophenol	38.3 ug/L	11.2	ug/L	56.2	<11.2 ug/L	68.2	40-115	28.4	20	P
3,3'-Dichlorobenzidine	38.5 ug/L	11.2	ug/L	56.2	<11.2 ug/L	68.5	10-85	25.5	20	P
4,6-Dinitro-2-methylphenol	<56.2 ug/L	56.2	ug/L	56.2	<56.2 ug/L	97.1	40-130	21.7	20	P
4-Bromophenyl phenyl ether	41.9 ug/L	11.2	ug/L	56.2	<11.2 ug/L	74.5	15-110	26.3	20	P
4-Chlorophenyl phenyl ether	36.8 ug/L	11.2	ug/L	56.2	<11.2 ug/L	65.5	15-110	26.8	20	P
4-Nitrophenol	<56.2 ug/L	56.2	ug/L	56.2	<56.2 ug/L	36.4	0-125	17.8	20	
Acenaphthene	37.9 ug/L	11.2	ug/L	56.2	<11.2 ug/L	67.5	24-90	23.6	20	P
Acenaphthylene	40.0 ug/L	11.2	ug/L	56.2	<11.2 ug/L	71.1	50-105	25.1	20	P
Acetophenone	33.8 ug/L	22.5	ug/L	56.2	<22.5 ug/L	60.1	0-200	25.1	20	P
alpha-Terpineol	40.7 ug/L	2.81	ug/L	56.2	<2.81 ug/L	72.5	0-200	26.9	20	P
Anthracene	41.1 ug/L	11.2	ug/L	56.2	<11.2 ug/L	73.1	55-110	29.0	20	P
Benzo (a) anthracene	46.9 ug/L	11.2	ug/L	56.2	<11.2 ug/L	83.5	55-110	21.3	20	P
Benzo (a) pyrene	42.2 ug/L	11.2	ug/L	56.2	<11.2 ug/L	75.2	55-110	19.8	20	
Benzo (b) fluoranthene	44.5 ug/L	11.2	ug/L	56.2	<11.2 ug/L	79.2	45-120	15.7	20	
Benzo (g,h,i) perylene	36.0 ug/L	11.2	ug/L	56.2	<11.2 ug/L	64.1	40-125	27.1	20	P
Benzo (k) fluoranthene	43.8 ug/L	11.2	ug/L	56.2	<11.2 ug/L	78.0	45-125	23.3	20	P
bis (2-Chloroethoxy) methane	36.4 ug/L	11.2	ug/L	56.2	<11.2 ug/L	64.7	40-125	27.8	20	P
bis (2-Chloroethyl) ether	33.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	60.0	40-125	26.9	20	P
2,2'-Oxybis (1-chloropropane)	31.3 ug/L	11.2	ug/L	56.2	<11.2 ug/L	55.8	40-125	30.1	20	P
bis (2-Ethylhexyl) phthalate	37.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	67.0	40-125	19.6	20	
Butyl benzyl phthalate	50.2 ug/L	11.2	ug/L	56.2	<11.2 ug/L	89.4	45-115	21.0	20	P
Carbazole	53.1 ug/L	2.81	ug/L	56.2	<2.81 ug/L	94.5	0-200	21.0	20	P
Chrysene	52.9 ug/L	11.2	ug/L	56.2	<11.2 ug/L	94.2	55-110	22.8	20	P
Dibenz (a,h) anthracene	38.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	68.9	40-125	26.9	20	P
Diethyl phthalate	42.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	76.0	40-120	23.5	20	P



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Matrix Spike Dup (BBJ0010-MSD1)

Source: 1811081-01

Prepared: 10/01/2018 Analyzed: 10/02/2018

Dimethyl phthalate	38.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	68.9	25-125	24.3	20	P
Di-n-butyl phthalate	48.5 ug/L	11.2	ug/L	56.2	<11.2 ug/L	86.3	55-115	21.6	20	P
Di-n-octyl phthalate	47.4 ug/L	11.2	ug/L	56.2	<11.2 ug/L	84.4	35-135	17.3	20	P
Fluoranthene	45.2 ug/L	11.2	ug/L	56.2	<11.2 ug/L	80.4	55-115	22.5	20	P
Fluorene	40.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	72.5	50-110	23.5	20	P
Hexachlorobenzene	44.1 ug/L	1.12	ug/L	56.2	<1.12 ug/L	78.5	25-125	25.0	20	P
Hexachlorobutadiene	34.3 ug/L	11.2	ug/L	56.2	<11.2 ug/L	61.1	25-125	28.8	20	P
Hexachlorocyclopentadiene	17.1 ug/L	11.2	ug/L	56.2	<11.2 ug/L	30.4	10-90	34.9	20	P
Hexachloroethane	28.9 ug/L	11.2	ug/L	56.2	<11.2 ug/L	51.5	25-125	30.7	20	P
Indeno (1,2,3-cd) pyrene	37.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	67.0	45-125	27.1	20	P
Isophorone	35.2 ug/L	11.2	ug/L	56.2	<11.2 ug/L	62.7	10-110	28.6	20	P
Naphthalene	35.3 ug/L	5.62	ug/L	56.2	<5.62 ug/L	62.8	40-100	28.8	20	P
Nitrobenzene	34.5 ug/L	11.2	ug/L	56.2	<11.2 ug/L	61.5	40-100	28.1	20	P
n-Nitrosodimethylamine	20.9 ug/L	11.2	ug/L	56.2	<11.2 ug/L	37.2	25-110	24.4	20	P
n-Nitrosodi-n-propylamine	33.9 ug/L	11.2	ug/L	56.2	<11.2 ug/L	60.3	12-97	25.1	20	P
n-Nitrosodiphenylamine	32.5 ug/L	11.2	ug/L	56.2	<11.2 ug/L	57.9	12-97	26.2	20	P
p-Chloro-m-cresol	37.7 ug/L	11.2	ug/L	56.2	<11.2 ug/L	67.2	10-91	25.1	20	P
Pentachlorophenol	56.3 ug/L	22.5	ug/L	56.2	<22.5 ug/L	100	27-109	26.8	20	P
Phenanthrene	42.1 ug/L	11.2	ug/L	56.2	<11.2 ug/L	75.0	50-115	31.1	20	P
Phenol	16.5 ug/L	11.2	ug/L	56.7	<11.2 ug/L	29.1	0-115	26.0	20	P
Pyrene	45.5 ug/L	11.2	ug/L	56.2	<11.2 ug/L	81.1	23-110	26.3	20	P
Pyridine	16.8 ug/L	11.2	ug/L	56.2	<11.2 ug/L	30.0	0-200	48.1	20	P
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	93.8		ug/L	112	ug/L	83.5	10-86			
Surr: 2-Fluorobiphenyl (Surr)	37.6		ug/L	56.2	ug/L	66.9	9-87			
Surr: 2-Fluorophenol (Surr)	37.9		ug/L	112	ug/L	33.7	10-52			
Surr: Nitrobenzene-d5 (Surr)	36.8		ug/L	56.2	ug/L	65.4	10-98.5			
Surr: Phenol-d5 (Surr)	31.3		ug/L	112	ug/L	27.9	5-33			
Surr: p-Terphenyl-d14 (Surr)	39.8		ug/L	56.2	ug/L	70.9	27-133			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Matrix Spike Dup (BBJ0010-MSD2)

Source: 18I0922-01

Prepared: 10/01/2018 Analyzed: 10/02/2018

1,2,4-Trichlorobenzene	305 ug/L	133	ug/L	667	<133 ug/L	45.7	21.8-66.7	1.45	20	
1,2-Dichlorobenzene	296 ug/L	133	ug/L	667	<133 ug/L	44.5	22-60	0.677	20	
1,3-Dichlorobenzene	267 ug/L	133	ug/L	667	<133 ug/L	40.1	22-60	1.83	20	
1,4-Dichlorobenzene	279 ug/L	133	ug/L	667	<133 ug/L	41.9	22-60	0.718	20	
1-Chloronaphthalene	368 ug/L	133	ug/L		<133 ug/L		0-200	1.06	20	
2,4,6-Trichlorophenol	385 ug/L	133	ug/L	667	<133 ug/L	57.8	50-115	0.138	20	
2,4-Dichlorophenol	375 ug/L	133	ug/L	667	<133 ug/L	56.2	50-105	2.45	20	
2,4-Dimethylphenol	358 ug/L	6.67	ug/L	667	<6.67 ug/L	53.8	30-110	4.14	20	
2,4-Dinitrophenol	751 ug/L	667	ug/L	667	<667 ug/L	113	15-140	5.88	20	
2,4-Dinitrotoluene	616 ug/L	133	ug/L	667	<133 ug/L	92.4	17-111	2.74	20	
2,6-Dinitrotoluene	423 ug/L	133	ug/L	667	<133 ug/L	63.4	15-140	6.47	20	
2-Chloronaphthalene	354 ug/L	133	ug/L	667	<133 ug/L	53.1	45-105	1.02	20	
2-Chlorophenol	355 ug/L	133	ug/L	667	<133 ug/L	53.2	19-64	0.151	20	
2-Nitrophenol	394 ug/L	133	ug/L	667	<133 ug/L	59.1	40-115	0.884	20	
3,3'-Dichlorobenzidine	712 ug/L	133	ug/L	667	<133 ug/L	107	10-85	4.74	20	
4,6-Dinitro-2-methylphenol	671 ug/L	667	ug/L	667	<667 ug/L	101	40-130	7.35	20	
4-Bromophenyl phenyl ether	447 ug/L	133	ug/L	667	<133 ug/L	67.1	15-110	6.60	20	
4-Chlorophenyl phenyl ether	386 ug/L	133	ug/L	667	<133 ug/L	57.9	15-110	5.58	20	
4-Nitrophenol	<667 ug/L	667	ug/L	667	<667 ug/L	32.4	0-125	3.40	20	
Acenaphthene	389 ug/L	133	ug/L	667	<133 ug/L	58.4	24-90	0.998	20	
Acenaphthylene	414 ug/L	133	ug/L	667	<133 ug/L	62.1	50-105	0.0967	20	
Acetophenone	358 ug/L	267	ug/L	667	<267 ug/L	53.6	0-200	2.99	20	
alpha-Terpineol	424 ug/L	33.3	ug/L	667	<33.3 ug/L	63.6	0-200	1.87	20	
Anthracene	515 ug/L	133	ug/L	667	<133 ug/L	77.3	55-110	1.54	20	
Benzidine	<667 ug/L	667	ug/L	667	<667 ug/L		0-130		20	
Benzo (a) anthracene	593 ug/L	133	ug/L	667	<133 ug/L	88.9	55-110	4.58	20	
Benzo (a) pyrene	611 ug/L	133	ug/L	667	<133 ug/L	91.6	55-110	6.66	20	
Benzo (b) fluoranthene	604 ug/L	133	ug/L	667	<133 ug/L	90.6	45-120	4.56	20	
Benzo (g,h,i) perylene	531 ug/L	133	ug/L	667	<133 ug/L	79.7	40-125	7.07	20	
Benzo (k) fluoranthene	694 ug/L	133	ug/L	667	<133 ug/L	104	45-125	5.81	20	
bis (2-Chloroethoxy) methane	363 ug/L	133	ug/L	667	<133 ug/L	54.5	40-125	3.18	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Matrix Spike Dup (BBJ0010-MSD2)

Source: 1810922-01

Prepared: 10/01/2018 Analyzed: 10/02/2018

bis (2-Chloroethyl) ether	347 ug/L	133	ug/L	667	<133 ug/L	52.1	40-125	0.00	20	
2,2'-Oxybis (1-chloropropane)	313 ug/L	133	ug/L	667	<133 ug/L	47.0	40-125	0.679	20	
bis (2-Ethylhexyl) phthalate	516 ug/L	133	ug/L	667	<133 ug/L	77.4	40-125	6.51	20	
Butyl benzyl phthalate	662 ug/L	133	ug/L	667	<133 ug/L	99.3	45-115	4.45	20	
Carbazole	720 ug/L	33.3	ug/L	667	<33.3 ug/L	108	0-200	3.14	20	
Chrysene	726 ug/L	133	ug/L	667	<133 ug/L	109	55-110	6.13	20	
Dibenz (a,h) anthracene	623 ug/L	133	ug/L	667	<133 ug/L	93.4	40-125	5.80	20	
Diethyl phthalate	527 ug/L	133	ug/L	667	<133 ug/L	79.1	40-120	0.781	20	
Dimethyl phthalate	432 ug/L	133	ug/L	667	<133 ug/L	64.8	25-125	6.31	20	
Di-n-butyl phthalate	648 ug/L	133	ug/L	667	<133 ug/L	97.2	55-115	2.33	20	
Di-n-octyl phthalate	717 ug/L	133	ug/L	667	<133 ug/L	108	35-135	5.91	20	
Fluoranthene	617 ug/L	133	ug/L	667	<133 ug/L	92.5	55-115	6.43	20	
Fluorene	444 ug/L	133	ug/L	667	<133 ug/L	66.5	50-110	5.58	20	
Hexachlorobenzene	528 ug/L	13.3	ug/L	667	<13.3 ug/L	79.1	25-125	1.88	20	
Hexachlorobutadiene	327 ug/L	133	ug/L	667	<133 ug/L	49.0	25-125	2.31	20	
Hexachlorocyclopentadiene	187 ug/L	133	ug/L	667	<133 ug/L	28.0	10-90	3.78	20	
Hexachloroethane	265 ug/L	133	ug/L	667	<133 ug/L	39.7	25-125	0.0504	20	
Indeno (1,2,3-cd) pyrene	591 ug/L	133	ug/L	667	<133 ug/L	88.6	45-125	5.90	20	
Isophorone	365 ug/L	133	ug/L	667	<133 ug/L	54.8	10-110	1.77	20	
Naphthalene	369 ug/L	66.7	ug/L	667	<66.7 ug/L	55.4	40-100	3.16	20	
Nitrobenzene	352 ug/L	133	ug/L	667	<133 ug/L	52.8	40-100	0.604	20	
n-Nitrosodimethylamine	137 ug/L	133	ug/L	667	<133 ug/L	20.5	25-110	24.7	20	
n-Nitrosodi-n-propylamine	343 ug/L	133	ug/L	667	<133 ug/L	51.5	12-97	3.80	20	
n-Nitrosodiphenylamine	410 ug/L	133	ug/L	667	<133 ug/L	61.5	12-97	3.54	20	
p-Chloro-m-cresol	393 ug/L	133	ug/L	667	<133 ug/L	58.9	10-91	1.47	20	
Pentachlorophenol	574 ug/L	267	ug/L	667	<267 ug/L	86.1	27-109	2.47	20	
Phenanthrene	542 ug/L	133	ug/L	667	<133 ug/L	81.3	50-115	1.24	20	
Phenol	159 ug/L	133	ug/L	673	<133 ug/L	23.7	0-115	4.65	20	
Pyrene	650 ug/L	133	ug/L	667	<133 ug/L	97.5	23-110	9.05	20	
Pyridine	<133 ug/L	133	ug/L	667	<133 ug/L	19.6	0-200	3.91	20	
Surr: 2,4,6-Tribromophenol (Surr)	1030		ug/L	1330	ug/L	76.9	10-86			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0010 - SW3510C

Matrix Spike Dup (BBJ0010-MSD2)

Source: 18I0922-01

Prepared: 10/01/2018 Analyzed: 10/02/2018

Surr: 2-Fluorobiphenyl (Surr)	390		ug/L	667	ug/L	58.5	9-87			
Surr: 2-Fluorophenol (Surr)	303		ug/L	1330	ug/L	22.8	10-52			
Surr: Nitrobenzene-d5 (Surr)	372		ug/L	667	ug/L	55.8	10-98.5			
Surr: Phenol-d5 (Surr)	304		ug/L	1330	ug/L	22.8	5-33			
Surr: p-Terphenyl-d14 (Surr)	695		ug/L	667	ug/L	104	27-133			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0019 - SW3510C

Blank (BBJ0019-BLK1)

Prepared & Analyzed: 10/01/2018

TPH-Semi-Volatiles (DRO)	<0.500 mg/L	0.500	mg/L						
Surr: Pentacosane (Surr)	0.141		mg/L	0.250		56.3	40-160		

LCS (BBJ0019-BS1)

Prepared & Analyzed: 10/01/2018

TPH-Semi-Volatiles (DRO)	2.9 mg/L	0.500	mg/L	5.00	mg/L	58.5	40-160		
Surr: Pentacosane (Surr)	0.143		mg/L	0.250	mg/L	57.1	40-160		

Batch BBJ0102 - SW3510C

Blank (BBJ0102-BLK1)

Prepared & Analyzed: 10/03/2018

TPH-Semi-Volatiles (DRO)	<0.500 mg/L	0.500	mg/L						
Surr: Pentacosane (Surr)	0.148		mg/L	0.250		59.3	40-160		

LCS (BBJ0102-BS1)

Prepared & Analyzed: 10/03/2018

TPH-Semi-Volatiles (DRO)	3.3 mg/L	0.500	mg/L	5.00	mg/L	66.8	40-160		
Surr: Pentacosane (Surr)	0.149		mg/L	0.250	mg/L	59.8	40-160		

Batch BBJ0103 - SW3510C

Blank (BBJ0103-BLK1)

Prepared & Analyzed: 10/03/2018

TPH-Semi-Volatiles (ORO)	<1.0 mg/L	1.0	mg/L						
Surr: Pentacosane (Surr)	0.148		mg/L	0.250		59.3	40-160		

LCS (BBJ0103-BS1)

Prepared & Analyzed: 10/03/2018

TPH-Semi-Volatiles (ORO)	2.5 mg/L	1.0	mg/L	5.00	mg/L	50.1	40-160		
--------------------------	----------	-----	------	------	------	------	--------	--	--



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0151 - No Prep Wet Chem

Blank (BBJ0151-BLK1)

Prepared & Analyzed: 09/28/2018

Chromium, Hexavalent	<0.005 mg/L	0.005	mg/L
----------------------	-------------	-------	------

LCS (BBJ0151-BS1)

Prepared & Analyzed: 09/28/2018

Chromium, Hexavalent	0.103 mg/L	0.005	mg/L	0.100 mg/L	103	80-120
----------------------	------------	-------	------	------------	-----	--------

Matrix Spike (BBJ0151-MS1)

Source: 18I1066-02

Prepared & Analyzed: 09/28/2018

Chromium, Hexavalent	0.090 mg/L	0.005	mg/L	0.100	<0.005 mg/L	90.0	80-120
----------------------	------------	-------	------	-------	-------------	------	--------

Matrix Spike Dup (BBJ0151-MSD1)

Source: 18I1066-02

Prepared & Analyzed: 09/28/2018

Chromium, Hexavalent	0.089 mg/L	0.005	mg/L	0.100	<0.005 mg/L	89.0	80-120	1.12	20
----------------------	------------	-------	------	-------	-------------	------	--------	------	----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Non-Potable Water	
Aluminum	VELAP,WVDEP
Barium	VELAP,WVDEP
Beryllium	VELAP,WVDEP
Cadmium	VELAP,WVDEP
Calcium	VELAP,WVDEP
Chromium	VELAP,WVDEP
Cobalt	VELAP,WVDEP
Copper	VELAP,WVDEP
Iron	VELAP,WVDEP
Lead	VELAP,WVDEP
Magnesium	VELAP,WVDEP
Manganese	VELAP,WVDEP
Nickel	VELAP,WVDEP
Potassium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP,WVDEP
Vanadium	VELAP,WVDEP
Zinc	VELAP,WVDEP
SW6020A in Non-Potable Water	
Antimony	VELAP,NC,WVDEP
Arsenic	VELAP,WVDEP
Selenium	VELAP,WVDEP
Thallium	VELAP,WVDEP
SW7196A in Non-Potable Water	
Chromium, Hexavalent	VELAP
SW7470A in Non-Potable Water	
Mercury	VELAP,NC,WVDEP
SW8015C in Non-Potable Water	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
TPH-Volatiles (GRO)	VELAP,NC,WVDEP
SW8260B in Non-Potable Water	
1,1,1,2-Tetrachloroethane	NC,VELAP,WVDEP
1,1,1-Trichloroethane	NC,VELAP,WVDEP
1,1,2,2-Tetrachloroethane	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
1,1,2-Trichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethylene	NC,VELAP,WVDEP
1,1-Dichloropropene	NC,VELAP,WVDEP
1,2,3-Trichlorobenzene	NC,VELAP,WVDEP
1,2,3-Trichloropropane	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2,4-Trimethylbenzene	NC,VELAP,WVDEP
1,2-Dibromo-3-chloropropane (DBCP)	NC,VELAP,WVDEP
1,2-Dibromoethane (EDB)	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,2-Dichloroethane	NC,VELAP,WVDEP
1,2-Dichloropropane	NC,VELAP,WVDEP
1,3,5-Trimethylbenzene	NC,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,3-Dichloropropane	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
2,2-Dichloropropane	NC,VELAP,WVDEP
2-Butanone (MEK)	NC,VELAP,WVDEP
2-Chlorotoluene	NC,VELAP,WVDEP
2-Hexanone (MBK)	NC,VELAP,WVDEP
4-Chlorotoluene	NC,VELAP,WVDEP
4-Isopropyltoluene	NC,VELAP,WVDEP
4-Methyl-2-pentanone (MIBK)	NC,VELAP,WVDEP
Acetone	NC,VELAP,WVDEP
Benzene	NC,VELAP,WVDEP
Bromobenzene	NC,VELAP,WVDEP
Bromochloromethane	NC,VELAP,WVDEP
Bromodichloromethane	NC,VELAP,WVDEP
Bromoform	NC,VELAP,WVDEP
Bromomethane	NC,VELAP,WVDEP
Carbon disulfide	NC,VELAP,WVDEP
Carbon tetrachloride	NC,VELAP,WVDEP
Chlorobenzene	NC,VELAP,WVDEP
Chloroethane	NC,VELAP,WVDEP
Chloroform	NC,VELAP,WVDEP
Chloromethane	NC,VELAP,WVDEP
cis-1,2-Dichloroethylene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
cis-1,3-Dichloropropene	NC,VELAP,WVDEP
Dibromochloromethane	NC,VELAP,WVDEP
Dibromomethane	NC,VELAP,WVDEP
Dichlorodifluoromethane	NC,VELAP,WVDEP
Di-isopropyl ether (DIPE)	NC,VELAP,WVDEP
Ethylbenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Iodomethane	NC,VELAP,WVDEP
Isopropylbenzene	NC,VELAP,WVDEP
m+p-Xylenes	NC,VELAP,WVDEP
Methylene chloride	NC,VELAP,WVDEP
Methyl-t-butyl ether (MTBE)	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP
n-Butylbenzene	NC,VELAP,WVDEP
n-Propylbenzene	NC,VELAP,WVDEP
o-Xylene	NC,VELAP,WVDEP
sec-Butylbenzene	NC,VELAP,WVDEP
Styrene	NC,VELAP,WVDEP
tert-Butylbenzene	NC,VELAP,WVDEP
Tetrachloroethylene (PCE)	NC,VELAP,WVDEP
Toluene	NC,VELAP,WVDEP
trans-1,2-Dichloroethylene	NC,VELAP,WVDEP
trans-1,3-Dichloropropene	NC,VELAP,WVDEP
Trichloroethylene	NC,VELAP,WVDEP
Trichlorofluoromethane	NC,VELAP,WVDEP
Vinyl acetate	NC,VELAP,WVDEP
Vinyl chloride	NC,VELAP,WVDEP
Xylenes, Total	NC,VELAP,WVDEP
SW8270D in Non-Potable Water	
1,2,4,5-Tetrachlorobenzene	VELAP,WVDEP,NC
1,2,4-Trichlorobenzene	VELAP,WVDEP,NC
1,2-Dichlorobenzene	VELAP,WVDEP,NC
1,2-Diphenylhydrazine	VELAP,WVDEP,NC
1,3-Dichlorobenzene	VELAP,WVDEP,NC
1,3-Dinitrobenzene	VELAP,WVDEP,NC
1,4-Dichlorobenzene	VELAP,WVDEP,NC
1-Naphthylamine	VELAP,WVDEP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
2,3,4,6-Tetrachlorophenol	VELAP,WVDEP,NC
2,4,5-Trichlorophenol	VELAP,WVDEP,NC
2,4,6-Trichlorophenol	VELAP,WVDEP,NC
2,4-Dichlorophenol	VELAP,WVDEP,NC
2,4-Dimethylphenol	VELAP,WVDEP,NC
2,4-Dinitrophenol	VELAP,WVDEP,NC
2,4-Dinitrotoluene	VELAP,WVDEP,NC
2,6-Dichlorophenol	VELAP,WVDEP,NC
2,6-Dinitrotoluene	VELAP,WVDEP,NC
2-Chloronaphthalene	VELAP,WVDEP,NC
2-Chlorophenol	VELAP,WVDEP,NC
2-Methylnaphthalene	VELAP,WVDEP,NC
2-Naphthylamine	VELAP,WVDEP,NC
2-Nitroaniline	VELAP,WVDEP,NC
2-Nitrophenol	VELAP,WVDEP,NC
3,3'-Dichlorobenzidine	VELAP,WVDEP,NC
3-Methylcholanthrene	VELAP,WVDEP,NC
3-Nitroaniline	VELAP,WVDEP,NC
4,6-Dinitro-2-methylphenol	VELAP,WVDEP,NC
4-Aminobiphenyl	VELAP,WVDEP,NC
4-Bromophenyl phenyl ether	VELAP,WVDEP,NC
4-Chloroaniline	VELAP,WVDEP,NC
4-Chlorophenyl phenyl ether	VELAP,WVDEP,NC
4-Nitroaniline	VELAP,WVDEP,NC
4-Nitrophenol	VELAP,WVDEP,NC
7,12-Dimethylbenz (a) anthracene	VELAP,WVDEP,NC
Acenaphthene	VELAP,WVDEP,NC
Acenaphthylene	VELAP,WVDEP,NC
Acetophenone	VELAP,WVDEP,NC
Aniline	VELAP,WVDEP,NC
Anthracene	VELAP,WVDEP,NC
Benzidine	VELAP,WVDEP,NC
Benzo (a) anthracene	VELAP,WVDEP,NC
Benzo (a) pyrene	VELAP,WVDEP,NC
Benzo (b) fluoranthene	VELAP,WVDEP,NC
Benzo (g,h,i) perylene	VELAP,WVDEP,NC
Benzo (k) fluoranthene	VELAP,WVDEP,NC
Benzoic acid	VELAP,WVDEP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Benzyl alcohol	VELAP,WVDEP,NC
bis (2-Chloroethoxy) methane	VELAP,WVDEP,NC
bis (2-Chloroethyl) ether	VELAP,WVDEP,NC
2,2'-Oxybis (1-chloropropane)	VELAP,WVDEP,NC
bis (2-Ethylhexyl) phthalate	VELAP,WVDEP,NC
Butyl benzyl phthalate	VELAP,WVDEP,NC
Chrysene	VELAP,WVDEP,NC
Dibenz (a,h) anthracene	VELAP,WVDEP,NC
Dibenz (a,j) acridine	VELAP,WVDEP,NC
Dibenzofuran	VELAP,WVDEP,NC
Diethyl phthalate	VELAP,WVDEP,NC
Dimethyl phthalate	VELAP,WVDEP,NC
Di-n-butyl phthalate	VELAP,WVDEP,NC
Di-n-octyl phthalate	VELAP,WVDEP,NC
Diphenylamine	VELAP,WVDEP,NC
Ethyl methanesulfonate	VELAP,WVDEP,NC
Fluoranthene	VELAP,WVDEP,NC
Fluorene	VELAP,WVDEP,NC
Hexachlorobenzene	VELAP,WVDEP,NC
Hexachlorobutadiene	VELAP,WVDEP,NC
Hexachlorocyclopentadiene	VELAP,WVDEP,NC
Hexachloroethane	VELAP,WVDEP,NC
Indeno (1,2,3-cd) pyrene	VELAP,WVDEP,NC
Isophorone	VELAP,WVDEP,NC
m+p-Cresols	VELAP,WVDEP,NC
Methyl methanesulfonate	VELAP,WVDEP,NC
Naphthalene	VELAP,WVDEP,NC
Nitrobenzene	VELAP,WVDEP,NC
n-Nitrosodimethylamine	VELAP,WVDEP,NC
n-Nitrosodi-n-butylamine	VELAP,WVDEP,NC
n-Nitrosodi-n-propylamine	VELAP,WVDEP,NC
n-Nitrosodiphenylamine	VELAP,WVDEP,NC
n-Nitrosopiperidine	VELAP,WVDEP,NC
o+m+p-Cresols	WVDEP,NC
o-Cresol	VELAP,WVDEP,NC
p-(Dimethylamino) azobenzene	VELAP,WVDEP,NC
p-Chloro-m-cresol	VELAP,WVDEP,NC
Pentachloronitrobenzene (quintozene)	VELAP,WVDEP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:28
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Pentachlorophenol	VELAP,WVDEP,NC
Phenacetin	VELAP,WVDEP,NC
Phenanthrene	VELAP,WVDEP,NC
Phenol	VELAP,WVDEP,NC
Pronamide	VELAP,WVDEP,NC
Pyrene	VELAP,WVDEP,NC
Pyridine	VELAP,WVDEP,NC

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers


- B Blank contamination. The recorded result is associated with a contaminated blank.
- C Continuing calibration verification response for this analyte is outside specifications.
- E Estimated concentration, outside calibration range
- L LCS recovery is outside of established acceptance limits
- M Matrix spike recovery is outside established acceptance limits
- M2 Sample was diluted due to matrix interference.
- P Duplicate analysis does not meet the acceptance criteria for precision
- S Surrogate recovery was outside acceptance criteria
- RPD Relative Percent Difference
- Qual Qualifiers
- RE Denotes sample was re-analyzed
- D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
- TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
- PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1


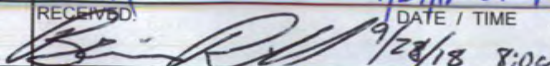
COMPANY NAME: EEE Consulting	INVOICE TO: Same	PROJECT NAME/Quote #: CUTC
CONTACT: 201 Church St. 24060	INVOICE CONTACT:	SITE NAME: CUTC
ADDRESS: Jeff Fisher	INVOICE ADDRESS:	PROJECT NUMBER: 18-760
PHONE #: 540-953-0170	INVOICE PHONE #:	P.O. #: 18-760
FAX #:	EMAIL: JFISHER@EEE-CONSULTING.COM	Pretreatment Program:

Is sample for compliance reporting? YES NO Is sample from a chlorinated supply? YES NO PWS I.D. #:

SAMPLER NAME (PRINT): **Jeff Fisher** SAMPLER SIGNATURE:  Turn Around Time: Circle: **10** 5 Days or ___ Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)					COMMENTS
											TPH-6 Ref DRO/ORO	VOCs 8260	SUDS 8270	TOTAL TAL Metals	Hex Chrome 7198	
1) MW 77-1	X		M			9-27-18	1200		GW	10	X	X	X	X	X	Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)
2) MW 77-2	X		N			9-27-18	1440		GW	10	X	X	X	X	X	
3)																
4)																
5)																
6)																
7)																
8)																
9)																
10)																

RELINQUISHED: 	DATE / TIME: 9-27-18 1518	RECEIVED: MAX	DATE / TIME: 9/27/18 3:20pm	QC Data Package Level III <input type="checkbox"/>	LAB USE ONLY	COOLER TEMP 0.5 °C
RELINQUISHED: Cowan	DATE / TIME:	RECEIVED: 	DATE / TIME: 9/28/18 8:00	QC Data Package Level IV <input type="checkbox"/>		
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:			

EEE-Blacksburg 1811066
CVTC
Recd: 09/28/2018 Due: 10/12/2018

Sample Preservation Log

Order ID 1811066

Date Performed: 09/28/18

Analyst Performing Check: BR

Sample ID	Container ID	Metals		Cyanide		Sulfide		Ammonia		TKN		Phos, Tot		NO3+NO2		ORO/DRO		Pesticide (8081/608/508)		SVOC (525.2/8270/625)		CrVI*		Pest/PCB (508) / SVOC(525)		
		pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	Res.Cl as Received	P/A (if adjust.)	Res.Cl as Received	P/A (if adjust.)	pH as Received	Adjusted final pH	pH as Received	Final pH (if adjust.)	
		< 2	Other	> 12	Other	> 9	Other	< 2	Other	< 2	Other	< 2	Other	< 2	Other	< 2	Other	Present	Absent	Present	Absent			< 2	Other	
01	A																									
01	B																									
01	C																									
01	D	/																								
02	A																									
02	B																									
02	C																									
02	D	/																								

NaOH ID: _____ HNO3 ID: _____
 SO4 ID: _____ Na2S2O3 ID: _____
 CL ID: _____ Na2SO3 ID: _____

CrVI preserved date/time: _____ Analyst Initials: _____
 * pH must be adjusted between 9.3 - 9.7
 Buffer Sol'n ID: _____
 1N NaOH ID: _____ 5N NaOH: _____



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:28
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	0.50°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	No
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	Yes
Are all volatile organic and TOX containers free of headspace?	Yes
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	Yes
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments

Trip Blank received with samples and added to work order. Trip Blank date and time (08/23/18 1410) logged as per container labels. BAR 09/28/18 0850



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 18J0020

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg, VA 24060

Date Received: October 2, 2018 8:10
Date Issued: October 9, 2018 16:18

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 10/02/2018 08:10. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18J0020

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Task 2.1 MW77-3	18J0020-01	Ground Water	10/01/2018 10:35	10/02/2018 08:10
Task 2.8 MW36-1	18J0020-02	Ground Water	09/28/2018 10:20	10/02/2018 08:10
Task 2.8 MW36-2	18J0020-03	Ground Water	09/28/2018 11:10	10/02/2018 08:10
Task 2.9 MW39-1	18J0020-04	Ground Water	10/01/2018 12:05	10/02/2018 08:10
Task 2.9 MW39-2	18J0020-05	Ground Water	10/01/2018 14:45	10/02/2018 08:10
Task 2.9 MW39-3	18J0020-06	Ground Water	10/01/2018 16:00	10/02/2018 08:10
Task 2.2 MW10-3	18J0020-07	Ground Water	10/01/2018 17:40	10/02/2018 08:10
Trip Blank	18J0020-08	Non-Potable Water	08/23/2018 14:10	10/02/2018 08:10



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.1 MW77-3 **Laboratory Sample ID:** 18J0020-01

Grab Date/Time: 10/01/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Aluminum	01	SW6010C	0.0530 mg/L		0.0500	1	10/02/18 16:00	10/05/18 12:29	BG
Arsenic	01	SW6020A	<1.0 ug/L		1.0	1	10/02/18 16:00	10/03/18 11:14	BG
Barium	01	SW6010C	0.0902 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Beryllium	01	SW6010C	<0.0040 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:29	BG
Calcium	01RE1	SW6010C	46.1 mg/L		0.500	10	10/02/18 16:00	10/05/18 17:25	BG
Cadmium	01	SW6010C	<0.0040 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:29	BG
Cobalt	01	SW6010C	<0.0040 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:29	BG
Chromium	01	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Copper	01	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Iron	01	SW6010C	0.138 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Mercury	01	SW7470A	<0.00020 mg/L		0.00020	1	10/04/18 09:46	10/05/18 11:55	MWL
Potassium	01	SW6010C	4.78 mg/L		0.50	1	10/02/18 16:00	10/05/18 12:29	BG
Magnesium	01	SW6010C	6.85 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Manganese	01	SW6010C	0.464 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Sodium	01	SW6010C	17.0 mg/L		0.50	1	10/02/18 16:00	10/05/18 12:29	BG
Nickel	01	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Lead	01	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Antimony	01	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:14	BG
Selenium	01	SW6020A	1.05 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:14	BG
Thallium	01	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:14	BG
Vanadium	01	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG
Zinc	01	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:29	BG

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	01	SW8015C	<0.10 mg/L	0.10	1	10/02/18 12:21	10/02/18 12:21	DFH
---------------------	----	---------	------------	------	---	----------------	----------------	-----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.1 MW77-3 **Laboratory Sample ID:** 18J0020-01

Grab Date/Time: 10/01/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	01	SW8015C	100 %		80-120		10/02/18 12:21	10/02/18 12:21	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	10/02/18 16:12	10/02/18 16:12	KCS
1,1,1-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,1,2,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	10/02/18 16:12	10/02/18 16:12	KCS
1,1,2-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,1-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,1-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,1-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,2,3-Trichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,2,3-Trichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,2,4-Trichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,2,4-Trimethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,2-Dibromoethane (EDB)	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,2-Dichlorobenzene	01	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:12	10/02/18 16:12	KCS
1,2-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,2-Dichloropropane	01	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:12	10/02/18 16:12	KCS
1,3,5-Trimethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,3-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,3-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
1,4-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
2,2-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.1 MW77-3

Laboratory Sample ID: 18J0020-01

Grab Date/Time: 10/01/2018 10:35

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	01	SW8260B	<10.0 ug/L		10.0	1	10/02/18 16:12	10/02/18 16:12	KCS
2-Chlorotoluene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
2-Hexanone (MBK)	01	SW8260B	<5.00 ug/L		5.00	1	10/02/18 16:12	10/02/18 16:12	KCS
4-Chlorotoluene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
4-Isopropyltoluene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
4-Methyl-2-pentanone (MIBK)	01	SW8260B	<5.00 ug/L		5.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Acetone	01	SW8260B	<10.0 ug/L		10.0	1	10/02/18 16:12	10/02/18 16:12	KCS
Benzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Bromobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Bromochloromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Bromodichloromethane	01	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:12	10/02/18 16:12	KCS
Bromoform	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Bromomethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Carbon disulfide	01	SW8260B	<10.0 ug/L		10.0	1	10/02/18 16:12	10/02/18 16:12	KCS
Carbon tetrachloride	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Chlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Chloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Chloroform	01	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:12	10/02/18 16:12	KCS
Chloromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
cis-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
cis-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Dibromochloromethane	01	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:12	10/02/18 16:12	KCS
Dibromomethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Dichlorodifluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Di-isopropyl ether (DIPE)	01	SW8260B	<5.00 ug/L		5.00	1	10/02/18 16:12	10/02/18 16:12	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.1 MW77-3

Laboratory Sample ID: 18J0020-01

Grab Date/Time: 10/01/2018 10:35

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Ethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Hexachlorobutadiene	01	SW8260B	<0.80 ug/L		0.80	1	10/02/18 16:12	10/02/18 16:12	KCS
Iodomethane	01	SW8260B	<10.0 ug/L		10.0	1	10/02/18 16:12	10/02/18 16:12	KCS
Isopropylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
m+p-Xylenes	01	SW8260B	<2.00 ug/L		2.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Methylene chloride	01	SW8260B	<4.00 ug/L		4.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Methyl-t-butyl ether (MTBE)	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Naphthalene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
n-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
n-Propylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
o-Xylene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
sec-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Styrene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
tert-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Tetrachloroethylene (PCE)	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Toluene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
trans-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
trans-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Trichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Trichlorofluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Vinyl acetate	01	SW8260B	<10.0 ug/L		10.0	1	10/02/18 16:12	10/02/18 16:12	KCS
Vinyl chloride	01	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:12	10/02/18 16:12	KCS
Xylenes, Total	01	SW8260B	<3.00 ug/L		3.00	1	10/02/18 16:12	10/02/18 16:12	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	01	SW8260B	106 %		70-120		10/02/18 16:12	10/02/18 16:12	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.1 MW77-3 **Laboratory Sample ID:** 18J0020-01

Grab Date/Time: 10/01/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260B	96.2 %		75-120		10/02/18 16:12	10/02/18 16:12	KCS
Surr: Dibromofluoromethane (Surr)	01	SW8260B	102 %		70-130		10/02/18 16:12	10/02/18 16:12	KCS
Surr: Toluene-d8 (Surr)	01	SW8260B	100 %		70-130		10/02/18 16:12	10/02/18 16:12	KCS
Semivolatile Organic Compounds by GCMS									
1,2,4,5-Tetrachlorobenzene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
1,2,4-Trichlorobenzene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
1,2-Dichlorobenzene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
1,2-Diphenylhydrazine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
1,3-Dichlorobenzene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
1,3-Dinitrobenzene	01	SW8270D	<2.75 ug/L		2.75	1	10/05/18 10:05	10/05/18 18:32	SKS
1,4-Dichlorobenzene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
1-Naphthylamine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2,3,4,6-Tetrachlorophenol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2,4,5-Trichlorophenol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2,4,6-Trichlorophenol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2,4-Dichlorophenol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2,4-Dimethylphenol	01	SW8270D	<0.55 ug/L		0.55	1	10/05/18 10:05	10/05/18 18:32	SKS
2,4-Dinitrophenol	01	SW8270D	<54.9 ug/L		54.9	1	10/05/18 10:05	10/05/18 18:32	SKS
2,4-Dinitrotoluene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2,6-Dichlorophenol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2,6-Dinitrotoluene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2-Chloronaphthalene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2-Chlorophenol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.1 MW77-3 **Laboratory Sample ID:** 18J0020-01

Grab Date/Time: 10/01/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2-Methylnaphthalene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2-Naphthylamine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2-Nitroaniline	01	SW8270D	<22.0 ug/L		22.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2-Nitrophenol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
3,3'-Dichlorobenzidine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
3-Methylcholanthrene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
3-Nitroaniline	01	SW8270D	<22.0 ug/L		22.0	1	10/05/18 10:05	10/05/18 18:32	SKS
4,6-Dinitro-2-methylphenol	01	SW8270D	<54.9 ug/L		54.9	1	10/05/18 10:05	10/05/18 18:32	SKS
4-Aminobiphenyl	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
4-Bromophenyl phenyl ether	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
4-Chloroaniline	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
4-Chlorophenyl phenyl ether	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
4-Nitroaniline	01	SW8270D	<22.0 ug/L		22.0	1	10/05/18 10:05	10/05/18 18:32	SKS
4-Nitrophenol	01	SW8270D	<54.9 ug/L		54.9	1	10/05/18 10:05	10/05/18 18:32	SKS
7,12-Dimethylbenz (a) anthracene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Acenaphthene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Acenaphthylene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Acetophenone	01	SW8270D	<22.0 ug/L		22.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Aniline	01	SW8270D	<54.9 ug/L		54.9	1	10/05/18 10:05	10/05/18 18:32	SKS
Anthracene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Benzidine	01	SW8270D	<54.9 ug/L	C	54.9	1	10/05/18 10:05	10/05/18 18:32	SKS
Benzo (a) anthracene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Benzo (a) pyrene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Benzo (b) fluoranthene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Benzo (g,h,i) perylene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.1 MW77-3 **Laboratory Sample ID:** 18J0020-01

Grab Date/Time: 10/01/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Benzo (k) fluoranthene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Benzoic acid	01	SW8270D	<54.9 ug/L		54.9	1	10/05/18 10:05	10/05/18 18:32	SKS
Benzyl alcohol	01	SW8270D	<22.0 ug/L		22.0	1	10/05/18 10:05	10/05/18 18:32	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
2,2'-Oxybis (1-chloropropane)	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Butyl benzyl phthalate	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Chrysene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Dibenz (a,h) anthracene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Dibenz (a,j) acridine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Dibenzofuran	01	SW8270D	<5.49 ug/L		5.49	1	10/05/18 10:05	10/05/18 18:32	SKS
Diethyl phthalate	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Dimethyl phthalate	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Di-n-butyl phthalate	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Di-n-octyl phthalate	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Diphenylamine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Ethyl methanesulfonate	01	SW8270D	<22.0 ug/L		22.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Fluoranthene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Fluorene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Hexachlorobenzene	01	SW8270D	<1.10 ug/L		1.10	1	10/05/18 10:05	10/05/18 18:32	SKS
Hexachlorobutadiene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Hexachlorocyclopentadiene	01	SW8270D	<11.0 ug/L	C	11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Hexachloroethane	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.1 MW77-3 **Laboratory Sample ID:** 18J0020-01

Grab Date/Time: 10/01/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Isophorone	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
m+p-Cresols	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Methyl methanesulfonate	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Naphthalene	01	SW8270D	<5.49 ug/L		5.49	1	10/05/18 10:05	10/05/18 18:32	SKS
Nitrobenzene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
n-Nitrosodimethylamine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
n-Nitrosodi-n-butylamine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
n-Nitrosodiphenylamine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
n-Nitrosopiperidine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
o+m+p-Cresols	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
o-Cresol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
p-(Dimethylamino) azobenzene	01	SW8270D	<2.75 ug/L		2.75	1	10/05/18 10:05	10/05/18 18:32	SKS
p-Chloro-m-cresol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Pentachloronitrobenzene (quintozene)	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Pentachlorophenol	01	SW8270D	<22.0 ug/L	C	22.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Phenacetin	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Phenanthrene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Phenol	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Pronamide	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Pyrene	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Pyridine	01	SW8270D	<11.0 ug/L		11.0	1	10/05/18 10:05	10/05/18 18:32	SKS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270D	72.3 %		10-86		10/05/18 10:05	10/05/18 18:32	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.1 MW77-3 **Laboratory Sample ID:** 18J0020-01

Grab Date/Time: 10/01/2018 10:35

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
<i>Surr: 2-Fluorobiphenyl (Surr)</i>	01	SW8270D	78.4 %		9-87		10/05/18 10:05	10/05/18 18:32	SKS
<i>Surr: 2-Fluorophenol (Surr)</i>	01	SW8270D	71.9 %	S	10-52		10/05/18 10:05	10/05/18 18:32	SKS
<i>Surr: Nitrobenzene-d5 (Surr)</i>	01	SW8270D	85.2 %		10-98.5		10/05/18 10:05	10/05/18 18:32	SKS
<i>Surr: Phenol-d5 (Surr)</i>	01	SW8270D	33.5 %	S	5-33		10/05/18 10:05	10/05/18 18:32	SKS
<i>Surr: p-Terphenyl-d14 (Surr)</i>	01	SW8270D	112 %		27-133		10/05/18 10:05	10/05/18 18:32	SKS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	<0.556 mg/L		0.556	1	10/05/18 14:41	10/08/18 14:55	HLM
<i>Surr: Pentacosane (Surr)</i>	01	SW8015C	50.6 %		40-160		10/05/18 14:41	10/08/18 14:55	HLM
TPH-Semi-Volatiles (ORO)	01	SW8015C	<1.1 mg/L		1.1	1	10/04/18 17:05	10/04/18 21:04	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	01	SW7196A	<0.005 mg/L		0.005	1	10/02/18 10:00	10/02/18 16:15	MWL



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.8 MW36-1

Laboratory Sample ID: 18J0020-02

Grab Date/Time: 09/28/2018 10:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	02	SW8015C	<0.10 mg/L		0.10	1	10/02/18 12:44	10/02/18 12:44	DFH
Surr: 2,5-Dibromotoluene (Surr FID)	02	SW8015C	94.9 %		80-120		10/02/18 12:44	10/02/18 12:44	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	10/02/18 16:34	10/02/18 16:34	KCS
1,1,1-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,1,2,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	10/02/18 16:34	10/02/18 16:34	KCS
1,1,2-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,1-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,1-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,1-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,2,3-Trichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,2,3-Trichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,2,4-Trichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,2,4-Trimethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,2-Dibromo-3-chloropropane (DBCP)	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,2-Dibromoethane (EDB)	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,2-Dichlorobenzene	02	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:34	10/02/18 16:34	KCS
1,2-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,2-Dichloropropane	02	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:34	10/02/18 16:34	KCS
1,3,5-Trimethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,3-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,3-Dichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
1,4-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.8 MW36-1 **Laboratory Sample ID:** 18J0020-02

Grab Date/Time: 09/28/2018 10:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2,2-Dichloropropane	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
2-Butanone (MEK)	02	SW8260B	<10.0 ug/L	10.0	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
2-Chlorotoluene	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
2-Hexanone (MBK)	02	SW8260B	<5.00 ug/L	5.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
4-Chlorotoluene	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
4-Isopropyltoluene	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
4-Methyl-2-pentanone (MIBK)	02	SW8260B	<5.00 ug/L	5.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Acetone	02	SW8260B	<10.0 ug/L	10.0	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Benzene	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Bromobenzene	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Bromochloromethane	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Bromodichloromethane	02	SW8260B	<0.50 ug/L	0.50	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Bromoform	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Bromomethane	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Carbon disulfide	02	SW8260B	<10.0 ug/L	10.0	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Carbon tetrachloride	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Chlorobenzene	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Chloroethane	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Chloroform	02	SW8260B	<0.50 ug/L	0.50	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Chloromethane	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
cis-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
cis-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Dibromochloromethane	02	SW8260B	<0.50 ug/L	0.50	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Dibromomethane	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS
Dichlorodifluoromethane	02	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:34	10/02/18 16:34	10/02/18 16:34	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.8 MW36-1 **Laboratory Sample ID:** 18J0020-02

Grab Date/Time: 09/28/2018 10:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Di-isopropyl ether (DIPE)	02	SW8260B	<5.00 ug/L		5.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Ethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Hexachlorobutadiene	02	SW8260B	<0.80 ug/L		0.80	1	10/02/18 16:34	10/02/18 16:34	KCS
Iodomethane	02	SW8260B	<10.0 ug/L		10.0	1	10/02/18 16:34	10/02/18 16:34	KCS
Isopropylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
m+p-Xylenes	02	SW8260B	<2.00 ug/L		2.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Methylene chloride	02	SW8260B	<4.00 ug/L		4.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Methyl-t-butyl ether (MTBE)	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Naphthalene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
n-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
n-Propylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
o-Xylene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
sec-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Styrene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
tert-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Tetrachloroethylene (PCE)	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Toluene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
trans-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
trans-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Trichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Trichlorofluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:34	10/02/18 16:34	KCS
Vinyl acetate	02	SW8260B	<10.0 ug/L		10.0	1	10/02/18 16:34	10/02/18 16:34	KCS
Vinyl chloride	02	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:34	10/02/18 16:34	KCS
Xylenes, Total	02	SW8260B	<3.00 ug/L		3.00	1	10/02/18 16:34	10/02/18 16:34	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.8 MW36-1 **Laboratory Sample ID:** 18J0020-02

Grab Date/Time: 09/28/2018 10:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 1,2-Dichloroethane-d4 (Surr)	02	SW8260B	105 %		70-120		10/02/18 16:34	10/02/18 16:34	KCS
Surr: 4-Bromofluorobenzene (Surr)	02	SW8260B	96.7 %		75-120		10/02/18 16:34	10/02/18 16:34	KCS
Surr: Dibromofluoromethane (Surr)	02	SW8260B	101 %		70-130		10/02/18 16:34	10/02/18 16:34	KCS
Surr: Toluene-d8 (Surr)	02	SW8260B	101 %		70-130		10/02/18 16:34	10/02/18 16:34	KCS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<0.505 mg/L		0.505	1	10/03/18 10:00	10/03/18 15:14	HLM
Surr: Pentacosane (Surr)	02	SW8015C	56.8 %		40-160		10/03/18 10:00	10/03/18 15:14	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.8 MW36-2	Laboratory Sample ID: 18J0020-03
Grab Date/Time: 09/28/2018 11:10	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	03	SW8015C	<0.10 mg/L		0.10	1	10/02/18 13:06	10/02/18 13:06	DFH
Surr: 2,5-Dibromotoluene (Surr FID)	03	SW8015C	96.8 %		80-120		10/02/18 13:06	10/02/18 13:06	DFH

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	10/02/18 16:56	10/02/18 16:56	KCS
1,1,1-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,1,2,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	10/02/18 16:56	10/02/18 16:56	KCS
1,1,2-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,1-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,1-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,1-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,2,3-Trichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,2,3-Trichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,2,4-Trichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,2,4-Trimethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,2-Dibromo-3-chloropropane (DBCP)	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,2-Dibromoethane (EDB)	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,2-Dichlorobenzene	03	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:56	10/02/18 16:56	KCS
1,2-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,2-Dichloropropane	03	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:56	10/02/18 16:56	KCS
1,3,5-Trimethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,3-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,3-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
1,4-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.8 MW36-2 **Laboratory Sample ID:** 18J0020-03

Grab Date/Time: 09/28/2018 11:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2,2-Dichloropropane	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
2-Butanone (MEK)	03	SW8260B	<10.0 ug/L	10.0	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
2-Chlorotoluene	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
2-Hexanone (MBK)	03	SW8260B	<5.00 ug/L	5.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
4-Chlorotoluene	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
4-Isopropyltoluene	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
4-Methyl-2-pentanone (MIBK)	03	SW8260B	<5.00 ug/L	5.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Acetone	03	SW8260B	<10.0 ug/L	10.0	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Benzene	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Bromobenzene	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Bromochloromethane	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Bromodichloromethane	03	SW8260B	<0.50 ug/L	0.50	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Bromoform	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Bromomethane	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Carbon disulfide	03	SW8260B	<10.0 ug/L	10.0	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Carbon tetrachloride	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Chlorobenzene	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Chloroethane	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Chloroform	03	SW8260B	<0.50 ug/L	0.50	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Chloromethane	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
cis-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
cis-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Dibromochloromethane	03	SW8260B	<0.50 ug/L	0.50	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Dibromomethane	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS
Dichlorodifluoromethane	03	SW8260B	<1.00 ug/L	1.00	1	10/02/18 16:56	10/02/18 16:56	10/02/18 16:56	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.8 MW36-2 **Laboratory Sample ID:** 18J0020-03

Grab Date/Time: 09/28/2018 11:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Di-isopropyl ether (DIPE)	03	SW8260B	<5.00 ug/L		5.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Ethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Hexachlorobutadiene	03	SW8260B	<0.80 ug/L		0.80	1	10/02/18 16:56	10/02/18 16:56	KCS
Iodomethane	03	SW8260B	<10.0 ug/L		10.0	1	10/02/18 16:56	10/02/18 16:56	KCS
Isopropylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
m+p-Xylenes	03	SW8260B	<2.00 ug/L		2.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Methylene chloride	03	SW8260B	<4.00 ug/L		4.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Methyl-t-butyl ether (MTBE)	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Naphthalene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
n-Butylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
n-Propylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
o-Xylene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
sec-Butylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Styrene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
tert-Butylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Tetrachloroethylene (PCE)	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Toluene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
trans-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
trans-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Trichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Trichlorofluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/02/18 16:56	10/02/18 16:56	KCS
Vinyl acetate	03	SW8260B	<10.0 ug/L		10.0	1	10/02/18 16:56	10/02/18 16:56	KCS
Vinyl chloride	03	SW8260B	<0.50 ug/L		0.50	1	10/02/18 16:56	10/02/18 16:56	KCS
Xylenes, Total	03	SW8260B	<3.00 ug/L		3.00	1	10/02/18 16:56	10/02/18 16:56	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.8 MW36-2 **Laboratory Sample ID:** 18J0020-03

Grab Date/Time: 09/28/2018 11:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 1,2-Dichloroethane-d4 (Surr)	03	SW8260B	101 %		70-120		10/02/18 16:56	10/02/18 16:56	KCS
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260B	96.9 %		75-120		10/02/18 16:56	10/02/18 16:56	KCS
Surr: Dibromofluoromethane (Surr)	03	SW8260B	102 %		70-130		10/02/18 16:56	10/02/18 16:56	KCS
Surr: Toluene-d8 (Surr)	03	SW8260B	100 %		70-130		10/02/18 16:56	10/02/18 16:56	KCS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	03	SW8015C	<0.521 mg/L		0.521	1	10/03/18 10:00	10/03/18 15:40	HLM
Surr: Pentacosane (Surr)	03	SW8015C	55.2 %		40-160		10/03/18 10:00	10/03/18 15:40	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-1

Laboratory Sample ID: 18J0020-04

Grab Date/Time: 10/01/2018 12:05

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04	SW6010C	0.0423 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Aluminum	04	SW6010C	4.13 mg/L		0.0500	1	10/02/18 16:00	10/05/18 12:36	BG
Arsenic	04	SW6020A	3.7 ug/L		1.0	1	10/02/18 16:00	10/03/18 11:20	BG
Barium	04	SW6010C	1.89 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Beryllium	04	SW6010C	<0.0040 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:36	BG
Calcium	04	SW6010C	<0.0500 mg/L		0.0500	1	10/02/18 16:00	10/05/18 12:36	BG
Cadmium	04	SW6010C	0.0064 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:36	BG
Cobalt	04	SW6010C	0.0045 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:36	BG
Chromium	04	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Copper	04	SW6010C	0.0104 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Iron	04	SW6010C	3.42 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Mercury	04	SW7470A	0.00070 mg/L		0.00020	1	10/04/18 09:46	10/05/18 11:58	MWL
Potassium	04	SW6010C	28.6 mg/L		0.50	1	10/02/18 16:00	10/05/18 12:36	BG
Magnesium	04RE1	SW6010C	296 mg/L		1.00	100	10/02/18 16:00	10/05/18 17:33	BG
Manganese	04	SW6010C	0.853 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Sodium	04RE1	SW6010C	1220 mg/L		50.0	100	10/02/18 16:00	10/05/18 17:33	BG
Nickel	04	SW6010C	0.0228 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Lead	04	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Antimony	04	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:20	BG
Selenium	04	SW6020A	9.70 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:20	BG
Thallium	04	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:20	BG
Vanadium	04	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Zinc	04	SW6010C	0.0779 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:36	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	04	SW8015C	<0.10 mg/L		0.10	1	10/02/18 13:29	10/02/18 13:29	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-1 **Laboratory Sample ID:** 18J0020-04

Grab Date/Time: 10/01/2018 12:05

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	04	SW8015C	99.1 %		80-120		10/02/18 13:29	10/02/18 13:29	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	04	SW8260B	<0.40 ug/L		0.40	1	10/02/18 17:19	10/02/18 17:19	KCS
1,1,1-Trichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,1,2,2-Tetrachloroethane	04	SW8260B	<0.40 ug/L		0.40	1	10/02/18 17:19	10/02/18 17:19	KCS
1,1,2-Trichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,1-Dichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,1-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,1-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,2,3-Trichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,2,3-Trichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,2,4-Trichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,2,4-Trimethylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,2-Dibromo-3-chloropropane (DBCP)	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,2-Dibromoethane (EDB)	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,2-Dichlorobenzene	04	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:19	10/02/18 17:19	KCS
1,2-Dichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,2-Dichloropropane	04	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:19	10/02/18 17:19	KCS
1,3,5-Trimethylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,3-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,3-Dichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
1,4-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
2,2-Dichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-1 **Laboratory Sample ID:** 18J0020-04

Grab Date/Time: 10/01/2018 12:05

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	04	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:19	10/02/18 17:19	KCS
2-Chlorotoluene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
2-Hexanone (MBK)	04	SW8260B	<5.00 ug/L		5.00	1	10/02/18 17:19	10/02/18 17:19	KCS
4-Chlorotoluene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
4-Isopropyltoluene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
4-Methyl-2-pentanone (MIBK)	04	SW8260B	<5.00 ug/L		5.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Acetone	04	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:19	10/02/18 17:19	KCS
Benzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Bromobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Bromochloromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Bromodichloromethane	04	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:19	10/02/18 17:19	KCS
Bromoform	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Bromomethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Carbon disulfide	04	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:19	10/02/18 17:19	KCS
Carbon tetrachloride	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Chlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Chloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Chloroform	04	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:19	10/02/18 17:19	KCS
Chloromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
cis-1,2-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
cis-1,3-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Dibromochloromethane	04	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:19	10/02/18 17:19	KCS
Dibromomethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Dichlorodifluoromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Di-isopropyl ether (DIPE)	04	SW8260B	<5.00 ug/L		5.00	1	10/02/18 17:19	10/02/18 17:19	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-1

Laboratory Sample ID: 18J0020-04

Grab Date/Time: 10/01/2018 12:05

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Ethylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Hexachlorobutadiene	04	SW8260B	<0.80 ug/L		0.80	1	10/02/18 17:19	10/02/18 17:19	KCS
Iodomethane	04	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:19	10/02/18 17:19	KCS
Isopropylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
m+p-Xylenes	04	SW8260B	<2.00 ug/L		2.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Methylene chloride	04	SW8260B	<4.00 ug/L		4.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Methyl-t-butyl ether (MTBE)	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Naphthalene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
n-Butylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
n-Propylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
o-Xylene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
sec-Butylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Styrene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
tert-Butylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Tetrachloroethylene (PCE)	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Toluene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
trans-1,2-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
trans-1,3-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Trichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Trichlorofluoromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Vinyl acetate	04	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:19	10/02/18 17:19	KCS
Vinyl chloride	04	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:19	10/02/18 17:19	KCS
Xylenes, Total	04	SW8260B	<3.00 ug/L		3.00	1	10/02/18 17:19	10/02/18 17:19	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	04	SW8260B	104 %		70-120		10/02/18 17:19	10/02/18 17:19	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-1	Laboratory Sample ID: 18J0020-04
Grab Date/Time: 10/01/2018 12:05	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	04	SW8260B	95.2 %		75-120		10/02/18 17:19	10/02/18 17:19	KCS
Surr: Dibromofluoromethane (Surr)	04	SW8260B	103 %		70-130		10/02/18 17:19	10/02/18 17:19	KCS
Surr: Toluene-d8 (Surr)	04	SW8260B	100 %		70-130		10/02/18 17:19	10/02/18 17:19	KCS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	04	SW8015C	<0.556 mg/L		0.556	1	10/05/18 14:41	10/08/18 15:21	HLM
Surr: Pentacosane (Surr)	04	SW8015C	47.1 %		40-160		10/05/18 14:41	10/08/18 15:21	HLM
TPH-Semi-Volatiles (ORO)	04	SW8015C	<1.1 mg/L		1.1	1	10/04/18 17:05	10/04/18 21:28	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
4,4'-DDE	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
4,4'-DDT	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Aldrin	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
alpha-BHC	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
beta-BHC	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Chlordane	04	SW8081B	<0.211 ug/L		0.211	1	10/04/18 17:35	10/05/18 14:12	HLM
delta-BHC	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Dieldrin	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Endosulfan I	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Endosulfan II	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Endosulfan sulfate	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Endrin	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Endrin aldehyde	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
gamma-BHC (Lindane)	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-1	Laboratory Sample ID: 18J0020-04
Grab Date/Time: 10/01/2018 12:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Heptachlor	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Heptachlor epoxide	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Methoxychlor	04	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:12	HLM
Toxaphene	04	SW8081B	<1.05 ug/L		1.05	1	10/04/18 17:35	10/05/18 14:12	HLM
<i>Surr: TCMX</i>	<i>04</i>	<i>SW8081B</i>	<i>65.0 %</i>		<i>18-112</i>		<i>10/04/18 17:35</i>	<i>10/05/18 14:12</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>04</i>	<i>SW8081B</i>	<i>55.0 %</i>		<i>27-131</i>		<i>10/04/18 17:35</i>	<i>10/05/18 14:12</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:22	SKS
2,4,5-TP (Silvex)	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:22	SKS
2,4-D	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:22	SKS
Dinoseb	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:22	SKS
Pentachlorophenol	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:22	SKS
<i>Surr: DCAA (Surr)</i>	<i>04</i>	<i>SW8151A</i>	<i>75.0 %</i>		<i>60-112</i>		<i>10/03/18 08:23</i>	<i>10/08/18 16:22</i>	<i>SKS</i>
Wet Chemistry Analysis									
Chromium, Hexavalent	04	SW7196A	<0.005 mg/L		0.005	1	10/02/18 10:00	10/02/18 16:15	MWL



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-2 **Laboratory Sample ID:** 18J0020-05

Grab Date/Time: 10/01/2018 14:45

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05	SW6010C	0.0163 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Aluminum	05	SW6010C	0.844 mg/L		0.0500	1	10/02/18 16:00	10/05/18 12:47	BG
Arsenic	05	SW6020A	<1.0 ug/L		1.0	1	10/02/18 16:00	10/03/18 11:22	BG
Barium	05	SW6010C	5.41 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Beryllium	05	SW6010C	<0.0040 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:47	BG
Calcium	05	SW6010C	<0.0500 mg/L		0.0500	1	10/02/18 16:00	10/05/18 12:47	BG
Cadmium	05	SW6010C	0.0150 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:47	BG
Cobalt	05	SW6010C	<0.0040 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:47	BG
Chromium	05	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Copper	05	SW6010C	0.0525 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Iron	05	SW6010C	0.999 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Mercury	05	SW7470A	0.00082 mg/L		0.00020	1	10/04/18 09:46	10/05/18 12:00	MWL
Potassium	05	SW6010C	27.5 mg/L		0.50	1	10/02/18 16:00	10/05/18 12:47	BG
Magnesium	05RE1	SW6010C	224 mg/L		1.00	100	10/02/18 16:00	10/05/18 17:35	BG
Manganese	05	SW6010C	1.00 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Sodium	05RE1	SW6010C	1360 mg/L		50.0	100	10/02/18 16:00	10/05/18 17:35	BG
Nickel	05	SW6010C	0.0524 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Lead	05	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Antimony	05	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:22	BG
Selenium	05	SW6020A	3.15 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:22	BG
Thallium	05	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:22	BG
Vanadium	05	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Zinc	05	SW6010C	0.161 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:47	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	05	SW8015C	<0.10 mg/L		0.10	1	10/02/18 13:51	10/02/18 13:51	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-2 **Laboratory Sample ID:** 18J0020-05

Grab Date/Time: 10/01/2018 14:45

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	05	SW8015C	99.1 %		80-120		10/02/18 13:51	10/02/18 13:51	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	05	SW8260B	<0.40 ug/L		0.40	1	10/02/18 17:41	10/02/18 17:41	KCS
1,1,1-Trichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,1,2,2-Tetrachloroethane	05	SW8260B	<0.40 ug/L		0.40	1	10/02/18 17:41	10/02/18 17:41	KCS
1,1,2-Trichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,1-Dichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,1-Dichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,1-Dichloropropene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,2,3-Trichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,2,3-Trichloropropane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,2,4-Trichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,2,4-Trimethylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,2-Dibromo-3-chloropropane (DBCP)	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,2-Dibromoethane (EDB)	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,2-Dichlorobenzene	05	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:41	10/02/18 17:41	KCS
1,2-Dichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,2-Dichloropropane	05	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:41	10/02/18 17:41	KCS
1,3,5-Trimethylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,3-Dichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,3-Dichloropropane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
1,4-Dichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
2,2-Dichloropropane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-2

Laboratory Sample ID: 18J0020-05

Grab Date/Time: 10/01/2018 14:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	05	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:41	10/02/18 17:41	KCS
2-Chlorotoluene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
2-Hexanone (MBK)	05	SW8260B	<5.00 ug/L		5.00	1	10/02/18 17:41	10/02/18 17:41	KCS
4-Chlorotoluene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
4-Isopropyltoluene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
4-Methyl-2-pentanone (MIBK)	05	SW8260B	<5.00 ug/L		5.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Acetone	05	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:41	10/02/18 17:41	KCS
Benzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Bromobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Bromochloromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Bromodichloromethane	05	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:41	10/02/18 17:41	KCS
Bromoform	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Bromomethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Carbon disulfide	05	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:41	10/02/18 17:41	KCS
Carbon tetrachloride	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Chlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Chloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Chloroform	05	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:41	10/02/18 17:41	KCS
Chloromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
cis-1,2-Dichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
cis-1,3-Dichloropropene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Dibromochloromethane	05	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:41	10/02/18 17:41	KCS
Dibromomethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Dichlorodifluoromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Di-isopropyl ether (DIPE)	05	SW8260B	<5.00 ug/L		5.00	1	10/02/18 17:41	10/02/18 17:41	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-2 **Laboratory Sample ID:** 18J0020-05

Grab Date/Time: 10/01/2018 14:45

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Ethylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Hexachlorobutadiene	05	SW8260B	<0.80 ug/L		0.80	1	10/02/18 17:41	10/02/18 17:41	KCS
Iodomethane	05	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:41	10/02/18 17:41	KCS
Isopropylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
m+p-Xylenes	05	SW8260B	<2.00 ug/L		2.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Methylene chloride	05	SW8260B	<4.00 ug/L		4.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Methyl-t-butyl ether (MTBE)	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Naphthalene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
n-Butylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
n-Propylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
o-Xylene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
sec-Butylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Styrene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
tert-Butylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Tetrachloroethylene (PCE)	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Toluene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
trans-1,2-Dichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
trans-1,3-Dichloropropene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Trichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Trichlorofluoromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Vinyl acetate	05	SW8260B	<10.0 ug/L		10.0	1	10/02/18 17:41	10/02/18 17:41	KCS
Vinyl chloride	05	SW8260B	<0.50 ug/L		0.50	1	10/02/18 17:41	10/02/18 17:41	KCS
Xylenes, Total	05	SW8260B	<3.00 ug/L		3.00	1	10/02/18 17:41	10/02/18 17:41	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	05	SW8260B	104 %		70-120		10/02/18 17:41	10/02/18 17:41	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-2	Laboratory Sample ID: 18J0020-05
Grab Date/Time: 10/01/2018 14:45	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	05	SW8260B	94.8 %		75-120		10/02/18 17:41	10/02/18 17:41	KCS
Surr: Dibromofluoromethane (Surr)	05	SW8260B	98.6 %		70-130		10/02/18 17:41	10/02/18 17:41	KCS
Surr: Toluene-d8 (Surr)	05	SW8260B	100 %		70-130		10/02/18 17:41	10/02/18 17:41	KCS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	05	SW8015C	<0.568 mg/L		0.568	1	10/05/18 14:41	10/08/18 15:47	HLM
Surr: Pentacosane (Surr)	05	SW8015C	52.2 %		40-160		10/05/18 14:41	10/08/18 15:47	HLM
TPH-Semi-Volatiles (ORO)	05	SW8015C	<1.1 mg/L		1.1	1	10/04/18 17:05	10/04/18 21:53	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
4,4'-DDE	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
4,4'-DDT	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Aldrin	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
alpha-BHC	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
beta-BHC	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Chlordane	05	SW8081B	<0.213 ug/L		0.213	1	10/04/18 17:35	10/05/18 14:31	HLM
delta-BHC	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Dieldrin	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Endosulfan I	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Endosulfan II	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Endosulfan sulfate	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Endrin	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Endrin aldehyde	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
gamma-BHC (Lindane)	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-2	Laboratory Sample ID: 18J0020-05
Grab Date/Time: 10/01/2018 14:45	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Heptachlor	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Heptachlor epoxide	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Methoxychlor	05	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:31	HLM
Toxaphene	05	SW8081B	<1.06 ug/L		1.06	1	10/04/18 17:35	10/05/18 14:31	HLM
<i>Surr: TCMX</i>	<i>05</i>	<i>SW8081B</i>	<i>70.0 %</i>		<i>18-112</i>		<i>10/04/18 17:35</i>	<i>10/05/18 14:31</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>05</i>	<i>SW8081B</i>	<i>65.0 %</i>		<i>27-131</i>		<i>10/04/18 17:35</i>	<i>10/05/18 14:31</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:40	SKS
2,4,5-TP (Silvex)	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:40	SKS
2,4-D	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:40	SKS
Dinoseb	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:40	SKS
Pentachlorophenol	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:40	SKS
<i>Surr: DCAA (Surr)</i>	<i>05</i>	<i>SW8151A</i>	<i>85.0 %</i>		<i>60-112</i>		<i>10/03/18 08:23</i>	<i>10/08/18 16:40</i>	<i>SKS</i>
Wet Chemistry Analysis									
Chromium, Hexavalent	05	SW7196A	<0.005 mg/L		0.005	1	10/02/18 10:00	10/02/18 16:15	MWL



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-3 **Laboratory Sample ID:** 18J0020-06

Grab Date/Time: 10/01/2018 16:00

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Aluminum	06	SW6010C	0.249 mg/L		0.0500	1	10/02/18 16:00	10/05/18 12:49	BG
Arsenic	06	SW6020A	<1.0 ug/L		1.0	1	10/02/18 16:00	10/03/18 11:24	BG
Barium	06	SW6010C	0.742 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Beryllium	06	SW6010C	<0.0040 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:49	BG
Calcium	06	SW6010C	<0.0500 mg/L		0.0500	1	10/02/18 16:00	10/05/18 12:49	BG
Cadmium	06	SW6010C	<0.0040 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:49	BG
Cobalt	06	SW6010C	0.0087 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:49	BG
Chromium	06	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Copper	06	SW6010C	0.0144 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Iron	06	SW6010C	0.341 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Mercury	06	SW7470A	<0.00020 mg/L		0.00020	1	10/04/18 09:46	10/05/18 12:02	MWL
Potassium	06	SW6010C	30.3 mg/L		0.50	1	10/02/18 16:00	10/05/18 12:49	BG
Magnesium	06RE1	SW6010C	170 mg/L		1.00	100	10/02/18 16:00	10/05/18 17:38	BG
Manganese	06	SW6010C	0.828 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Sodium	06RE1	SW6010C	782 mg/L		50.0	100	10/02/18 16:00	10/05/18 17:38	BG
Nickel	06	SW6010C	0.0292 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Lead	06	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Antimony	06	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:24	BG
Selenium	06	SW6020A	3.55 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:24	BG
Thallium	06	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:24	BG
Vanadium	06	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Zinc	06	SW6010C	0.0526 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:49	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	06	SW8015C	<0.10 mg/L		0.10	1	10/02/18 14:14	10/02/18 14:14	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-3	Laboratory Sample ID: 18J0020-06
Grab Date/Time: 10/01/2018 16:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	06	SW8015C	94.1 %		80-120		10/02/18 14:14	10/02/18 14:14	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	06	SW8260B	<0.40 ug/L		0.40	1	10/02/18 18:03	10/02/18 18:03	KCS
1,1,1-Trichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,1,2,2-Tetrachloroethane	06	SW8260B	<0.40 ug/L		0.40	1	10/02/18 18:03	10/02/18 18:03	KCS
1,1,2-Trichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,1-Dichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,1-Dichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,1-Dichloropropene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,2,3-Trichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,2,3-Trichloropropane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,2,4-Trichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,2,4-Trimethylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,2-Dibromo-3-chloropropane (DBCP)	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,2-Dibromoethane (EDB)	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,2-Dichlorobenzene	06	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:03	10/02/18 18:03	KCS
1,2-Dichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,2-Dichloropropane	06	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:03	10/02/18 18:03	KCS
1,3,5-Trimethylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,3-Dichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,3-Dichloropropane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
1,4-Dichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
2,2-Dichloropropane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-3

Laboratory Sample ID: 18J0020-06

Grab Date/Time: 10/01/2018 16:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	06	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:03	10/02/18 18:03	KCS
2-Chlorotoluene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
2-Hexanone (MBK)	06	SW8260B	<5.00 ug/L		5.00	1	10/02/18 18:03	10/02/18 18:03	KCS
4-Chlorotoluene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
4-Isopropyltoluene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
4-Methyl-2-pentanone (MIBK)	06	SW8260B	<5.00 ug/L		5.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Acetone	06	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:03	10/02/18 18:03	KCS
Benzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Bromobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Bromochloromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Bromodichloromethane	06	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:03	10/02/18 18:03	KCS
Bromoform	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Bromomethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Carbon disulfide	06	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:03	10/02/18 18:03	KCS
Carbon tetrachloride	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Chlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Chloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Chloroform	06	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:03	10/02/18 18:03	KCS
Chloromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
cis-1,2-Dichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
cis-1,3-Dichloropropene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Dibromochloromethane	06	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:03	10/02/18 18:03	KCS
Dibromomethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Dichlorodifluoromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Di-isopropyl ether (DIPE)	06	SW8260B	<5.00 ug/L		5.00	1	10/02/18 18:03	10/02/18 18:03	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-3

Laboratory Sample ID: 18J0020-06

Grab Date/Time: 10/01/2018 16:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Ethylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Hexachlorobutadiene	06	SW8260B	<0.80 ug/L		0.80	1	10/02/18 18:03	10/02/18 18:03	KCS
Iodomethane	06	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:03	10/02/18 18:03	KCS
Isopropylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
m+p-Xylenes	06	SW8260B	<2.00 ug/L		2.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Methylene chloride	06	SW8260B	<4.00 ug/L		4.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Methyl-t-butyl ether (MTBE)	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Naphthalene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
n-Butylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
n-Propylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
o-Xylene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
sec-Butylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Styrene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
tert-Butylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Tetrachloroethylene (PCE)	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Toluene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
trans-1,2-Dichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
trans-1,3-Dichloropropene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Trichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Trichlorofluoromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Vinyl acetate	06	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:03	10/02/18 18:03	KCS
Vinyl chloride	06	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:03	10/02/18 18:03	KCS
Xylenes, Total	06	SW8260B	<3.00 ug/L		3.00	1	10/02/18 18:03	10/02/18 18:03	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	06	SW8260B	108 %		70-120		10/02/18 18:03	10/02/18 18:03	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-3	Laboratory Sample ID: 18J0020-06
Grab Date/Time: 10/01/2018 16:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	06	SW8260B	94.6 %		75-120		10/02/18 18:03	10/02/18 18:03	KCS
Surr: Dibromofluoromethane (Surr)	06	SW8260B	103 %		70-130		10/02/18 18:03	10/02/18 18:03	KCS
Surr: Toluene-d8 (Surr)	06	SW8260B	100 %		70-130		10/02/18 18:03	10/02/18 18:03	KCS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	06	SW8015C	<0.556 mg/L		0.556	1	10/05/18 14:41	10/08/18 16:13	HLM
Surr: Pentacosane (Surr)	06	SW8015C	50.7 %		40-160		10/05/18 14:41	10/08/18 16:13	HLM
TPH-Semi-Volatiles (ORO)	06	SW8015C	<1.0 mg/L		1.0	1	10/04/18 17:05	10/04/18 22:18	HLM
Organochlorine Pesticides and PCBs by GC/ECD									
4,4'-DDD	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
4,4'-DDE	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
4,4'-DDT	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Aldrin	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
alpha-BHC	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
beta-BHC	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Chlordane	06	SW8081B	<0.213 ug/L		0.213	1	10/04/18 17:35	10/05/18 14:50	HLM
delta-BHC	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Dieldrin	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Endosulfan I	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Endosulfan II	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Endosulfan sulfate	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Endrin	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Endrin aldehyde	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
gamma-BHC (Lindane)	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.9 MW39-3	Laboratory Sample ID: 18J0020-06
Grab Date/Time: 10/01/2018 16:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Heptachlor	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Heptachlor epoxide	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Methoxychlor	06	SW8081B	<0.053 ug/L		0.053	1	10/04/18 17:35	10/05/18 14:50	HLM
Toxaphene	06	SW8081B	<1.06 ug/L		1.06	1	10/04/18 17:35	10/05/18 14:50	HLM
<i>Surr: TCMX</i>	06	SW8081B	70.0 %		18-112		10/04/18 17:35	10/05/18 14:50	HLM
<i>Surr: DCB</i>	06	SW8081B	65.0 %		27-131		10/04/18 17:35	10/05/18 14:50	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:58	SKS
2,4,5-TP (Silvex)	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:58	SKS
2,4-D	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:58	SKS
Dinoseb	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:58	SKS
Pentachlorophenol	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 16:58	SKS
<i>Surr: DCAA (Surr)</i>	06	SW8151A	75.0 %		60-112		10/03/18 08:23	10/08/18 16:58	SKS
Wet Chemistry Analysis									
Chromium, Hexavalent	06	SW7196A	<0.005 mg/L		0.005	1	10/02/18 10:00	10/02/18 16:15	MWL



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.2 MW10-3

Laboratory Sample ID: 18J0020-07

Grab Date/Time: 10/01/2018 17:40

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	07	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Aluminum	07RE1	SW6010C	19.1 mg/L		0.500	10	10/02/18 16:00	10/05/18 17:40	BG
Arsenic	07	SW6020A	4.6 ug/L		1.0	1	10/02/18 16:00	10/03/18 11:26	BG
Barium	07	SW6010C	0.258 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Beryllium	07	SW6010C	0.0043 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:52	BG
Calcium	07RE1	SW6010C	39.0 mg/L		0.500	10	10/02/18 16:00	10/05/18 17:40	BG
Cadmium	07	SW6010C	<0.0040 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:52	BG
Cobalt	07	SW6010C	0.0282 mg/L		0.0040	1	10/02/18 16:00	10/05/18 12:52	BG
Chromium	07	SW6010C	0.0143 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Copper	07	SW6010C	0.0154 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Iron	07RE1	SW6010C	21.7 mg/L		0.100	10	10/02/18 16:00	10/05/18 17:40	BG
Mercury	07	SW7470A	<0.00020 mg/L		0.00020	1	10/04/18 09:46	10/05/18 12:05	MWL
Potassium	07	SW6010C	7.45 mg/L		0.50	1	10/02/18 16:00	10/05/18 12:52	BG
Magnesium	07	SW6010C	14.2 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Manganese	07	SW6010C	1.33 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Sodium	07	SW6010C	44.5 mg/L		0.50	1	10/02/18 16:00	10/05/18 12:52	BG
Nickel	07	SW6010C	<0.0100 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Lead	07	SW6010C	0.0198 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Antimony	07	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:26	BG
Selenium	07	SW6020A	11.9 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:26	BG
Thallium	07	SW6020A	<1.00 ug/L		1.00	1	10/02/18 16:00	10/03/18 11:26	BG
Vanadium	07	SW6010C	0.0449 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Zinc	07	SW6010C	0.0606 mg/L		0.0100	1	10/02/18 16:00	10/05/18 12:52	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	07	SW8015C	<0.10 mg/L		0.10	1	10/02/18 14:36	10/02/18 14:36	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.2 MW10-3	Laboratory Sample ID: 18J0020-07
Grab Date/Time: 10/01/2018 17:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	07	SW8015C	90.2 %		80-120		10/02/18 14:36	10/02/18 14:36	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	07	SW8260B	<0.40 ug/L		0.40	1	10/02/18 18:25	10/02/18 18:25	KCS
1,1,1-Trichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,1,2,2-Tetrachloroethane	07	SW8260B	<0.40 ug/L		0.40	1	10/02/18 18:25	10/02/18 18:25	KCS
1,1,2-Trichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,1-Dichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,1-Dichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,1-Dichloropropene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,2,3-Trichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,2,3-Trichloropropane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,2,4-Trichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,2,4-Trimethylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,2-Dibromo-3-chloropropane (DBCP)	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,2-Dibromoethane (EDB)	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,2-Dichlorobenzene	07	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:25	10/02/18 18:25	KCS
1,2-Dichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,2-Dichloropropane	07	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:25	10/02/18 18:25	KCS
1,3,5-Trimethylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,3-Dichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,3-Dichloropropane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
1,4-Dichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
2,2-Dichloropropane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.2 MW10-3	Laboratory Sample ID: 18J0020-07
Grab Date/Time: 10/01/2018 17:40	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	07	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:25	10/02/18 18:25	KCS
2-Chlorotoluene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
2-Hexanone (MBK)	07	SW8260B	<5.00 ug/L		5.00	1	10/02/18 18:25	10/02/18 18:25	KCS
4-Chlorotoluene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
4-Isopropyltoluene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
4-Methyl-2-pentanone (MIBK)	07	SW8260B	<5.00 ug/L		5.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Acetone	07	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:25	10/02/18 18:25	KCS
Benzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Bromobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Bromochloromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Bromodichloromethane	07	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:25	10/02/18 18:25	KCS
Bromoform	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Bromomethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Carbon disulfide	07	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:25	10/02/18 18:25	KCS
Carbon tetrachloride	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Chlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Chloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Chloroform	07	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:25	10/02/18 18:25	KCS
Chloromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
cis-1,2-Dichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
cis-1,3-Dichloropropene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Dibromochloromethane	07	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:25	10/02/18 18:25	KCS
Dibromomethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Dichlorodifluoromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Di-isopropyl ether (DIPE)	07	SW8260B	<5.00 ug/L		5.00	1	10/02/18 18:25	10/02/18 18:25	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.2 MW10-3 **Laboratory Sample ID:** 18J0020-07

Grab Date/Time: 10/01/2018 17:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Ethylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Hexachlorobutadiene	07	SW8260B	<0.80 ug/L		0.80	1	10/02/18 18:25	10/02/18 18:25	KCS
Iodomethane	07	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:25	10/02/18 18:25	KCS
Isopropylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
m+p-Xylenes	07	SW8260B	<2.00 ug/L		2.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Methylene chloride	07	SW8260B	<4.00 ug/L		4.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Methyl-t-butyl ether (MTBE)	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Naphthalene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
n-Butylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
n-Propylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
o-Xylene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
sec-Butylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Styrene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
tert-Butylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Tetrachloroethylene (PCE)	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Toluene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
trans-1,2-Dichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
trans-1,3-Dichloropropene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Trichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Trichlorofluoromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Vinyl acetate	07	SW8260B	<10.0 ug/L		10.0	1	10/02/18 18:25	10/02/18 18:25	KCS
Vinyl chloride	07	SW8260B	<0.50 ug/L		0.50	1	10/02/18 18:25	10/02/18 18:25	KCS
Xylenes, Total	07	SW8260B	<3.00 ug/L		3.00	1	10/02/18 18:25	10/02/18 18:25	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	07	SW8260B	106 %		70-120		10/02/18 18:25	10/02/18 18:25	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Task 2.2 MW10-3 **Laboratory Sample ID:** 18J0020-07

Grab Date/Time: 10/01/2018 17:40

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	07	SW8260B	94.3 %		75-120		10/02/18 18:25	10/02/18 18:25	KCS
Surr: Dibromofluoromethane (Surr)	07	SW8260B	102 %		70-130		10/02/18 18:25	10/02/18 18:25	KCS
Surr: Toluene-d8 (Surr)	07	SW8260B	99.7 %		70-130		10/02/18 18:25	10/02/18 18:25	KCS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	07	SW8015C	<0.556 mg/L		0.556	1	10/05/18 14:41	10/08/18 16:39	HLM
Surr: Pentacosane (Surr)	07	SW8015C	47.1 %		40-160		10/05/18 14:41	10/08/18 16:39	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	07	SW7196A	<0.005 mg/L		0.005	1	10/02/18 10:00	10/02/18 16:15	MWL



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Trip Blank	Laboratory Sample ID: 18J0020-08
Grab Date/Time: 08/23/2018 14:10	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Volatile Hydrocarbons by GC

TPH-Volatiles (GRO)	08	SW8015C	<0.10 mg/L		0.10	1	10/02/18 11:14	10/02/18 11:14	DFH
Surr: 2,5-Dibromotoluene (Surr FID)	08	SW8015C	94.5 %		80-120		10/02/18 11:14	10/02/18 11:14	DFH

Volatile Organic Compounds by GCMS

1,1,1,2-Tetrachloroethane	08	SW8260B	<0.40 ug/L		0.40	1	10/02/18 13:36	10/02/18 13:36	KCS
1,1,1-Trichloroethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,1,2,2-Tetrachloroethane	08	SW8260B	<0.40 ug/L		0.40	1	10/02/18 13:36	10/02/18 13:36	KCS
1,1,2-Trichloroethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,1-Dichloroethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,1-Dichloroethylene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,1-Dichloropropene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,2,3-Trichlorobenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,2,3-Trichloropropane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,2,4-Trichlorobenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,2,4-Trimethylbenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,2-Dibromo-3-chloropropane (DBCP)	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,2-Dibromoethane (EDB)	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,2-Dichlorobenzene	08	SW8260B	<0.50 ug/L		0.50	1	10/02/18 13:36	10/02/18 13:36	KCS
1,2-Dichloroethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,2-Dichloropropane	08	SW8260B	<0.50 ug/L		0.50	1	10/02/18 13:36	10/02/18 13:36	KCS
1,3,5-Trimethylbenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,3-Dichlorobenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,3-Dichloropropane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
1,4-Dichlorobenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Trip Blank **Laboratory Sample ID:** 18J0020-08

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2,2-Dichloropropane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
2-Butanone (MEK)	08	SW8260B	<10.0 ug/L		10.0	1	10/02/18 13:36	10/02/18 13:36	KCS
2-Chlorotoluene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
2-Hexanone (MBK)	08	SW8260B	<5.00 ug/L		5.00	1	10/02/18 13:36	10/02/18 13:36	KCS
4-Chlorotoluene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
4-Isopropyltoluene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
4-Methyl-2-pentanone (MIBK)	08	SW8260B	<5.00 ug/L		5.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Acetone	08	SW8260B	<10.0 ug/L		10.0	1	10/02/18 13:36	10/02/18 13:36	KCS
Benzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Bromobenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Bromochloromethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Bromodichloromethane	08	SW8260B	<0.50 ug/L		0.50	1	10/02/18 13:36	10/02/18 13:36	KCS
Bromoform	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Bromomethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Carbon disulfide	08	SW8260B	<10.0 ug/L		10.0	1	10/02/18 13:36	10/02/18 13:36	KCS
Carbon tetrachloride	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Chlorobenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Chloroethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Chloroform	08	SW8260B	<0.50 ug/L		0.50	1	10/02/18 13:36	10/02/18 13:36	KCS
Chloromethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
cis-1,2-Dichloroethylene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
cis-1,3-Dichloropropene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Dibromochloromethane	08	SW8260B	<0.50 ug/L		0.50	1	10/02/18 13:36	10/02/18 13:36	KCS
Dibromomethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Dichlorodifluoromethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Trip Blank **Laboratory Sample ID:** 18J0020-08

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Di-isopropyl ether (DIPE)	08	SW8260B	<5.00 ug/L		5.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Ethylbenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Hexachlorobutadiene	08	SW8260B	<0.80 ug/L		0.80	1	10/02/18 13:36	10/02/18 13:36	KCS
Iodomethane	08	SW8260B	<10.0 ug/L		10.0	1	10/02/18 13:36	10/02/18 13:36	KCS
Isopropylbenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
m+p-Xylenes	08	SW8260B	<2.00 ug/L		2.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Methylene chloride	08	SW8260B	<4.00 ug/L		4.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Methyl-t-butyl ether (MTBE)	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Naphthalene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
n-Butylbenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
n-Propylbenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
o-Xylene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
sec-Butylbenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Styrene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
tert-Butylbenzene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Tetrachloroethylene (PCE)	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Toluene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
trans-1,2-Dichloroethylene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
trans-1,3-Dichloropropene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Trichloroethylene	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Trichlorofluoromethane	08	SW8260B	<1.00 ug/L		1.00	1	10/02/18 13:36	10/02/18 13:36	KCS
Vinyl acetate	08	SW8260B	<10.0 ug/L		10.0	1	10/02/18 13:36	10/02/18 13:36	KCS
Vinyl chloride	08	SW8260B	<0.50 ug/L		0.50	1	10/02/18 13:36	10/02/18 13:36	KCS
Xylenes, Total	08	SW8260B	<3.00 ug/L		3.00	1	10/02/18 13:36	10/02/18 13:36	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0020

Analytical Results

Sample I.D. Trip Blank	Laboratory Sample ID: 18J0020-08
Grab Date/Time: 08/23/2018 14:10	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 1,2-Dichloroethane-d4 (Surr)	08	SW8260B	107 %		70-120		10/02/18 13:36	10/02/18 13:36	KCS
Surr: 4-Bromofluorobenzene (Surr)	08	SW8260B	96.0 %		75-120		10/02/18 13:36	10/02/18 13:36	KCS
Surr: Dibromofluoromethane (Surr)	08	SW8260B	107 %		70-130		10/02/18 13:36	10/02/18 13:36	KCS
Surr: Toluene-d8 (Surr)	08	SW8260B	99.8 %		70-130		10/02/18 13:36	10/02/18 13:36	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher
 Client Site I.D.: CVTC

Project Number: 18-760
 Purchase Order: 18-760

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.7/R4.4			
18J0020-01	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0218	AJ80041
18J0020-01RE1	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0232	AJ80041
18J0020-04	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0218	AJ80041
18J0020-04RE1	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0232	AJ80041
18J0020-05	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0218	AJ80041
18J0020-05RE1	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0232	AJ80041
18J0020-06	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0218	AJ80041
18J0020-06RE1	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0232	AJ80041
18J0020-07	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0218	AJ80041
18J0020-07RE1	50.0 mL / 50.0 mL	SW6010C	BBJ0062	SBJ0232	AJ80041

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.8 R5.4			
18J0020-01	50.0 mL / 50.0 mL	SW6020A	BBJ0063	SBJ0112	AJ80021
18J0020-04	50.0 mL / 50.0 mL	SW6020A	BBJ0063	SBJ0112	AJ80021
18J0020-05	50.0 mL / 50.0 mL	SW6020A	BBJ0063	SBJ0112	AJ80021
18J0020-06	50.0 mL / 50.0 mL	SW6020A	BBJ0063	SBJ0112	AJ80021
18J0020-07	50.0 mL / 50.0 mL	SW6020A	BBJ0063	SBJ0112	AJ80021

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18J0020-01	100 mL / 100 mL	SW7196A	BBJ0155	SBJ0155	AJ80029
18J0020-04	100 mL / 100 mL	SW7196A	BBJ0155	SBJ0155	AJ80029
18J0020-05	100 mL / 100 mL	SW7196A	BBJ0155	SBJ0155	AJ80029
18J0020-06	100 mL / 100 mL	SW7196A	BBJ0155	SBJ0155	AJ80029
18J0020-07	100 mL / 100 mL	SW7196A	BBJ0155	SBJ0155	AJ80029



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Semivolatile Hydrocarbons by GC		Preparation Method: SW3510C			
18J0020-02	990 mL / 1.00 mL	SW8015C	BBJ0102	SBJ0095	AH80058
18J0020-03	960 mL / 1.00 mL	SW8015C	BBJ0102	SBJ0095	AH80058
Organochlorine Herbicides by GC/ECD		Preparation Method: SW3510C			
18J0020-04	900 mL / 5.00 mL	SW8151A	BBJ0120	SBJ0294	AG80138
18J0020-05	900 mL / 5.00 mL	SW8151A	BBJ0120	SBJ0294	AG80138
18J0020-06	900 mL / 5.00 mL	SW8151A	BBJ0120	SBJ0294	AG80138
Semivolatile Hydrocarbons by GC		Preparation Method: SW3510C			
18J0020-01	940 mL / 1.00 mL	SW8015C	BBJ0177	SBJ0205	AH80136
18J0020-04	940 mL / 1.00 mL	SW8015C	BBJ0177	SBJ0205	AH80136
18J0020-05	890 mL / 1.00 mL	SW8015C	BBJ0177	SBJ0205	AH80136
18J0020-06	960 mL / 1.00 mL	SW8015C	BBJ0177	SBJ0205	AH80136
Organochlorine Pesticides and PCBs by GC/ECD		Preparation Method: SW3510C			
18J0020-04	950 mL / 1.00 mL	SW8081B	BBJ0178	SBJ0216	AD80036
18J0020-05	940 mL / 1.00 mL	SW8081B	BBJ0178	SBJ0216	AD80036
18J0020-06	940 mL / 1.00 mL	SW8081B	BBJ0178	SBJ0216	AD80036
Semivolatile Organic Compounds by GCMS		Preparation Method: SW3510C			
18J0020-01	910 mL / 1.00 mL	SW8270D	BBJ0193	SBJ0258	AF80101
Semivolatile Hydrocarbons by GC		Preparation Method: SW3510C			
18J0020-01	900 mL / 1.00 mL	SW8015C	BBJ0209	SBJ0278	AH80058
18J0020-04	900 mL / 1.00 mL	SW8015C	BBJ0209	SBJ0278	AH80058
18J0020-05	880 mL / 1.00 mL	SW8015C	BBJ0209	SBJ0278	AH80058
18J0020-06	900 mL / 1.00 mL	SW8015C	BBJ0209	SBJ0278	AH80058
18J0020-07	900 mL / 1.00 mL	SW8015C	BBJ0209	SBJ0278	AH80058
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Hydrocarbons by GC		Preparation Method: SW5030B			
18J0020-01	5.00 mL / 5.00 mL	SW8015C	BBJ0057	SBJ0061	AJ80010
18J0020-02	5.00 mL / 5.00 mL	SW8015C	BBJ0057	SBJ0061	AJ80010
18J0020-03	5.00 mL / 5.00 mL	SW8015C	BBJ0057	SBJ0061	AJ80010
18J0020-04	5.00 mL / 5.00 mL	SW8015C	BBJ0057	SBJ0061	AJ80010
18J0020-05	5.00 mL / 5.00 mL	SW8015C	BBJ0057	SBJ0061	AJ80010
18J0020-06	5.00 mL / 5.00 mL	SW8015C	BBJ0057	SBJ0061	AJ80010



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18J0020-07	5.00 mL / 5.00 mL	SW8015C	BBJ0057	SBJ0061	AJ80010
18J0020-08	5.00 mL / 5.00 mL	SW8015C	BBJ0057	SBJ0061	AJ80010
Volatile Organic Compounds by GCMS		Preparation Method: SW5030B			
18J0020-01	5.00 mL / 5.00 mL	SW8260B	BBJ0086	SBJ0084	AH80138
18J0020-02	5.00 mL / 5.00 mL	SW8260B	BBJ0086	SBJ0084	AH80138
18J0020-03	5.00 mL / 5.00 mL	SW8260B	BBJ0086	SBJ0084	AH80138
18J0020-04	5.00 mL / 5.00 mL	SW8260B	BBJ0086	SBJ0084	AH80138
18J0020-05	5.00 mL / 5.00 mL	SW8260B	BBJ0086	SBJ0084	AH80138
18J0020-06	5.00 mL / 5.00 mL	SW8260B	BBJ0086	SBJ0084	AH80138
18J0020-07	5.00 mL / 5.00 mL	SW8260B	BBJ0086	SBJ0084	AH80138
18J0020-08	5.00 mL / 5.00 mL	SW8260B	BBJ0086	SBJ0084	AH80138

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: SW7470A			
18J0020-01	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039
18J0020-04	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039
18J0020-05	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039
18J0020-06	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039
18J0020-07	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

Blank (BBJ0062-BLK1)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	<0.0500 mg/L	0.0500	mg/L							
Barium	<0.0100 mg/L	0.0100	mg/L							
Beryllium	<0.0040 mg/L	0.0040	mg/L							
Cadmium	<0.0040 mg/L	0.0040	mg/L							
Calcium	<0.0500 mg/L	0.0500	mg/L							
Chromium	<0.0100 mg/L	0.0100	mg/L							
Cobalt	<0.0040 mg/L	0.0040	mg/L							
Copper	<0.0100 mg/L	0.0100	mg/L							
Iron	<0.0100 mg/L	0.0100	mg/L							
Lead	<0.0100 mg/L	0.0100	mg/L							
Magnesium	<0.0100 mg/L	0.0100	mg/L							
Manganese	<0.0100 mg/L	0.0100	mg/L							
Nickel	<0.0100 mg/L	0.0100	mg/L							
Potassium	<0.50 mg/L	0.50	mg/L							
Silver	<0.0100 mg/L	0.0100	mg/L							
Sodium	<0.50 mg/L	0.50	mg/L							
Vanadium	<0.0100 mg/L	0.0100	mg/L							
Zinc	<0.0100 mg/L	0.0100	mg/L							

Blank (BBJ0062-BLK2)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Barium	<0.0100 mg/L	0.0100	mg/L							
Cadmium	<0.0040 mg/L	0.0040	mg/L							
Chromium	<0.0100 mg/L	0.0100	mg/L							
Lead	<0.0100 mg/L	0.0100	mg/L							
Silver	<0.0100 mg/L	0.0100	mg/L							

Blank (BBJ0062-BLK3)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	<0.0500 mg/L	0.0500	mg/L							
Barium	<0.0100 mg/L	0.0100	mg/L							
Beryllium	<0.0040 mg/L	0.0040	mg/L							
Cadmium	<0.0040 mg/L	0.0040	mg/L							
Calcium	<0.0500 mg/L	0.0500	mg/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

Blank (BBJ0062-BLK3)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Chromium	<0.0100 mg/L	0.0100	mg/L							
Cobalt	<0.0040 mg/L	0.0040	mg/L							
Copper	<0.0100 mg/L	0.0100	mg/L							
Iron	<0.0100 mg/L	0.0100	mg/L							
Lead	<0.0100 mg/L	0.0100	mg/L							
Magnesium	<0.0100 mg/L	0.0100	mg/L							
Manganese	<0.0100 mg/L	0.0100	mg/L							
Nickel	<0.0100 mg/L	0.0100	mg/L							
Potassium	<0.50 mg/L	0.50	mg/L							
Silver	<0.0100 mg/L	0.0100	mg/L							
Sodium	<0.50 mg/L	0.50	mg/L							
Vanadium	<0.0100 mg/L	0.0100	mg/L							
Zinc	<0.0100 mg/L	0.0100	mg/L							

LCS (BBJ0062-BS1)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.546 mg/L	0.0500	mg/L	0.500	mg/L	109	80-120			
Barium	0.543 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120			
Beryllium	0.519 mg/L	0.0040	mg/L	0.500	mg/L	104	80-120			
Cadmium	0.519 mg/L	0.0040	mg/L	0.500	mg/L	104	80-120			
Calcium	0.522 mg/L	0.0500	mg/L	0.500	mg/L	104	80-120			
Chromium	0.522 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120			
Cobalt	0.527 mg/L	0.0040	mg/L	0.500	mg/L	105	80-120			
Copper	0.538 mg/L	0.0100	mg/L	0.500	mg/L	108	80-120			
Iron	0.523 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120			
Lead	0.523 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120			
Magnesium	0.529 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120			
Manganese	0.532 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120			
Nickel	0.5289 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120			
Potassium	5.27 mg/L	0.50	mg/L	5.00	mg/L	105	80-120			
Silver	0.107 mg/L	0.0100	mg/L	0.100	mg/L	107	80-120			E
Sodium	5.24 mg/L	0.50	mg/L	5.00	mg/L	105	80-120			
Vanadium	0.539 mg/L	0.0100	mg/L	0.500	mg/L	108	80-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

LCS (BBJ0062-BS1)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Zinc	0.548 mg/L	0.0100	mg/L	0.500	mg/L	110	80-120			
------	------------	--------	------	-------	------	-----	--------	--	--	--

LCS (BBJ0062-BS2)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Barium	0.488 mg/L	0.0100	mg/L	0.500	mg/L	97.6	80-120			
Cadmium	0.493 mg/L	0.0040	mg/L	0.500	mg/L	98.5	80-120			
Chromium	0.494 mg/L	0.0100	mg/L	0.500	mg/L	98.8	80-120			
Lead	0.494 mg/L	0.0100	mg/L	0.500	mg/L	98.8	80-120			
Silver	0.0951 mg/L	0.0100	mg/L	0.100	mg/L	95.1	80-120			

LCS (BBJ0062-BS3)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.546 mg/L	0.0500	mg/L	0.500	mg/L	109	80-120			
Barium	0.543 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120			
Beryllium	0.519 mg/L	0.0040	mg/L	0.500	mg/L	104	80-120			
Cadmium	0.519 mg/L	0.0040	mg/L	0.500	mg/L	104	80-120			
Calcium	0.522 mg/L	0.0500	mg/L	0.500	mg/L	104	80-120			
Chromium	0.522 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120			
Cobalt	0.527 mg/L	0.0040	mg/L	0.500	mg/L	105	80-120			
Copper	0.538 mg/L	0.0100	mg/L	0.500	mg/L	108	80-120			
Iron	0.523 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120			
Lead	0.523 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120			
Magnesium	0.529 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120			
Manganese	0.532 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120			
Nickel	0.5289 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120			
Potassium	5.27 mg/L	0.50	mg/L	5.00	mg/L	105	80-120			
Silver	0.107 mg/L	0.0100	mg/L	0.100	mg/L	107	80-120			E
Sodium	5.24 mg/L	0.50	mg/L	5.00	mg/L	105	80-120			
Vanadium	0.539 mg/L	0.0100	mg/L	0.500	mg/L	108	80-120			
Zinc	0.548 mg/L	0.0100	mg/L	0.500	mg/L	110	80-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

LCS Dup (BBJ0062-BSD1)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.539 mg/L	0.0500	mg/L	0.500	mg/L	108	80-120	1.28	20	
Barium	0.547 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120	0.767	20	
Beryllium	0.518 mg/L	0.0040	mg/L	0.500	mg/L	104	80-120	0.144	20	
Cadmium	0.517 mg/L	0.0040	mg/L	0.500	mg/L	103	80-120	0.439	20	
Calcium	0.534 mg/L	0.0500	mg/L	0.500	mg/L	107	80-120	2.22	20	
Chromium	0.521 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	0.149	20	
Cobalt	0.525 mg/L	0.0040	mg/L	0.500	mg/L	105	80-120	0.423	20	
Copper	0.537 mg/L	0.0100	mg/L	0.500	mg/L	107	80-120	0.0832	20	
Iron	0.523 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120	0.139	20	
Lead	0.521 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	0.367	20	
Magnesium	0.545 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120	2.94	20	
Manganese	0.532 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120	0.00679	20	
Nickel	0.5242 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120	0.876	20	
Potassium	5.55 mg/L	0.50	mg/L	5.00	mg/L	111	80-120	5.13	20	
Silver	0.109 mg/L	0.0100	mg/L	0.100	mg/L	109	80-120	1.99	20	E
Sodium	5.50 mg/L	0.50	mg/L	5.00	mg/L	110	80-120	4.89	20	
Vanadium	0.534 mg/L	0.0100	mg/L	0.500	mg/L	107	80-120	1.09	20	
Zinc	0.543 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120	0.998	20	

LCS Dup (BBJ0062-BSD2)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Barium	0.493 mg/L	0.0100	mg/L	0.500	mg/L	98.6	80-120	0.979	20	
Cadmium	0.488 mg/L	0.0040	mg/L	0.500	mg/L	97.6	80-120	0.968	20	
Chromium	0.490 mg/L	0.0100	mg/L	0.500	mg/L	97.9	80-120	0.848	20	
Lead	0.490 mg/L	0.0100	mg/L	0.500	mg/L	97.9	80-120	0.886	20	
Silver	0.0961 mg/L	0.0100	mg/L	0.100	mg/L	96.1	80-120	0.960	20	

LCS Dup (BBJ0062-BSD3)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.539 mg/L	0.0500	mg/L	0.500	mg/L	108	80-120	1.28	20	
Barium	0.547 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120	0.767	20	
Beryllium	0.518 mg/L	0.0040	mg/L	0.500	mg/L	104	80-120	0.144	20	
Cadmium	0.517 mg/L	0.0040	mg/L	0.500	mg/L	103	80-120	0.439	20	
Calcium	0.534 mg/L	0.0500	mg/L	0.500	mg/L	107	80-120	2.22	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

LCS Dup (BBJ0062-BSD3)

Prepared: 10/02/2018 Analyzed: 10/05/2018

Chromium	0.521 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	0.149	20	
Cobalt	0.525 mg/L	0.0040	mg/L	0.500	mg/L	105	80-120	0.423	20	
Copper	0.537 mg/L	0.0100	mg/L	0.500	mg/L	107	80-120	0.0832	20	
Iron	0.523 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120	0.139	20	
Lead	0.521 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	0.367	20	
Magnesium	0.545 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120	2.94	20	
Manganese	0.532 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120	0.00679	20	
Nickel	0.5242 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120	0.876	20	
Potassium	5.55 mg/L	0.50	mg/L	5.00	mg/L	111	80-120	5.13	20	
Silver	0.109 mg/L	0.0100	mg/L	0.100	mg/L	109	80-120	1.99	20	E
Sodium	5.50 mg/L	0.50	mg/L	5.00	mg/L	110	80-120	4.89	20	
Vanadium	0.534 mg/L	0.0100	mg/L	0.500	mg/L	107	80-120	1.09	20	
Zinc	0.543 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120	0.998	20	

Matrix Spike (BBJ0062-MS1)

Source: 18J0020-01

Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.547 mg/L	0.0500	mg/L	0.500	0.0530 mg/L	98.9	75-125			
Barium	0.606 mg/L	0.0100	mg/L	0.500	0.0902 mg/L	103	75-125			
Beryllium	0.510 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	102	75-125			
Cadmium	0.503 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125			
Calcium	42.3 mg/L	0.0500	mg/L	0.500	42.3 mg/L	-2.83	75-125			M, E
Chromium	0.503 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Cobalt	0.504 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125			
Copper	0.518 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	104	75-125			
Iron	0.647 mg/L	0.0100	mg/L	0.500	0.138 mg/L	102	75-125			
Lead	0.505 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Magnesium	7.33 mg/L	0.0100	mg/L	0.500	6.85 mg/L	95.9	75-125			
Manganese	0.962 mg/L	0.0100	mg/L	0.500	0.464 mg/L	99.6	75-125			
Nickel	0.5043 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Potassium	9.73 mg/L	0.50	mg/L	5.00	4.78 mg/L	99.0	75-125			
Silver	0.101 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	101	75-125			E
Sodium	21.9 mg/L	0.50	mg/L	5.00	17.0 mg/L	98.4	75-125			
Vanadium	0.515 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	103	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/9/2018 16:18
 201 Church Street
 Blacksburg VA, 24060

Submitted To: Jeff Fisher Project Number: 18-760
 Client Site I.D.: CVTC Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

Matrix Spike (BBJ0062-MS1) Source: 18J0020-01 Prepared: 10/02/2018 Analyzed: 10/05/2018

Zinc	0.522 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	104	75-125			
------	------------	--------	------	-------	--------------	-----	--------	--	--	--

Matrix Spike (BBJ0062-MS2) Source: 18J0029-02 Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.721 mg/L	0.0500	mg/L	0.500	0.189 mg/L	106	75-125			
Barium	0.529 mg/L	0.0100	mg/L	0.500	0.0491 mg/L	95.9	75-125			
Beryllium	0.493 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	98.6	75-125			
Cadmium	0.474 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	94.9	75-125			
Calcium	147 mg/L	0.0500	mg/L	0.500	152 mg/L	-1090	75-125			M, E
Chromium	0.484 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	96.8	75-125			
Cobalt	0.473 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	94.7	75-125			
Copper	0.502 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.5	75-125			
Iron	0.599 mg/L	0.0100	mg/L	0.500	0.118 mg/L	96.2	75-125			
Lead	0.471 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	94.1	75-125			
Magnesium	27.1 mg/L	0.0100	mg/L	0.500	27.9 mg/L	-156	75-125			M, E
Manganese	0.549 mg/L	0.0100	mg/L	0.500	0.0661 mg/L	96.5	75-125			
Nickel	0.4776 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	94.2	75-125			
Potassium	13.6 mg/L	0.50	mg/L	5.00	9.17 mg/L	89.4	75-125			
Silver	0.0980 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	98.0	75-125			
Sodium	63.3 mg/L	0.50	mg/L	5.00	61.1 mg/L	45.2	75-125			M
Vanadium	0.490 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	98.0	75-125			
Zinc	0.481 mg/L	0.0100	mg/L	0.500	0.0109 mg/L	94.0	75-125			

Matrix Spike (BBJ0062-MS3) Source: 18J0020-01 Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.547 mg/L	0.0500	mg/L	0.500	0.0530 mg/L	98.9	75-125			
Barium	0.606 mg/L	0.0100	mg/L	0.500	0.0902 mg/L	103	75-125			
Beryllium	0.510 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	102	75-125			
Cadmium	0.503 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125			
Calcium	42.3 mg/L	0.0500	mg/L	0.500	42.3 mg/L	-2.83	75-125			M, E
Chromium	0.503 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Cobalt	0.504 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125			
Copper	0.518 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	104	75-125			
Iron	0.647 mg/L	0.0100	mg/L	0.500	0.138 mg/L	102	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

Matrix Spike (BBJ0062-MS3)

Source: 18J0020-01

Prepared: 10/02/2018 Analyzed: 10/05/2018

Lead	0.505 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Magnesium	7.33 mg/L	0.0100	mg/L	0.500	6.85 mg/L	95.9	75-125			
Manganese	0.962 mg/L	0.0100	mg/L	0.500	0.464 mg/L	99.6	75-125			
Nickel	0.5043 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Potassium	9.73 mg/L	0.50	mg/L	5.00	4.78 mg/L	99.0	75-125			
Silver	0.101 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	101	75-125			E
Sodium	21.9 mg/L	0.50	mg/L	5.00	17.0 mg/L	98.4	75-125			
Vanadium	0.515 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	103	75-125			
Zinc	0.522 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	104	75-125			

Matrix Spike (BBJ0062-MS4)

Source: 18J0029-02

Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.721 mg/L	0.0500	mg/L	0.250	0.189 mg/L	213	75-125			M
Barium	0.529 mg/L	0.0100	mg/L	0.250	0.0491 mg/L	192	75-125			M
Beryllium	0.493 mg/L	0.0040	mg/L	0.250	<0.0040 mg/L	197	75-125			M
Cadmium	0.474 mg/L	0.0040	mg/L	0.250	<0.0040 mg/L	190	75-125			M
Calcium	147 mg/L	0.0500	mg/L	0.250	152 mg/L	-2190	75-125			M, E
Chromium	0.484 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	194	75-125			M
Cobalt	0.473 mg/L	0.0040	mg/L	0.250	<0.0040 mg/L	189	75-125			M
Copper	0.502 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	199	75-125			M
Iron	0.599 mg/L	0.0100	mg/L	0.250	0.118 mg/L	192	75-125			M
Lead	0.471 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	188	75-125			M
Magnesium	27.1 mg/L	0.0100	mg/L	0.250	27.9 mg/L	-312	75-125			M, E
Manganese	0.549 mg/L	0.0100	mg/L	0.250	0.0661 mg/L	193	75-125			M
Nickel	0.4776 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	188	75-125			M
Potassium	13.6 mg/L	0.50	mg/L	2.50	9.17 mg/L	179	75-125			M
Silver	0.0980 mg/L	0.0100	mg/L	0.0500	<0.0100 mg/L	196	75-125			M
Sodium	63.3 mg/L	0.50	mg/L	2.50	61.1 mg/L	90.5	75-125			M
Vanadium	0.490 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	196	75-125			M
Zinc	0.481 mg/L	0.0100	mg/L	0.250	0.0109 mg/L	188	75-125			M



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

Matrix Spike (BBJ0062-MS5)	Source: 18J0020-01			Prepared: 10/02/2018 Analyzed: 10/05/2018						
Aluminum	1.29 mg/L	0.500	mg/L	0.500	<0.500 mg/L	257	75-125			M2
Calcium	44.4 mg/L	0.500	mg/L	0.500	42.3 mg/L	416	75-125			M2
Iron	0.644 mg/L	0.100	mg/L	0.500	0.138 mg/L	101	75-125			
Magnesium	7.16 mg/L	0.100	mg/L	0.500	6.85 mg/L	61.2	75-125			M2
Sodium	23.7 mg/L	5.00	mg/L	5.00	17.0 mg/L	133	75-125			M2

Matrix Spike Dup (BBJ0062-MSD1)	Source: 18J0020-01			Prepared: 10/02/2018 Analyzed: 10/05/2018						
Aluminum	0.597 mg/L	0.0500	mg/L	0.500	0.0530 mg/L	109	75-125	8.76	20	
Barium	0.611 mg/L	0.0100	mg/L	0.500	0.0902 mg/L	104	75-125	0.722	20	
Beryllium	0.504 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125	1.32	20	
Cadmium	0.496 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	99.2	75-125	1.46	20	
Calcium	42.0 mg/L	0.0500	mg/L	0.500	42.3 mg/L	-71.0	75-125	0.808	20	M, E
Chromium	0.498 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.5	75-125	1.13	20	
Cobalt	0.497 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	99.5	75-125	1.39	20	
Copper	0.512 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125	1.14	20	
Iron	0.672 mg/L	0.0100	mg/L	0.500	0.138 mg/L	107	75-125	3.75	20	
Lead	0.498 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.6	75-125	1.50	20	
Magnesium	7.32 mg/L	0.0100	mg/L	0.500	6.85 mg/L	93.8	75-125	0.144	20	
Manganese	0.957 mg/L	0.0100	mg/L	0.500	0.464 mg/L	98.6	75-125	0.487	20	
Nickel	0.4954 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.1	75-125	1.77	20	
Potassium	9.72 mg/L	0.50	mg/L	5.00	4.78 mg/L	98.6	75-125	0.172	20	
Silver	0.103 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	103	75-125	1.53	20	E
Sodium	22.0 mg/L	0.50	mg/L	5.00	17.0 mg/L	99.5	75-125	0.267	20	
Vanadium	0.515 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	103	75-125	0.0170	20	
Zinc	0.518 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	104	75-125	0.756	20	

Matrix Spike Dup (BBJ0062-MSD2)	Source: 18J0029-02			Prepared: 10/02/2018 Analyzed: 10/05/2018						
Aluminum	0.676 mg/L	0.0500	mg/L	0.500	0.189 mg/L	97.4	75-125	6.44	20	
Barium	0.526 mg/L	0.0100	mg/L	0.500	0.0491 mg/L	95.3	75-125	0.562	20	
Beryllium	0.503 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125	2.01	20	
Cadmium	0.485 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	96.9	75-125	2.14	20	
Calcium	146 mg/L	0.0500	mg/L	0.500	152 mg/L	-1140	75-125	0.154	20	M, E



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/9/2018 16:18

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

Matrix Spike Dup (BBJ0062-MSD2)

Source: 18J0029-02

Prepared: 10/02/2018 Analyzed: 10/05/2018

Chromium	0.492 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	98.4	75-125	1.63	20	
Cobalt	0.484 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	96.9	75-125	2.32	20	
Copper	0.510 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125	1.49	20	
Iron	0.613 mg/L	0.0100	mg/L	0.500	0.118 mg/L	99.0	75-125	2.30	20	
Lead	0.481 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	96.3	75-125	2.25	20	
Magnesium	27.4 mg/L	0.0100	mg/L	0.500	27.9 mg/L	-96.5	75-125	1.10	20	M, E
Manganese	0.557 mg/L	0.0100	mg/L	0.500	0.0661 mg/L	98.2	75-125	1.55	20	
Nickel	0.4870 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	96.1	75-125	1.95	20	
Potassium	13.7 mg/L	0.50	mg/L	5.00	9.17 mg/L	91.6	75-125	0.833	20	
Silver	0.0961 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	96.1	75-125	1.98	20	
Sodium	63.3 mg/L	0.50	mg/L	5.00	61.1 mg/L	45.3	75-125	0.00482	20	M
Vanadium	0.496 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.2	75-125	1.27	20	
Zinc	0.492 mg/L	0.0100	mg/L	0.500	0.0109 mg/L	96.3	75-125	2.37	20	

Matrix Spike Dup (BBJ0062-MSD3)

Source: 18J0020-01

Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.597 mg/L	0.0500	mg/L	0.500	0.0530 mg/L	109	75-125	8.76	20	
Barium	0.611 mg/L	0.0100	mg/L	0.500	0.0902 mg/L	104	75-125	0.722	20	
Beryllium	0.504 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125	1.32	20	
Cadmium	0.496 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	99.2	75-125	1.46	20	
Calcium	42.0 mg/L	0.0500	mg/L	0.500	42.3 mg/L	-71.0	75-125	0.808	20	E
Chromium	0.498 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.5	75-125	1.13	20	
Cobalt	0.497 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	99.5	75-125	1.39	20	
Copper	0.512 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125	1.14	20	
Iron	0.672 mg/L	0.0100	mg/L	0.500	0.138 mg/L	107	75-125	3.75	20	
Lead	0.498 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.6	75-125	1.50	20	
Magnesium	7.32 mg/L	0.0100	mg/L	0.500	6.85 mg/L	93.8	75-125	0.144	20	
Manganese	0.957 mg/L	0.0100	mg/L	0.500	0.464 mg/L	98.6	75-125	0.487	20	
Nickel	0.4954 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.1	75-125	1.77	20	
Potassium	9.72 mg/L	0.50	mg/L	5.00	4.78 mg/L	98.6	75-125	0.172	20	
Silver	0.103 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	103	75-125	1.53	20	E
Sodium	22.0 mg/L	0.50	mg/L	5.00	17.0 mg/L	99.5	75-125	0.267	20	
Vanadium	0.515 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	103	75-125	0.0170	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0062 - EPA200.7/R4.4

Matrix Spike Dup (BBJ0062-MSD3) Source: 18J0020-01 Prepared: 10/02/2018 Analyzed: 10/05/2018

Zinc	0.518 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	104	75-125	0.756	20	
------	------------	--------	------	-------	--------------	-----	--------	-------	----	--

Matrix Spike Dup (BBJ0062-MSD4) Source: 18J0029-02 Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	0.676 mg/L	0.0500	mg/L	0.250	0.189 mg/L	195	75-125	6.44	20	M
Barium	0.526 mg/L	0.0100	mg/L	0.250	0.0491 mg/L	191	75-125	0.562	20	M
Beryllium	0.503 mg/L	0.0040	mg/L	0.250	<0.0040 mg/L	201	75-125	2.01	20	M
Cadmium	0.485 mg/L	0.0040	mg/L	0.250	<0.0040 mg/L	194	75-125	2.14	20	M
Calcium	146 mg/L	0.0500	mg/L	0.250	152 mg/L	-2280	75-125	0.154	20	M, E
Chromium	0.492 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	197	75-125	1.63	20	M
Cobalt	0.484 mg/L	0.0040	mg/L	0.250	<0.0040 mg/L	194	75-125	2.32	20	M
Copper	0.510 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	202	75-125	1.49	20	M
Iron	0.613 mg/L	0.0100	mg/L	0.250	0.118 mg/L	198	75-125	2.30	20	M
Lead	0.481 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	193	75-125	2.25	20	M
Magnesium	27.4 mg/L	0.0100	mg/L	0.250	27.9 mg/L	-193	75-125	1.10	20	M, E
Manganese	0.557 mg/L	0.0100	mg/L	0.250	0.0661 mg/L	196	75-125	1.55	20	M
Nickel	0.4870 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	192	75-125	1.95	20	M
Potassium	13.7 mg/L	0.50	mg/L	2.50	9.17 mg/L	183	75-125	0.833	20	M
Silver	0.0961 mg/L	0.0100	mg/L	0.0500	<0.0100 mg/L	192	75-125	1.98	20	M
Sodium	63.3 mg/L	0.50	mg/L	2.50	61.1 mg/L	90.6	75-125	0.00482	20	
Vanadium	0.496 mg/L	0.0100	mg/L	0.250	<0.0100 mg/L	198	75-125	1.27	20	M
Zinc	0.492 mg/L	0.0100	mg/L	0.250	0.0109 mg/L	193	75-125	2.37	20	M

Matrix Spike Dup (BBJ0062-MSD5) Source: 18J0020-01 Prepared: 10/02/2018 Analyzed: 10/05/2018

Aluminum	1.15 mg/L	0.500	mg/L	0.500	<0.500 mg/L	231	75-125	10.9	20	M2
Calcium	45.3 mg/L	0.500	mg/L	0.500	42.3 mg/L	600	75-125	2.05	20	M2
Iron	0.685 mg/L	0.100	mg/L	0.500	0.138 mg/L	109	75-125	6.23	20	
Magnesium	7.30 mg/L	0.100	mg/L	0.500	6.85 mg/L	89.4	75-125	1.95	20	
Sodium	24.2 mg/L	5.00	mg/L	5.00	17.0 mg/L	144	75-125	2.21	20	M2



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0063 - EPA200.8 R5.4

Blank (BBJ0063-BLK1)

Prepared: 10/02/2018 Analyzed: 10/03/2018

Antimony	<1.00 ug/L	1.00	ug/L							
Arsenic	<1.0 ug/L	1.0	ug/L							
Selenium	<1.00 ug/L	1.00	ug/L							
Thallium	<1.00 ug/L	1.00	ug/L							

LCS (BBJ0063-BS1)

Prepared: 10/02/2018 Analyzed: 10/03/2018

Antimony	53.4 ug/L	1.00	ug/L	50.0	ug/L	107	80-120			
Arsenic	53 ug/L	1.0	ug/L	50.0	ug/L	105	80-120			
Selenium	51.7 ug/L	1.00	ug/L	50.0	ug/L	103	80-120			
Thallium	52.5 ug/L	1.00	ug/L	50.0	ug/L	105	80-120			

LCS Dup (BBJ0063-BSD1)

Prepared: 10/02/2018 Analyzed: 10/03/2018

Antimony	52.0 ug/L	1.00	ug/L	50.0	ug/L	104	80-120	2.70	20	
Arsenic	52 ug/L	1.0	ug/L	50.0	ug/L	105	80-120	0.257	20	
Selenium	50.4 ug/L	1.00	ug/L	50.0	ug/L	101	80-120	2.63	20	
Thallium	51.2 ug/L	1.00	ug/L	50.0	ug/L	102	80-120	2.48	20	

Matrix Spike (BBJ0063-MS1)

Source: 18J0020-01

Prepared: 10/02/2018 Analyzed: 10/03/2018

Antimony	50.7 ug/L	1.00	ug/L	50.0	<1.00 ug/L	101	75-125			
Arsenic	51 ug/L	1.0	ug/L	50.0	<1.0 ug/L	102	75-125			
Selenium	49.3 ug/L	1.00	ug/L	50.0	1.05 ug/L	96.5	75-125			
Thallium	50.3 ug/L	1.00	ug/L	50.0	<1.00 ug/L	101	75-125			

Matrix Spike (BBJ0063-MS2)

Source: 18J0029-02

Prepared: 10/02/2018 Analyzed: 10/03/2018

Antimony	52.8 ug/L	1.00	ug/L	50.0	<1.00 ug/L	106	75-125			
Arsenic	52 ug/L	1.0	ug/L	50.0	<1.0 ug/L	102	75-125			
Selenium	49.2 ug/L	1.00	ug/L	50.0	3.18 ug/L	92.0	75-125			
Thallium	48.7 ug/L	1.00	ug/L	50.0	<1.00 ug/L	97.4	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0063 - EPA200.8 R5.4

Matrix Spike Dup (BBJ0063-MSD1)		Source: 18J0020-01		Prepared: 10/02/2018 Analyzed: 10/03/2018					
Antimony	52.4 ug/L	1.00	ug/L	50.0	<1.00 ug/L	105	75-125	3.47	20
Arsenic	52 ug/L	1.0	ug/L	50.0	<1.0 ug/L	105	75-125	2.81	20
Selenium	50.3 ug/L	1.00	ug/L	50.0	1.05 ug/L	98.6	75-125	2.06	20
Thallium	52.6 ug/L	1.00	ug/L	50.0	<1.00 ug/L	105	75-125	4.52	20

Matrix Spike Dup (BBJ0063-MSD2)		Source: 18J0029-02		Prepared: 10/02/2018 Analyzed: 10/03/2018					
Antimony	54.8 ug/L	1.00	ug/L	50.0	<1.00 ug/L	110	75-125	3.74	20
Arsenic	55 ug/L	1.0	ug/L	50.0	<1.0 ug/L	108	75-125	5.82	20
Selenium	51.9 ug/L	1.00	ug/L	50.0	3.18 ug/L	97.4	75-125	5.31	20
Thallium	51.3 ug/L	1.00	ug/L	50.0	<1.00 ug/L	103	75-125	5.23	20

Batch BBJ0132 - SW7470A

Blank (BBJ0132-BLK1)				Prepared: 10/04/2018 Analyzed: 10/05/2018	
Mercury	<0.00020 mg/L	0.00020	mg/L		

LCS (BBJ0132-BS1)				Prepared: 10/04/2018 Analyzed: 10/05/2018	
Mercury	0.00247 mg/L	0.00020	mg/L	0.00250 mg/L	98.8 80-120

LCS Dup (BBJ0132-BSD1)				Prepared: 10/04/2018 Analyzed: 10/05/2018	
Mercury	0.00231 mg/L	0.00020	mg/L	0.00250 mg/L	92.2 80-120 6.89 20

Matrix Spike (BBJ0132-MS1)		Source: 18I1083-01		Prepared: 10/04/2018 Analyzed: 10/05/2018	
Mercury	0.00223 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L	89.4 80-120

Matrix Spike (BBJ0132-MS2)		Source: 18I1076-01		Prepared: 10/04/2018 Analyzed: 10/05/2018	
Mercury	0.00244 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L	97.5 80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0132 - SW7470A

Matrix Spike Dup (BBJ0132-MSD1)		Source: 1811083-01		Prepared: 10/04/2018 Analyzed: 10/05/2018	
Mercury	0.00215 mg/L	0.00020	mg/L	0.00250 < 0.00020 mg/L	85.8 80-120 4.05 20
Matrix Spike Dup (BBJ0132-MSD2)		Source: 1811076-01		Prepared: 10/04/2018 Analyzed: 10/05/2018	
Mercury	0.00261 mg/L	0.00020	mg/L	0.00250 < 0.00020 mg/L	104 80-120 6.91 20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0057 - SW5030B

Blank (BBJ0057-BLK1)

Prepared & Analyzed: 10/02/2018

TPH-Volatiles (GRO)	<0.10 mg/L	0.10	mg/L						
Surr: 2,5-Dibromotoluene (Surr FID)	94.9		ug/L	100		94.9	80-120		

LCS (BBJ0057-BS1)

Prepared & Analyzed: 10/02/2018

TPH-Volatiles (GRO)	0.86 mg/L	0.10	mg/L	1.00	mg/L	85.6	70-130		
Surr: 2,5-Dibromotoluene (Surr FID)	93.4		ug/L	100	ug/L	93.4	80-120		

Matrix Spike (BBJ0057-MS1)

Source: 18J0023-01

Prepared & Analyzed: 10/02/2018

TPH-Volatiles (GRO)	0.82 mg/L	0.10	mg/L	1.00	<0.10 mg/L	76.7	70-130		
Surr: 2,5-Dibromotoluene (Surr FID)	93.5		ug/L	100	ug/L	93.5	80-120		

Matrix Spike Dup (BBJ0057-MSD1)

Source: 18J0023-01

Prepared & Analyzed: 10/02/2018

TPH-Volatiles (GRO)	0.84 mg/L	0.10	mg/L	1.00	<0.10 mg/L	79.1	70-130	2.93	20
Surr: 2,5-Dibromotoluene (Surr FID)	95.1		ug/L	100	ug/L	95.1	80-120		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0086 - SW5030B

Blank (BBJ0086-BLK1)

Prepared & Analyzed: 10/02/2018

1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L						
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L						
1,1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L						
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L						
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L						
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L						
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L						
1,2,3-Trichlorobenzene	<1.00 ug/L	1.00	ug/L						
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L						
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L						
1,2,4-Trimethylbenzene	<1.00 ug/L	1.00	ug/L						
1,2-Dibromo-3-chloropropane (DBCP)	<1.00 ug/L	1.00	ug/L						
1,2-Dibromoethane (EDB)	<1.00 ug/L	1.00	ug/L						
1,2-Dichlorobenzene	<0.50 ug/L	0.50	ug/L						
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L						
1,2-Dichloropropane	<0.50 ug/L	0.50	ug/L						
1,3,5-Trimethylbenzene	<1.00 ug/L	1.00	ug/L						
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L						
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L						
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L						
2,2-Dichloropropane	<1.00 ug/L	1.00	ug/L						
2-Butanone (MEK)	<10.0 ug/L	10.0	ug/L						
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L						
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L						
4-Chlorotoluene	<1.00 ug/L	1.00	ug/L						
4-Isopropyltoluene	<1.00 ug/L	1.00	ug/L						
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L						
Acetone	<10.0 ug/L	10.0	ug/L						
Benzene	<1.00 ug/L	1.00	ug/L						
Bromobenzene	<1.00 ug/L	1.00	ug/L						
Bromochloromethane	<1.00 ug/L	1.00	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0086 - SW5030B

Blank (BBJ0086-BLK1)

Prepared & Analyzed: 10/02/2018

Bromodichloromethane	<0.50 ug/L	0.50	ug/L						
Bromoform	<1.00 ug/L	1.00	ug/L						
Bromomethane	<1.00 ug/L	1.00	ug/L						
Carbon disulfide	<10.0 ug/L	10.0	ug/L						
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L						
Chlorobenzene	<1.00 ug/L	1.00	ug/L						
Chloroethane	<1.00 ug/L	1.00	ug/L						
Chloroform	<0.50 ug/L	0.50	ug/L						
Chloromethane	<1.00 ug/L	1.00	ug/L						
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L						
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L						
Dibromochloromethane	<0.50 ug/L	0.50	ug/L						
Dibromomethane	<1.00 ug/L	1.00	ug/L						
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L						
Di-isopropyl ether (DIPE)	<5.00 ug/L	5.00	ug/L						
Ethylbenzene	<1.00 ug/L	1.00	ug/L						
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L						
Iodomethane	<10.0 ug/L	10.0	ug/L						
Isopropylbenzene	<1.00 ug/L	1.00	ug/L						
m+p-Xylenes	<2.00 ug/L	2.00	ug/L						
Methylene chloride	<4.00 ug/L	4.00	ug/L						
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L						
Naphthalene	<1.00 ug/L	1.00	ug/L						
n-Butylbenzene	<1.00 ug/L	1.00	ug/L						
n-Propylbenzene	<1.00 ug/L	1.00	ug/L						
o-Xylene	<1.00 ug/L	1.00	ug/L						
sec-Butylbenzene	<1.00 ug/L	1.00	ug/L						
Styrene	<1.00 ug/L	1.00	ug/L						
tert-Butylbenzene	<1.00 ug/L	1.00	ug/L						
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L						
Toluene	<1.00 ug/L	1.00	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0086 - SW5030B

Blank (BBJ0086-BLK1)

Prepared & Analyzed: 10/02/2018

trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L						
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L						
Trichloroethylene	<1.00 ug/L	1.00	ug/L						
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L						
Vinyl acetate	<10.0 ug/L	10.0	ug/L						
Vinyl chloride	<0.50 ug/L	0.50	ug/L						
Xylenes, Total	<3.00 ug/L	3.00	ug/L						
<hr style="border-top: 1px dashed black;"/>									
Surr: 1,2-Dichloroethane-d4 (Surr)	54.1		ug/L	50.0		108		70-120	
Surr: 4-Bromofluorobenzene (Surr)	48.8		ug/L	50.0		97.6		75-120	
Surr: Dibromofluoromethane (Surr)	51.7		ug/L	50.0		103		70-130	
Surr: Toluene-d8 (Surr)	50.4		ug/L	50.0		101		70-130	

LCS (BBJ0086-BS1)

Prepared & Analyzed: 10/02/2018

1,1,1,2-Tetrachloroethane	45.2 ug/L	0.4	ug/L	50.0	ug/L	90.5		80-130	
1,1,1-Trichloroethane	43.1 ug/L	1	ug/L	50.0	ug/L	86.1		65-130	
1,1,2,2-Tetrachloroethane	41.6 ug/L	0.4	ug/L	50.0	ug/L	83.3		65-130	
1,1,2-Trichloroethane	44.1 ug/L	1	ug/L	50.0	ug/L	88.2		75-125	
1,1-Dichloroethane	43.4 ug/L	1	ug/L	50.0	ug/L	86.8		70-135	
1,1-Dichloroethylene	39.6 ug/L	1	ug/L	50.0	ug/L	79.2		70-130	
1,1-Dichloropropene	43.9 ug/L	1	ug/L	50.0	ug/L	87.8		75-135	
1,2,3-Trichlorobenzene	39.2 ug/L	1	ug/L	50.0	ug/L	78.4		55-140	
1,2,3-Trichloropropane	44.5 ug/L	1	ug/L	50.0	ug/L	89.0		75-125	
1,2,4-Trichlorobenzene	40.5 ug/L	1	ug/L	50.0	ug/L	81.1		65-135	
1,2,4-Trimethylbenzene	48.4 ug/L	1	ug/L	50.0	ug/L	96.7		75-130	
1,2-Dibromo-3-chloropropane (DBCP)	41.0 ug/L	1	ug/L	50.0	ug/L	82.1		50-130	
1,2-Dibromoethane (EDB)	45.0 ug/L	1	ug/L	50.0	ug/L	89.9		80-120	
1,2-Dichlorobenzene	44.4 ug/L	0.5	ug/L	50.0	ug/L	88.8		70-120	
1,2-Dichloroethane	41.6 ug/L	1	ug/L	50.0	ug/L	83.2		70-130	
1,2-Dichloropropane	41.2 ug/L	0.5	ug/L	50.0	ug/L	82.4		75-125	
1,3,5-Trimethylbenzene	48.2 ug/L	1	ug/L	50.0	ug/L	96.4		75-125	
1,3-Dichlorobenzene	46.7 ug/L	1	ug/L	50.0	ug/L	93.5		75-125	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0086 - SW5030B

LCS (BBJ0086-BS1)

Prepared & Analyzed: 10/02/2018

1,3-Dichloropropane	41.4 ug/L	1	ug/L	50.0	ug/L	82.9	75-125			
1,4-Dichlorobenzene	45.8 ug/L	1	ug/L	50.0	ug/L	91.6	75-125			
2,2-Dichloropropane	45.9 ug/L	1	ug/L	50.0	ug/L	91.8	70-135			
2-Butanone (MEK)	39.2 ug/L	10	ug/L	50.0	ug/L	78.3	30-150			
2-Chlorotoluene	47.5 ug/L	1	ug/L	50.0	ug/L	95.0	75-125			
2-Hexanone (MBK)	43.9 ug/L	5	ug/L	50.0	ug/L	87.8	55-130			
4-Chlorotoluene	46.3 ug/L	1	ug/L	50.0	ug/L	92.6	75-130			
4-Isopropyltoluene	45.7 ug/L	1	ug/L	50.0	ug/L	91.3	75-130			
4-Methyl-2-pentanone (MIBK)	39.9 ug/L	5	ug/L	50.0	ug/L	79.9	60-135			
Acetone	40.2 ug/L	10	ug/L	50.0	ug/L	80.5	40-140			
Benzene	42.1 ug/L	1	ug/L	50.0	ug/L	84.3	80-120			
Bromobenzene	46.5 ug/L	1	ug/L	50.0	ug/L	93.0	75-125			
Bromochloromethane	46.3 ug/L	1	ug/L	50.0	ug/L	92.6	65-130			
Bromodichloromethane	44.8 ug/L	0.5	ug/L	50.0	ug/L	89.5	75-120			
Bromoform	47.2 ug/L	1	ug/L	50.0	ug/L	94.4	70-130			
Bromomethane	38.2 ug/L	1	ug/L	50.0	ug/L	76.3	30-145			
Carbon disulfide	44.9 ug/L	10	ug/L	50.0	ug/L	89.7	35-160			
Carbon tetrachloride	42.6 ug/L	1	ug/L	50.0	ug/L	85.2	65-140			
Chlorobenzene	45.5 ug/L	1	ug/L	50.0	ug/L	90.9	80-120			
Chloroethane	40.4 ug/L	1	ug/L	50.0	ug/L	80.8	60-135			
Chloroform	44.3 ug/L	0.5	ug/L	50.0	ug/L	88.6	65-135			
Chloromethane	38.0 ug/L	1	ug/L	50.0	ug/L	75.9	40-125			
cis-1,2-Dichloroethylene	45.1 ug/L	1	ug/L	50.0	ug/L	90.2	70-125			
cis-1,3-Dichloropropene	43.8 ug/L	1	ug/L	50.0	ug/L	87.7	70-130			
Dibromochloromethane	45.4 ug/L	0.5	ug/L	50.0	ug/L	90.8	60-135			
Dibromomethane	42.5 ug/L	1	ug/L	50.0	ug/L	85.0	75-125			
Dichlorodifluoromethane	30.2 ug/L	1	ug/L	50.0	ug/L	60.4	30-155			
Ethylbenzene	46.3 ug/L	1	ug/L	50.0	ug/L	92.7	75-125			
Hexachlorobutadiene	42.5 ug/L	0.8	ug/L	50.0	ug/L	85.0	50-140			
Isopropylbenzene	46.2 ug/L	1	ug/L	50.0	ug/L	92.5	75-125			
m+p-Xylenes	95.2 ug/L	2	ug/L	100	ug/L	95.2	75-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0086 - SW5030B

LCS (BBJ0086-BS1)

Prepared & Analyzed: 10/02/2018

Methylene chloride	43.0 ug/L	4	ug/L	50.0	ug/L	86.0	55-140			
Methyl-t-butyl ether (MTBE)	48.6 ug/L	1	ug/L	50.0	ug/L	97.3	65-125			
Naphthalene	34.4 ug/L	1	ug/L	50.0	ug/L	68.9	55-140			
n-Butylbenzene	46.4 ug/L	1	ug/L	50.0	ug/L	92.9	70-135			
n-Propylbenzene	46.4 ug/L	1	ug/L	50.0	ug/L	92.8	70-130			
o-Xylene	47.6 ug/L	1	ug/L	50.0	ug/L	95.2	80-120			
sec-Butylbenzene	45.6 ug/L	1	ug/L	50.0	ug/L	91.2	70-125			
Styrene	50.4 ug/L	1	ug/L	50.0	ug/L	101	65-135			
tert-Butylbenzene	47.1 ug/L	1	ug/L	50.0	ug/L	94.3	70-130			
Tetrachloroethylene (PCE)	64.0 ug/L	1	ug/L	50.0	ug/L	128	45-150			
Toluene	41.9 ug/L	1	ug/L	50.0	ug/L	83.8	75-120			
trans-1,2-Dichloroethylene	42.7 ug/L	1	ug/L	50.0	ug/L	85.5	60-140			
trans-1,3-Dichloropropene	38.7 ug/L	1	ug/L	50.0	ug/L	77.4	55-140			
Trichloroethylene	40.8 ug/L	1	ug/L	50.0	ug/L	81.5	70-125			
Trichlorofluoromethane	36.9 ug/L	1	ug/L	50.0	ug/L	73.9	60-145			
Vinyl chloride	35.8 ug/L	0.5	ug/L	50.0	ug/L	71.5	50-145			
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	53.2		ug/L	50.0	ug/L	106	70-120			
Surr: 4-Bromofluorobenzene (Surr)	50.8		ug/L	50.0	ug/L	102	75-120			
Surr: Dibromofluoromethane (Surr)	51.2		ug/L	50.0	ug/L	102	70-130			
Surr: Toluene-d8 (Surr)	49.4		ug/L	50.0	ug/L	98.8	70-130			

Duplicate (BBJ0086-DUP1)

Source: 18J0020-01

Prepared & Analyzed: 10/02/2018

1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40 ug/L		NA	30			
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30			
1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40 ug/L		NA	30			
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30			
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30			
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30			
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30			
1,2,3-Trichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30			
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L		NA	30			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0086 - SW5030B

Duplicate (BBJ0086-DUP1)	Source: 18J0020-01			Prepared & Analyzed: 10/02/2018						
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2,4-Trimethylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2-Dibromo-3-chloropropane (DBCP)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2-Dibromoethane (EDB)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2-Dichlorobenzene	<0.50 ug/L	0.50	ug/L	<0.50 ug/L				NA	30	
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2-Dichloropropane	<0.50 ug/L	0.50	ug/L	<0.50 ug/L				NA	30	
1,3,5-Trimethylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
2,2-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
2-Butanone (MEK)	<10.0 ug/L	10.0	ug/L	<10.0 ug/L				NA	30	
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L				NA	30	
4-Chlorotoluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
4-Isopropyltoluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L				NA	30	
Acetone	<10.0 ug/L	10.0	ug/L	<10.0 ug/L				NA	30	
Benzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Bromobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Bromochloromethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Bromodichloromethane	<0.50 ug/L	0.50	ug/L	<0.50 ug/L				NA	30	
Bromoform	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Bromomethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Carbon disulfide	<10.0 ug/L	10.0	ug/L	<10.0 ug/L				NA	30	
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Chlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Chloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Chloroform	<0.50 ug/L	0.50	ug/L	<0.50 ug/L				NA	30	
Chloromethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0086 - SW5030B

Duplicate (BBJ0086-DUP1)	Source: 18J0020-01			Prepared & Analyzed: 10/02/2018						
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Dibromochloromethane	<0.50 ug/L	0.50	ug/L	<0.50 ug/L				NA	30	
Dibromomethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Di-isopropyl ether (DIPE)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L				NA	30	
Ethylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L	<0.80 ug/L				NA	30	
Iodomethane	<10.0 ug/L	10.0	ug/L	<10.0 ug/L				NA	30	
Isopropylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
m+p-Xylenes	<2.00 ug/L	2.00	ug/L	<2.00 ug/L				NA	30	
Methylene chloride	<4.00 ug/L	4.00	ug/L	<4.00 ug/L				NA	30	
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Naphthalene	2.12 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	P
n-Butylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
n-Propylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
o-Xylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
sec-Butylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Styrene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
tert-Butylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Toluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Trichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Vinyl acetate	<10.0 ug/L	10.0	ug/L	<10.0 ug/L				NA	30	
Vinyl chloride	<0.50 ug/L	0.50	ug/L	<0.50 ug/L				NA	30	
Xylenes, Total	<3.00 ug/L	3.00	ug/L	<3.00 ug/L				NA	30	
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	54.4		ug/L	50.0 ug/L	109	70-120				
Surr: 4-Bromofluorobenzene (Surr)	48.9		ug/L	50.0 ug/L	97.8	75-120				



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0086 - SW5030B

Duplicate (BBJ0086-DUP1)

Source: 18J0020-01

Prepared & Analyzed: 10/02/2018

Surr: Dibromofluoromethane (Surr)	51.3		ug/L	50.0	ug/L	103	70-130			
Surr: Toluene-d8 (Surr)	49.6		ug/L	50.0	ug/L	99.1	70-130			

Matrix Spike (BBJ0086-MS1)

Source: 18J0020-03

Prepared & Analyzed: 10/02/2018

1,1,1,2-Tetrachloroethane	44.5 ug/L	0.4	ug/L	50.0	<0.4 ug/L	88.9	80-130			
1,1,1-Trichloroethane	42.8 ug/L	1	ug/L	50.0	<1 ug/L	85.6	65-130			
1,1,2,2-Tetrachloroethane	43.7 ug/L	0.4	ug/L	50.0	<0.4 ug/L	87.3	65-130			
1,1,2-Trichloroethane	44.6 ug/L	1	ug/L	50.0	<1 ug/L	89.2	75-125			
1,1-Dichloroethane	42.3 ug/L	1	ug/L	50.0	<1 ug/L	84.6	70-135			
1,1-Dichloroethylene	40.2 ug/L	1	ug/L	50.0	<1 ug/L	80.5	70-130			
1,1-Dichloropropene	44.5 ug/L	1	ug/L	50.0	<1 ug/L	88.9	75-135			
1,2,3-Trichlorobenzene	36.1 ug/L	1	ug/L	50.0	<1 ug/L	72.1	55-140			
1,2,3-Trichloropropane	47.1 ug/L	1	ug/L	50.0	<1 ug/L	94.3	75-125			
1,2,4-Trichlorobenzene	36.7 ug/L	1	ug/L	50.0	<1 ug/L	73.4	65-135			
1,2,4-Trimethylbenzene	46.3 ug/L	1	ug/L	50.0	<1 ug/L	92.6	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	41.8 ug/L	1	ug/L	50.0	<1 ug/L	83.6	50-130			
1,2-Dibromoethane (EDB)	45.6 ug/L	1	ug/L	50.0	<1 ug/L	91.3	80-120			
1,2-Dichlorobenzene	42.7 ug/L	0.5	ug/L	50.0	<0.5 ug/L	85.4	70-120			
1,2-Dichloroethane	39.5 ug/L	1	ug/L	50.0	<1 ug/L	79.0	70-130			
1,2-Dichloropropane	39.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	79.5	75-125			
1,3,5-Trimethylbenzene	46.7 ug/L	1	ug/L	50.0	<1 ug/L	93.3	75-124			
1,3-Dichlorobenzene	44.4 ug/L	1	ug/L	50.0	<1 ug/L	88.9	75-125			
1,3-Dichloropropane	40.9 ug/L	1	ug/L	50.0	<1 ug/L	81.8	75-125			
1,4-Dichlorobenzene	44.0 ug/L	1	ug/L	50.0	<1 ug/L	88.0	75-125			
2,2-Dichloropropane	41.8 ug/L	1	ug/L	50.0	<1 ug/L	83.5	70-135			
2-Butanone (MEK)	40.6 ug/L	10	ug/L	50.0	<10 ug/L	81.2	30-150			
2-Chlorotoluene	45.7 ug/L	1	ug/L	50.0	<1 ug/L	91.4	75-125			
2-Hexanone (MBK)	46.2 ug/L	5	ug/L	50.0	<5 ug/L	92.5	55-130			
4-Chlorotoluene	43.8 ug/L	1	ug/L	50.0	<1 ug/L	87.5	75-130			
4-Isopropyltoluene	43.5 ug/L	1	ug/L	50.0	<1 ug/L	87.0	75-130			
4-Methyl-2-pentanone (MIBK)	43.2 ug/L	5	ug/L	50.0	<5 ug/L	86.4	60-135			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0086 - SW5030B

Matrix Spike (BBJ0086-MS1)

Source: 18J0020-03

Prepared & Analyzed: 10/02/2018

Acetone	42.8 ug/L	10	ug/L	50.0	<10 ug/L	85.5	40-140			
Benzene	42.1 ug/L	1	ug/L	50.0	<1 ug/L	84.2	80-120			
Bromobenzene	45.9 ug/L	1	ug/L	50.0	<1 ug/L	91.9	75-125			
Bromochloromethane	43.8 ug/L	1	ug/L	50.0	<1 ug/L	87.5	65-130			
Bromodichloromethane	43.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	86.4	75-120			
Bromoform	47.3 ug/L	1	ug/L	50.0	<1 ug/L	94.6	70-130			
Bromomethane	30.9 ug/L	1	ug/L	50.0	<1 ug/L	61.8	30-145			
Carbon disulfide	48.5 ug/L	10	ug/L	50.0	<10 ug/L	97.0	35-160			
Carbon tetrachloride	43.1 ug/L	1	ug/L	50.0	<1 ug/L	86.1	65-140			
Chlorobenzene	45.1 ug/L	1	ug/L	50.0	<1 ug/L	90.3	80-120			
Chloroethane	41.4 ug/L	1	ug/L	50.0	<1 ug/L	82.8	60-135			
Chloroform	42.6 ug/L	0.5	ug/L	50.0	<0.5 ug/L	85.2	65-135			
Chloromethane	35.8 ug/L	1	ug/L	50.0	<1 ug/L	71.6	40-125			
cis-1,2-Dichloroethylene	41.5 ug/L	1	ug/L	50.0	<1 ug/L	83.0	70-125			
cis-1,3-Dichloropropene	40.6 ug/L	1	ug/L	50.0	<1 ug/L	81.3	70-130			
Dibromochloromethane	43.3 ug/L	0.5	ug/L	50.0	<0.5 ug/L	86.6	60-135			
Dibromomethane	41.9 ug/L	1	ug/L	50.0	<1 ug/L	83.7	75-125			
Dichlorodifluoromethane	30.9 ug/L	1	ug/L	50.0	<1 ug/L	61.8	30-155			
Ethylbenzene	45.9 ug/L	1	ug/L	50.0	<1 ug/L	91.8	75-125			
Hexachlorobutadiene	40.2 ug/L	0.8	ug/L	50.0	<0.8 ug/L	80.5	50-140			
Isopropylbenzene	45.7 ug/L	1	ug/L	50.0	<1 ug/L	91.5	75-125			
m+p-Xylenes	92.9 ug/L	2	ug/L	100	<2 ug/L	92.9	75-130			
Methylene chloride	40.2 ug/L	4	ug/L	50.0	<4 ug/L	80.4	55-140			
Methyl-t-butyl ether (MTBE)	47.1 ug/L	1	ug/L	50.0	<1 ug/L	94.2	65-125			
Naphthalene	33.3 ug/L	1	ug/L	50.0	<1 ug/L	66.6	55-140			
n-Butylbenzene	42.8 ug/L	1	ug/L	50.0	<1 ug/L	85.7	70-135			
n-Propylbenzene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.4	70-130			
o-Xylene	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.9	80-120			
sec-Butylbenzene	43.0 ug/L	1	ug/L	50.0	<1 ug/L	86.0	70-125			
Styrene	47.9 ug/L	1	ug/L	50.0	<1 ug/L	95.8	65-135			
tert-Butylbenzene	45.6 ug/L	1	ug/L	50.0	<1 ug/L	91.2	70-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0086 - SW5030B

Matrix Spike (BBJ0086-MS1)

Source: 18J0020-03

Prepared & Analyzed: 10/02/2018

Tetrachloroethylene (PCE)	65.4 ug/L	1	ug/L	50.0	<1 ug/L	131	45-150			
Toluene	41.2 ug/L	1	ug/L	50.0	<1 ug/L	82.4	75-120			
trans-1,2-Dichloroethylene	42.4 ug/L	1	ug/L	50.0	<1 ug/L	84.8	60-140			
trans-1,3-Dichloropropene	36.0 ug/L	1	ug/L	50.0	<1 ug/L	72.0	55-140			
Trichloroethylene	40.6 ug/L	1	ug/L	50.0	<1 ug/L	81.2	70-125			
Trichlorofluoromethane	38.0 ug/L	1	ug/L	50.0	<1 ug/L	75.9	60-145			
Vinyl chloride	37.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	74.4	50-145			
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	51.1		ug/L	50.0	ug/L	102	70-120			
Surr: 4-Bromofluorobenzene (Surr)	51.4		ug/L	50.0	ug/L	103	75-120			
Surr: Dibromofluoromethane (Surr)	50.6		ug/L	50.0	ug/L	101	70-130			
Surr: Toluene-d8 (Surr)	48.7		ug/L	50.0	ug/L	97.4	70-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0193 - SW3510C

Blank (BBJ0193-BLK1)

Prepared & Analyzed: 10/05/2018

1,2,4,5-Tetrachlorobenzene	<10.0 ug/L	10.0	ug/L						
1,2,4-Trichlorobenzene	<10.0 ug/L	10.0	ug/L						
1,2-Dichlorobenzene	<10.0 ug/L	10.0	ug/L						
1,2-Diphenylhydrazine	<10.0 ug/L	10.0	ug/L						
1,3-Dichlorobenzene	<10.0 ug/L	10.0	ug/L						
1,3-Dinitrobenzene	<2.50 ug/L	2.50	ug/L						
1,4-Dichlorobenzene	<10.0 ug/L	10.0	ug/L						
1-Naphthylamine	<10.0 ug/L	10.0	ug/L						
2,3,4,6-Tetrachlorophenol	<10.0 ug/L	10.0	ug/L						
2,4,5-Trichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4,6-Trichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4-Dichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4-Dimethylphenol	<0.50 ug/L	0.50	ug/L						
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L						
2,4-Dinitrotoluene	<10.0 ug/L	10.0	ug/L						
2,6-Dichlorophenol	<10.0 ug/L	10.0	ug/L						
2,6-Dinitrotoluene	<10.0 ug/L	10.0	ug/L						
2-Chloronaphthalene	<10.0 ug/L	10.0	ug/L						
2-Chlorophenol	<10.0 ug/L	10.0	ug/L						
2-Methylnaphthalene	<10.0 ug/L	10.0	ug/L						
2-Naphthylamine	<10.0 ug/L	10.0	ug/L						
2-Nitroaniline	<20.0 ug/L	20.0	ug/L						
2-Nitrophenol	<10.0 ug/L	10.0	ug/L						
3,3'-Dichlorobenzidine	<10.0 ug/L	10.0	ug/L						
3-Methylcholanthrene	<10.0 ug/L	10.0	ug/L						
3-Nitroaniline	<20.0 ug/L	20.0	ug/L						
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L						
4-Aminobiphenyl	<10.0 ug/L	10.0	ug/L						
4-Bromophenyl phenyl ether	<10.0 ug/L	10.0	ug/L						
4-Chloroaniline	<10.0 ug/L	10.0	ug/L						
4-Chlorophenyl phenyl ether	<10.0 ug/L	10.0	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Blank (BBJ0193-BLK1)

Prepared & Analyzed: 10/05/2018

4-Nitroaniline	<20.0 ug/L	20.0	ug/L						
4-Nitrophenol	<50.0 ug/L	50.0	ug/L						
7,12-Dimethylbenz (a) anthracene	<10.0 ug/L	10.0	ug/L						
Acenaphthene	<10.0 ug/L	10.0	ug/L						
Acenaphthylene	<10.0 ug/L	10.0	ug/L						
Acetophenone	<20.0 ug/L	20.0	ug/L						
Aniline	<50.0 ug/L	50.0	ug/L						
Anthracene	<10.0 ug/L	10.0	ug/L						
Benzidine	<50.0 ug/L	50.0	ug/L						
Benzo (a) anthracene	<10.0 ug/L	10.0	ug/L						
Benzo (a) pyrene	<10.0 ug/L	10.0	ug/L						
Benzo (b) fluoranthene	<10.0 ug/L	10.0	ug/L						
Benzo (g,h,i) perylene	<10.0 ug/L	10.0	ug/L						
Benzo (k) fluoranthene	<10.0 ug/L	10.0	ug/L						
Benzoic acid	<50.0 ug/L	50.0	ug/L						
Benzyl alcohol	<20.0 ug/L	20.0	ug/L						
bis (2-Chloroethoxy) methane	<10.0 ug/L	10.0	ug/L						
bis (2-Chloroethyl) ether	<10.0 ug/L	10.0	ug/L						
2,2'-Oxybis (1-chloropropane)	<10.0 ug/L	10.0	ug/L						
bis (2-Ethylhexyl) phthalate	<10.0 ug/L	10.0	ug/L						
Butyl benzyl phthalate	<10.0 ug/L	10.0	ug/L						
Chrysene	<10.0 ug/L	10.0	ug/L						
Dibenz (a,h) anthracene	<10.0 ug/L	10.0	ug/L						
Dibenz (a,j) acridine	<10.0 ug/L	10.0	ug/L						
Dibenzofuran	<5.00 ug/L	5.00	ug/L						
Diethyl phthalate	<10.0 ug/L	10.0	ug/L						
Dimethyl phthalate	<10.0 ug/L	10.0	ug/L						
Di-n-butyl phthalate	<10.0 ug/L	10.0	ug/L						
Di-n-octyl phthalate	<10.0 ug/L	10.0	ug/L						
Diphenylamine	<10.0 ug/L	10.0	ug/L						
Ethyl methanesulfonate	<20.0 ug/L	20.0	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Blank (BBJ0193-BLK1)

Prepared & Analyzed: 10/05/2018

Fluoranthene	<10.0 ug/L	10.0	ug/L							
Fluorene	<10.0 ug/L	10.0	ug/L							
Hexachlorobenzene	<1.00 ug/L	1.00	ug/L							
Hexachlorobutadiene	<10.0 ug/L	10.0	ug/L							
Hexachlorocyclopentadiene	<10.0 ug/L	10.0	ug/L							
Hexachloroethane	<10.0 ug/L	10.0	ug/L							
Indeno (1,2,3-cd) pyrene	<10.0 ug/L	10.0	ug/L							
Isophorone	<10.0 ug/L	10.0	ug/L							
m+p-Cresols	<10.0 ug/L	10.0	ug/L							
Methyl methanesulfonate	<10.0 ug/L	10.0	ug/L							
Naphthalene	<5.00 ug/L	5.00	ug/L							
Nitrobenzene	<10.0 ug/L	10.0	ug/L							
n-Nitrosodimethylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosodi-n-butylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosodi-n-propylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosodiphenylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosopiperidine	<10.0 ug/L	10.0	ug/L							
o+m+p-Cresols	<10.0 ug/L	10.0	ug/L							
o-Cresol	<10.0 ug/L	10.0	ug/L							
p-(Dimethylamino) azobenzene	<2.50 ug/L	2.50	ug/L							
p-Chloro-m-cresol	<10.0 ug/L	10.0	ug/L							
Pentachloronitrobenzene (quintozene)	<10.0 ug/L	10.0	ug/L							
Pentachlorophenol	<20.0 ug/L	20.0	ug/L							
Phenacetin	<10.0 ug/L	10.0	ug/L							
Phenanthrene	<10.0 ug/L	10.0	ug/L							
Phenol	<10.0 ug/L	10.0	ug/L							
Pronamide	<10.0 ug/L	10.0	ug/L							
Pyrene	<10.0 ug/L	10.0	ug/L							
Pyridine	<10.0 ug/L	10.0	ug/L							
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	75.0		ug/L	100		75.0	10-86			
Surr: 2-Fluorobiphenyl (Surr)	32.7		ug/L	50.0		65.5	9-87			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Blank (BBJ0193-BLK1)

Prepared & Analyzed: 10/05/2018

Surr: 2-Fluorophenol (Surr)	68.8		ug/L	100		68.8	10-52			S
Surr: Nitrobenzene-d5 (Surr)	39.3		ug/L	50.0		78.7	10-98.5			
Surr: Phenol-d5 (Surr)	31.6		ug/L	100		31.6	5-33			
Surr: p-Terphenyl-d14 (Surr)	55.9		ug/L	50.0		112	27-133			

LCS (BBJ0193-BS1)

Prepared & Analyzed: 10/05/2018

1,2,4-Trichlorobenzene	26.4 ug/L	10.0	ug/L	50.0	ug/L	52.8	21.8-66.7			
1,2-Dichlorobenzene	25.5 ug/L	10.0	ug/L	50.0	ug/L	51.0	22-60			
1,3-Dichlorobenzene	22.6 ug/L	10.0	ug/L	50.0	ug/L	45.3	22-60			
1,4-Dichlorobenzene	25.4 ug/L	10.0	ug/L	50.0	ug/L	50.8	13-68			
1-Chloronaphthalene	36.3 ug/L	10.0	ug/L		ug/L		0-200			
2,4,6-Trichlorophenol	42.3 ug/L	10.0	ug/L	50.0	ug/L	84.7	50-115			
2,4-Dichlorophenol	42.0 ug/L	10.0	ug/L	50.0	ug/L	83.9	50-105			
2,4-Dimethylphenol	43.0 ug/L	0.50	ug/L	50.0	ug/L	86.1	30-110			
2,4-Dinitrophenol	64.7 ug/L	50.0	ug/L	50.0	ug/L	129	15-140			
2,4-Dinitrotoluene	50.6 ug/L	10.0	ug/L	50.0	ug/L	101	21-99			L
2,6-Dinitrotoluene	46.3 ug/L	10.0	ug/L	50.0	ug/L	92.6	15-140			
2-Chloronaphthalene	34.8 ug/L	10.0	ug/L	50.0	ug/L	69.6	45-105			
2-Chlorophenol	37.6 ug/L	10.0	ug/L	50.0	ug/L	75.2	15-74			L
2-Nitrophenol	40.8 ug/L	10.0	ug/L	50.0	ug/L	81.7	40-115			
3,3'-Dichlorobenzidine	30.9 ug/L	10.0	ug/L	50.0	ug/L	61.9	25-85			
4,6-Dinitro-2-methylphenol	56.4 ug/L	50.0	ug/L	50.0	ug/L	113	40-130			
4-Bromophenyl phenyl ether	37.3 ug/L	10.0	ug/L	50.0	ug/L	74.6	15-110			
4-Chlorophenyl phenyl ether	35.0 ug/L	10.0	ug/L	50.0	ug/L	70.1	15-110			
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	33.3	0-125			
Acenaphthene	39.7 ug/L	10.0	ug/L	50.0	ug/L	79.5	27.7-85.5			
Acenaphthylene	43.8 ug/L	10.0	ug/L	50.0	ug/L	87.5	50-105			
Acetophenone	42.4 ug/L	20.0	ug/L	50.0	ug/L	84.7	0-200			
alpha-Terpineol	57.5 ug/L	2.50	ug/L	50.0	ug/L	115	0-200			
Anthracene	45.4 ug/L	10.0	ug/L	50.0	ug/L	90.8	55-110			
Benzo (a) anthracene	43.4 ug/L	10.0	ug/L	50.0	ug/L	86.9	55-110			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0193 - SW3510C

LCS (BBJ0193-BS1)

Prepared & Analyzed: 10/05/2018

Benzo (a) pyrene	39.7 ug/L	10.0	ug/L	50.0	ug/L	79.3	55-110		
Benzo (b) fluoranthene	45.9 ug/L	10.0	ug/L	50.0	ug/L	91.8	45-120		
Benzo (g,h,i) perylene	41.6 ug/L	10.0	ug/L	50.0	ug/L	83.2	40-125		
Benzo (k) fluoranthene	42.3 ug/L	10.0	ug/L	50.0	ug/L	84.6	45-125		
bis (2-Chloroethoxy) methane	44.1 ug/L	10.0	ug/L	50.0	ug/L	88.2	40-125		
bis (2-Chloroethyl) ether	37.8 ug/L	10.0	ug/L	50.0	ug/L	75.5	40-125		
2,2'-Oxybis (1-chloropropane)	32.7 ug/L	10.0	ug/L	50.0	ug/L	65.3	40-125		
bis (2-Ethylhexyl) phthalate	70.5 ug/L	10.0	ug/L	50.0	ug/L	141	40-125		L
Butyl benzyl phthalate	65.9 ug/L	10.0	ug/L	50.0	ug/L	132	45-115		L
Carbazole	46.5 ug/L	2.50	ug/L	50.0	ug/L	93.0	0-200		
Chrysene	52.2 ug/L	10.0	ug/L	50.0	ug/L	104	55-110		
Dibenz (a,h) anthracene	41.9 ug/L	10.0	ug/L	50.0	ug/L	83.7	40-125		
Diethyl phthalate	48.8 ug/L	10.0	ug/L	50.0	ug/L	97.5	40-120		
Dimethyl phthalate	44.9 ug/L	10.0	ug/L	50.0	ug/L	89.8	25-125		
Di-n-butyl phthalate	56.4 ug/L	10.0	ug/L	50.0	ug/L	113	55-115		
Di-n-octyl phthalate	72.1 ug/L	10.0	ug/L	50.0	ug/L	144	35-135		L
Fluoranthene	45.6 ug/L	10.0	ug/L	50.0	ug/L	91.3	55-115		
Fluorene	42.0 ug/L	10.0	ug/L	50.0	ug/L	84.0	50-110		
Hexachlorobenzene	38.4 ug/L	1.00	ug/L	50.0	ug/L	76.9	25-125		
Hexachlorobutadiene	26.3 ug/L	10.0	ug/L	50.0	ug/L	52.5	25-125		
Hexachlorocyclopentadiene	16.5 ug/L	10.0	ug/L	50.0	ug/L	33.1	25-125		
Hexachloroethane	24.7 ug/L	10.0	ug/L	50.0	ug/L	49.4	25-125		
Indeno (1,2,3-cd) pyrene	41.4 ug/L	10.0	ug/L	50.0	ug/L	82.9	45-125		
Isophorone	41.7 ug/L	10.0	ug/L	50.0	ug/L	83.4	10-110		
Naphthalene	35.2 ug/L	5.00	ug/L	50.0	ug/L	70.5	40-100		
Nitrobenzene	41.9 ug/L	10.0	ug/L	50.0	ug/L	83.8	40-100		
n-Nitrosodimethylamine	28.9 ug/L	10.0	ug/L	50.0	ug/L	57.9	25-110		
n-Nitrosodi-n-propylamine	43.3 ug/L	10.0	ug/L	50.0	ug/L	86.5	12-97		
n-Nitrosodiphenylamine	35.2 ug/L	10.0	ug/L	50.0	ug/L	70.5	12-97		
p-Chloro-m-cresol	43.7 ug/L	10.0	ug/L	50.0	ug/L	87.5	10-91		
Pentachlorophenol	31.9 ug/L	20.0	ug/L	50.0	ug/L	63.8	30-109		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

LCS (BBJ0193-BS1)

Prepared & Analyzed: 10/05/2018

Phenanthrene	50.0 ug/L	10.0	ug/L	50.0	ug/L	100	50-115			
Phenol	16.9 ug/L	10.0	ug/L	50.5	ug/L	33.5	0-115			
Pyrene	58.5 ug/L	10.0	ug/L	50.0	ug/L	117	27-110			L
Pyridine	29.8 ug/L	10.0	ug/L	50.0	ug/L	59.7	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	83.8		ug/L	100	ug/L	83.8	10-86			
Surr: 2-Fluorobiphenyl (Surr)	39.4		ug/L	50.0	ug/L	78.9	9-87			
Surr: 2-Fluorophenol (Surr)	76.2		ug/L	100	ug/L	76.2	10-52			S
Surr: Nitrobenzene-d5 (Surr)	44.0		ug/L	50.0	ug/L	87.9	10-98.5			
Surr: Phenol-d5 (Surr)	33.7		ug/L	100	ug/L	33.7	5-33			S
Surr: p-Terphenyl-d14 (Surr)	56.8		ug/L	50.0	ug/L	114	27-133			

Matrix Spike (BBJ0193-MS1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

1,2,4-Trichlorobenzene	19.8 ug/L	10.2	ug/L	51.0	<10.2 ug/L	38.8	21.8-66.7			
1,2-Dichlorobenzene	19.5 ug/L	10.2	ug/L	51.0	<10.2 ug/L	38.3	22-60			
1,3-Dichlorobenzene	18.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	35.5	22-60			
1,4-Dichlorobenzene	19.9 ug/L	10.2	ug/L	51.0	<10.2 ug/L	39.1	22-60			
1-Chloronaphthalene	23.3 ug/L	10.2	ug/L		<10.2 ug/L		0-200			
2,4,6-Trichlorophenol	22.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	43.5	50-115			M
2,4-Dichlorophenol	22.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	43.2	50-105			M
2,4-Dimethylphenol	22.0 ug/L	0.51	ug/L	51.0	<0.51 ug/L	43.2	30-110			
2,4-Dinitrophenol	<51.0 ug/L	51.0	ug/L	51.0	<51.0 ug/L	92.4	15-140			
2,4-Dinitrotoluene	40.3 ug/L	10.2	ug/L	51.0	<10.2 ug/L	78.9	17-111			
2,6-Dinitrotoluene	29.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	58.1	15-140			
2-Chloronaphthalene	22.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.3	45-105			M
2-Chlorophenol	21.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	41.5	19-64			
2-Nitrophenol	23.3 ug/L	10.2	ug/L	51.0	<10.2 ug/L	45.6	40-115			
3,3'-Dichlorobenzidine	22.8 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.7	10-85			
4,6-Dinitro-2-methylphenol	<51.0 ug/L	51.0	ug/L	51.0	<51.0 ug/L	88.2	40-130			
4-Bromophenyl phenyl ether	26.4 ug/L	10.2	ug/L	51.0	<10.2 ug/L	51.8	15-110			
4-Chlorophenyl phenyl ether	22.4 ug/L	10.2	ug/L	51.0	<10.2 ug/L	43.9	15-110			
4-Nitrophenol	<51.0 ug/L	51.0	ug/L	51.0	<51.0 ug/L	27.5	0-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Matrix Spike (BBJ0193-MS1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

Acenaphthene	23.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	46.3	24-90			
Acenaphthylene	25.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	50.3	50-105			
Acetophenone	23.4 ug/L	20.4	ug/L	51.0	<20.4 ug/L	45.8	0-200			
alpha-Terpineol	32.1 ug/L	2.55	ug/L	51.0	<2.55 ug/L	62.8	0-200			
Anthracene	37.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	73.6	55-110			
Benzo (a) anthracene	40.0 ug/L	10.2	ug/L	51.0	<10.2 ug/L	78.4	55-110			
Benzo (a) pyrene	35.8 ug/L	10.2	ug/L	51.0	<10.2 ug/L	70.1	55-110			
Benzo (b) fluoranthene	40.9 ug/L	10.2	ug/L	51.0	<10.2 ug/L	80.2	45-120			
Benzo (g,h,i) perylene	33.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	66.0	40-125			
Benzo (k) fluoranthene	41.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	81.6	45-125			
bis (2-Chloroethoxy) methane	22.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.3	40-125			
bis (2-Chloroethyl) ether	20.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	40.6	40-125			
2,2'-Oxybis (1-chloropropane)	19.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	38.4	40-125			M
bis (2-Ethylhexyl) phthalate	65.4 ug/L	10.2	ug/L	51.0	<10.2 ug/L	128	40-125			M
Butyl benzyl phthalate	62.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	122	45-115			M
Carbazole	40.6 ug/L	2.55	ug/L	51.0	<2.55 ug/L	79.6	0-200			
Chrysene	47.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	92.5	55-110			
Dibenz (a,h) anthracene	33.8 ug/L	10.2	ug/L	51.0	<10.2 ug/L	66.3	40-125			
Diethyl phthalate	36.3 ug/L	10.2	ug/L	51.0	<10.2 ug/L	71.1	40-120			
Dimethyl phthalate	28.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	55.0	25-125			
Di-n-butyl phthalate	49.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	97.2	55-115			
Di-n-octyl phthalate	77.0 ug/L	10.2	ug/L	51.0	<10.2 ug/L	151	35-135			M
Fluoranthene	42.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	82.7	55-115			
Fluorene	27.4 ug/L	10.2	ug/L	51.0	<10.2 ug/L	53.6	50-110			
Hexachlorobenzene	31.9 ug/L	1.02	ug/L	51.0	<1.02 ug/L	62.5	25-125			
Hexachlorobutadiene	20.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	40.7	25-125			
Hexachlorocyclopentadiene	12.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	23.7	10-90			
Hexachloroethane	19.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	38.3	25-125			
Indeno (1,2,3-cd) pyrene	34.5 ug/L	10.2	ug/L	51.0	<10.2 ug/L	67.6	45-125			
Isophorone	22.4 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.0	10-110			
Naphthalene	23.6 ug/L	5.10	ug/L	51.0	<5.10 ug/L	46.2	40-100			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Matrix Spike (BBJ0193-MS1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

Nitrobenzene	24.9 ug/L	10.2	ug/L	51.0	<10.2 ug/L	48.8	40-100			
n-Nitrosodimethylamine	17.8 ug/L	10.2	ug/L	51.0	<10.2 ug/L	34.8	25-110			
n-Nitrosodi-n-propylamine	24.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	47.5	12-97			
n-Nitrosodiphenylamine	26.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	51.2	12-97			
p-Chloro-m-cresol	22.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.6	10-91			
Pentachlorophenol	26.9 ug/L	20.4	ug/L	51.0	<20.4 ug/L	52.7	27-109			
Phenanthrene	42.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	82.6	50-115			
Phenol	<10.2 ug/L	10.2	ug/L	51.5	<10.2 ug/L	17.9	0-115			
Pyrene	56.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	110	23-110			
Pyridine	18.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	36.6	0-200			

Surr: 2,4,6-Tribromophenol (Surr)	59.7		ug/L	102	ug/L	58.5	10-86			
Surr: 2-Fluorobiphenyl (Surr)	23.8		ug/L	51.0	ug/L	46.6	9-87			
Surr: 2-Fluorophenol (Surr)	39.7		ug/L	102	ug/L	38.9	10-52			
Surr: Nitrobenzene-d5 (Surr)	26.3		ug/L	51.0	ug/L	51.6	10-98.5			
Surr: Phenol-d5 (Surr)	19.0		ug/L	102	ug/L	18.6	5-33			
Surr: p-Terphenyl-d14 (Surr)	52.6		ug/L	51.0	ug/L	103	27-133			

Matrix Spike Dup (BBJ0193-MSD1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

1,2,4-Trichlorobenzene	20.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	40.4	21.8-66.7	1.92	20	
1,2-Dichlorobenzene	18.9 ug/L	10.0	ug/L	50.0	<10.0 ug/L	37.8	22-60	3.34	20	
1,3-Dichlorobenzene	17.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	34.3	22-60	5.57	20	
1,4-Dichlorobenzene	18.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	37.5	22-60	6.25	20	
1-Chloronaphthalene	24.2 ug/L	10.0	ug/L		<10.0 ug/L		0-200	3.72	20	
2,4,6-Trichlorophenol	22.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	44.3	50-115	0.0616	20	M
2,4-Dichlorophenol	23.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	46.2	50-105	4.51	20	M
2,4-Dimethylphenol	23.4 ug/L	0.50	ug/L	50.0	<0.50 ug/L	46.8	30-110	6.12	20	
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L	50.0	<50.0 ug/L	91.7	15-140	2.76	20	
2,4-Dinitrotoluene	37.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	74.4	17-111	7.89	20	
2,6-Dinitrotoluene	29.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	58.3	15-140	1.68	20	
2-Chloronaphthalene	23.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	46.9	45-105	3.55	20	
2-Chlorophenol	20.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	41.5	19-64	1.92	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0193 - SW3510C

Matrix Spike Dup (BBJ0193-MSD1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

2-Nitrophenol	24.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.2	40-115	3.65	20	
3,3'-Dichlorobenzidine	20.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	41.5	10-85	9.30	20	
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L	50.0	<50.0 ug/L	83.2	40-130	7.85	20	
4-Bromophenyl phenyl ether	26.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	52.2	15-110	1.14	20	
4-Chlorophenyl phenyl ether	22.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	44.9	15-110	0.186	20	
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	<50.0 ug/L	25.7	0-125	8.64	20	
Acenaphthene	24.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.6	24-90	2.87	20	
Acenaphthylene	26.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	53.1	50-105	3.36	20	
Acetophenone	23.8 ug/L	20.0	ug/L	50.0	<20.0 ug/L	47.6	0-200	1.84	20	
alpha-Terpineol	32.0 ug/L	2.50	ug/L	50.0	<2.50 ug/L	64.1	0-200	0.0662	20	
Anthracene	34.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	68.8	55-110	8.76	20	
Benzo (a) anthracene	35.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	70.4	55-110	12.8	20	
Benzo (a) pyrene	31.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	62.5	55-110	13.5	20	
Benzo (b) fluoranthene	35.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	70.0	45-120	15.5	20	
Benzo (g,h,i) perylene	35.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	70.9	40-125	5.23	20	
Benzo (k) fluoranthene	34.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	68.5	45-125	19.4	20	
bis (2-Chloroethoxy) methane	23.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	46.9	40-125	3.64	20	
bis (2-Chloroethyl) ether	19.9 ug/L	10.0	ug/L	50.0	<10.0 ug/L	39.7	40-125	4.21	20	M
2,2'-Oxybis (1-chloropropane)	19.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	39.0	40-125	0.522	20	M
bis (2-Ethylhexyl) phthalate	58.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	117	40-125	11.2	20	
Butyl benzyl phthalate	56.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	114	45-115	9.08	20	
Carbazole	33.8 ug/L	2.50	ug/L	50.0	<2.50 ug/L	67.7	0-200	18.2	20	
Chrysene	41.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	83.6	55-110	12.2	20	
Dibenz (a,h) anthracene	34.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	68.5	40-125	1.30	20	
Diethyl phthalate	34.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	69.6	40-120	4.15	20	
Dimethyl phthalate	28.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	56.1	25-125	0.0400	20	
Di-n-butyl phthalate	44.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	88.0	55-115	11.9	20	
Di-n-octyl phthalate	56.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	113	35-135	30.3	20	P
Fluoranthene	35.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	70.0	55-115	18.6	20	
Fluorene	27.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	54.3	50-110	0.834	20	
Hexachlorobenzene	30.2 ug/L	1.00	ug/L	50.0	<1.00 ug/L	60.4	25-125	5.44	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Matrix Spike Dup (BBJ0193-MSD1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

Hexachlorobutadiene	21.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	42.6	25-125	2.55	20	
Hexachlorocyclopentadiene	13.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	26.4	10-90	8.76	20	
Hexachloroethane	19.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	38.7	25-125	1.09	20	
Indeno (1,2,3-cd) pyrene	34.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	68.2	45-125	1.08	20	
Isophorone	22.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	45.4	10-110	1.25	20	
Naphthalene	23.8 ug/L	5.00	ug/L	50.0	<5.00 ug/L	47.6	40-100	1.05	20	
Nitrobenzene	24.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.1	40-100	3.63	20	
n-Nitrosodimethylamine	18.6 ug/L	10.0	ug/L	50.0	<10.0 ug/L	37.1	25-110	4.37	20	
n-Nitrosodi-n-propylamine	24.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.4	12-97	0.142	20	
n-Nitrosodiphenylamine	24.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.5	12-97	7.51	20	
p-Chloro-m-cresol	23.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	46.8	10-91	2.92	20	
Pentachlorophenol	24.2 ug/L	20.0	ug/L	50.0	<20.0 ug/L	48.4	27-109	10.4	20	
Phenanthrene	38.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	76.9	50-115	9.19	20	
Phenol	<10.0 ug/L	10.0	ug/L	50.5	<10.0 ug/L	18.8	0-115	3.27	20	
Pyrene	53.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	107	23-110	4.86	20	
Pyridine	19.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	38.5	0-200	3.05	20	
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	55.7		ug/L	100	ug/L	55.7	10-86			
Surr: 2-Fluorobiphenyl (Surr)	24.5		ug/L	50.0	ug/L	49.0	9-87			
Surr: 2-Fluorophenol (Surr)	39.6		ug/L	100	ug/L	39.6	10-52			
Surr: Nitrobenzene-d5 (Surr)	25.2		ug/L	50.0	ug/L	50.4	10-98.5			
Surr: Phenol-d5 (Surr)	17.9		ug/L	100	ug/L	17.9	5-33			
Surr: p-Terphenyl-d14 (Surr)	48.1		ug/L	50.0	ug/L	96.3	27-133			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0102 - SW3510C

Blank (BBJ0102-BLK1)

Prepared & Analyzed: 10/03/2018

TPH-Semi-Volatiles (DRO)	<0.500 mg/L	0.500	mg/L						
<i>Surr: Pentacosane (Surr)</i>	0.148		mg/L	0.250		59.3	40-160		

LCS (BBJ0102-BS1)

Prepared & Analyzed: 10/03/2018

TPH-Semi-Volatiles (DRO)	3.3 mg/L	0.500	mg/L	5.00	mg/L	66.8	40-160		
<i>Surr: Pentacosane (Surr)</i>	0.149		mg/L	0.250	mg/L	59.8	40-160		

Batch BBJ0177 - SW3510C

Blank (BBJ0177-BLK1)

Prepared & Analyzed: 10/04/2018

TPH-Semi-Volatiles (ORO)	<1.0 mg/L	1.0	mg/L						
--------------------------	-----------	-----	------	--	--	--	--	--	--

LCS (BBJ0177-BS1)

Prepared & Analyzed: 10/04/2018

TPH-Semi-Volatiles (ORO)	2.5 mg/L	1.0	mg/L	5.00	mg/L	51.0	40-160		
--------------------------	----------	-----	------	------	------	------	--------	--	--

Batch BBJ0209 - SW3510C

Blank (BBJ0209-BLK1)

Prepared: 10/05/2018 Analyzed: 10/08/2018

TPH-Semi-Volatiles (DRO)	<0.500 mg/L	0.500	mg/L						
<i>Surr: Pentacosane (Surr)</i>	0.144		mg/L	0.250		57.5	40-160		

LCS (BBJ0209-BS1)

Prepared: 10/05/2018 Analyzed: 10/08/2018

TPH-Semi-Volatiles (DRO)	3.5 mg/L	0.500	mg/L	5.00	mg/L	70.6	40-160		
<i>Surr: Pentacosane (Surr)</i>	0.137		mg/L	0.250	mg/L	54.8	40-160		

Matrix Spike (BBJ0209-MS1)

Source: 18J0033-01

Prepared: 10/05/2018 Analyzed: 10/08/2018

TPH-Semi-Volatiles (DRO)	4.1 mg/L	0.556	mg/L	5.56	<0.556 mg/L	73.5	40-160		
<i>Surr: Pentacosane (Surr)</i>	0.155		mg/L	0.278	mg/L	55.9	40-160		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0209 - SW3510C

Matrix Spike Dup (BBJ0209-MSD1)

Source: 18J0033-01

Prepared: 10/05/2018 Analyzed: 10/08/2018

TPH-Semi-Volatiles (DRO)	3.9 mg/L	0.532	mg/L	5.32	<0.532 mg/L	73.1	40-160	4.91	20	
Surr: Pentacosane (Surr)	0.146		mg/L	0.266	mg/L	54.8	40-160			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0178 - SW3510C

Blank (BBJ0178-BLK1)

Prepared: 10/04/2018 Analyzed: 10/05/2018

4,4'-DDD	<0.050 ug/L	0.050	ug/L							
4,4'-DDE	<0.050 ug/L	0.050	ug/L							
4,4'-DDT	<0.050 ug/L	0.050	ug/L							
Aldrin	<0.050 ug/L	0.050	ug/L							
alpha-BHC	<0.050 ug/L	0.050	ug/L							
beta-BHC	<0.050 ug/L	0.050	ug/L							
Chlordane	<0.200 ug/L	0.200	ug/L							
delta-BHC	<0.050 ug/L	0.050	ug/L							
Dieldrin	<0.050 ug/L	0.050	ug/L							
Endosulfan I	<0.050 ug/L	0.050	ug/L							
Endosulfan II	<0.050 ug/L	0.050	ug/L							
Endosulfan sulfate	<0.050 ug/L	0.050	ug/L							
Endrin	<0.050 ug/L	0.050	ug/L							
Endrin aldehyde	<0.050 ug/L	0.050	ug/L							
gamma-BHC (Lindane)	<0.050 ug/L	0.050	ug/L							
Heptachlor	<0.050 ug/L	0.050	ug/L							
Heptachlor epoxide	<0.050 ug/L	0.050	ug/L							
Methoxychlor	<0.050 ug/L	0.050	ug/L							
Toxaphene	<1.00 ug/L	1.00	ug/L							
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	0.110		ug/L	0.200		55.0	18-112			
Surr: DCB	0.130		ug/L	0.200		65.0	27-131			

LCS (BBJ0178-BS1)

Prepared: 10/04/2018 Analyzed: 10/05/2018

4,4'-DDD	0.090 ug/L	0.050	ug/L	0.100	ug/L	90.0	23-134			
4,4'-DDE	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134			
4,4'-DDT	0.090 ug/L	0.050	ug/L	0.100	ug/L	90.0	23-134			
Aldrin	0.050 ug/L	0.050	ug/L	0.100	ug/L	50.0	23-134			
alpha-BHC	0.060 ug/L	0.050	ug/L	0.100	ug/L	60.0	23-134			
beta-BHC	0.100 ug/L	0.050	ug/L	0.100	ug/L	100	23-134			
delta-BHC	0.090 ug/L	0.050	ug/L	0.100	ug/L	90.0	23-134			
Dieldrin	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0178 - SW3510C

LCS (BBJ0178-BS1)

Prepared: 10/04/2018 Analyzed: 10/05/2018

Endosulfan I	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
Endosulfan II	0.090 ug/L	0.050	ug/L	0.100	ug/L	90.0	23-134		
Endosulfan sulfate	0.090 ug/L	0.050	ug/L	0.100	ug/L	90.0	23-134		
Endrin	0.090 ug/L	0.050	ug/L	0.100	ug/L	90.0	23-134		
Endrin aldehyde	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
gamma-BHC (Lindane)	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134		
Heptachlor	0.060 ug/L	0.050	ug/L	0.100	ug/L	60.0	23-134		
Heptachlor epoxide	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134		
Methoxychlor	0.090 ug/L	0.050	ug/L	0.100	ug/L	90.0	23-134		
Mirex	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134		
<hr style="border-top: 1px dashed black;"/>									
Surr: TCMX	0.120		ug/L	0.200	ug/L	60.0	18-112		
Surr: DCB	0.170		ug/L	0.200	ug/L	85.0	27-131		

LCS (BBJ0178-BS2)

Prepared: 10/04/2018 Analyzed: 10/05/2018

Toxaphene	1.61 ug/L	1.00	ug/L	2.50	ug/L	64.4	23-134		
-----------	-----------	------	------	------	------	------	--------	--	--

LCS (BBJ0178-BS3)

Prepared: 10/04/2018 Analyzed: 10/05/2018

Chlordane	1.59 ug/L	0.200	ug/L	2.50	ug/L	63.6	23-134		
-----------	-----------	-------	------	------	------	------	--------	--	--

Matrix Spike (BBJ0178-MS1)

Source: 18J0065-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

4,4'-DDD	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134		
4,4'-DDE	0.933 ug/L	0.667	ug/L	1.33	<0.667 ug/L	70.0	23-134		
4,4'-DDT	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134		
Aldrin	0.800 ug/L	0.667	ug/L	1.33	<0.667 ug/L	60.0	23-134		
alpha-BHC	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134		
beta-BHC	1.20 ug/L	0.667	ug/L	1.33	<0.667 ug/L	90.0	23-134		
delta-BHC	1.20 ug/L	0.667	ug/L	1.33	<0.667 ug/L	90.0	23-134		
Dieldrin	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134		
Endosulfan I	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134		
Endosulfan II	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134		
Endosulfan sulfate	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134		
Endrin	1.20 ug/L	0.667	ug/L	1.33	<0.667 ug/L	90.0	23-134		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0178 - SW3510C

Matrix Spike (BBJ0178-MS1)

Source: 18J0065-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

Endrin aldehyde	0.933 ug/L	0.667	ug/L	1.33	<0.667 ug/L	70.0	23-134			
gamma-BHC (Lindane)	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134			
Heptachlor	0.933 ug/L	0.667	ug/L	1.33	<0.667 ug/L	70.0	23-134			
Heptachlor epoxide	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134			
Methoxychlor	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134			
Mirex	0.800 ug/L	0.667	ug/L	1.33	<0.667 ug/L	60.0	23-134			
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	2.00		ug/L	2.67	ug/L	75.0	18-112			
Surr: DCB	1.87		ug/L	2.67	ug/L	70.0	27-131			

Matrix Spike Dup (BBJ0178-MSD1)

Source: 18J0065-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

4,4'-DDD	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	0.00	20	
4,4'-DDE	0.933 ug/L	0.667	ug/L	1.33	<0.667 ug/L	70.0	23-134	0.00	20	
4,4'-DDT	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	0.00	20	
Aldrin	0.800 ug/L	0.667	ug/L	1.33	<0.667 ug/L	60.0	23-134	0.00	20	
alpha-BHC	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	0.00	20	
beta-BHC	1.20 ug/L	0.667	ug/L	1.33	<0.667 ug/L	90.0	23-134	0.00	20	
delta-BHC	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	11.8	20	
Dieldrin	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	0.00	20	
Endosulfan I	1.20 ug/L	0.667	ug/L	1.33	<0.667 ug/L	90.0	23-134	11.8	20	
Endosulfan II	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	0.00	20	
Endosulfan sulfate	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	0.00	20	
Endrin	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	11.8	20	
Endrin aldehyde	0.933 ug/L	0.667	ug/L	1.33	<0.667 ug/L	70.0	23-134	0.00	20	
gamma-BHC (Lindane)	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	0.00	20	
Heptachlor	0.933 ug/L	0.667	ug/L	1.33	<0.667 ug/L	70.0	23-134	0.00	20	
Heptachlor epoxide	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	0.00	20	
Methoxychlor	1.07 ug/L	0.667	ug/L	1.33	<0.667 ug/L	80.0	23-134	0.00	20	
Mirex	0.800 ug/L	0.667	ug/L	1.33	<0.667 ug/L	60.0	23-134	0.00	20	
<hr style="border-top: 1px dashed black;"/>										
Surr: TCMX	1.87		ug/L	2.67	ug/L	70.0	18-112			
Surr: DCB	1.87		ug/L	2.67	ug/L	70.0	27-131			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Herbicides by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0120 - SW3510C

Blank (BBJ0120-BLK1)

Prepared: 10/03/2018 Analyzed: 10/08/2018

2,4,5-T	<0.500 ug/L	0.500	ug/L						
2,4,5-TP (Silvex)	<0.500 ug/L	0.500	ug/L						
2,4-D	<0.500 ug/L	0.500	ug/L						
Dinoseb	<0.500 ug/L	0.500	ug/L						
Pentachlorophenol	<0.500 ug/L	0.500	ug/L						

Surr: DCAA (Surr) 1.06 ug/L 1.11 95.0 60-112

LCS (BBJ0120-BS1)

Prepared: 10/03/2018 Analyzed: 10/08/2018

2,4,5-T	0.667 ug/L	0.500	ug/L	0.556 ug/L	120	53-144		
2,4,5-TP (Silvex)	0.667 ug/L	0.500	ug/L	0.556 ug/L	120	52-129		
2,4-D	0.611 ug/L	0.500	ug/L	0.556 ug/L	110	53-126		
Dinoseb	0.667 ug/L	0.500	ug/L	0.556 ug/L	120	60-137		
Pentachlorophenol	0.611 ug/L	0.500	ug/L	0.556 ug/L	110	52-124		

Surr: DCAA (Surr) 0.944 ug/L 1.11 ug/L 85.0 60-112

Matrix Spike (BBJ0120-MS1)

Source: 18I1081-01

Prepared: 10/03/2018 Analyzed: 10/08/2018

2,4,5-T	0.500 ug/L	0.500	ug/L	0.556 <0.500 ug/L	90.0	53-144		
2,4,5-TP (Silvex)	0.556 ug/L	0.500	ug/L	0.556 <0.500 ug/L	100	52-129		
2,4-D	0.500 ug/L	0.500	ug/L	0.556 <0.500 ug/L	90.0	53-126		
Dinoseb	0.500 ug/L	0.500	ug/L	0.556 <0.500 ug/L	90.0	60-137		
Pentachlorophenol	0.556 ug/L	0.500	ug/L	0.556 <0.500 ug/L	100	52-124		

Surr: DCAA (Surr) 1.11 ug/L 1.11 ug/L 100 60-112

Matrix Spike Dup (BBJ0120-MSD1)

Source: 18I1081-01

Prepared: 10/03/2018 Analyzed: 10/08/2018

2,4,5-T	0.556 ug/L	0.500	ug/L	0.556 <0.500 ug/L	100	53-144	10.5	20
2,4,5-TP (Silvex)	0.556 ug/L	0.500	ug/L	0.556 <0.500 ug/L	100	52-129	0.00	20
2,4-D	0.556 ug/L	0.500	ug/L	0.556 <0.500 ug/L	100	53-126	10.5	20
Dinoseb	0.556 ug/L	0.500	ug/L	0.556 <0.500 ug/L	100	60-137	10.5	20
Pentachlorophenol	0.556 ug/L	0.500	ug/L	0.556 <0.500 ug/L	100	52-124	0.00	20

Surr: DCAA (Surr) 0.944 ug/L 1.11 ug/L 85.0 60-112



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0155 - No Prep Wet Chem

Blank (BBJ0155-BLK1)

Prepared & Analyzed: 10/02/2018

Chromium, Hexavalent	<0.005 mg/L	0.005	mg/L
----------------------	-------------	-------	------

LCS (BBJ0155-BS1)

Prepared & Analyzed: 10/02/2018

Chromium, Hexavalent	0.099 mg/L	0.005	mg/L	0.100 mg/L	99.0	80-120
----------------------	------------	-------	------	------------	------	--------

Matrix Spike (BBJ0155-MS1)

Source: 18J0020-01

Prepared & Analyzed: 10/02/2018

Chromium, Hexavalent	0.103 mg/L	0.005	mg/L	0.100	<0.005 mg/L	103	80-120
----------------------	------------	-------	------	-------	-------------	-----	--------

Matrix Spike Dup (BBJ0155-MSD1)

Source: 18J0020-01

Prepared & Analyzed: 10/02/2018

Chromium, Hexavalent	0.102 mg/L	0.005	mg/L	0.100	<0.005 mg/L	102	80-120	0.976	20
----------------------	------------	-------	------	-------	-------------	-----	--------	-------	----



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Non-Potable Water	
Aluminum	VELAP,WVDEP
Barium	VELAP,WVDEP
Beryllium	VELAP,WVDEP
Cadmium	VELAP,WVDEP
Calcium	VELAP,WVDEP
Chromium	VELAP,WVDEP
Cobalt	VELAP,WVDEP
Copper	VELAP,WVDEP
Iron	VELAP,WVDEP
Lead	VELAP,WVDEP
Magnesium	VELAP,WVDEP
Manganese	VELAP,WVDEP
Nickel	VELAP,WVDEP
Potassium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP,WVDEP
Vanadium	VELAP,WVDEP
Zinc	VELAP,WVDEP
SW6020A in Non-Potable Water	
Antimony	VELAP,NC,WVDEP
Arsenic	VELAP,WVDEP
Selenium	VELAP,WVDEP
Thallium	VELAP,WVDEP
SW7196A in Non-Potable Water	
Chromium, Hexavalent	VELAP
SW7470A in Non-Potable Water	
Mercury	VELAP,NC,WVDEP
SW8015C in Non-Potable Water	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
TPH-Volatiles (GRO)	VELAP,NC,WVDEP
SW8081B in Non-Potable Water	
4,4'-DDD	NC,VELAP,WVDEP
4,4'-DDE	NC,VELAP,WVDEP
4,4'-DDT	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Aldrin	NC,VELAP,WVDEP
alpha-BHC	NC,VELAP,WVDEP
beta-BHC	NC,VELAP,WVDEP
Chlordane	NC,VELAP,WVDEP
delta-BHC	NC,VELAP,WVDEP
Dieldrin	NC,VELAP,WVDEP
Endosulfan I	NC,VELAP,WVDEP
Endosulfan II	NC,VELAP,WVDEP
Endosulfan sulfate	NC,VELAP,WVDEP
Endrin	NC,VELAP,WVDEP
Endrin aldehyde	NC,VELAP,WVDEP
gamma-BHC (Lindane)	NC,VELAP,WVDEP
Heptachlor	NC,VELAP,WVDEP
Heptachlor epoxide	NC,VELAP,WVDEP
Methoxychlor	NC,VELAP,WVDEP
Toxaphene	NC,VELAP,WVDEP
 SW8151A in Non-Potable Water	
2,4,5-T	VELAP,NC
2,4,5-TP (Silvex)	VELAP,NC
2,4-D	VELAP,NC
Dinoseb	VELAP,NC
Pentachlorophenol	VELAP,NC
 SW8260B in Non-Potable Water	
1,1,1,2-Tetrachloroethane	NC,VELAP,WVDEP
1,1,1-Trichloroethane	NC,VELAP,WVDEP
1,1,2,2-Tetrachloroethane	NC,VELAP,WVDEP
1,1,2-Trichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethylene	NC,VELAP,WVDEP
1,1-Dichloropropene	NC,VELAP,WVDEP
1,2,3-Trichlorobenzene	NC,VELAP,WVDEP
1,2,3-Trichloropropane	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2,4-Trimethylbenzene	NC,VELAP,WVDEP
1,2-Dibromo-3-chloropropane (DBCP)	NC,VELAP,WVDEP
1,2-Dibromoethane (EDB)	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
1,2-Dichloroethane	NC,VELAP,WVDEP
1,2-Dichloropropane	NC,VELAP,WVDEP
1,3,5-Trimethylbenzene	NC,VELAP,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,3-Dichloropropane	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
2,2-Dichloropropane	NC,VELAP,WVDEP
2-Butanone (MEK)	NC,VELAP,WVDEP
2-Chlorotoluene	NC,VELAP,WVDEP
2-Hexanone (MBK)	NC,VELAP,WVDEP
4-Chlorotoluene	NC,VELAP,WVDEP
4-Isopropyltoluene	NC,VELAP,WVDEP
4-Methyl-2-pentanone (MIBK)	NC,VELAP,WVDEP
Acetone	NC,VELAP,WVDEP
Benzene	NC,VELAP,WVDEP
Bromobenzene	NC,VELAP,WVDEP
Bromochloromethane	NC,VELAP,WVDEP
Bromodichloromethane	NC,VELAP,WVDEP
Bromoform	NC,VELAP,WVDEP
Bromomethane	NC,VELAP,WVDEP
Carbon disulfide	NC,VELAP,WVDEP
Carbon tetrachloride	NC,VELAP,WVDEP
Chlorobenzene	NC,VELAP,WVDEP
Chloroethane	NC,VELAP,WVDEP
Chloroform	NC,VELAP,WVDEP
Chloromethane	NC,VELAP,WVDEP
cis-1,2-Dichloroethylene	NC,VELAP,WVDEP
cis-1,3-Dichloropropene	NC,VELAP,WVDEP
Dibromochloromethane	NC,VELAP,WVDEP
Dibromomethane	NC,VELAP,WVDEP
Dichlorodifluoromethane	NC,VELAP,WVDEP
Di-isopropyl ether (DIPE)	NC,VELAP,WVDEP
Ethylbenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Iodomethane	NC,VELAP,WVDEP
Isopropylbenzene	NC,VELAP,WVDEP
m+p-Xylenes	NC,VELAP,WVDEP
Methylene chloride	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Methyl-t-butyl ether (MTBE)	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP
n-Butylbenzene	NC,VELAP,WVDEP
n-Propylbenzene	NC,VELAP,WVDEP
o-Xylene	NC,VELAP,WVDEP
sec-Butylbenzene	NC,VELAP,WVDEP
Styrene	NC,VELAP,WVDEP
tert-Butylbenzene	NC,VELAP,WVDEP
Tetrachloroethylene (PCE)	NC,VELAP,WVDEP
Toluene	NC,VELAP,WVDEP
trans-1,2-Dichloroethylene	NC,VELAP,WVDEP
trans-1,3-Dichloropropene	NC,VELAP,WVDEP
Trichloroethylene	NC,VELAP,WVDEP
Trichlorofluoromethane	NC,VELAP,WVDEP
Vinyl acetate	NC,VELAP,WVDEP
Vinyl chloride	NC,VELAP,WVDEP
Xylenes, Total	NC,VELAP,WVDEP
SW8270D in Non-Potable Water	
1,2,4,5-Tetrachlorobenzene	VELAP,WVDEP,NC
1,2,4-Trichlorobenzene	VELAP,WVDEP,NC
1,2-Dichlorobenzene	VELAP,WVDEP,NC
1,2-Diphenylhydrazine	VELAP,WVDEP,NC
1,3-Dichlorobenzene	VELAP,WVDEP,NC
1,3-Dinitrobenzene	VELAP,WVDEP,NC
1,4-Dichlorobenzene	VELAP,WVDEP,NC
1-Naphthylamine	VELAP,WVDEP,NC
2,3,4,6-Tetrachlorophenol	VELAP,WVDEP,NC
2,4,5-Trichlorophenol	VELAP,WVDEP,NC
2,4,6-Trichlorophenol	VELAP,WVDEP,NC
2,4-Dichlorophenol	VELAP,WVDEP,NC
2,4-Dimethylphenol	VELAP,WVDEP,NC
2,4-Dinitrophenol	VELAP,WVDEP,NC
2,4-Dinitrotoluene	VELAP,WVDEP,NC
2,6-Dichlorophenol	VELAP,WVDEP,NC
2,6-Dinitrotoluene	VELAP,WVDEP,NC
2-Chloronaphthalene	VELAP,WVDEP,NC
2-Chlorophenol	VELAP,WVDEP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
2-Methylnaphthalene	VELAP,WVDEP,NC
2-Naphthylamine	VELAP,WVDEP,NC
2-Nitroaniline	VELAP,WVDEP,NC
2-Nitrophenol	VELAP,WVDEP,NC
3,3'-Dichlorobenzidine	VELAP,WVDEP,NC
3-Methylcholanthrene	VELAP,WVDEP,NC
3-Nitroaniline	VELAP,WVDEP,NC
4,6-Dinitro-2-methylphenol	VELAP,WVDEP,NC
4-Aminobiphenyl	VELAP,WVDEP,NC
4-Bromophenyl phenyl ether	VELAP,WVDEP,NC
4-Chloroaniline	VELAP,WVDEP,NC
4-Chlorophenyl phenyl ether	VELAP,WVDEP,NC
4-Nitroaniline	VELAP,WVDEP,NC
4-Nitrophenol	VELAP,WVDEP,NC
7,12-Dimethylbenz (a) anthracene	VELAP,WVDEP,NC
Acenaphthene	VELAP,WVDEP,NC
Acenaphthylene	VELAP,WVDEP,NC
Acetophenone	VELAP,WVDEP,NC
Aniline	VELAP,WVDEP,NC
Anthracene	VELAP,WVDEP,NC
Benzidine	VELAP,WVDEP,NC
Benzo (a) anthracene	VELAP,WVDEP,NC
Benzo (a) pyrene	VELAP,WVDEP,NC
Benzo (b) fluoranthene	VELAP,WVDEP,NC
Benzo (g,h,i) perylene	VELAP,WVDEP,NC
Benzo (k) fluoranthene	VELAP,WVDEP,NC
Benzoic acid	VELAP,WVDEP,NC
Benzyl alcohol	VELAP,WVDEP,NC
bis (2-Chloroethoxy) methane	VELAP,WVDEP,NC
bis (2-Chloroethyl) ether	VELAP,WVDEP,NC
2,2'-Oxybis (1-chloropropane)	VELAP,WVDEP,NC
bis (2-Ethylhexyl) phthalate	VELAP,WVDEP,NC
Butyl benzyl phthalate	VELAP,WVDEP,NC
Chrysene	VELAP,WVDEP,NC
Dibenz (a,h) anthracene	VELAP,WVDEP,NC
Dibenz (a,j) acridine	VELAP,WVDEP,NC
Dibenzofuran	VELAP,WVDEP,NC
Diethyl phthalate	VELAP,WVDEP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/9/2018 16:18
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Dimethyl phthalate	VELAP,WVDEP,NC
Di-n-butyl phthalate	VELAP,WVDEP,NC
Di-n-octyl phthalate	VELAP,WVDEP,NC
Diphenylamine	VELAP,WVDEP,NC
Ethyl methanesulfonate	VELAP,WVDEP,NC
Fluoranthene	VELAP,WVDEP,NC
Fluorene	VELAP,WVDEP,NC
Hexachlorobenzene	VELAP,WVDEP,NC
Hexachlorobutadiene	VELAP,WVDEP,NC
Hexachlorocyclopentadiene	VELAP,WVDEP,NC
Hexachloroethane	VELAP,WVDEP,NC
Indeno (1,2,3-cd) pyrene	VELAP,WVDEP,NC
Isophorone	VELAP,WVDEP,NC
m+p-Cresols	VELAP,WVDEP,NC
Methyl methanesulfonate	VELAP,WVDEP,NC
Naphthalene	VELAP,WVDEP,NC
Nitrobenzene	VELAP,WVDEP,NC
n-Nitrosodimethylamine	VELAP,WVDEP,NC
n-Nitrosodi-n-butylamine	VELAP,WVDEP,NC
n-Nitrosodi-n-propylamine	VELAP,WVDEP,NC
n-Nitrosodiphenylamine	VELAP,WVDEP,NC
n-Nitrosopiperidine	VELAP,WVDEP,NC
o+m+p-Cresols	WVDEP,NC
o-Cresol	VELAP,WVDEP,NC
p-(Dimethylamino) azobenzene	VELAP,WVDEP,NC
p-Chloro-m-cresol	VELAP,WVDEP,NC
Pentachloronitrobenzene (quintozene)	VELAP,WVDEP,NC
Pentachlorophenol	VELAP,WVDEP,NC
Phenacetin	VELAP,WVDEP,NC
Phenanthrene	VELAP,WVDEP,NC
Phenol	VELAP,WVDEP,NC
Pronamide	VELAP,WVDEP,NC
Pyrene	VELAP,WVDEP,NC
Pyridine	VELAP,WVDEP,NC



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/9/2018 16:18
201 Church Street
Blacksburg VA, 24060

Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

C Continuing calibration verification response for this analyte is outside specifications.

E Estimated concentration, outside calibration range

L LCS recovery is outside of established acceptance limits

M Matrix spike recovery is outside established acceptance limits

M2 Sample was diluted due to matrix interference.

P Duplicate analysis does not meet the acceptance criteria for precision

S Surrogate recovery was outside acceptance criteria

RPD Relative Percent Difference

Qual Qualifiers

-RE Denotes sample was re-analyzed

D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: <i>EEE Consulting</i>	INVOICE TO: <i>Jeff Fisher</i>	PROJECT NAME/Quote #: <i>CVTC</i>
CONTACT: <i>Jeff Fisher</i>	INVOICE CONTACT: <i>same</i>	SITE NAME: <i>CVTC</i>
ADDRESS: <i>201 Church St. 24060</i>	INVOICE ADDRESS:	PROJECT NUMBER: <i>18-760</i>
PHONE #: <i>540-953-0170</i>	INVOICE PHONE #:	P.O. #: <i>18-760</i>
FAX #:	EMAIL: <i>JFISHER@EEE-CONSULTING.COM</i>	Pretreatment Program:
Is sample for compliance reporting? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	Is sample from a chlorinated supply? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	PWS I.D. #:
SAMPLER NAME (PRINT): <i>Jeff Fisher</i>	SAMPLER SIGNATURE:	Turn Around Time: Circle: 10 <input checked="" type="radio"/> 5 Days or ___ Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)							COMMENTS		
											8015	TPH-6RO/DRO/ORO	VOCs 8260	SVOCs 8270	Total TAL Method	Hex Chrome 7196	Pesticides 8081		Aerobics 8151	Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol
1) Task 2.1 MW 77-3	X		N			10-1-18	1035		GW	10	X	X	X	X	X	X				
2) Task 2.8 MW 36-1	X		N			9-28-18	1020		GW	4	X	X						No ORO		
3) " " MW 36-2	X		N			9-28-18	1110		GW	4	X	X						No ORO		
4) Task 2.9 MW 39-1	X		N			10-1-18	1205		GW	9	X	X	X	X	X	X				
5) " " MW 39-2	X		N			10-1-18	1445		GW	9	X	X	X	X	X	X				
6) " " MW 39-3	X		N			10-1-18	1600		GW	9	X	X	X	X	X	X				
7) Task 2.2 MW 10-3	X		N			10-1-18	1710		GW		X	X	X	X				No ORO		
8)																				
9)																				
10)																		3.9°C		

UNOBTAINED:	DATE / TIME: 10-1-18 1755	RECEIVED:	DATE / TIME: 10-1-18/17:55	QC Data Package	LAB USE ONLY Custody Seals used and intact? (Y/N) <input checked="" type="checkbox"/>	COOLER TEMP Received on ice? (Y/N) <input checked="" type="checkbox"/>
UNOBTAINED:	DATE / TIME: 10-2-18 8:10	RECEIVED:	DATE / TIME: 10/2/18 8:10	Level III <input type="checkbox"/>	EEE-Blacksburg CVTC	18J0020
UNOBTAINED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level IV <input type="checkbox"/>		
				Recd: 10/02/2018 Due: 10/09/2018		

Page 99 of 102



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/9/2018 16:18
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	3.90°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	No
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	Yes
Are all volatile organic and TOX containers free of headspace?	Yes
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	Yes
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments

Trip Blank received with samples and added to work order . Trip Blank date and time (08/23/18 1410) logged as per container labels. BAR 10/02/18 0856



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 18J0081

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg, VA 24060

Date Received: October 3, 2018 8:09
Date Issued: October 10, 2018 16:12
Project Number: 18-760
Purchase Order: 18-760

Submitted To: Jeff Fisher

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 10/03/2018 08:09. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/10/2018 16:12
201 Church Street
Blacksburg VA, 24060
Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18J0081

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
10-1 Task 2.2	18J0081-01	Ground Water	10/02/2018 10:35	10/03/2018 08:09
10-2 Task 2.2	18J0081-02	Ground Water	10/02/2018 09:15	10/03/2018 08:09
13-1 Task 2.3	18J0081-03	Ground Water	10/02/2018 11:45	10/03/2018 08:09
13-2 Task 2.3	18J0081-04	Ground Water	10/02/2018 14:15	10/03/2018 08:09
14-3 Task 2.4	18J0081-05	Ground Water	10/02/2018 15:20	10/03/2018 08:09
14-1 Task 2.4	18J0081-06	Ground Water	10/02/2018 16:25	10/03/2018 08:09
Trip Blank	18J0081-07	Ground Water	08/23/2018 14:10	10/03/2018 08:09



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-1 Task 2.2

Laboratory Sample ID: 18J0081-01

Grab Date/Time: 10/02/2018 10:35

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Aluminum	01	SW6010C	1.84 mg/L		0.0500	1	10/03/18 10:00	10/05/18 14:32	BG
Arsenic	01	SW6020A	3.7 ug/L		1.0	1	10/03/18 10:00	10/04/18 10:46	BG
Barium	01	SW6010C	0.133 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Beryllium	01	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:32	BG
Calcium	01RE1	SW6010C	23.1 mg/L		0.500	10	10/03/18 10:00	10/09/18 17:00	BG
Cadmium	01	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:32	BG
Cobalt	01	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:32	BG
Chromium	01	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Copper	01	SW6010C	0.0103 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Iron	01	SW6010C	4.39 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Mercury	01	SW7470A	<0.00020 mg/L		0.00020	1	10/04/18 09:46	10/05/18 12:08	MWL
Potassium	01	SW6010C	5.33 mg/L		0.50	1	10/03/18 10:00	10/05/18 14:32	BG
Magnesium	01	SW6010C	8.84 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Manganese	01	SW6010C	0.131 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Sodium	01	SW6010C	25.5 mg/L		0.50	1	10/03/18 10:00	10/05/18 14:32	BG
Nickel	01	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Lead	01	SW6010C	0.0106 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Antimony	01	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:46	BG
Selenium	01	SW6020A	13.9 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:46	BG
Thallium	01	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:46	BG
Vanadium	01	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Zinc	01	SW6010C	0.0127 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:32	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	01	SW8015C	<0.10 mg/L		0.10	1	10/03/18 18:48	10/03/18 18:48	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-1 Task 2.2

Laboratory Sample ID: 18J0081-01

Grab Date/Time: 10/02/2018 10:35

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	01	SW8015C	87.1 %		80-120		10/03/18 18:48	10/03/18 18:48	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	10/03/18 15:22	10/03/18 15:22	KCS
1,1,1-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,1,2,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	10/03/18 15:22	10/03/18 15:22	KCS
1,1,2-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,1-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,1-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,1-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,2,3-Trichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,2,3-Trichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,2,4-Trichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,2,4-Trimethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,2-Dibromoethane (EDB)	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,2-Dichlorobenzene	01	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:22	10/03/18 15:22	KCS
1,2-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,2-Dichloropropane	01	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:22	10/03/18 15:22	KCS
1,3,5-Trimethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,3-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,3-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
1,4-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
2,2-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-1 Task 2.2

Laboratory Sample ID: 18J0081-01

Grab Date/Time: 10/02/2018 10:35

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	01	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:22	10/03/18 15:22	KCS
2-Chlorotoluene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
2-Hexanone (MBK)	01	SW8260B	<5.00 ug/L		5.00	1	10/03/18 15:22	10/03/18 15:22	KCS
4-Chlorotoluene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
4-Isopropyltoluene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
4-Methyl-2-pentanone (MIBK)	01	SW8260B	<5.00 ug/L		5.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Acetone	01	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:22	10/03/18 15:22	KCS
Benzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Bromobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Bromochloromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Bromodichloromethane	01	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:22	10/03/18 15:22	KCS
Bromoform	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Bromomethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Carbon disulfide	01	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:22	10/03/18 15:22	KCS
Carbon tetrachloride	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Chlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Chloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Chloroform	01	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:22	10/03/18 15:22	KCS
Chloromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
cis-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
cis-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Dibromochloromethane	01	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:22	10/03/18 15:22	KCS
Dibromomethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Dichlorodifluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Di-isopropyl ether (DIPE)	01	SW8260B	<5.00 ug/L		5.00	1	10/03/18 15:22	10/03/18 15:22	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-1 Task 2.2

Laboratory Sample ID: 18J0081-01

Grab Date/Time: 10/02/2018 10:35

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Ethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Hexachlorobutadiene	01	SW8260B	<0.80 ug/L		0.80	1	10/03/18 15:22	10/03/18 15:22	KCS
Iodomethane	01	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:22	10/03/18 15:22	KCS
Isopropylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
m+p-Xylenes	01	SW8260B	<2.00 ug/L		2.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Methylene chloride	01	SW8260B	<4.00 ug/L		4.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Methyl-t-butyl ether (MTBE)	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Naphthalene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
n-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
n-Propylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
o-Xylene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
sec-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Styrene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
tert-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Tetrachloroethylene (PCE)	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Toluene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
trans-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
trans-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Trichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Trichlorofluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Vinyl acetate	01	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:22	10/03/18 15:22	KCS
Vinyl chloride	01	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:22	10/03/18 15:22	KCS
Xylenes, Total	01	SW8260B	<3.00 ug/L		3.00	1	10/03/18 15:22	10/03/18 15:22	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	01	SW8260B	104 %		70-120		10/03/18 15:22	10/03/18 15:22	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-1 Task 2.2	Laboratory Sample ID: 18J0081-01
Grab Date/Time: 10/02/2018 10:35	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260B	95.3 %		75-120		10/03/18 15:22	10/03/18 15:22	KCS
Surr: Dibromofluoromethane (Surr)	01	SW8260B	99.7 %		70-130		10/03/18 15:22	10/03/18 15:22	KCS
Surr: Toluene-d8 (Surr)	01	SW8260B	99.4 %		70-130		10/03/18 15:22	10/03/18 15:22	KCS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	01	SW8015C	<0.510 mg/L		0.510	1	10/08/18 09:35	10/09/18 11:01	HLM
Surr: Pentacosane (Surr)	01	SW8015C	49.6 %		40-160		10/08/18 09:35	10/09/18 11:01	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	01	SW7196A	<0.005 mg/L		0.005	1	10/03/08 08:30	10/03/18 13:00	MWL



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-2 Task 2.2

Laboratory Sample ID: 18J0081-02

Grab Date/Time: 10/02/2018 09:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Aluminum	02	SW6010C	0.355 mg/L		0.0500	1	10/03/18 10:00	10/05/18 14:35	BG
Arsenic	02	SW6020A	<1.0 ug/L		1.0	1	10/03/18 10:00	10/04/18 10:48	BG
Barium	02	SW6010C	0.0766 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Beryllium	02	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:35	BG
Calcium	02RE1	SW6010C	52.1 mg/L		0.500	10	10/03/18 10:00	10/09/18 17:04	BG
Cadmium	02	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:35	BG
Cobalt	02	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:35	BG
Chromium	02	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Copper	02	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Iron	02	SW6010C	0.589 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Mercury	02	SW7470A	<0.00020 mg/L		0.00020	1	10/04/18 09:46	10/05/18 12:15	MWL
Potassium	02	SW6010C	14.5 mg/L		0.50	1	10/03/18 10:00	10/05/18 14:35	BG
Magnesium	02	SW6010C	10.6 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Manganese	02	SW6010C	0.146 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Sodium	02	SW6010C	25.8 mg/L		0.50	1	10/03/18 10:00	10/05/18 14:35	BG
Nickel	02	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Lead	02	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Antimony	02	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:48	BG
Selenium	02	SW6020A	4.47 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:48	BG
Thallium	02	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:48	BG
Vanadium	02	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Zinc	02	SW6010C	0.0227 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:35	BG
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	02	SW8015C	<0.10 mg/L		0.10	1	10/03/18 19:10	10/03/18 19:10	DFH



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-2 Task 2.2

Laboratory Sample ID: 18J0081-02

Grab Date/Time: 10/02/2018 09:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	02	SW8015C	87.1 %		80-120		10/03/18 19:10	10/03/18 19:10	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	10/03/18 15:44	10/03/18 15:44	KCS
1,1,1-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,1,2,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	10/03/18 15:44	10/03/18 15:44	KCS
1,1,2-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,1-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,1-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,1-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,2,3-Trichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,2,3-Trichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,2,4-Trichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,2,4-Trimethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,2-Dibromo-3-chloropropane (DBCP)	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,2-Dibromoethane (EDB)	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,2-Dichlorobenzene	02	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:44	10/03/18 15:44	KCS
1,2-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,2-Dichloropropane	02	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:44	10/03/18 15:44	KCS
1,3,5-Trimethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,3-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,3-Dichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
1,4-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
2,2-Dichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-2 Task 2.2

Laboratory Sample ID: 18J0081-02

Grab Date/Time: 10/02/2018 09:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2-Butanone (MEK)	02	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:44	10/03/18 15:44	KCS
2-Chlorotoluene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
2-Hexanone (MBK)	02	SW8260B	<5.00 ug/L		5.00	1	10/03/18 15:44	10/03/18 15:44	KCS
4-Chlorotoluene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
4-Isopropyltoluene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
4-Methyl-2-pentanone (MIBK)	02	SW8260B	<5.00 ug/L		5.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Acetone	02	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:44	10/03/18 15:44	KCS
Benzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Bromobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Bromochloromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Bromodichloromethane	02	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:44	10/03/18 15:44	KCS
Bromoform	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Bromomethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Carbon disulfide	02	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:44	10/03/18 15:44	KCS
Carbon tetrachloride	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Chlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Chloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Chloroform	02	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:44	10/03/18 15:44	KCS
Chloromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
cis-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
cis-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Dibromochloromethane	02	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:44	10/03/18 15:44	KCS
Dibromomethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Dichlorodifluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Di-isopropyl ether (DIPE)	02	SW8260B	<5.00 ug/L		5.00	1	10/03/18 15:44	10/03/18 15:44	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-2 Task 2.2

Laboratory Sample ID: 18J0081-02

Grab Date/Time: 10/02/2018 09:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Ethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Hexachlorobutadiene	02	SW8260B	<0.80 ug/L		0.80	1	10/03/18 15:44	10/03/18 15:44	KCS
Iodomethane	02	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:44	10/03/18 15:44	KCS
Isopropylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
m+p-Xylenes	02	SW8260B	<2.00 ug/L		2.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Methylene chloride	02	SW8260B	<4.00 ug/L		4.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Methyl-t-butyl ether (MTBE)	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Naphthalene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
n-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
n-Propylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
o-Xylene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
sec-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Styrene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
tert-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Tetrachloroethylene (PCE)	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Toluene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
trans-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
trans-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Trichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Trichlorofluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Vinyl acetate	02	SW8260B	<10.0 ug/L		10.0	1	10/03/18 15:44	10/03/18 15:44	KCS
Vinyl chloride	02	SW8260B	<0.50 ug/L		0.50	1	10/03/18 15:44	10/03/18 15:44	KCS
Xylenes, Total	02	SW8260B	<3.00 ug/L		3.00	1	10/03/18 15:44	10/03/18 15:44	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	02	SW8260B	103 %		70-120		10/03/18 15:44	10/03/18 15:44	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 10-2 Task 2.2

Laboratory Sample ID: 18J0081-02

Grab Date/Time: 10/02/2018 09:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 4-Bromofluorobenzene (Surr)	02	SW8260B	96.2 %		75-120		10/03/18 15:44	10/03/18 15:44	KCS
Surr: Dibromofluoromethane (Surr)	02	SW8260B	101 %		70-130		10/03/18 15:44	10/03/18 15:44	KCS
Surr: Toluene-d8 (Surr)	02	SW8260B	99.7 %		70-130		10/03/18 15:44	10/03/18 15:44	KCS
Semivolatile Hydrocarbons by GC									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<0.500 mg/L		0.500	1	10/08/18 09:35	10/09/18 11:26	HLM
Surr: Pentacosane (Surr)	02	SW8015C	45.2 %		40-160		10/08/18 09:35	10/09/18 11:26	HLM
Wet Chemistry Analysis									
Chromium, Hexavalent	02	SW7196A	<0.005 mg/L		0.005	1	10/03/08 08:30	10/03/18 13:00	MWL



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3

Laboratory Sample ID: 18J0081-03

Grab Date/Time: 10/02/2018 11:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 15:03	BG
Arsenic	03	SW6020A	<1.0 ug/L		1.0	1	10/03/18 10:00	10/04/18 10:50	BG
Barium	03	SW6010C	0.0692 mg/L		0.0100	1	10/03/18 10:00	10/05/18 15:03	BG
Beryllium	03	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 15:03	BG
Cadmium	03	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 15:03	BG
Cobalt	03	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 15:03	BG
Chromium	03	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 15:03	BG
Copper	03	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 15:03	BG
Mercury	03	SW7470A	<0.00020 mg/L		0.00020	1	10/04/18 09:46	10/05/18 12:17	MWL
Nickel	03	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 15:03	BG
Lead	03	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 15:03	BG
Antimony	03	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:50	BG
Selenium	03	SW6010C	<0.0500 mg/L		0.0500	1	10/03/18 10:00	10/05/18 15:03	BG
Tin	03	SW6010C	<0.0200 mg/L		0.0200	1	10/03/18 10:00	10/05/18 15:03	BG
Thallium	03	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:50	BG
Vanadium	03	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 15:03	BG
Zinc	03	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 15:03	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	10/03/18 16:06	10/03/18 16:06	KCS
1,1,1-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,1,2,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	10/03/18 16:06	10/03/18 16:06	KCS
1,1,2-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,1-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,1-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,1-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3

Laboratory Sample ID: 18J0081-03

Grab Date/Time: 10/02/2018 11:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,2,4-Trichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,2-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,2-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,2-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,3-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,3-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
1,4-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
2,2-Dichloropropane	03	SW8260B	<2.00 ug/L		2.00	1	10/03/18 16:06	10/03/18 16:06	KCS
2-Butanone (MEK)	03	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:06	10/03/18 16:06	KCS
2-Hexanone (MBK)	03	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:06	10/03/18 16:06	KCS
4-Methyl-2-pentanone (MIBK)	03	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Acetone	03	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:06	10/03/18 16:06	KCS
Acetonitrile	03	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:06	10/03/18 16:06	KCS
Acrolein	03	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:06	10/03/18 16:06	KCS
Acrylonitrile	03	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Allyl chloride	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Benzene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Bromochloromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Bromodichloromethane	03	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:06	10/03/18 16:06	KCS
Bromoform	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Bromomethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Carbon disulfide	03	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:06	10/03/18 16:06	KCS
Carbon tetrachloride	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Chlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3

Laboratory Sample ID: 18J0081-03

Grab Date/Time: 10/02/2018 11:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Chloroform	03	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:06	10/03/18 16:06	KCS
Chloromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Chloroprene	03	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:06	10/03/18 16:06	KCS
cis-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
cis-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Dibromochloromethane	03	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:06	10/03/18 16:06	KCS
Dibromomethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Dichlorodifluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Ethyl methacrylate	03	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Ethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Hexachlorobutadiene	03	SW8260B	<0.80 ug/L		0.80	1	10/03/18 16:06	10/03/18 16:06	KCS
Iodomethane	03	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:06	10/03/18 16:06	KCS
Isobutyl Alcohol	03	SW8260B	<40.0 ug/L		40.0	1	10/03/18 16:06	10/03/18 16:06	KCS
m+p-Xylenes	03	SW8260B	<2.00 ug/L		2.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Methacrylonitrile	03	SW8260B	<1.50 ug/L		1.50	1	10/03/18 16:06	10/03/18 16:06	KCS
Methyl methacrylate	03	SW8260B	<2.00 ug/L		2.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Methylene chloride	03	SW8260B	<4.00 ug/L		4.00	1	10/03/18 16:06	10/03/18 16:06	KCS
o-Xylene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Propionitrile	03	SW8260B	<40.0 ug/L		40.0	1	10/03/18 16:06	10/03/18 16:06	KCS
Styrene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Tetrachloroethylene (PCE)	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Toluene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
trans-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
trans-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3

Laboratory Sample ID: 18J0081-03

Grab Date/Time: 10/02/2018 11:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	03	SW8260B	<4.00 ug/L		4.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Trichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Trichlorofluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:06	10/03/18 16:06	KCS
Vinyl acetate	03	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:06	10/03/18 16:06	KCS
Vinyl chloride	03	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:06	10/03/18 16:06	KCS
Xylenes, Total	03	SW8260B	<3.00 ug/L		3.00	1	10/03/18 16:06	10/03/18 16:06	KCS
<i>Surr: 1,2-Dichloroethane-d4 (Surr)</i>	03	SW8260B	104 %		70-120		10/03/18 16:06	10/03/18 16:06	KCS
<i>Surr: 4-Bromofluorobenzene (Surr)</i>	03	SW8260B	96.1 %		75-120		10/03/18 16:06	10/03/18 16:06	KCS
<i>Surr: Dibromofluoromethane (Surr)</i>	03	SW8260B	102 %		70-130		10/03/18 16:06	10/03/18 16:06	KCS
<i>Surr: Toluene-d8 (Surr)</i>	03	SW8260B	99.2 %		70-130		10/03/18 16:06	10/03/18 16:06	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	03	EPA625	Not Detected			1	10/05/18 10:05	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
1,3,5-Trinitrobenzene	03	SW8270D	<5.56 ug/L		5.56	1	10/05/18 10:05	10/05/18 20:36	SKS
1,3-Dinitrobenzene	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
1,4-Naphthoquinone	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
1-Naphthylamine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2,3,4,6-Tetrachlorophenol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2,4,5-Trichlorophenol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2,4,6-Trichlorophenol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2,4-Dichlorophenol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2,4-Dimethylphenol	03	SW8270D	<0.56 ug/L		0.56	1	10/05/18 10:05	10/05/18 20:36	SKS
2,4-Dinitrophenol	03	SW8270D	<55.6 ug/L		55.6	1	10/05/18 10:05	10/05/18 20:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3

Laboratory Sample ID: 18J0081-03

Grab Date/Time: 10/02/2018 11:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2,6-Dichlorophenol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2,6-Dinitrotoluene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2-Acetylaminofluorene	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
2-Chloronaphthalene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2-Chlorophenol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2-Methylnaphthalene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2-Naphthylamine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2-Nitroaniline	03	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 20:36	SKS
2-Nitrophenol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
3,3'-Dichlorobenzidine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
3,3'-Dimethylbenzidine	03	SW8270D	<2.78 ug/L	C	2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
3-Methylcholanthrene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
3-Nitroaniline	03	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 20:36	SKS
4,6-Dinitro-2-methylphenol	03	SW8270D	<55.6 ug/L		55.6	1	10/05/18 10:05	10/05/18 20:36	SKS
4-Aminobiphenyl	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
4-Bromophenyl phenyl ether	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
4-Chloroaniline	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
4-Chlorophenyl phenyl ether	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
4-Nitroaniline	03	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 20:36	SKS
4-Nitrophenol	03	SW8270D	<55.6 ug/L		55.6	1	10/05/18 10:05	10/05/18 20:36	SKS
5-Nitro-o-toluidine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
7,12-Dimethylbenz (a) anthracene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Acenaphthene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Acenaphthylene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3

Laboratory Sample ID: 18J0081-03

Grab Date/Time: 10/02/2018 11:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	03	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 20:36	SKS
Anthracene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Benzo (a) anthracene	03	SW8270D	<0.06 ug/L		0.06	1	10/05/18 10:05	10/05/18 20:36	SKS
Benzo (a) pyrene	03	SW8270D	<0.11 ug/L		0.11	1	10/05/18 10:05	10/05/18 20:36	SKS
Benzo (b) fluoranthene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Benzo (g,h,i) perylene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Benzo (k) fluoranthene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Benzyl alcohol	03	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 20:36	SKS
bis (2-Chloroethoxy) methane	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
bis (2-Chloroethyl) ether	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
2,2'-Oxybis (1-chloropropane)	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
bis (2-Ethylhexyl) phthalate	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
Butyl benzyl phthalate	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Chlorobenzilate	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
Chrysene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Diallate	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
Dibenz (a,h) anthracene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Dibenzofuran	03	SW8270D	<5.56 ug/L		5.56	1	10/05/18 10:05	10/05/18 20:36	SKS
Diethyl phthalate	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Dimethoate	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
Dimethyl phthalate	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Di-n-butyl phthalate	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Di-n-octyl phthalate	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Diphenylamine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Disulfoton	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3

Laboratory Sample ID: 18J0081-03

Grab Date/Time: 10/02/2018 11:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	03	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 20:36	SKS
Ethyl parathion	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
Famphur	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
Fluoranthene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Fluorene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Hexachlorobenzene	03	SW8270D	<0.06 ug/L		0.06	1	10/05/18 10:05	10/05/18 20:36	SKS
Hexachlorobutadiene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Hexachlorocyclopentadiene	03	SW8270D	<11.1 ug/L	C	11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Hexachloroethane	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Hexachloropropene	03	SW8270D	<2.78 ug/L	C	2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
Indeno (1,2,3-cd) pyrene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Isodrin	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Isophorone	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Isosafrole	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Kepon	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
m+p-Cresols	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Methapyrilene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Methyl methanesulfonate	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Methyl parathion	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
Naphthalene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Nitrobenzene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
n-Nitrosodiethylamine	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
n-Nitrosodimethylamine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
n-Nitrosodi-n-butylamine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
n-Nitrosodi-n-propylamine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3

Laboratory Sample ID: 18J0081-03

Grab Date/Time: 10/02/2018 11:45

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
n-Nitrosomethylethylamine	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
n-Nitrosopiperidine	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
n-Nitrosopyrrolidine	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
o,o,o-Triethyl phosphorothioate	03	SW8270D	<11.1 ug/L	C	11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
o+m+p-Cresols	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
o-Cresol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
o-Toluidine	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
p-(Dimethylamino) azobenzene	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
p-Chloro-m-cresol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Pentachlorobenzene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Pentachloronitrobenzene (quintozene)	03	SW8270D	<1.11 ug/L		1.11	1	10/05/18 10:05	10/05/18 20:36	SKS
Phenacetin	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Phenanthrene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Phenol	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Phorate	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
p-Phenylenediamine	03	SW8270D	<11.1 ug/L	C	11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Pronamide	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Pyrene	03	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 20:36	SKS
Safrole	03	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 20:36	SKS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270D	45.5 %		10-86		10/05/18 10:05	10/05/18 20:36	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3 **Laboratory Sample ID:** 18J0081-03

Grab Date/Time: 10/02/2018 11:45

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270D	54.6 %		9-87		10/05/18 10:05	10/05/18 20:36	SKS
Surr: 2-Fluorophenol (Surr)	03	SW8270D	39.8 %		10-52		10/05/18 10:05	10/05/18 20:36	SKS
Surr: Nitrobenzene-d5 (Surr)	03	SW8270D	57.2 %		10-98.5		10/05/18 10:05	10/05/18 20:36	SKS
Surr: Phenol-d5 (Surr)	03	SW8270D	23.0 %		5-33		10/05/18 10:05	10/05/18 20:36	SKS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270D	103 %		27-133		10/05/18 10:05	10/05/18 20:36	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.220 ug/L		0.220	1	10/08/18 14:02	10/09/18 13:04	HLM
PCB as Aroclor 1221	03	SW8082A	<0.220 ug/L		0.220	1	10/08/18 14:02	10/09/18 13:04	HLM
PCB as Aroclor 1232	03	SW8082A	<0.220 ug/L		0.220	1	10/08/18 14:02	10/09/18 13:04	HLM
PCB as Aroclor 1242	03	SW8082A	<0.220 ug/L		0.220	1	10/08/18 14:02	10/09/18 13:04	HLM
PCB as Aroclor 1248	03	SW8082A	<0.220 ug/L		0.220	1	10/08/18 14:02	10/09/18 13:04	HLM
PCB as Aroclor 1254	03	SW8082A	<0.220 ug/L		0.220	1	10/08/18 14:02	10/09/18 13:04	HLM
PCB as Aroclor 1260	03	SW8082A	<0.220 ug/L		0.220	1	10/08/18 14:02	10/09/18 13:04	HLM
Surr: DCB	03	SW8082A	60.0 %		30-105		10/08/18 14:02	10/09/18 13:04	HLM
Surr: TCMX	03	SW8082A	55.0 %		30-105		10/08/18 14:02	10/09/18 13:04	HLM
4,4'-DDD	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
4,4'-DDE	03	SW8081B	<0.055 ug/L	C	0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
4,4'-DDT	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Aldrin	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
alpha-BHC	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
beta-BHC	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Chlordane	03	SW8081B	<0.220 ug/L		0.220	1	10/08/18 14:02	10/09/18 13:04	HLM
delta-BHC	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Dieldrin	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Endosulfan I	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3	Laboratory Sample ID: 18J0081-03
Grab Date/Time: 10/02/2018 11:45	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Organochlorine Pesticides and PCBs by GC/ECD

Endosulfan II	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Endosulfan sulfate	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Endrin	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Endrin aldehyde	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
gamma-BHC (Lindane)	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Heptachlor	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Heptachlor epoxide	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Methoxychlor	03	SW8081B	<0.055 ug/L		0.055	1	10/08/18 14:02	10/09/18 13:04	HLM
Toxaphene	03	SW8081B	<1.10 ug/L		1.10	1	10/08/18 14:02	10/09/18 13:04	HLM
<hr style="border-top: 1px dashed black;"/>									
<i>Surr: TCMX</i>	03	SW8081B	65.0 %		18-112		10/08/18 14:02	10/09/18 13:04	HLM
<i>Surr: DCB</i>	03	SW8081B	70.0 %		27-131		10/08/18 14:02	10/09/18 13:04	HLM

Organochlorine Herbicides by GC/ECD

2,4,5-T	03	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:34	SKS
2,4,5-TP (Silvex)	03	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:34	SKS
2,4-D	03	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:34	SKS
Dinoseb	03	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:34	SKS
Pentachlorophenol	03	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:34	SKS
<hr style="border-top: 1px dashed black;"/>									
<i>Surr: DCAA (Surr)</i>	03	SW8151A	70.0 %		60-112		10/03/18 08:23	10/08/18 17:34	SKS

Micro-extractables by GC/ECD

1,2-Dibromoethane (EDB)	03	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 18:58	HLM
1,2,3-Trichloropropane	03	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 18:58	HLM
1,2-Dibromo-3-chloropropane (DBCP)	03	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 18:58	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-1 Task 2.3	Laboratory Sample ID: 18J0081-03
Grab Date/Time: 10/02/2018 11:45	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	03	SW9012B	<0.01 mg/L	Cl	0.01	1	10/08/18 18:04	10/08/18 18:04	TMB
Sulfide	03	SW9215	<1.00 mg/L		1.00	1	10/04/18 09:15	10/04/18 13:00	LAO



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:47	BG
Arsenic	04	SW6020A	<1.0 ug/L		1.0	1	10/03/18 10:00	10/04/18 10:52	BG
Barium	04	SW6010C	0.130 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:47	BG
Beryllium	04	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:47	BG
Cadmium	04	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:47	BG
Cobalt	04	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:47	BG
Chromium	04	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:47	BG
Copper	04	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:47	BG
Mercury	04	SW7470A	<0.00020 mg/L		0.00020	1	10/04/18 09:46	10/05/18 12:18	MWL
Nickel	04	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:47	BG
Lead	04	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:47	BG
Antimony	04	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:52	BG
Selenium	04	SW6010C	<0.0500 mg/L		0.0500	1	10/03/18 10:00	10/05/18 14:47	BG
Tin	04	SW6010C	<0.0200 mg/L		0.0200	1	10/03/18 10:00	10/05/18 14:47	BG
Thallium	04	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:52	BG
Vanadium	04	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:47	BG
Zinc	04	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:47	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	04	SW8260B	<0.40 ug/L		0.40	1	10/03/18 16:29	10/03/18 16:29	KCS
1,1,1-Trichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,1,2,2-Tetrachloroethane	04	SW8260B	<0.40 ug/L		0.40	1	10/03/18 16:29	10/03/18 16:29	KCS
1,1,2-Trichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,1-Dichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,1-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,1-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,2,4-Trichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,2-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,2-Dichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,2-Dichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,3-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,3-Dichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
1,4-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
2,2-Dichloropropane	04	SW8260B	<2.00 ug/L		2.00	1	10/03/18 16:29	10/03/18 16:29	KCS
2-Butanone (MEK)	04	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:29	10/03/18 16:29	KCS
2-Hexanone (MBK)	04	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:29	10/03/18 16:29	KCS
4-Methyl-2-pentanone (MIBK)	04	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Acetone	04	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:29	10/03/18 16:29	KCS
Acetonitrile	04	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:29	10/03/18 16:29	KCS
Acrolein	04	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:29	10/03/18 16:29	KCS
Acrylonitrile	04	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Allyl chloride	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Benzene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Bromochloromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Bromodichloromethane	04	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:29	10/03/18 16:29	KCS
Bromoform	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Bromomethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Carbon disulfide	04	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:29	10/03/18 16:29	KCS
Carbon tetrachloride	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Chlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Chloroform	04	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:29	10/03/18 16:29	KCS
Chloromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Chloroprene	04	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:29	10/03/18 16:29	KCS
cis-1,2-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
cis-1,3-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Dibromochloromethane	04	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:29	10/03/18 16:29	KCS
Dibromomethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Dichlorodifluoromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Ethyl methacrylate	04	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Ethylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Hexachlorobutadiene	04	SW8260B	<0.80 ug/L		0.80	1	10/03/18 16:29	10/03/18 16:29	KCS
Iodomethane	04	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:29	10/03/18 16:29	KCS
Isobutyl Alcohol	04	SW8260B	<40.0 ug/L		40.0	1	10/03/18 16:29	10/03/18 16:29	KCS
m+p-Xylenes	04	SW8260B	<2.00 ug/L		2.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Methacrylonitrile	04	SW8260B	<1.50 ug/L		1.50	1	10/03/18 16:29	10/03/18 16:29	KCS
Methyl methacrylate	04	SW8260B	<2.00 ug/L		2.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Methylene chloride	04	SW8260B	<4.00 ug/L		4.00	1	10/03/18 16:29	10/03/18 16:29	KCS
o-Xylene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Propionitrile	04	SW8260B	<40.0 ug/L		40.0	1	10/03/18 16:29	10/03/18 16:29	KCS
Styrene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Tetrachloroethylene (PCE)	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Toluene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
trans-1,2-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
trans-1,3-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	04	SW8260B	<4.00 ug/L		4.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Trichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Trichlorofluoromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Vinyl acetate	04	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:29	10/03/18 16:29	KCS
Vinyl chloride	04	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:29	10/03/18 16:29	KCS
Xylenes, Total	04	SW8260B	<3.00 ug/L		3.00	1	10/03/18 16:29	10/03/18 16:29	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	04	SW8260B	104 %		70-120		10/03/18 16:29	10/03/18 16:29	KCS
Surr: 4-Bromofluorobenzene (Surr)	04	SW8260B	96.4 %		75-120		10/03/18 16:29	10/03/18 16:29	KCS
Surr: Dibromofluoromethane (Surr)	04	SW8260B	103 %		70-130		10/03/18 16:29	10/03/18 16:29	KCS
Surr: Toluene-d8 (Surr)	04	SW8260B	101 %		70-130		10/03/18 16:29	10/03/18 16:29	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	04	EPA625	Not Detected			1	10/05/18 10:05	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
1,3,5-Trinitrobenzene	04	SW8270D	<5.56 ug/L		5.56	1	10/05/18 10:05	10/05/18 21:07	SKS
1,3-Dinitrobenzene	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
1,4-Naphthoquinone	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
1-Naphthylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2,3,4,6-Tetrachlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2,4,5-Trichlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2,4,6-Trichlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2,4-Dichlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2,4-Dimethylphenol	04	SW8270D	<0.56 ug/L		0.56	1	10/05/18 10:05	10/05/18 21:07	SKS
2,4-Dinitrophenol	04	SW8270D	<55.6 ug/L		55.6	1	10/05/18 10:05	10/05/18 21:07	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2,6-Dichlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2,6-Dinitrotoluene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2-Acetylaminofluorene	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
2-Chloronaphthalene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2-Chlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2-Methylnaphthalene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2-Naphthylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2-Nitroaniline	04	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 21:07	SKS
2-Nitrophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
3,3'-Dichlorobenzidine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
3,3'-Dimethylbenzidine	04	SW8270D	<2.78 ug/L	C	2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
3-Methylcholanthrene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
3-Nitroaniline	04	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 21:07	SKS
4,6-Dinitro-2-methylphenol	04	SW8270D	<55.6 ug/L		55.6	1	10/05/18 10:05	10/05/18 21:07	SKS
4-Aminobiphenyl	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
4-Bromophenyl phenyl ether	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
4-Chloroaniline	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
4-Chlorophenyl phenyl ether	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
4-Nitroaniline	04	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 21:07	SKS
4-Nitrophenol	04	SW8270D	<55.6 ug/L		55.6	1	10/05/18 10:05	10/05/18 21:07	SKS
5-Nitro-o-toluidine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
7,12-Dimethylbenz (a) anthracene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Acenaphthene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Acenaphthylene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	04	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 21:07	SKS
Anthracene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Benzo (a) anthracene	04	SW8270D	<0.06 ug/L		0.06	1	10/05/18 10:05	10/05/18 21:07	SKS
Benzo (a) pyrene	04	SW8270D	<0.11 ug/L		0.11	1	10/05/18 10:05	10/05/18 21:07	SKS
Benzo (b) fluoranthene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Benzo (g,h,i) perylene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Benzo (k) fluoranthene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Benzyl alcohol	04	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 21:07	SKS
bis (2-Chloroethoxy) methane	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
bis (2-Chloroethyl) ether	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
2,2'-Oxybis (1-chloropropane)	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
bis (2-Ethylhexyl) phthalate	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
Butyl benzyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Chlorobenzilate	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
Chrysene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Diallate	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
Dibenz (a,h) anthracene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Dibenzofuran	04	SW8270D	<5.56 ug/L		5.56	1	10/05/18 10:05	10/05/18 21:07	SKS
Diethyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Dimethoate	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
Dimethyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Di-n-butyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Di-n-octyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Diphenylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Disulfoton	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	04	SW8270D	<22.2 ug/L		22.2	1	10/05/18 10:05	10/05/18 21:07	SKS
Ethyl parathion	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
Famphur	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
Fluoranthene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Fluorene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Hexachlorobenzene	04	SW8270D	<0.06 ug/L		0.06	1	10/05/18 10:05	10/05/18 21:07	SKS
Hexachlorobutadiene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Hexachlorocyclopentadiene	04	SW8270D	<11.1 ug/L	C	11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Hexachloroethane	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Hexachloropropene	04	SW8270D	<2.78 ug/L	C	2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
Indeno (1,2,3-cd) pyrene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Isodrin	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Isophorone	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Isosafrole	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Kepon	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
m+p-Cresols	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Methapyrilene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Methyl methanesulfonate	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Methyl parathion	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
Naphthalene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Nitrobenzene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
n-Nitrosodiethylamine	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
n-Nitrosodimethylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
n-Nitrosodi-n-butylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
n-Nitrosodi-n-propylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
n-Nitrosomethylethylamine	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
n-Nitrosopiperidine	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
n-Nitrosopyrrolidine	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
o,o,o-Triethyl phosphorothioate	04	SW8270D	<11.1 ug/L	C	11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
o+m+p-Cresols	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
o-Cresol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
o-Toluidine	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
p-(Dimethylamino) azobenzene	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
p-Chloro-m-cresol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Pentachlorobenzene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Pentachloronitrobenzene (quintozene)	04	SW8270D	<1.11 ug/L		1.11	1	10/05/18 10:05	10/05/18 21:07	SKS
Phenacetin	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Phenanthrene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Phenol	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Phorate	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
p-Phenylenediamine	04	SW8270D	<11.1 ug/L	C	11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Pronamide	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Pyrene	04	SW8270D	<11.1 ug/L		11.1	1	10/05/18 10:05	10/05/18 21:07	SKS
Safrole	04	SW8270D	<2.78 ug/L		2.78	1	10/05/18 10:05	10/05/18 21:07	SKS
Surr: 2,4,6-Tribromophenol (Surr)	04	SW8270D	68.4 %		10-86		10/05/18 10:05	10/05/18 21:07	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	04	SW8270D	75.9 %		9-87		10/05/18 10:05	10/05/18 21:07	SKS
Surr: 2-Fluorophenol (Surr)	04	SW8270D	60.5 %	S	10-52		10/05/18 10:05	10/05/18 21:07	SKS
Surr: Nitrobenzene-d5 (Surr)	04	SW8270D	72.9 %		10-98.5		10/05/18 10:05	10/05/18 21:07	SKS
Surr: Phenol-d5 (Surr)	04	SW8270D	29.3 %		5-33		10/05/18 10:05	10/05/18 21:07	SKS
Surr: p-Terphenyl-d14 (Surr)	04	SW8270D	107 %		27-133		10/05/18 10:05	10/05/18 21:07	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	04	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:22	HLM
PCB as Aroclor 1221	04	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:22	HLM
PCB as Aroclor 1232	04	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:22	HLM
PCB as Aroclor 1242	04	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:22	HLM
PCB as Aroclor 1248	04	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:22	HLM
PCB as Aroclor 1254	04	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:22	HLM
PCB as Aroclor 1260	04	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:22	HLM
Surr: DCB	04	SW8082A	55.0 %		30-105		10/08/18 14:02	10/09/18 13:22	HLM
Surr: TCMX	04	SW8082A	50.0 %		30-105		10/08/18 14:02	10/09/18 13:22	HLM
4,4'-DDD	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
4,4'-DDE	04	SW8081B	<0.056 ug/L	C	0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
4,4'-DDT	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Aldrin	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
alpha-BHC	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
beta-BHC	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Chlordane	04	SW8081B	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:22	HLM
delta-BHC	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Dieldrin	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Endosulfan I	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3

Laboratory Sample ID: 18J0081-04

Grab Date/Time: 10/02/2018 14:15

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan II	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Endosulfan sulfate	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Endrin	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Endrin aldehyde	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
gamma-BHC (Lindane)	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Heptachlor	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Heptachlor epoxide	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Methoxychlor	04	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:22	HLM
Toxaphene	04	SW8081B	<1.11 ug/L		1.11	1	10/08/18 14:02	10/09/18 13:22	HLM
<i>Surr: TCMX</i>	<i>04</i>	<i>SW8081B</i>	<i>65.0 %</i>		<i>18-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 13:22</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>04</i>	<i>SW8081B</i>	<i>85.0 %</i>		<i>27-131</i>		<i>10/08/18 14:02</i>	<i>10/09/18 13:22</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:51	SKS
2,4,5-TP (Silvex)	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:51	SKS
2,4-D	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:51	SKS
Dinoseb	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:51	SKS
Pentachlorophenol	04	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 17:51	SKS
<i>Surr: DCAA (Surr)</i>	<i>04</i>	<i>SW8151A</i>	<i>80.0 %</i>		<i>60-112</i>		<i>10/03/18 08:23</i>	<i>10/08/18 17:51</i>	<i>SKS</i>
Micro-extractables by GC/ECD									
1,2-Dibromoethane (EDB)	04	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 19:17	HLM
1,2,3-Trichloropropane	04	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 19:17	HLM
1,2-Dibromo-3-chloropropane (DBCP)	04	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 19:17	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 13-2 Task 2.3	Laboratory Sample ID: 18J0081-04
Grab Date/Time: 10/02/2018 14:15	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	04	SW9012B	<0.01 mg/L	Cl	0.01	1	10/08/18 18:04	10/08/18 18:04	TMB
Sulfide	04	SW9215	<1.00 mg/L		1.00	1	10/04/18 09:15	10/04/18 13:00	LAO



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4

Laboratory Sample ID: 18J0081-05

Grab Date/Time: 10/02/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:50	BG
Arsenic	05	SW6020A	<1.0 ug/L		1.0	1	10/03/18 10:00	10/04/18 10:54	BG
Barium	05	SW6010C	0.0244 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:50	BG
Beryllium	05	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:50	BG
Cadmium	05	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:50	BG
Cobalt	05	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:50	BG
Chromium	05	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:50	BG
Copper	05	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:50	BG
Mercury	05	SW7470A	<0.00020 mg/L		0.00020	1	10/04/18 09:46	10/05/18 12:20	MWL
Nickel	05	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:50	BG
Lead	05	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:50	BG
Antimony	05	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:54	BG
Selenium	05	SW6010C	<0.0500 mg/L		0.0500	1	10/03/18 10:00	10/05/18 14:50	BG
Tin	05	SW6010C	<0.0200 mg/L		0.0200	1	10/03/18 10:00	10/05/18 14:50	BG
Thallium	05	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:54	BG
Vanadium	05	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:50	BG
Zinc	05	SW6010C	0.0108 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:50	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	05	SW8260B	<0.40 ug/L		0.40	1	10/03/18 16:51	10/03/18 16:51	KCS
1,1,1-Trichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,1,2,2-Tetrachloroethane	05	SW8260B	<0.40 ug/L		0.40	1	10/03/18 16:51	10/03/18 16:51	KCS
1,1,2-Trichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,1-Dichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,1-Dichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,1-Dichloropropene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4

Laboratory Sample ID: 18J0081-05

Grab Date/Time: 10/02/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,2,4-Trichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,2-Dichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,2-Dichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,2-Dichloropropane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,3-Dichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,3-Dichloropropane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
1,4-Dichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
2,2-Dichloropropane	05	SW8260B	<2.00 ug/L		2.00	1	10/03/18 16:51	10/03/18 16:51	KCS
2-Butanone (MEK)	05	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:51	10/03/18 16:51	KCS
2-Hexanone (MBK)	05	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:51	10/03/18 16:51	KCS
4-Methyl-2-pentanone (MIBK)	05	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Acetone	05	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:51	10/03/18 16:51	KCS
Acetonitrile	05	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:51	10/03/18 16:51	KCS
Acrolein	05	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:51	10/03/18 16:51	KCS
Acrylonitrile	05	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Allyl chloride	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Benzene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Bromochloromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Bromodichloromethane	05	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:51	10/03/18 16:51	KCS
Bromoform	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Bromomethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Carbon disulfide	05	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:51	10/03/18 16:51	KCS
Carbon tetrachloride	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Chlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4

Laboratory Sample ID: 18J0081-05

Grab Date/Time: 10/02/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Chloroform	05	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:51	10/03/18 16:51	KCS
Chloromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Chloroprene	05	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:51	10/03/18 16:51	KCS
cis-1,2-Dichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
cis-1,3-Dichloropropene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Dibromochloromethane	05	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:51	10/03/18 16:51	KCS
Dibromomethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Dichlorodifluoromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Ethyl methacrylate	05	SW8260B	<5.00 ug/L		5.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Ethylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Hexachlorobutadiene	05	SW8260B	<0.80 ug/L		0.80	1	10/03/18 16:51	10/03/18 16:51	KCS
Iodomethane	05	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:51	10/03/18 16:51	KCS
Isobutyl Alcohol	05	SW8260B	<40.0 ug/L		40.0	1	10/03/18 16:51	10/03/18 16:51	KCS
m+p-Xylenes	05	SW8260B	<2.00 ug/L		2.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Methacrylonitrile	05	SW8260B	<1.50 ug/L		1.50	1	10/03/18 16:51	10/03/18 16:51	KCS
Methyl methacrylate	05	SW8260B	<2.00 ug/L		2.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Methylene chloride	05	SW8260B	<4.00 ug/L		4.00	1	10/03/18 16:51	10/03/18 16:51	KCS
o-Xylene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Propionitrile	05	SW8260B	<40.0 ug/L		40.0	1	10/03/18 16:51	10/03/18 16:51	KCS
Styrene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Tetrachloroethylene (PCE)	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Toluene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
trans-1,2-Dichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
trans-1,3-Dichloropropene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4 **Laboratory Sample ID:** 18J0081-05

Grab Date/Time: 10/02/2018 15:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	05	SW8260B	<4.00 ug/L		4.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Trichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Trichlorofluoromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/03/18 16:51	10/03/18 16:51	KCS
Vinyl acetate	05	SW8260B	<10.0 ug/L		10.0	1	10/03/18 16:51	10/03/18 16:51	KCS
Vinyl chloride	05	SW8260B	<0.50 ug/L		0.50	1	10/03/18 16:51	10/03/18 16:51	KCS
Xylenes, Total	05	SW8260B	<3.00 ug/L		3.00	1	10/03/18 16:51	10/03/18 16:51	KCS
<i>Surr: 1,2-Dichloroethane-d4 (Surr)</i>	05	SW8260B	103 %		70-120		10/03/18 16:51	10/03/18 16:51	KCS
<i>Surr: 4-Bromofluorobenzene (Surr)</i>	05	SW8260B	95.1 %		75-120		10/03/18 16:51	10/03/18 16:51	KCS
<i>Surr: Dibromofluoromethane (Surr)</i>	05	SW8260B	99.6 %		70-130		10/03/18 16:51	10/03/18 16:51	KCS
<i>Surr: Toluene-d8 (Surr)</i>	05	SW8260B	99.9 %		70-130		10/03/18 16:51	10/03/18 16:51	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	05	EPA625	Not Detected			1	10/05/18 10:05	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
1,3,5-Trinitrobenzene	05	SW8270D	<5.43 ug/L		5.43	1	10/05/18 10:05	10/05/18 21:39	SKS
1,3-Dinitrobenzene	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
1,4-Naphthoquinone	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
1-Naphthylamine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2,3,4,6-Tetrachlorophenol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2,4,5-Trichlorophenol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2,4,6-Trichlorophenol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2,4-Dichlorophenol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2,4-Dimethylphenol	05	SW8270D	<0.54 ug/L		0.54	1	10/05/18 10:05	10/05/18 21:39	SKS
2,4-Dinitrophenol	05	SW8270D	<54.3 ug/L		54.3	1	10/05/18 10:05	10/05/18 21:39	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4

Laboratory Sample ID: 18J0081-05

Grab Date/Time: 10/02/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2,6-Dichlorophenol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2,6-Dinitrotoluene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2-Acetylaminofluorene	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
2-Chloronaphthalene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2-Chlorophenol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2-Methylnaphthalene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2-Naphthylamine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2-Nitroaniline	05	SW8270D	<21.7 ug/L		21.7	1	10/05/18 10:05	10/05/18 21:39	SKS
2-Nitrophenol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
3,3'-Dichlorobenzidine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
3,3'-Dimethylbenzidine	05	SW8270D	<2.72 ug/L	C	2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
3-Methylcholanthrene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
3-Nitroaniline	05	SW8270D	<21.7 ug/L		21.7	1	10/05/18 10:05	10/05/18 21:39	SKS
4,6-Dinitro-2-methylphenol	05	SW8270D	<54.3 ug/L		54.3	1	10/05/18 10:05	10/05/18 21:39	SKS
4-Aminobiphenyl	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
4-Bromophenyl phenyl ether	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
4-Chloroaniline	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
4-Chlorophenyl phenyl ether	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
4-Nitroaniline	05	SW8270D	<21.7 ug/L		21.7	1	10/05/18 10:05	10/05/18 21:39	SKS
4-Nitrophenol	05	SW8270D	<54.3 ug/L		54.3	1	10/05/18 10:05	10/05/18 21:39	SKS
5-Nitro-o-toluidine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
7,12-Dimethylbenz (a) anthracene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Acenaphthene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Acenaphthylene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4

Laboratory Sample ID: 18J0081-05

Grab Date/Time: 10/02/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	05	SW8270D	<21.7 ug/L		21.7	1	10/05/18 10:05	10/05/18 21:39	SKS
Anthracene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Benzo (a) anthracene	05	SW8270D	<0.05 ug/L		0.05	1	10/05/18 10:05	10/05/18 21:39	SKS
Benzo (a) pyrene	05	SW8270D	<0.11 ug/L		0.11	1	10/05/18 10:05	10/05/18 21:39	SKS
Benzo (b) fluoranthene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Benzo (g,h,i) perylene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Benzo (k) fluoranthene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Benzyl alcohol	05	SW8270D	<21.7 ug/L		21.7	1	10/05/18 10:05	10/05/18 21:39	SKS
bis (2-Chloroethoxy) methane	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
bis (2-Chloroethyl) ether	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
2,2'-Oxybis (1-chloropropane)	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
bis (2-Ethylhexyl) phthalate	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
Butyl benzyl phthalate	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Chlorobenzilate	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
Chrysene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Diallate	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
Dibenz (a,h) anthracene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Dibenzofuran	05	SW8270D	<5.43 ug/L		5.43	1	10/05/18 10:05	10/05/18 21:39	SKS
Diethyl phthalate	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Dimethoate	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
Dimethyl phthalate	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Di-n-butyl phthalate	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Di-n-octyl phthalate	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Diphenylamine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Disulfoton	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4

Laboratory Sample ID: 18J0081-05

Grab Date/Time: 10/02/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	05	SW8270D	<21.7 ug/L		21.7	1	10/05/18 10:05	10/05/18 21:39	SKS
Ethyl parathion	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
Famphur	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
Fluoranthene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Fluorene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Hexachlorobenzene	05	SW8270D	<0.05 ug/L		0.05	1	10/05/18 10:05	10/05/18 21:39	SKS
Hexachlorobutadiene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Hexachlorocyclopentadiene	05	SW8270D	<10.9 ug/L	C	10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Hexachloroethane	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Hexachloropropene	05	SW8270D	<2.72 ug/L	C	2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
Indeno (1,2,3-cd) pyrene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Isodrin	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Isophorone	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Isosafrole	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Kepon	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
m+p-Cresols	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Methapyrilene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Methyl methanesulfonate	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Methyl parathion	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
Naphthalene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Nitrobenzene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
n-Nitrosodiethylamine	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
n-Nitrosodimethylamine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
n-Nitrosodi-n-butylamine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
n-Nitrosodi-n-propylamine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4

Laboratory Sample ID: 18J0081-05

Grab Date/Time: 10/02/2018 15:20

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
n-Nitrosomethylethylamine	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
n-Nitrosopiperidine	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
n-Nitrosopyrrolidine	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
o,o,o-Triethyl phosphorothioate	05	SW8270D	<10.9 ug/L	C	10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
o+m+p-Cresols	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
o-Cresol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
o-Toluidine	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
p-(Dimethylamino) azobenzene	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
p-Chloro-m-cresol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Pentachlorobenzene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Pentachloronitrobenzene (quintozene)	05	SW8270D	<1.09 ug/L		1.09	1	10/05/18 10:05	10/05/18 21:39	SKS
Phenacetin	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Phenanthrene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Phenol	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Phorate	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
p-Phenylenediamine	05	SW8270D	<10.9 ug/L	C	10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Pronamide	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Pyrene	05	SW8270D	<10.9 ug/L		10.9	1	10/05/18 10:05	10/05/18 21:39	SKS
Safrole	05	SW8270D	<2.72 ug/L		2.72	1	10/05/18 10:05	10/05/18 21:39	SKS
Surr: 2,4,6-Tribromophenol (Surr)	05	SW8270D	82.3 %		10-86		10/05/18 10:05	10/05/18 21:39	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4 **Laboratory Sample ID:** 18J0081-05

Grab Date/Time: 10/02/2018 15:20

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	05	SW8270D	89.9 %	S	9-87		10/05/18 10:05	10/05/18 21:39	SKS
Surr: 2-Fluorophenol (Surr)	05	SW8270D	76.6 %	S	10-52		10/05/18 10:05	10/05/18 21:39	SKS
Surr: Nitrobenzene-d5 (Surr)	05	SW8270D	93.7 %		10-98.5		10/05/18 10:05	10/05/18 21:39	SKS
Surr: Phenol-d5 (Surr)	05	SW8270D	36.5 %	S	5-33		10/05/18 10:05	10/05/18 21:39	SKS
Surr: p-Terphenyl-d14 (Surr)	05	SW8270D	113 %		27-133		10/05/18 10:05	10/05/18 21:39	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	05	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:39	HLM
PCB as Aroclor 1221	05	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:39	HLM
PCB as Aroclor 1232	05	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:39	HLM
PCB as Aroclor 1242	05	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:39	HLM
PCB as Aroclor 1248	05	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:39	HLM
PCB as Aroclor 1254	05	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:39	HLM
PCB as Aroclor 1260	05	SW8082A	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:39	HLM
Surr: DCB	05	SW8082A	45.0 %		30-105		10/08/18 14:02	10/09/18 13:39	HLM
Surr: TCMX	05	SW8082A	55.0 %		30-105		10/08/18 14:02	10/09/18 13:39	HLM
4,4'-DDD	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
4,4'-DDE	05	SW8081B	<0.056 ug/L	C	0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
4,4'-DDT	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Aldrin	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
alpha-BHC	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
beta-BHC	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Chlordane	05	SW8081B	<0.222 ug/L		0.222	1	10/08/18 14:02	10/09/18 13:39	HLM
delta-BHC	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Dieldrin	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Endosulfan I	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4	Laboratory Sample ID: 18J0081-05
Grab Date/Time: 10/02/2018 15:20	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Organochlorine Pesticides and PCBs by GC/ECD

Endosulfan II	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Endosulfan sulfate	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Endrin	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Endrin aldehyde	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
gamma-BHC (Lindane)	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Heptachlor	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Heptachlor epoxide	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Methoxychlor	05	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:39	HLM
Toxaphene	05	SW8081B	<1.11 ug/L		1.11	1	10/08/18 14:02	10/09/18 13:39	HLM
<hr style="border-top: 1px dashed black;"/>									
Surr: TCMX	05	SW8081B	75.0 %		18-112		10/08/18 14:02	10/09/18 13:39	HLM
Surr: DCB	05	SW8081B	60.0 %		27-131		10/08/18 14:02	10/09/18 13:39	HLM

Organochlorine Herbicides by GC/ECD

2,4,5-T	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:09	SKS
2,4,5-TP (Silvex)	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:09	SKS
2,4-D	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:09	SKS
Dinoseb	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:09	SKS
Pentachlorophenol	05	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:09	SKS
<hr style="border-top: 1px dashed black;"/>									
Surr: DCAA (Surr)	05	SW8151A	100 %		60-112		10/03/18 08:23	10/08/18 18:09	SKS

Micro-extractables by GC/ECD

1,2-Dibromoethane (EDB)	05	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 19:37	HLM
1,2,3-Trichloropropane	05	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 19:37	HLM
1,2-Dibromo-3-chloropropane (DBCP)	05	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 19:37	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-3 Task 2.4	Laboratory Sample ID: 18J0081-05
Grab Date/Time: 10/02/2018 15:20	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	05	SW9012B	<0.01 mg/L	Cl	0.01	1	10/08/18 18:04	10/08/18 18:04	TMB
Sulfide	05	SW9215	<1.00 mg/L		1.00	1	10/04/18 09:15	10/04/18 13:00	LAO



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4

Laboratory Sample ID: 18J0081-06

Grab Date/Time: 10/02/2018 16:25

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	06	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:53	BG
Arsenic	06	SW6020A	1.6 ug/L		1.0	1	10/03/18 10:00	10/04/18 10:56	BG
Barium	06	SW6010C	0.0281 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:53	BG
Beryllium	06	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:53	BG
Cadmium	06	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:53	BG
Cobalt	06	SW6010C	<0.0040 mg/L		0.0040	1	10/03/18 10:00	10/05/18 14:53	BG
Chromium	06	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:53	BG
Copper	06	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:53	BG
Mercury	06	SW7470A	<0.00020 mg/L		0.00020	1	10/04/18 09:46	10/05/18 12:22	MWL
Nickel	06	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:53	BG
Lead	06	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:53	BG
Antimony	06	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:56	BG
Selenium	06	SW6010C	<0.0500 mg/L		0.0500	1	10/03/18 10:00	10/05/18 14:53	BG
Tin	06	SW6010C	<0.0200 mg/L		0.0200	1	10/03/18 10:00	10/05/18 14:53	BG
Thallium	06	SW6020A	<1.00 ug/L		1.00	1	10/03/18 10:00	10/04/18 10:56	BG
Vanadium	06	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:53	BG
Zinc	06	SW6010C	<0.0100 mg/L		0.0100	1	10/03/18 10:00	10/05/18 14:53	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	06	SW8260B	<0.40 ug/L		0.40	1	10/03/18 17:13	10/03/18 17:13	KCS
1,1,1-Trichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,1,2,2-Tetrachloroethane	06	SW8260B	<0.40 ug/L		0.40	1	10/03/18 17:13	10/03/18 17:13	KCS
1,1,2-Trichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,1-Dichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,1-Dichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,1-Dichloropropene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4

Laboratory Sample ID: 18J0081-06

Grab Date/Time: 10/02/2018 16:25

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,2,4-Trichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,2-Dichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,2-Dichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,2-Dichloropropane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,3-Dichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,3-Dichloropropane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
1,4-Dichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
2,2-Dichloropropane	06	SW8260B	<2.00 ug/L		2.00	1	10/03/18 17:13	10/03/18 17:13	KCS
2-Butanone (MEK)	06	SW8260B	<5.00 ug/L		5.00	1	10/03/18 17:13	10/03/18 17:13	KCS
2-Hexanone (MBK)	06	SW8260B	<5.00 ug/L		5.00	1	10/03/18 17:13	10/03/18 17:13	KCS
4-Methyl-2-pentanone (MIBK)	06	SW8260B	<5.00 ug/L		5.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Acetone	06	SW8260B	<10.0 ug/L		10.0	1	10/03/18 17:13	10/03/18 17:13	KCS
Acetonitrile	06	SW8260B	<10.0 ug/L		10.0	1	10/03/18 17:13	10/03/18 17:13	KCS
Acrolein	06	SW8260B	<10.0 ug/L		10.0	1	10/03/18 17:13	10/03/18 17:13	KCS
Acrylonitrile	06	SW8260B	<5.00 ug/L		5.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Allyl chloride	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Benzene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Bromochloromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Bromodichloromethane	06	SW8260B	<0.50 ug/L		0.50	1	10/03/18 17:13	10/03/18 17:13	KCS
Bromoform	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Bromomethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Carbon disulfide	06	SW8260B	<10.0 ug/L		10.0	1	10/03/18 17:13	10/03/18 17:13	KCS
Carbon tetrachloride	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Chlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4

Laboratory Sample ID: 18J0081-06

Grab Date/Time: 10/02/2018 16:25

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Chloroform	06	SW8260B	<0.50 ug/L		0.50	1	10/03/18 17:13	10/03/18 17:13	KCS
Chloromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Chloroprene	06	SW8260B	<5.00 ug/L		5.00	1	10/03/18 17:13	10/03/18 17:13	KCS
cis-1,2-Dichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
cis-1,3-Dichloropropene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Dibromochloromethane	06	SW8260B	<0.50 ug/L		0.50	1	10/03/18 17:13	10/03/18 17:13	KCS
Dibromomethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Dichlorodifluoromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Ethyl methacrylate	06	SW8260B	<5.00 ug/L		5.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Ethylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Hexachlorobutadiene	06	SW8260B	<0.80 ug/L		0.80	1	10/03/18 17:13	10/03/18 17:13	KCS
Iodomethane	06	SW8260B	<10.0 ug/L		10.0	1	10/03/18 17:13	10/03/18 17:13	KCS
Isobutyl Alcohol	06	SW8260B	<40.0 ug/L		40.0	1	10/03/18 17:13	10/03/18 17:13	KCS
m+p-Xylenes	06	SW8260B	<2.00 ug/L		2.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Methacrylonitrile	06	SW8260B	<1.50 ug/L		1.50	1	10/03/18 17:13	10/03/18 17:13	KCS
Methyl methacrylate	06	SW8260B	<2.00 ug/L		2.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Methylene chloride	06	SW8260B	<4.00 ug/L		4.00	1	10/03/18 17:13	10/03/18 17:13	KCS
o-Xylene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Propionitrile	06	SW8260B	<40.0 ug/L		40.0	1	10/03/18 17:13	10/03/18 17:13	KCS
Styrene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Tetrachloroethylene (PCE)	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Toluene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
trans-1,2-Dichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
trans-1,3-Dichloropropene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4

Laboratory Sample ID: 18J0081-06

Grab Date/Time: 10/02/2018 16:25

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	06	SW8260B	<4.00 ug/L		4.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Trichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Trichlorofluoromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Vinyl acetate	06	SW8260B	<10.0 ug/L		10.0	1	10/03/18 17:13	10/03/18 17:13	KCS
Vinyl chloride	06	SW8260B	<0.50 ug/L		0.50	1	10/03/18 17:13	10/03/18 17:13	KCS
Xylenes, Total	06	SW8260B	<3.00 ug/L		3.00	1	10/03/18 17:13	10/03/18 17:13	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	06	SW8260B	100 %		70-120		10/03/18 17:13	10/03/18 17:13	KCS
Surr: 4-Bromofluorobenzene (Surr)	06	SW8260B	95.0 %		75-120		10/03/18 17:13	10/03/18 17:13	KCS
Surr: Dibromofluoromethane (Surr)	06	SW8260B	100 %		70-130		10/03/18 17:13	10/03/18 17:13	KCS
Surr: Toluene-d8 (Surr)	06	SW8260B	101 %		70-130		10/03/18 17:13	10/03/18 17:13	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	06	EPA625	Not Detected			1	10/05/18 10:05	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
1,3,5-Trinitrobenzene	06	SW8270D	<5.21 ug/L		5.21	1	10/05/18 10:05	10/05/18 22:10	SKS
1,3-Dinitrobenzene	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
1,4-Naphthoquinone	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
1-Naphthylamine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2,3,4,6-Tetrachlorophenol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2,4,5-Trichlorophenol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2,4,6-Trichlorophenol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2,4-Dichlorophenol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2,4-Dimethylphenol	06	SW8270D	<0.52 ug/L		0.52	1	10/05/18 10:05	10/05/18 22:10	SKS
2,4-Dinitrophenol	06	SW8270D	<52.1 ug/L		52.1	1	10/05/18 10:05	10/05/18 22:10	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4

Laboratory Sample ID: 18J0081-06

Grab Date/Time: 10/02/2018 16:25

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2,6-Dichlorophenol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2,6-Dinitrotoluene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2-Acetylaminofluorene	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
2-Chloronaphthalene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2-Chlorophenol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2-Methylnaphthalene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2-Naphthylamine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2-Nitroaniline	06	SW8270D	<20.8 ug/L		20.8	1	10/05/18 10:05	10/05/18 22:10	SKS
2-Nitrophenol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
3,3'-Dichlorobenzidine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
3,3'-Dimethylbenzidine	06	SW8270D	<2.60 ug/L	C	2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
3-Methylcholanthrene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
3-Nitroaniline	06	SW8270D	<20.8 ug/L		20.8	1	10/05/18 10:05	10/05/18 22:10	SKS
4,6-Dinitro-2-methylphenol	06	SW8270D	<52.1 ug/L		52.1	1	10/05/18 10:05	10/05/18 22:10	SKS
4-Aminobiphenyl	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
4-Bromophenyl phenyl ether	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
4-Chloroaniline	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
4-Chlorophenyl phenyl ether	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
4-Nitroaniline	06	SW8270D	<20.8 ug/L		20.8	1	10/05/18 10:05	10/05/18 22:10	SKS
4-Nitrophenol	06	SW8270D	<52.1 ug/L		52.1	1	10/05/18 10:05	10/05/18 22:10	SKS
5-Nitro-o-toluidine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
7,12-Dimethylbenz (a) anthracene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Acenaphthene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Acenaphthylene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4 **Laboratory Sample ID:** 18J0081-06

Grab Date/Time: 10/02/2018 16:25

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	06	SW8270D	<20.8 ug/L		20.8	1	10/05/18 10:05	10/05/18 22:10	SKS
Anthracene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Benzo (a) anthracene	06	SW8270D	<0.05 ug/L		0.05	1	10/05/18 10:05	10/05/18 22:10	SKS
Benzo (a) pyrene	06	SW8270D	<0.10 ug/L		0.10	1	10/05/18 10:05	10/05/18 22:10	SKS
Benzo (b) fluoranthene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Benzo (g,h,i) perylene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Benzo (k) fluoranthene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Benzyl alcohol	06	SW8270D	<20.8 ug/L		20.8	1	10/05/18 10:05	10/05/18 22:10	SKS
bis (2-Chloroethoxy) methane	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
bis (2-Chloroethyl) ether	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
2,2'-Oxybis (1-chloropropane)	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
bis (2-Ethylhexyl) phthalate	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
Butyl benzyl phthalate	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Chlorobenzilate	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
Chrysene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Diallate	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
Dibenz (a,h) anthracene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Dibenzofuran	06	SW8270D	<5.21 ug/L		5.21	1	10/05/18 10:05	10/05/18 22:10	SKS
Diethyl phthalate	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Dimethoate	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
Dimethyl phthalate	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Di-n-butyl phthalate	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Di-n-octyl phthalate	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Diphenylamine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Disulfoton	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4

Laboratory Sample ID: 18J0081-06

Grab Date/Time: 10/02/2018 16:25

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	06	SW8270D	<20.8 ug/L		20.8	1	10/05/18 10:05	10/05/18 22:10	SKS
Ethyl parathion	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
Famphur	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
Fluoranthene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Fluorene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Hexachlorobenzene	06	SW8270D	<0.05 ug/L		0.05	1	10/05/18 10:05	10/05/18 22:10	SKS
Hexachlorobutadiene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Hexachlorocyclopentadiene	06	SW8270D	<10.4 ug/L	C	10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Hexachloroethane	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Hexachloropropene	06	SW8270D	<2.60 ug/L	C	2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
Indeno (1,2,3-cd) pyrene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Isodrin	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Isophorone	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Isosafrole	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Kepon	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
m+p-Cresols	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Methapyrilene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Methyl methanesulfonate	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Methyl parathion	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
Naphthalene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Nitrobenzene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
n-Nitrosodiethylamine	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
n-Nitrosodimethylamine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
n-Nitrosodi-n-butylamine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
n-Nitrosodi-n-propylamine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4 **Laboratory Sample ID:** 18J0081-06

Grab Date/Time: 10/02/2018 16:25

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
n-Nitrosomethylethylamine	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
n-Nitrosopiperidine	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
n-Nitrosopyrrolidine	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
o,o,o-Triethyl phosphorothioate	06	SW8270D	<10.4 ug/L	C	10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
o+m+p-Cresols	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
o-Cresol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
o-Toluidine	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
p-(Dimethylamino) azobenzene	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
p-Chloro-m-cresol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Pentachlorobenzene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Pentachloronitrobenzene (quintozene)	06	SW8270D	<1.04 ug/L		1.04	1	10/05/18 10:05	10/05/18 22:10	SKS
Phenacetin	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Phenanthrene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Phenol	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Phorate	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
p-Phenylenediamine	06	SW8270D	<10.4 ug/L	C	10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Pronamide	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Pyrene	06	SW8270D	<10.4 ug/L		10.4	1	10/05/18 10:05	10/05/18 22:10	SKS
Safrole	06	SW8270D	<2.60 ug/L		2.60	1	10/05/18 10:05	10/05/18 22:10	SKS
Surr: 2,4,6-Tribromophenol (Surr)	06	SW8270D	79.1 %		10-86		10/05/18 10:05	10/05/18 22:10	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4	Laboratory Sample ID: 18J0081-06
Grab Date/Time: 10/02/2018 16:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	06	SW8270D	85.3 %		9-87		10/05/18 10:05	10/05/18 22:10	SKS
Surr: 2-Fluorophenol (Surr)	06	SW8270D	59.3 %	S	10-52		10/05/18 10:05	10/05/18 22:10	SKS
Surr: Nitrobenzene-d5 (Surr)	06	SW8270D	83.7 %		10-98.5		10/05/18 10:05	10/05/18 22:10	SKS
Surr: Phenol-d5 (Surr)	06	SW8270D	30.8 %		5-33		10/05/18 10:05	10/05/18 22:10	SKS
Surr: p-Terphenyl-d14 (Surr)	06	SW8270D	102 %		27-133		10/05/18 10:05	10/05/18 22:10	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	06	SW8082A	<0.225 ug/L		0.225	1	10/08/18 14:02	10/09/18 13:57	HLM
PCB as Aroclor 1221	06	SW8082A	<0.225 ug/L		0.225	1	10/08/18 14:02	10/09/18 13:57	HLM
PCB as Aroclor 1232	06	SW8082A	<0.225 ug/L		0.225	1	10/08/18 14:02	10/09/18 13:57	HLM
PCB as Aroclor 1242	06	SW8082A	<0.225 ug/L		0.225	1	10/08/18 14:02	10/09/18 13:57	HLM
PCB as Aroclor 1248	06	SW8082A	<0.225 ug/L		0.225	1	10/08/18 14:02	10/09/18 13:57	HLM
PCB as Aroclor 1254	06	SW8082A	<0.225 ug/L		0.225	1	10/08/18 14:02	10/09/18 13:57	HLM
PCB as Aroclor 1260	06	SW8082A	<0.225 ug/L		0.225	1	10/08/18 14:02	10/09/18 13:57	HLM
Surr: DCB	06	SW8082A	35.0 %		30-105		10/08/18 14:02	10/09/18 13:57	HLM
Surr: TCMX	06	SW8082A	60.0 %		30-105		10/08/18 14:02	10/09/18 13:57	HLM
4,4'-DDD	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
4,4'-DDE	06	SW8081B	<0.056 ug/L	C	0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
4,4'-DDT	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Aldrin	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
alpha-BHC	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
beta-BHC	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Chlordane	06	SW8081B	<0.225 ug/L		0.225	1	10/08/18 14:02	10/09/18 13:57	HLM
delta-BHC	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Dieldrin	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Endosulfan I	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4	Laboratory Sample ID: 18J0081-06
Grab Date/Time: 10/02/2018 16:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan II	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Endosulfan sulfate	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Endrin	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Endrin aldehyde	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
gamma-BHC (Lindane)	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Heptachlor	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Heptachlor epoxide	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Methoxychlor	06	SW8081B	<0.056 ug/L		0.056	1	10/08/18 14:02	10/09/18 13:57	HLM
Toxaphene	06	SW8081B	<1.12 ug/L		1.12	1	10/08/18 14:02	10/09/18 13:57	HLM
<i>Surr: TCMX</i>	06	SW8081B	75.0 %		18-112		10/08/18 14:02	10/09/18 13:57	HLM
<i>Surr: DCB</i>	06	SW8081B	40.0 %		27-131		10/08/18 14:02	10/09/18 13:57	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:27	SKS
2,4,5-TP (Silvex)	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:27	SKS
2,4-D	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:27	SKS
Dinoseb	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:27	SKS
Pentachlorophenol	06	SW8151A	<0.500 ug/L		0.500	1	10/03/18 08:23	10/08/18 18:27	SKS
<i>Surr: DCAA (Surr)</i>	06	SW8151A	90.0 %		60-112		10/03/18 08:23	10/08/18 18:27	SKS
Micro-extractables by GC/ECD									
1,2-Dibromoethane (EDB)	06	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 19:56	HLM
1,2,3-Trichloropropane	06	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 19:56	HLM
1,2-Dibromo-3-chloropropane (DBCP)	06	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 19:56	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. 14-1 Task 2.4	Laboratory Sample ID: 18J0081-06
Grab Date/Time: 10/02/2018 16:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	06	SW9012B	<0.01 mg/L	Cl	0.01	1	10/08/18 18:04	10/08/18 18:04	TMB
Sulfide	06	SW9215	<1.00 mg/L		1.00	1	10/04/18 09:15	10/04/18 13:00	LAO



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. Trip Blank	Laboratory Sample ID: 18J0081-07
Grab Date/Time: 08/23/2018 14:10	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Hydrocarbons by GC									
TPH-Volatiles (GRO)	07	SW8015C	<0.10 mg/L		0.10	1	10/03/18 18:03	10/03/18 18:03	DFH
Surr: 2,5-Dibromotoluene (Surr FID)	07	SW8015C	93.5 %		80-120		10/03/18 18:03	10/03/18 18:03	DFH
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	07	SW8260B	<0.40 ug/L		0.40	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1,1-Trichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1,2,2-Tetrachloroethane	07	SW8260B	<0.40 ug/L		0.40	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1,2-Trichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1-Dichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1-Dichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1-Dichloropropene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2,3-Trichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2,3-Trichloropropane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2,4-Trichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2,4-Trimethylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2-Dibromo-3-chloropropane (DBCP)	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2-Dibromoethane (EDB)	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2-Dichlorobenzene	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2-Dichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2-Dichloropropane	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
1,3,5-Trimethylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,3-Dichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,3-Dichloropropane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,4-Dichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. Trip Blank **Laboratory Sample ID:** 18J0081-07

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
2,2-Dichloropropane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
2-Butanone (MEK)	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
2-Chlorotoluene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
2-Hexanone (MBK)	07	SW8260B	<5.00 ug/L		5.00	1	10/03/18 14:59	10/03/18 14:59	KCS
4-Chlorotoluene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
4-Isopropyltoluene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
4-Methyl-2-pentanone (MIBK)	07	SW8260B	<5.00 ug/L		5.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Acetone	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Benzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Bromobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Bromochloromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Bromodichloromethane	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
Bromoform	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Bromomethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Carbon disulfide	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Carbon tetrachloride	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Chlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Chloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Chloroform	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
Chloromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
cis-1,2-Dichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
cis-1,3-Dichloropropene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Dibromochloromethane	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
Dibromomethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Dichlorodifluoromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. Trip Blank **Laboratory Sample ID:** 18J0081-07

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Di-isopropyl ether (DIPE)	07	SW8260B	<5.00 ug/L		5.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Ethylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Hexachlorobutadiene	07	SW8260B	<0.80 ug/L		0.80	1	10/03/18 14:59	10/03/18 14:59	KCS
Iodomethane	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Isopropylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
m+p-Xylenes	07	SW8260B	<2.00 ug/L		2.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Methylene chloride	07	SW8260B	<4.00 ug/L		4.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Methyl-t-butyl ether (MTBE)	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Naphthalene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
n-Butylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
n-Propylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
o-Xylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
sec-Butylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Styrene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
tert-Butylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Tetrachloroethylene (PCE)	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Toluene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
trans-1,2-Dichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
trans-1,3-Dichloropropene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Trichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Trichlorofluoromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Vinyl acetate	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Vinyl chloride	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
Xylenes, Total	07	SW8260B	<3.00 ug/L		3.00	1	10/03/18 14:59	10/03/18 14:59	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. Trip Blank	Laboratory Sample ID: 18J0081-07
Grab Date/Time: 08/23/2018 14:10	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Surr: 1,2-Dichloroethane-d4 (Surr)	07	SW8260B	105 %		70-120		10/03/18 14:59	10/03/18 14:59	KCS
Surr: 4-Bromofluorobenzene (Surr)	07	SW8260B	96.9 %		75-120		10/03/18 14:59	10/03/18 14:59	KCS
Surr: Dibromofluoromethane (Surr)	07	SW8260B	100 %		70-130		10/03/18 14:59	10/03/18 14:59	KCS
Surr: Toluene-d8 (Surr)	07	SW8260B	99.9 %		70-130		10/03/18 14:59	10/03/18 14:59	KCS
1,1,1,2-Tetrachloroethane	07	SW8260B	<0.40 ug/L		0.40	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1,1-Trichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1,2,2-Tetrachloroethane	07	SW8260B	<0.40 ug/L		0.40	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1,2-Trichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1-Dichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1-Dichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,1-Dichloropropene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2,3-Trichloropropane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2,4-Trichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2-Dichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2-Dichloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,2-Dichloropropane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,3-Dichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,3-Dichloropropane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
1,4-Dichlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
2,2-Dichloropropane	07	SW8260B	<2.00 ug/L		2.00	1	10/03/18 14:59	10/03/18 14:59	KCS
2-Butanone (MEK)	07	SW8260B	<5.00 ug/L		5.00	1	10/03/18 14:59	10/03/18 14:59	KCS
2-Hexanone (MBK)	07	SW8260B	<5.00 ug/L		5.00	1	10/03/18 14:59	10/03/18 14:59	KCS
4-Methyl-2-pentanone (MIBK)	07	SW8260B	<5.00 ug/L		5.00	1	10/03/18 14:59	10/03/18 14:59	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. Trip Blank **Laboratory Sample ID:** 18J0081-07

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Acetone	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Acetonitrile	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Acrolein	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Acrylonitrile	07	SW8260B	<5.00 ug/L		5.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Allyl chloride	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Benzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Bromochloromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Bromodichloromethane	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
Bromoform	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Bromomethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Carbon disulfide	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Carbon tetrachloride	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Chlorobenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Chloroethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Chloroform	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
Chloromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Chloroprene	07	SW8260B	<5.00 ug/L		5.00	1	10/03/18 14:59	10/03/18 14:59	KCS
cis-1,2-Dichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
cis-1,3-Dichloropropene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Dibromochloromethane	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
Dibromomethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Dichlorodifluoromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Ethyl methacrylate	07	SW8260B	<5.00 ug/L		5.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Ethylbenzene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Hexachlorobutadiene	07	SW8260B	<0.80 ug/L		0.80	1	10/03/18 14:59	10/03/18 14:59	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0081

Analytical Results

Sample I.D. Trip Blank	Laboratory Sample ID: 18J0081-07
Grab Date/Time: 08/23/2018 14:10	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Iodomethane	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Isobutyl Alcohol	07	SW8260B	<40.0 ug/L		40.0	1	10/03/18 14:59	10/03/18 14:59	KCS
m+p-Xylenes	07	SW8260B	<2.00 ug/L		2.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Methacrylonitrile	07	SW8260B	<1.50 ug/L		1.50	1	10/03/18 14:59	10/03/18 14:59	KCS
Methyl methacrylate	07	SW8260B	<2.00 ug/L		2.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Methylene chloride	07	SW8260B	<4.00 ug/L		4.00	1	10/03/18 14:59	10/03/18 14:59	KCS
o-Xylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Propionitrile	07	SW8260B	<40.0 ug/L		40.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Styrene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Tetrachloroethylene (PCE)	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Toluene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
trans-1,2-Dichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
trans-1,3-Dichloropropene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
trans-1,4-Dichloro-2-butene	07	SW8260B	<4.00 ug/L		4.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Trichloroethylene	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Trichlorofluoromethane	07	SW8260B	<1.00 ug/L		1.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Vinyl acetate	07	SW8260B	<10.0 ug/L		10.0	1	10/03/18 14:59	10/03/18 14:59	KCS
Vinyl chloride	07	SW8260B	<0.50 ug/L		0.50	1	10/03/18 14:59	10/03/18 14:59	KCS
Xylenes, Total	07	SW8260B	<3.00 ug/L		3.00	1	10/03/18 14:59	10/03/18 14:59	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	07	SW8260B	105 %		70-120		10/03/18 14:59	10/03/18 14:59	KCS
Surr: 4-Bromofluorobenzene (Surr)	07	SW8260B	96.9 %		75-120		10/03/18 14:59	10/03/18 14:59	KCS
Surr: Dibromofluoromethane (Surr)	07	SW8260B	100 %		70-130		10/03/18 14:59	10/03/18 14:59	KCS
Surr: Toluene-d8 (Surr)	07	SW8260B	99.9 %		70-130		10/03/18 14:59	10/03/18 14:59	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0081



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.2/R2.8			
18J0081-01	50.0 mL / 50.0 mL	SW6010C	BBJ0094	SBJ0224	AJ80041
18J0081-01RE1	50.0 mL / 50.0 mL	SW6010C	BBJ0094	SBJ0309	AJ80053
18J0081-02	50.0 mL / 50.0 mL	SW6010C	BBJ0094	SBJ0224	AJ80041
18J0081-02RE1	50.0 mL / 50.0 mL	SW6010C	BBJ0094	SBJ0309	AJ80053
18J0081-03	50.0 mL / 50.0 mL	SW6010C	BBJ0094	SBJ0224	AJ80041
18J0081-04	50.0 mL / 50.0 mL	SW6010C	BBJ0094	SBJ0224	AJ80041
18J0081-05	50.0 mL / 50.0 mL	SW6010C	BBJ0094	SBJ0224	AJ80041
18J0081-06	50.0 mL / 50.0 mL	SW6010C	BBJ0094	SBJ0224	AJ80041

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.8 R5.4			
18J0081-01	50.0 mL / 50.0 mL	SW6020A	BBJ0095	SBJ0147	AJ80026
18J0081-02	50.0 mL / 50.0 mL	SW6020A	BBJ0095	SBJ0147	AJ80026
18J0081-03	50.0 mL / 50.0 mL	SW6020A	BBJ0095	SBJ0147	AJ80026
18J0081-04	50.0 mL / 50.0 mL	SW6020A	BBJ0095	SBJ0147	AJ80026
18J0081-05	50.0 mL / 50.0 mL	SW6020A	BBJ0095	SBJ0147	AJ80026
18J0081-06	50.0 mL / 50.0 mL	SW6020A	BBJ0095	SBJ0147	AJ80026

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18J0081-01	100 mL / 100 mL	SW7196A	BBJ0156	SBJ0159	AJ80030
18J0081-02	100 mL / 100 mL	SW7196A	BBJ0156	SBJ0159	AJ80030
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18J0081-03	6.00 mL / 6.00 mL	SW9215	BBJ0161	SBJ0204	
18J0081-04	6.00 mL / 6.00 mL	SW9215	BBJ0161	SBJ0204	
18J0081-05	6.00 mL / 6.00 mL	SW9215	BBJ0161	SBJ0204	
18J0081-06	6.00 mL / 6.00 mL	SW9215	BBJ0161	SBJ0204	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis					
		Preparation Method:	No Prep Wet Chem		
18J0081-03	6.00 mL / 6.00 mL	SW9012B	BBJ0260	SBJ0264	AJ80049
18J0081-04	6.00 mL / 6.00 mL	SW9012B	BBJ0260	SBJ0264	AJ80049
18J0081-05	6.00 mL / 6.00 mL	SW9012B	BBJ0260	SBJ0264	AJ80049
18J0081-06	6.00 mL / 6.00 mL	SW9012B	BBJ0260	SBJ0264	AJ80049
<hr/>					
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Organochlorine Herbicides by GC/ECD					
		Preparation Method:	SW3510C		
18J0081-03	900 mL / 5.00 mL	SW8151A	BBJ0120	SBJ0294	AG80138
18J0081-04	900 mL / 5.00 mL	SW8151A	BBJ0120	SBJ0294	AG80138
18J0081-05	900 mL / 5.00 mL	SW8151A	BBJ0120	SBJ0294	AG80138
18J0081-06	900 mL / 5.00 mL	SW8151A	BBJ0120	SBJ0294	AG80138
Semivolatile Organic Compounds by GCMS					
		Preparation Method:	SW3510C		
18J0081-03	900 mL / 1.00 mL	EPA625	BBJ0193	SBJ0280	AF80101
18J0081-04	900 mL / 1.00 mL	EPA625	BBJ0193	SBJ0280	AF80101
18J0081-05	920 mL / 1.00 mL	EPA625	BBJ0193	SBJ0280	AF80101
18J0081-06	960 mL / 1.00 mL	EPA625	BBJ0193	SBJ0280	AF80101
18J0081-03	900 mL / 1.00 mL	SW8270D	BBJ0193	SBJ0258	AF80101
18J0081-04	900 mL / 1.00 mL	SW8270D	BBJ0193	SBJ0258	AF80101
18J0081-05	920 mL / 1.00 mL	SW8270D	BBJ0193	SBJ0258	AF80101
18J0081-06	960 mL / 1.00 mL	SW8270D	BBJ0193	SBJ0258	AF80101
Semivolatile Hydrocarbons by GC					
		Preparation Method:	SW3510C		
18J0081-01	980 mL / 1.00 mL	SW8015C	BBJ0237	SBJ0278	AH80058
18J0081-02	1000 mL / 1.00 mL	SW8015C	BBJ0237	SBJ0278	AH80058
Organochlorine Pesticides and PCBs by GC/ECD					
		Preparation Method:	SW3510C		
18J0081-03	910 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0081-04	900 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0081-05	900 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0081-06	890 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0081-03	910 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059
18J0081-04	900 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059
18J0081-05	900 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059
18J0081-06	890 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg VA, 24060

Date Issued: 10/10/2018 16:12

Submitted To: Jeff Fisher
 Client Site I.D.: CVTC

Project Number: 18-760
 Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Volatile Organic Compounds by GCMS

Preparation Method: SW5030B

18J0081-01	5.00 mL / 5.00 mL	SW8260B	BBJ0107	SBJ0107	AH80138
18J0081-02	5.00 mL / 5.00 mL	SW8260B	BBJ0107	SBJ0107	AH80138
18J0081-03	5.00 mL / 5.00 mL	SW8260B	BBJ0107	SBJ0107	AH80138
18J0081-04	5.00 mL / 5.00 mL	SW8260B	BBJ0107	SBJ0107	AH80138
18J0081-05	5.00 mL / 5.00 mL	SW8260B	BBJ0107	SBJ0107	AH80138
18J0081-06	5.00 mL / 5.00 mL	SW8260B	BBJ0107	SBJ0107	AH80138
18J0081-07	5.00 mL / 5.00 mL	SW8260B	BBJ0107	SBJ0107	AH80138

Volatile Hydrocarbons by GC

Preparation Method: SW5030B

18J0081-01	5.00 mL / 5.00 mL	SW8015C	BBJ0114	SBJ0121	AJ80010
18J0081-02	5.00 mL / 5.00 mL	SW8015C	BBJ0114	SBJ0121	AJ80010
18J0081-07	5.00 mL / 5.00 mL	SW8015C	BBJ0114	SBJ0121	AJ80010

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method: SW7470A

18J0081-01	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039
18J0081-02	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039
18J0081-03	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039
18J0081-04	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039
18J0081-05	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039
18J0081-06	20.0 mL / 20.0 mL	SW7470A	BBJ0132	SBJ0201	AJ80039

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Micro-extractables by GC/ECD

Preparation Method: SW8011

18J0081-03	58.2 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045
18J0081-04	59.1 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045
18J0081-05	58.3 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045
18J0081-06	57.8 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0094 - EPA200.2/R2.8

Blank (BBJ0094-BLK1)

Prepared: 10/03/2018 Analyzed: 10/05/2018

Aluminum	<0.0500 mg/L	0.0500	mg/L							
Barium	<0.0100 mg/L	0.0100	mg/L							
Beryllium	<0.0040 mg/L	0.0040	mg/L							
Cadmium	<0.0040 mg/L	0.0040	mg/L							
Calcium	<0.0500 mg/L	0.0500	mg/L							
Chromium	<0.0100 mg/L	0.0100	mg/L							
Cobalt	<0.0040 mg/L	0.0040	mg/L							
Copper	<0.0100 mg/L	0.0100	mg/L							
Iron	<0.0100 mg/L	0.0100	mg/L							
Lead	<0.0100 mg/L	0.0100	mg/L							
Magnesium	<0.0100 mg/L	0.0100	mg/L							
Manganese	<0.0100 mg/L	0.0100	mg/L							
Nickel	<0.0100 mg/L	0.0100	mg/L							
Potassium	<0.50 mg/L	0.50	mg/L							
Selenium	<0.0500 mg/L	0.0500	mg/L							
Silver	<0.0100 mg/L	0.0100	mg/L							
Sodium	<0.50 mg/L	0.50	mg/L							
Tin	<0.0200 mg/L	0.0200	mg/L							
Vanadium	<0.0100 mg/L	0.0100	mg/L							
Zinc	<0.0100 mg/L	0.0100	mg/L							

LCS (BBJ0094-BS1)

Prepared: 10/03/2018 Analyzed: 10/05/2018

Aluminum	0.526 mg/L	0.0500	mg/L	0.500 mg/L	105	80-120
Barium	0.535 mg/L	0.0100	mg/L	0.500 mg/L	107	80-120
Beryllium	0.501 mg/L	0.0040	mg/L	0.500 mg/L	100	80-120
Cadmium	0.503 mg/L	0.0040	mg/L	0.500 mg/L	101	80-120
Calcium	0.522 mg/L	0.0500	mg/L	0.500 mg/L	104	80-120
Chromium	0.504 mg/L	0.0100	mg/L	0.500 mg/L	101	80-120
Cobalt	0.510 mg/L	0.0040	mg/L	0.500 mg/L	102	80-120
Copper	0.516 mg/L	0.0100	mg/L	0.500 mg/L	103	80-120
Iron	0.505 mg/L	0.0100	mg/L	0.500 mg/L	101	80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0094 - EPA200.2/R2.8

LCS (BBJ0094-BS1)

Prepared: 10/03/2018 Analyzed: 10/05/2018

Lead	0.511 mg/L	0.0100	mg/L	0.500	mg/L	102	80-120			
Magnesium	0.506 mg/L	0.0100	mg/L	0.500	mg/L	101	80-120			
Manganese	0.513 mg/L	0.0100	mg/L	0.500	mg/L	103	80-120			
Nickel	0.5113 mg/L	0.0100	mg/L	0.500	mg/L	102	80-120			
Potassium	5.25 mg/L	0.50	mg/L	5.00	mg/L	105	80-120			
Selenium	0.505 mg/L	0.0500	mg/L	0.500	mg/L	101	80-120			
Silver	0.106 mg/L	0.0100	mg/L	0.100	mg/L	106	80-120			E
Sodium	5.31 mg/L	0.50	mg/L	5.00	mg/L	106	80-120			
Tin	0.0969 mg/L	0.0200	mg/L	0.100	mg/L	96.9	80-120			
Vanadium	0.522 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120			
Zinc	0.534 mg/L	0.0100	mg/L	0.500	mg/L	107	80-120			

LCS Dup (BBJ0094-BSD1)

Prepared: 10/03/2018 Analyzed: 10/05/2018

Aluminum	0.502 mg/L	0.0500	mg/L	0.500	mg/L	100	80-120	4.64	20	
Barium	0.543 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120	1.57	20	
Beryllium	0.511 mg/L	0.0040	mg/L	0.500	mg/L	102	80-120	2.03	20	
Cadmium	0.510 mg/L	0.0040	mg/L	0.500	mg/L	102	80-120	1.36	20	
Calcium	0.613 mg/L	0.0500	mg/L	0.500	mg/L	123	80-120	16.0	20	L
Chromium	0.512 mg/L	0.0100	mg/L	0.500	mg/L	102	80-120	1.61	20	
Cobalt	0.516 mg/L	0.0040	mg/L	0.500	mg/L	103	80-120	1.17	20	
Copper	0.527 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120	2.08	20	
Iron	0.518 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	2.52	20	
Lead	0.515 mg/L	0.0100	mg/L	0.500	mg/L	103	80-120	0.786	20	
Magnesium	0.519 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	2.53	20	
Manganese	0.525 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120	2.43	20	
Nickel	0.5214 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	1.97	20	
Potassium	5.32 mg/L	0.50	mg/L	5.00	mg/L	106	80-120	1.41	20	
Selenium	0.515 mg/L	0.0500	mg/L	0.500	mg/L	103	80-120	1.99	20	
Silver	0.106 mg/L	0.0100	mg/L	0.100	mg/L	106	80-120	0.450	20	E
Sodium	5.64 mg/L	0.50	mg/L	5.00	mg/L	113	80-120	6.03	20	
Tin	0.0990 mg/L	0.0200	mg/L	0.100	mg/L	99.0	80-120	2.14	20	
Vanadium	0.528 mg/L	0.0100	mg/L	0.500	mg/L	106	80-120	1.21	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0094 - EPA200.2/R2.8

LCS Dup (BBJ0094-BSD1)

Prepared: 10/03/2018 Analyzed: 10/05/2018

Zinc	0.568 mg/L	0.0100	mg/L	0.500	mg/L	114	80-120	6.14	20	
------	------------	--------	------	-------	------	-----	--------	------	----	--

Matrix Spike (BBJ0094-MS1)

Source: 18J0067-01

Prepared: 10/03/2018 Analyzed: 10/05/2018

Aluminum	2.96 mg/L	0.0500	mg/L	0.500	2.36 mg/L	121	75-125			
Barium	0.574 mg/L	0.0100	mg/L	0.500	0.0384 mg/L	107	75-125			
Beryllium	0.530 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	106	75-125			
Cadmium	0.506 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125			
Calcium	30.4 mg/L	0.0500	mg/L	0.500	29.5 mg/L	179	75-125			M, E
Chromium	0.518 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	104	75-125			
Cobalt	0.513 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	103	75-125			
Copper	0.634 mg/L	0.0100	mg/L	0.500	0.0923 mg/L	108	75-125			
Iron	1.68 mg/L	0.0100	mg/L	0.500	1.27 mg/L	80.5	75-125			
Lead	0.513 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Magnesium	37.0 mg/L	0.0100	mg/L	0.500	36.2 mg/L	166	75-125			M, E
Manganese	0.606 mg/L	0.0100	mg/L	0.500	0.0879 mg/L	104	75-125			
Nickel	0.5146 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125			
Potassium	32.4 mg/L	0.50	mg/L	5.00	26.6 mg/L	116	75-125			
Selenium	0.499 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	99.7	75-125			
Silver	0.107 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	107	75-125			E
Sodium	63.3 mg/L	0.50	mg/L	5.00	57.2 mg/L	123	75-125			
Tin	0.0216 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L	21.6	75-125			M
Vanadium	0.543 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	109	75-125			
Zinc	0.745 mg/L	0.0100	mg/L	0.500	0.216 mg/L	106	75-125			

Matrix Spike (BBJ0094-MS2)

Source: 18J0067-02

Prepared: 10/03/2018 Analyzed: 10/05/2018

Aluminum	0.628 mg/L	0.0500	mg/L	0.500	0.100 mg/L	105	75-125			
Barium	0.542 mg/L	0.0100	mg/L	0.500	0.0147 mg/L	105	75-125			
Beryllium	0.526 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	105	75-125			
Cadmium	0.510 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	102	75-125			
Calcium	29.7 mg/L	0.0500	mg/L	0.500	28.7 mg/L	195	75-125			M, E
Chromium	0.514 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	103	75-125			
Cobalt	0.512 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	102	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0094 - EPA200.2/R2.8

Matrix Spike (BBJ0094-MS2)

Source: 18J0067-02

Prepared: 10/03/2018 Analyzed: 10/05/2018

Copper	0.528 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	105	75-125			
Iron	0.535 mg/L	0.0100	mg/L	0.500	0.0196 mg/L	103	75-125			
Lead	0.511 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Magnesium	31.5 mg/L	0.0100	mg/L	0.500	30.6 mg/L	170	75-125			M, E
Manganese	0.520 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	103	75-125			
Nickel	0.5132 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125			
Potassium	29.9 mg/L	0.50	mg/L	5.00	24.4 mg/L	110	75-125			
Selenium	0.518 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	104	75-125			
Silver	0.102 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	102	75-125			E
Sodium	70.6 mg/L	0.50	mg/L	5.00	64.6 mg/L	120	75-125			
Tin	0.0986 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L	98.6	75-125			
Vanadium	0.533 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	107	75-125			
Zinc	0.614 mg/L	0.0100	mg/L	0.500	0.0847 mg/L	106	75-125			

Matrix Spike Dup (BBJ0094-MSD1)

Source: 18J0067-01

Prepared: 10/03/2018 Analyzed: 10/05/2018

Aluminum	2.95 mg/L	0.0500	mg/L	0.500	2.36 mg/L	118	75-125	0.535	20	
Barium	0.550 mg/L	0.0100	mg/L	0.500	0.0384 mg/L	102	75-125	4.34	20	
Beryllium	0.526 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	105	75-125	0.705	20	
Cadmium	0.501 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	100	75-125	0.898	20	
Calcium	30.3 mg/L	0.0500	mg/L	0.500	29.5 mg/L	158	75-125	0.329	20	M, E
Chromium	0.514 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	103	75-125	0.902	20	
Cobalt	0.508 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	102	75-125	1.04	20	
Copper	0.627 mg/L	0.0100	mg/L	0.500	0.0923 mg/L	107	75-125	1.09	20	
Iron	1.66 mg/L	0.0100	mg/L	0.500	1.27 mg/L	77.2	75-125	1.01	20	
Lead	0.507 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.9	75-125	1.09	20	
Magnesium	36.6 mg/L	0.0100	mg/L	0.500	36.2 mg/L	75.0	75-125	1.24	20	M, E
Manganese	0.602 mg/L	0.0100	mg/L	0.500	0.0879 mg/L	103	75-125	0.710	20	
Nickel	0.5103 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125	0.843	20	
Potassium	32.4 mg/L	0.50	mg/L	5.00	26.6 mg/L	116	75-125	0.0814	20	
Selenium	0.496 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	99.2	75-125	0.552	20	
Silver	0.102 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	102	75-125	5.39	20	E
Sodium	62.5 mg/L	0.50	mg/L	5.00	57.2 mg/L	106	75-125	1.31	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0094 - EPA200.2/R2.8

Matrix Spike Dup (BBJ0094-MSD1)	Source: 18J0067-01		Prepared: 10/03/2018 Analyzed: 10/05/2018							
Tin	0.0219 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L	21.9	75-125	1.31	20	M
Vanadium	0.534 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	107	75-125	1.70	20	
Zinc	0.731 mg/L	0.0100	mg/L	0.500	0.216 mg/L	103	75-125	1.97	20	

Matrix Spike Dup (BBJ0094-MSD2)	Source: 18J0067-02		Prepared: 10/03/2018 Analyzed: 10/05/2018							
Aluminum	0.596 mg/L	0.0500	mg/L	0.500	0.100 mg/L	99.2	75-125	5.12	20	
Barium	0.519 mg/L	0.0100	mg/L	0.500	0.0147 mg/L	101	75-125	4.30	20	
Beryllium	0.508 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	102	75-125	3.41	20	
Cadmium	0.491 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	98.2	75-125	3.79	20	
Calcium	28.1 mg/L	0.0500	mg/L	0.500	28.7 mg/L	-131	75-125	5.64	20	M, E
Chromium	0.492 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	98.4	75-125	4.39	20	
Cobalt	0.493 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	98.6	75-125	3.76	20	
Copper	0.506 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	100	75-125	4.22	20	
Iron	0.521 mg/L	0.0100	mg/L	0.500	0.0196 mg/L	100	75-125	2.72	20	
Lead	0.492 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	97.3	75-125	3.75	20	
Magnesium	30.1 mg/L	0.0100	mg/L	0.500	30.6 mg/L	-111	75-125	4.56	20	M, E
Manganese	0.503 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.9	75-125	3.43	20	
Nickel	0.4937 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	98.0	75-125	3.89	20	
Potassium	28.7 mg/L	0.50	mg/L	5.00	24.4 mg/L	87.5	75-125	3.85	20	
Selenium	0.498 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	99.6	75-125	3.87	20	
Silver	0.0986 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	98.6	75-125	3.75	20	
Sodium	67.4 mg/L	0.50	mg/L	5.00	64.6 mg/L	55.5	75-125	4.65	20	M
Tin	0.0938 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L	93.8	75-125	4.98	20	
Vanadium	0.509 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125	4.56	20	
Zinc	0.591 mg/L	0.0100	mg/L	0.500	0.0847 mg/L	101	75-125	3.74	20	

Batch BBJ0095 - EPA200.8 R5.4

Blank (BBJ0095-BLK1)	Prepared: 10/03/2018 Analyzed: 10/04/2018										
Antimony	<1.00 ug/L	1.00	ug/L								
Arsenic	<1.0 ug/L	1.0	ug/L								



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0095 - EPA200.8 R5.4

Blank (BBJ0095-BLK1)

Prepared: 10/03/2018 Analyzed: 10/04/2018

Selenium	<1.00 ug/L	1.00	ug/L						
Thallium	<1.00 ug/L	1.00	ug/L						

LCS (BBJ0095-BS1)

Prepared: 10/03/2018 Analyzed: 10/04/2018

Antimony	52.0 ug/L	1.00	ug/L	50.0	ug/L	104	80-120		
Arsenic	51 ug/L	1.0	ug/L	50.0	ug/L	102	80-120		
Selenium	50.1 ug/L	1.00	ug/L	50.0	ug/L	100	80-120		
Thallium	52.3 ug/L	1.00	ug/L	50.0	ug/L	105	80-120		

LCS Dup (BBJ0095-BSD1)

Prepared: 10/03/2018 Analyzed: 10/04/2018

Antimony	51.7 ug/L	1.00	ug/L	50.0	ug/L	103	80-120	0.490	20
Arsenic	51 ug/L	1.0	ug/L	50.0	ug/L	103	80-120	0.324	20
Selenium	50.6 ug/L	1.00	ug/L	50.0	ug/L	101	80-120	0.977	20
Thallium	51.4 ug/L	1.00	ug/L	50.0	ug/L	103	80-120	1.80	20

Matrix Spike (BBJ0095-MS1)

Source: 18J0067-01

Prepared: 10/03/2018 Analyzed: 10/04/2018

Antimony	53.5 ug/L	1.00	ug/L	50.0	<1.00 ug/L	107	75-125		
Arsenic	54 ug/L	1.0	ug/L	50.0	<1.0 ug/L	106	75-125		
Selenium	41.5 ug/L	1.00	ug/L	50.0	<1.00 ug/L	83.1	75-125		
Thallium	52.6 ug/L	1.00	ug/L	50.0	<1.00 ug/L	105	75-125		

Matrix Spike (BBJ0095-MS2)

Source: 18J0067-02

Prepared: 10/03/2018 Analyzed: 10/04/2018

Antimony	52.6 ug/L	1.00	ug/L	50.0	<1.00 ug/L	105	75-125		
Arsenic	52 ug/L	1.0	ug/L	50.0	<1.0 ug/L	103	75-125		
Selenium	47.3 ug/L	1.00	ug/L	50.0	<1.00 ug/L	94.7	75-125		
Thallium	50.6 ug/L	1.00	ug/L	50.0	<1.00 ug/L	101	75-125		

Matrix Spike Dup (BBJ0095-MSD2)

Source: 18J0067-02

Prepared: 10/03/2018 Analyzed: 10/04/2018

Antimony	53.5 ug/L	1.00	ug/L	50.0	<1.00 ug/L	107	75-125	1.79	20
Arsenic	53 ug/L	1.0	ug/L	50.0	<1.0 ug/L	105	75-125	1.59	20
Selenium	48.3 ug/L	1.00	ug/L	50.0	<1.00 ug/L	96.6	75-125	1.99	20
Thallium	51.4 ug/L	1.00	ug/L	50.0	<1.00 ug/L	103	75-125	1.52	20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BBJ0132 - SW7470A										
Blank (BBJ0132-BLK1) Prepared: 10/04/2018 Analyzed: 10/05/2018										
Mercury	<0.00020 mg/L	0.00020	mg/L							
LCS (BBJ0132-BS1) Prepared: 10/04/2018 Analyzed: 10/05/2018										
Mercury	0.00247 mg/L	0.00020	mg/L	0.00250 mg/L		98.8	80-120			
LCS Dup (BBJ0132-BSD1) Prepared: 10/04/2018 Analyzed: 10/05/2018										
Mercury	0.00231 mg/L	0.00020	mg/L	0.00250 mg/L		92.2	80-120	6.89	20	
Matrix Spike (BBJ0132-MS1) Source: 18I1083-01 Prepared: 10/04/2018 Analyzed: 10/05/2018										
Mercury	0.00223 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		89.4	80-120			
Matrix Spike (BBJ0132-MS2) Source: 18I1076-01 Prepared: 10/04/2018 Analyzed: 10/05/2018										
Mercury	0.00244 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		97.5	80-120			
Matrix Spike Dup (BBJ0132-MSD1) Source: 18I1083-01 Prepared: 10/04/2018 Analyzed: 10/05/2018										
Mercury	0.00215 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		85.8	80-120	4.05	20	
Matrix Spike Dup (BBJ0132-MSD2) Source: 18I1076-01 Prepared: 10/04/2018 Analyzed: 10/05/2018										
Mercury	0.00261 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		104	80-120	6.91	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BBJ0114 - SW5030B										
Blank (BBJ0114-BLK1) Prepared & Analyzed: 10/03/2018										
TPH-Volatiles (GRO)	<0.10 mg/L	0.10	mg/L							
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	88.2		ug/L	100		88.2	80-120			
LCS (BBJ0114-BS1) Prepared & Analyzed: 10/03/2018										
TPH-Volatiles (GRO)	0.85 mg/L	0.10	mg/L	1.00	mg/L	85.2	70-130			
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	91.6		ug/L	100	ug/L	91.6	80-120			
Matrix Spike (BBJ0114-MS1) Source: 18J0081-01 Prepared & Analyzed: 10/03/2018										
TPH-Volatiles (GRO)	0.81 mg/L	0.10	mg/L	1.00	<0.10 mg/L	81.2	70-130			
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	91.0		ug/L	100	ug/L	91.0	80-120			
Matrix Spike Dup (BBJ0114-MSD1) Source: 18J0081-01 Prepared & Analyzed: 10/03/2018										
TPH-Volatiles (GRO)	0.85 mg/L	0.10	mg/L	1.00	<0.10 mg/L	84.5	70-130	3.97	20	
<i>Surr: 2,5-Dibromotoluene (Surr FID)</i>	91.6		ug/L	100	ug/L	91.6	80-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Blank (BBJ0107-BLK1)

Prepared & Analyzed: 10/03/2018

1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L							
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L							
1,2,3-Trichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L							
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L							
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2,4-Trimethylbenzene	<1.00 ug/L	1.00	ug/L							
1,2-Dibromo-3-chloropropane (DBCP)	<1.00 ug/L	1.00	ug/L							
1,2-Dibromoethane (EDB)	<1.00 ug/L	1.00	ug/L							
1,2-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2-Dichlorobenzene	<0.50 ug/L	0.50	ug/L							
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,2-Dichloropropane	<0.50 ug/L	0.50	ug/L							
1,2-Dichloropropane	<1.00 ug/L	1.00	ug/L							
1,3,5-Trimethylbenzene	<1.00 ug/L	1.00	ug/L							
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Blank (BBJ0107-BLK1)

Prepared & Analyzed: 10/03/2018

1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L							
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L							
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
2,2-Dichloropropane	<1.00 ug/L	1.00	ug/L							
2,2-Dichloropropane	<2.00 ug/L	2.00	ug/L							
2-Butanone (MEK)	<10.0 ug/L	10.0	ug/L							
2-Butanone (MEK)	<5.00 ug/L	5.00	ug/L							
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L							
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L							
4-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
4-Isopropyltoluene	<1.00 ug/L	1.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L							
Acetone	<10.0 ug/L	10.0	ug/L							
Acetone	<10.0 ug/L	10.0	ug/L							
Acetonitrile	<10.0 ug/L	10.0	ug/L							
Acrolein	<10.0 ug/L	10.0	ug/L							
Acrylonitrile	<5.00 ug/L	5.00	ug/L							
Allyl chloride	<1.00 ug/L	1.00	ug/L							
Benzene	<1.00 ug/L	1.00	ug/L							
Benzene	<1.00 ug/L	1.00	ug/L							
Bromobenzene	<1.00 ug/L	1.00	ug/L							
Bromochloromethane	<1.00 ug/L	1.00	ug/L							
Bromochloromethane	<1.00 ug/L	1.00	ug/L							
Bromodichloromethane	<0.50 ug/L	0.50	ug/L							
Bromodichloromethane	<0.50 ug/L	0.50	ug/L							
Bromoform	<1.00 ug/L	1.00	ug/L							
Bromoform	<1.00 ug/L	1.00	ug/L							
Bromomethane	<1.00 ug/L	1.00	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Blank (BBJ0107-BLK1)

Prepared & Analyzed: 10/03/2018

Bromomethane	<1.00 ug/L	1.00	ug/L							
Carbon disulfide	<10.0 ug/L	10.0	ug/L							
Carbon disulfide	<10.0 ug/L	10.0	ug/L							
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L							
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L							
Chlorobenzene	<1.00 ug/L	1.00	ug/L							
Chlorobenzene	<1.00 ug/L	1.00	ug/L							
Chloroethane	<1.00 ug/L	1.00	ug/L							
Chloroethane	<1.00 ug/L	1.00	ug/L							
Chloroform	<0.50 ug/L	0.50	ug/L							
Chloroform	<0.50 ug/L	0.50	ug/L							
Chloromethane	<1.00 ug/L	1.00	ug/L							
Chloromethane	<1.00 ug/L	1.00	ug/L							
Chloroprene	<5.00 ug/L	5.00	ug/L							
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
Dibromochloromethane	<0.50 ug/L	0.50	ug/L							
Dibromochloromethane	<0.50 ug/L	0.50	ug/L							
Dibromomethane	<1.00 ug/L	1.00	ug/L							
Dibromomethane	<1.00 ug/L	1.00	ug/L							
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L							
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L							
Di-isopropyl ether (DIPE)	<5.00 ug/L	5.00	ug/L							
Ethyl methacrylate	<5.00 ug/L	5.00	ug/L							
Ethylbenzene	<1.00 ug/L	1.00	ug/L							
Ethylbenzene	<1.00 ug/L	1.00	ug/L							
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L							
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L							
Iodomethane	<10.0 ug/L	10.0	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Blank (BBJ0107-BLK1)

Prepared & Analyzed: 10/03/2018

Iodomethane	<10.0 ug/L	10.0	ug/L							
Isobutyl Alcohol	<40.0 ug/L	40.0	ug/L							
Isopropylbenzene	<1.00 ug/L	1.00	ug/L							
m+p-Xylenes	<2.00 ug/L	2.00	ug/L							
m+p-Xylenes	<2.00 ug/L	2.00	ug/L							
Methacrylonitrile	<1.50 ug/L	1.50	ug/L							
Methyl methacrylate	<2.00 ug/L	2.00	ug/L							
Methylene chloride	<4.00 ug/L	4.00	ug/L							
Methylene chloride	<4.00 ug/L	4.00	ug/L							
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L							
Naphthalene	<1.00 ug/L	1.00	ug/L							
n-Butylbenzene	<1.00 ug/L	1.00	ug/L							
o-Xylene	<1.00 ug/L	1.00	ug/L							
n-Propylbenzene	<1.00 ug/L	1.00	ug/L							
o-Xylene	<1.00 ug/L	1.00	ug/L							
Propionitrile	<40.0 ug/L	40.0	ug/L							
sec-Butylbenzene	<1.00 ug/L	1.00	ug/L							
Styrene	<1.00 ug/L	1.00	ug/L							
Styrene	<1.00 ug/L	1.00	ug/L							
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L							
tert-Butylbenzene	<1.00 ug/L	1.00	ug/L							
Toluene	<1.00 ug/L	1.00	ug/L							
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L							
Toluene	<1.00 ug/L	1.00	ug/L							
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
trans-1,4-Dichloro-2-butene	<4.00 ug/L	4.00	ug/L							
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
Trichloroethylene	<1.00 ug/L	1.00	ug/L							
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------------------	---------	-------	------

Batch BBJ0107 - SW5030B

Blank (BBJ0107-BLK1)

Prepared & Analyzed: 10/03/2018

Trichloroethylene	<1.00 ug/L	1.00	ug/L						
Vinyl acetate	<10.0 ug/L	10.0	ug/L						
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L						
Vinyl chloride	<0.50 ug/L	0.50	ug/L						
Vinyl acetate	<10.0 ug/L	10.0	ug/L						
Xylenes, Total	<3.00 ug/L	3.00	ug/L						
Vinyl chloride	<0.50 ug/L	0.50	ug/L						
Xylenes, Total	<3.00 ug/L	3.00	ug/L						
<hr/>									
Surr: 1,2-Dichloroethane-d4 (Surr)	51.8		ug/L	50.0		104		70-120	
Surr: 1,2-Dichloroethane-d4 (Surr)	51.8		ug/L	50.0		104		70-120	
Surr: 4-Bromofluorobenzene (Surr)	49.2		ug/L	50.0		98.5		75-120	
Surr: 4-Bromofluorobenzene (Surr)	49.2		ug/L	50.0		98.5		75-120	
Surr: Dibromofluoromethane (Surr)	50.1		ug/L	50.0		100		70-130	
Surr: Dibromofluoromethane (Surr)	50.1		ug/L	50.0		100		70-130	
Surr: Toluene-d8 (Surr)	50.0		ug/L	50.0		100		70-130	
Surr: Toluene-d8 (Surr)	50.0		ug/L	50.0		100		70-130	

LCS (BBJ0107-BS1)

Prepared & Analyzed: 10/03/2018

1,1,1,2-Tetrachloroethane	46.2 ug/L	0.4	ug/L	50.0	ug/L	92.3		80-130	
1,1,1,2-Tetrachloroethane	46.2 ug/L	0.4	ug/L	50.0	ug/L	92.3		80-130	
1,1,1-Trichloroethane	45.8 ug/L	1	ug/L	50.0	ug/L	91.6		65-130	
1,1,1-Trichloroethane	45.8 ug/L	1	ug/L	50.0	ug/L	91.6		65-130	
1,1,2,2-Tetrachloroethane	41.4 ug/L	0.4	ug/L	50.0	ug/L	82.8		65-130	
1,1,2,2-Tetrachloroethane	41.4 ug/L	0.4	ug/L	50.0	ug/L	82.8		65-130	
1,1,2-Trichloroethane	44.3 ug/L	1	ug/L	50.0	ug/L	88.6		75-125	
1,1,2-Trichloroethane	44.3 ug/L	1	ug/L	50.0	ug/L	88.6		75-125	
1,1-Dichloroethane	44.5 ug/L	1	ug/L	50.0	ug/L	89.1		70-135	
1,1-Dichloroethane	44.5 ug/L	1	ug/L	50.0	ug/L	89.1		70-135	
1,1-Dichloroethylene	43.7 ug/L	1	ug/L	50.0	ug/L	87.5		70-130	
1,1-Dichloroethylene	43.7 ug/L	1	ug/L	50.0	ug/L	87.5		70-130	
1,1-Dichloropropene	48.0 ug/L	1	ug/L	50.0	ug/L	96.1		75-135	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

LCS (BBJ0107-BS1)

Prepared & Analyzed: 10/03/2018

1,1-Dichloropropene	48.0 ug/L	1	ug/L	50.0	ug/L	96.1	75-135			
1,2,3-Trichlorobenzene	37.7 ug/L	1	ug/L	50.0	ug/L	75.4	55-140			
1,2,3-Trichloropropane	44.0 ug/L	1	ug/L	50.0	ug/L	88.0	75-125			
1,2,3-Trichloropropane	44.0 ug/L	1	ug/L	50.0	ug/L	88.0	75-125			
1,2,4-Trichlorobenzene	40.5 ug/L	1	ug/L	50.0	ug/L	81.1	65-135			
1,2,4-Trichlorobenzene	40.5 ug/L	1	ug/L	50.0	ug/L	81.1	65-135			
1,2,4-Trimethylbenzene	49.6 ug/L	1	ug/L	50.0	ug/L	99.2	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	39.9 ug/L	1	ug/L	50.0	ug/L	79.8	50-130			
1,2-Dibromoethane (EDB)	44.6 ug/L	1	ug/L	50.0	ug/L	89.1	80-120			
1,2-Dichlorobenzene	44.6 ug/L	0.5	ug/L	50.0	ug/L	89.2	70-120			
1,2-Dichlorobenzene	44.6 ug/L	1	ug/L	50.0	ug/L	89.2	70-120			
1,2-Dichloroethane	40.5 ug/L	1	ug/L	50.0	ug/L	81.0	70-130			
1,2-Dichloroethane	40.5 ug/L	1	ug/L	50.0	ug/L	81.0	70-130			
1,2-Dichloropropane	42.7 ug/L	1	ug/L	50.0	ug/L	85.5	75-125			
1,2-Dichloropropane	42.7 ug/L	0.5	ug/L	50.0	ug/L	85.5	75-125			
1,3,5-Trimethylbenzene	49.7 ug/L	1	ug/L	50.0	ug/L	99.5	75-125			
1,3-Dichlorobenzene	47.1 ug/L	1	ug/L	50.0	ug/L	94.3	75-125			
1,3-Dichlorobenzene	47.1 ug/L	1	ug/L	50.0	ug/L	94.3	75-125			
1,3-Dichloropropane	41.9 ug/L	1	ug/L	50.0	ug/L	83.8	75-125			
1,3-Dichloropropane	41.9 ug/L	1	ug/L	50.0	ug/L	83.8	75-125			
1,4-Dichlorobenzene	45.9 ug/L	1	ug/L	50.0	ug/L	91.8	75-125			
1,4-Dichlorobenzene	45.9 ug/L	1	ug/L	50.0	ug/L	91.8	75-125			
2,2-Dichloropropane	50.2 ug/L	1	ug/L	50.0	ug/L	100	70-135			
2,2-Dichloropropane	50.2 ug/L	2	ug/L	50.0	ug/L	100	70-135			
2-Butanone (MEK)	42.7 ug/L	10	ug/L	50.0	ug/L	85.4	30-150			
2-Butanone (MEK)	42.7 ug/L	5	ug/L	50.0	ug/L	85.4	30-150			
2-Chlorotoluene	49.1 ug/L	1	ug/L	50.0	ug/L	98.2	75-125			
2-Hexanone (MBK)	44.5 ug/L	5	ug/L	50.0	ug/L	88.9	55-130			
2-Hexanone (MBK)	44.5 ug/L	5	ug/L	50.0	ug/L	88.9	55-130			
4-Chlorotoluene	46.0 ug/L	1	ug/L	50.0	ug/L	92.0	75-130			
4-Isopropyltoluene	47.8 ug/L	1	ug/L	50.0	ug/L	95.6	75-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

LCS (BBJ0107-BS1)

Prepared & Analyzed: 10/03/2018

4-Methyl-2-pentanone (MIBK)	40.0 ug/L	5	ug/L	50.0	ug/L	80.0	60-135			
4-Methyl-2-pentanone (MIBK)	40.0 ug/L	5	ug/L	50.0	ug/L	80.0	60-135			
Acetone	42.2 ug/L	10	ug/L	50.0	ug/L	84.4	40-140			
Acetone	42.2 ug/L	10	ug/L	50.0	ug/L	84.4	40-140			
Acrylonitrile	227 ug/L	5	ug/L	250	ug/L	90.8	70-130			
Benzene	44.7 ug/L	1	ug/L	50.0	ug/L	89.4	80-120			
Benzene	44.7 ug/L	1	ug/L	50.0	ug/L	89.4	80-120			
Bromobenzene	47.6 ug/L	1	ug/L	50.0	ug/L	95.2	75-125			
Bromochloromethane	44.8 ug/L	1	ug/L	50.0	ug/L	89.6	65-130			
Bromochloromethane	44.8 ug/L	1	ug/L	50.0	ug/L	89.6	65-130			
Bromodichloromethane	44.8 ug/L	0.5	ug/L	50.0	ug/L	89.7	75-120			
Bromodichloromethane	44.8 ug/L	0.5	ug/L	50.0	ug/L	89.7	75-120			
Bromoform	47.0 ug/L	1	ug/L	50.0	ug/L	94.0	70-130			
Bromoform	47.0 ug/L	1	ug/L	50.0	ug/L	94.0	70-130			
Bromomethane	37.4 ug/L	1	ug/L	50.0	ug/L	74.8	30-145			
Bromomethane	37.4 ug/L	1	ug/L	50.0	ug/L	74.8	30-145			
Carbon disulfide	46.6 ug/L	10	ug/L	50.0	ug/L	93.3	35-160			
Carbon disulfide	46.6 ug/L	10	ug/L	50.0	ug/L	93.3	35-160			
Carbon tetrachloride	47.7 ug/L	1	ug/L	50.0	ug/L	95.3	65-140			
Carbon tetrachloride	47.7 ug/L	1	ug/L	50.0	ug/L	95.3	65-140			
Chlorobenzene	46.0 ug/L	1	ug/L	50.0	ug/L	92.0	80-120			
Chlorobenzene	46.0 ug/L	1	ug/L	50.0	ug/L	92.0	80-120			
Chloroethane	43.5 ug/L	1	ug/L	50.0	ug/L	87.0	60-135			
Chloroethane	43.5 ug/L	1	ug/L	50.0	ug/L	87.0	60-135			
Chloroform	44.5 ug/L	0.5	ug/L	50.0	ug/L	89.1	65-135			
Chloroform	44.5 ug/L	0.5	ug/L	50.0	ug/L	89.1	65-135			
Chloromethane	38.6 ug/L	1	ug/L	50.0	ug/L	77.2	40-125			
Chloromethane	38.6 ug/L	1	ug/L	50.0	ug/L	77.2	40-125			
cis-1,2-Dichloroethylene	45.3 ug/L	1	ug/L	50.0	ug/L	90.7	70-125			
cis-1,2-Dichloroethylene	45.3 ug/L	1	ug/L	50.0	ug/L	90.7	70-125			
cis-1,3-Dichloropropene	44.7 ug/L	1	ug/L	50.0	ug/L	89.5	70-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

LCS (BBJ0107-BS1)

Prepared & Analyzed: 10/03/2018

cis-1,3-Dichloropropene	44.7 ug/L	1	ug/L	50.0	ug/L	89.5	70-130			
Dibromochloromethane	45.2 ug/L	0.5	ug/L	50.0	ug/L	90.3	60-135			
Dibromochloromethane	45.2 ug/L	0.5	ug/L	50.0	ug/L	90.3	60-135			
Dibromomethane	41.6 ug/L	1	ug/L	50.0	ug/L	83.3	75-125			
Dibromomethane	41.6 ug/L	1	ug/L	50.0	ug/L	83.3	75-125			
Dichlorodifluoromethane	34.1 ug/L	1	ug/L	50.0	ug/L	68.1	30-155			
Dichlorodifluoromethane	34.1 ug/L	1	ug/L	50.0	ug/L	68.1	30-155			
Ethylbenzene	48.7 ug/L	1	ug/L	50.0	ug/L	97.5	75-125			
Ethylbenzene	48.7 ug/L	1	ug/L	50.0	ug/L	97.5	75-125			
Hexachlorobutadiene	49.4 ug/L	0.8	ug/L	50.0	ug/L	98.8	50-140			
Hexachlorobutadiene	49.4 ug/L	0.8	ug/L	50.0	ug/L	98.8	50-140			
Isopropylbenzene	48.3 ug/L	1	ug/L	50.0	ug/L	96.6	75-125			
m+p-Xylenes	99.0 ug/L	2	ug/L	100	ug/L	99.0	75-130			
m+p-Xylenes	99.0 ug/L	2	ug/L	100	ug/L	99.0	75-130			
Methylene chloride	43.1 ug/L	4	ug/L	50.0	ug/L	86.2	55-140			
Methylene chloride	43.1 ug/L	4	ug/L	50.0	ug/L	86.2	55-140			
Methyl-t-butyl ether (MTBE)	47.8 ug/L	1	ug/L	50.0	ug/L	95.6	65-125			
Naphthalene	33.4 ug/L	1	ug/L	50.0	ug/L	66.8	55-140			
n-Butylbenzene	49.1 ug/L	1	ug/L	50.0	ug/L	98.2	70-135			
n-Propylbenzene	49.0 ug/L	1	ug/L	50.0	ug/L	97.9	70-130			
o-Xylene	48.7 ug/L	1	ug/L	50.0	ug/L	97.4	80-120			
o-Xylene	48.7 ug/L	1	ug/L	50.0	ug/L	97.4	80-120			
Styrene	51.2 ug/L	1	ug/L	50.0	ug/L	102	65-135			
sec-Butylbenzene	48.0 ug/L	1	ug/L	50.0	ug/L	96.0	70-125			
Styrene	51.2 ug/L	1	ug/L	50.0	ug/L	102	65-135			
tert-Butylbenzene	49.5 ug/L	1	ug/L	50.0	ug/L	99.1	70-130			
Tetrachloroethylene (PCE)	69.8 ug/L	1	ug/L	50.0	ug/L	140	45-150			
Tetrachloroethylene (PCE)	69.8 ug/L	1	ug/L	50.0	ug/L	140	45-150			
Toluene	45.0 ug/L	1	ug/L	50.0	ug/L	90.0	75-120			
Toluene	45.0 ug/L	1	ug/L	50.0	ug/L	90.0	75-120			
trans-1,2-Dichloroethylene	44.0 ug/L	1	ug/L	50.0	ug/L	88.1	60-140			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

LCS (BBJ0107-BS1)

Prepared & Analyzed: 10/03/2018

trans-1,2-Dichloroethylene	44.0 ug/L	1	ug/L	50.0	ug/L	88.1	60-140			
trans-1,3-Dichloropropene	39.2 ug/L	1	ug/L	50.0	ug/L	78.3	55-140			
trans-1,3-Dichloropropene	39.2 ug/L	1	ug/L	50.0	ug/L	78.3	55-140			
Trichloroethylene	43.4 ug/L	1	ug/L	50.0	ug/L	86.9	70-125			
Trichlorofluoromethane	41.6 ug/L	1	ug/L	50.0	ug/L	83.1	60-145			
Trichloroethylene	43.4 ug/L	1	ug/L	50.0	ug/L	86.9	70-125			
Trichlorofluoromethane	41.6 ug/L	1	ug/L	50.0	ug/L	83.1	60-145			
Vinyl chloride	39.0 ug/L	0.5	ug/L	50.0	ug/L	78.0	50-145			
Vinyl chloride	39.0 ug/L	0.5	ug/L	50.0	ug/L	78.0	50-145			
<hr style="border-top: 1px dashed #000;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	49.6		ug/L	50.0	ug/L	99.2	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	49.6		ug/L	50.0	ug/L	99.2	70-120			
Surr: 4-Bromofluorobenzene (Surr)	50.1		ug/L	50.0	ug/L	100	75-120			
Surr: 4-Bromofluorobenzene (Surr)	50.1		ug/L	50.0	ug/L	100	75-120			
Surr: Dibromofluoromethane (Surr)	49.1		ug/L	50.0	ug/L	98.1	70-130			
Surr: Dibromofluoromethane (Surr)	49.1		ug/L	50.0	ug/L	98.1	70-130			
Surr: Toluene-d8 (Surr)	49.3		ug/L	50.0	ug/L	98.6	70-130			
Surr: Toluene-d8 (Surr)	49.3		ug/L	50.0	ug/L	98.6	70-130			

Duplicate (BBJ0107-DUP1)

Source: 18J0111-01

Prepared & Analyzed: 10/03/2018

1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40	ug/L			NA	30	
1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40	ug/L			NA	30	
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00	ug/L			NA	30	
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00	ug/L			NA	30	
1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40	ug/L			NA	30	
1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40	ug/L			NA	30	
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00	ug/L			NA	30	
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00	ug/L			NA	30	
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00	ug/L			NA	30	
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00	ug/L			NA	30	
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00	ug/L			NA	30	
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00	ug/L			NA	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Duplicate (BBJ0107-DUP1)

Source: 18J0111-01

Prepared & Analyzed: 10/03/2018

1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2,3-Trichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2,4-Trimethylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2-Dibromo-3-chloropropane (DBCP)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2-Dibromoethane (EDB)	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2-Dichlorobenzene	<0.50 ug/L	0.50	ug/L	<0.50 ug/L	<0.50 ug/L	NA	NA	30	30	NA
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,2-Dichloropropane	<0.50 ug/L	0.50	ug/L	<0.50 ug/L	<0.50 ug/L	NA	NA	30	30	NA
1,2-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,3,5-Trimethylbenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
2,2-Dichloropropane	<2.00 ug/L	2.00	ug/L	<2.00 ug/L	<2.00 ug/L	NA	NA	30	30	NA
2,2-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
2-Butanone (MEK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L	<5.00 ug/L	NA	NA	30	30	NA
2-Butanone (MEK)	<10.0 ug/L	10.0	ug/L	<10.0 ug/L	<10.0 ug/L	NA	NA	30	30	NA
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L	<5.00 ug/L	NA	NA	30	30	NA
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L	<5.00 ug/L	NA	NA	30	30	NA
4-Chlorotoluene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L	<1.00 ug/L	NA	NA	30	30	NA



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Duplicate (BBJ0107-DUP1)

Source: 18J0111-01

Prepared & Analyzed: 10/03/2018

4-Isopropyltoluene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L		<5.00 ug/L			NA	30	
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L		<5.00 ug/L			NA	30	
Acetone	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Acetone	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Acetonitrile	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Acrolein	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Acrylonitrile	<5.00 ug/L	5.00	ug/L		<5.00 ug/L			NA	30	
Allyl chloride	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Benzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Benzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Bromobenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Bromochloromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Bromochloromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Bromodichloromethane	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Bromodichloromethane	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Bromoform	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Bromoform	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Bromomethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Bromomethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Carbon disulfide	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Carbon disulfide	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Chlorobenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Chlorobenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Chloroethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Chloroethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Chloroform	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Chloroform	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Chloromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Duplicate (BBJ0107-DUP1)

Source: 18J0111-01

Prepared & Analyzed: 10/03/2018

Chloromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Chloroprene	<5.00 ug/L	5.00	ug/L		<5.00 ug/L			NA	30	
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Dibromochloromethane	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Dibromochloromethane	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Dibromomethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Dibromomethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Di-isopropyl ether (DIPE)	<5.00 ug/L	5.00	ug/L		<5.00 ug/L			NA	30	
Ethyl methacrylate	<5.00 ug/L	5.00	ug/L		<5.00 ug/L			NA	30	
Ethylbenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Ethylbenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L		<0.80 ug/L			NA	30	
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L		<0.80 ug/L			NA	30	
Iodomethane	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Iodomethane	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Isobutyl Alcohol	<40.0 ug/L	40.0	ug/L		<40.0 ug/L			NA	30	
m+p-Xylenes	<2.00 ug/L	2.00	ug/L		<2.00 ug/L			NA	30	
Isopropylbenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Methacrylonitrile	<1.50 ug/L	1.50	ug/L		<1.50 ug/L			NA	30	
m+p-Xylenes	<2.00 ug/L	2.00	ug/L		<2.00 ug/L			NA	30	
Methyl methacrylate	<2.00 ug/L	2.00	ug/L		<2.00 ug/L			NA	30	
Methylene chloride	<4.00 ug/L	4.00	ug/L		<4.00 ug/L			NA	30	
Methylene chloride	<4.00 ug/L	4.00	ug/L		<4.00 ug/L			NA	30	
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Naphthalene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
n-Butylbenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Duplicate (BBJ0107-DUP1)

Source: 18J0111-01

Prepared & Analyzed: 10/03/2018

n-Propylbenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
o-Xylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
o-Xylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Propionitrile	<40.0 ug/L	40.0	ug/L		<40.0 ug/L			NA	30	
Styrene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
sec-Butylbenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Styrene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
tert-Butylbenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Toluene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Toluene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
trans-1,4-Dichloro-2-butene	<4.00 ug/L	4.00	ug/L		<4.00 ug/L			NA	30	
Trichloroethylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Trichloroethylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Vinyl acetate	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Vinyl acetate	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Vinyl chloride	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Vinyl chloride	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Xylenes, Total	<3.00 ug/L	3.00	ug/L		<3.00 ug/L			NA	30	
Xylenes, Total	<3.00 ug/L	3.00	ug/L		<3.00 ug/L			NA	30	
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	50.2		ug/L	50.0	ug/L	100	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	50.2		ug/L	50.0	ug/L	100	70-120			
Surr: 4-Bromofluorobenzene (Surr)	48.3		ug/L	50.0	ug/L	96.6	75-120			
Surr: 4-Bromofluorobenzene (Surr)	48.3		ug/L	50.0	ug/L	96.6	75-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Duplicate (BBJ0107-DUP1)

Source: 18J0111-01

Prepared & Analyzed: 10/03/2018

Surr: Dibromofluoromethane (Surr)	50.3		ug/L	50.0	ug/L	101	70-130			
Surr: Dibromofluoromethane (Surr)	50.3		ug/L	50.0	ug/L	101	70-130			
Surr: Toluene-d8 (Surr)	49.5		ug/L	50.0	ug/L	99.1	70-130			
Surr: Toluene-d8 (Surr)	49.5		ug/L	50.0	ug/L	99.1	70-130			

Matrix Spike (BBJ0107-MS1)

Source: 18J0111-02

Prepared & Analyzed: 10/03/2018

1,1,1,2-Tetrachloroethane	46.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	93.3	80-130			
1,1,1,2-Tetrachloroethane	46.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	93.3	80-130			
1,1,1-Trichloroethane	47.4 ug/L	1	ug/L	50.0	<1 ug/L	94.8	65-130			
1,1,1-Trichloroethane	47.4 ug/L	1	ug/L	50.0	<1 ug/L	94.8	65-130			
1,1,2,2-Tetrachloroethane	45.3 ug/L	0.4	ug/L	50.0	<0.4 ug/L	90.5	65-130			
1,1,2,2-Tetrachloroethane	45.3 ug/L	0.4	ug/L	50.0	<0.4 ug/L	90.5	65-130			
1,1,2-Trichloroethane	47.1 ug/L	1	ug/L	50.0	<1 ug/L	94.2	75-125			
1,1,2-Trichloroethane	47.1 ug/L	1	ug/L	50.0	<1 ug/L	94.2	75-125			
1,1-Dichloroethane	45.7 ug/L	1	ug/L	50.0	<1 ug/L	91.4	70-135			
1,1-Dichloroethane	45.7 ug/L	1	ug/L	50.0	<1 ug/L	91.4	70-135			
1,1-Dichloroethylene	44.3 ug/L	1	ug/L	50.0	<1 ug/L	88.6	70-130			
1,1-Dichloroethylene	44.3 ug/L	1	ug/L	50.0	<1 ug/L	88.6	70-130			
1,1-Dichloropropene	48.5 ug/L	1	ug/L	50.0	<1 ug/L	97.0	75-135			
1,1-Dichloropropene	48.5 ug/L	1	ug/L	50.0	<1 ug/L	97.0	75-135			
1,2,3-Trichlorobenzene	38.5 ug/L	1	ug/L	50.0	<1 ug/L	76.9	55-140			
1,2,3-Trichloropropane	47.9 ug/L	1	ug/L	50.0	<1 ug/L	95.7	75-125			
1,2,3-Trichloropropane	47.9 ug/L	1	ug/L	50.0	<1 ug/L	95.7	75-125			
1,2,4-Trichlorobenzene	39.1 ug/L	1	ug/L	50.0	<1 ug/L	78.2	65-135			
1,2,4-Trichlorobenzene	39.1 ug/L	1	ug/L	50.0	<1 ug/L	78.2	65-135			
1,2,4-Trimethylbenzene	50.5 ug/L	1	ug/L	50.0	<1 ug/L	101	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	44.6 ug/L	1	ug/L	50.0	<1 ug/L	89.2	50-130			
1,2-Dibromoethane (EDB)	47.2 ug/L	1	ug/L	50.0	<1 ug/L	94.3	80-120			
1,2-Dichlorobenzene	46.6 ug/L	0.5	ug/L	50.0	<0.5 ug/L	93.3	70-120			
1,2-Dichlorobenzene	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.3	70-120			
1,2-Dichloroethane	42.3 ug/L	1	ug/L	50.0	<1 ug/L	84.5	70-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Matrix Spike (BBJ0107-MS1)

Source: 18J0111-02

Prepared & Analyzed: 10/03/2018

1,2-Dichloroethane	42.3 ug/L	1	ug/L	50.0	<1 ug/L	84.5	70-130			
1,2-Dichloropropane	43.7 ug/L	0.5	ug/L	50.0	<0.5 ug/L	87.5	75-125			
1,2-Dichloropropane	43.7 ug/L	1	ug/L	50.0	<1 ug/L	87.5	75-125			
1,3,5-Trimethylbenzene	50.5 ug/L	1	ug/L	50.0	<1 ug/L	101	75-124			
1,3-Dichlorobenzene	48.2 ug/L	1	ug/L	50.0	<1 ug/L	96.5	75-125			
1,3-Dichlorobenzene	48.2 ug/L	1	ug/L	50.0	<1 ug/L	96.5	75-125			
1,3-Dichloropropane	43.4 ug/L	1	ug/L	50.0	<1 ug/L	86.9	75-125			
1,3-Dichloropropane	43.4 ug/L	1	ug/L	50.0	<1 ug/L	86.9	75-125			
1,4-Dichlorobenzene	47.4 ug/L	1	ug/L	50.0	<1 ug/L	94.8	75-125			
1,4-Dichlorobenzene	47.4 ug/L	1	ug/L	50.0	<1 ug/L	94.8	75-125			
2,2-Dichloropropane	43.6 ug/L	2	ug/L	50.0	<2 ug/L	87.2	70-135			
2,2-Dichloropropane	43.6 ug/L	1	ug/L	50.0	<1 ug/L	87.2	70-135			
2-Butanone (MEK)	41.5 ug/L	5	ug/L	50.0	<5 ug/L	83.0	30-150			
2-Butanone (MEK)	41.5 ug/L	10	ug/L	50.0	<10 ug/L	83.0	30-150			
2-Chlorotoluene	50.0 ug/L	1	ug/L	50.0	<1 ug/L	99.9	75-125			
2-Hexanone (MBK)	47.7 ug/L	5	ug/L	50.0	<5 ug/L	95.4	55-130			
2-Hexanone (MBK)	47.7 ug/L	5	ug/L	50.0	<5 ug/L	95.4	55-130			
4-Chlorotoluene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	95.9	75-130			
4-Isopropyltoluene	48.1 ug/L	1	ug/L	50.0	<1 ug/L	96.3	75-130			
4-Methyl-2-pentanone (MIBK)	42.9 ug/L	5	ug/L	50.0	<5 ug/L	85.8	60-135			
4-Methyl-2-pentanone (MIBK)	42.9 ug/L	5	ug/L	50.0	<5 ug/L	85.8	60-135			
Acetone	51.2 ug/L	10	ug/L	50.0	<10 ug/L	102	40-140			
Acetone	51.2 ug/L	10	ug/L	50.0	<10 ug/L	102	40-140			
Acrylonitrile	233 ug/L	5	ug/L	250	<5 ug/L	93.2	70-130			
Benzene	46.5 ug/L	1	ug/L	50.0	<1 ug/L	93.0	80-120			
Benzene	46.5 ug/L	1	ug/L	50.0	<1 ug/L	93.0	80-120			
Bromobenzene	48.6 ug/L	1	ug/L	50.0	<1 ug/L	97.2	75-125			
Bromochloromethane	46.8 ug/L	1	ug/L	50.0	<1 ug/L	93.6	65-130			
Bromochloromethane	46.8 ug/L	1	ug/L	50.0	<1 ug/L	93.6	65-130			
Bromodichloromethane	46.5 ug/L	0.5	ug/L	50.0	<0.5 ug/L	93.0	75-120			
Bromodichloromethane	46.5 ug/L	0.5	ug/L	50.0	<0.5 ug/L	93.0	75-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Matrix Spike (BBJ0107-MS1)

Source: 18J0111-02

Prepared & Analyzed: 10/03/2018

Bromoform	48.5 ug/L	1	ug/L	50.0	<1 ug/L	97.0	70-130			
Bromoform	48.5 ug/L	1	ug/L	50.0	<1 ug/L	97.0	70-130			
Bromomethane	35.7 ug/L	1	ug/L	50.0	<1 ug/L	71.3	30-145			
Bromomethane	35.7 ug/L	1	ug/L	50.0	<1 ug/L	71.3	30-145			
Carbon disulfide	41.4 ug/L	10	ug/L	50.0	<10 ug/L	82.8	35-160			
Carbon disulfide	41.4 ug/L	10	ug/L	50.0	<10 ug/L	82.8	35-160			
Carbon tetrachloride	49.5 ug/L	1	ug/L	50.0	<1 ug/L	98.9	65-140			
Carbon tetrachloride	49.5 ug/L	1	ug/L	50.0	<1 ug/L	98.9	65-140			
Chlorobenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.6	80-120			
Chlorobenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.6	80-120			
Chloroethane	44.9 ug/L	1	ug/L	50.0	<1 ug/L	89.9	60-135			
Chloroethane	44.9 ug/L	1	ug/L	50.0	<1 ug/L	89.9	60-135			
Chloroform	46.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	92.5	65-135			
Chloroform	46.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	92.5	65-135			
Chloromethane	40.1 ug/L	1	ug/L	50.0	<1 ug/L	80.2	40-125			
Chloromethane	40.1 ug/L	1	ug/L	50.0	<1 ug/L	80.2	40-125			
cis-1,2-Dichloroethylene	47.4 ug/L	1	ug/L	50.0	<1 ug/L	94.8	70-125			
cis-1,2-Dichloroethylene	47.4 ug/L	1	ug/L	50.0	<1 ug/L	94.8	70-125			
cis-1,3-Dichloropropene	43.9 ug/L	1	ug/L	50.0	<1 ug/L	87.7	70-130			
cis-1,3-Dichloropropene	43.9 ug/L	1	ug/L	50.0	<1 ug/L	87.7	70-130			
Dibromochloromethane	47.1 ug/L	0.5	ug/L	50.0	<0.5 ug/L	94.3	60-135			
Dibromochloromethane	47.1 ug/L	0.5	ug/L	50.0	<0.5 ug/L	94.3	60-135			
Dibromomethane	45.5 ug/L	1	ug/L	50.0	<1 ug/L	91.0	75-125			
Dibromomethane	45.5 ug/L	1	ug/L	50.0	<1 ug/L	91.0	75-125			
Dichlorodifluoromethane	32.8 ug/L	1	ug/L	50.0	<1 ug/L	65.6	30-155			
Dichlorodifluoromethane	32.8 ug/L	1	ug/L	50.0	<1 ug/L	65.6	30-155			
Ethylbenzene	49.3 ug/L	1	ug/L	50.0	<1 ug/L	98.7	75-125			
Ethylbenzene	49.3 ug/L	1	ug/L	50.0	<1 ug/L	98.7	75-125			
Hexachlorobutadiene	42.6 ug/L	0.8	ug/L	50.0	<0.8 ug/L	85.3	50-140			
Hexachlorobutadiene	42.6 ug/L	0.8	ug/L	50.0	<0.8 ug/L	85.3	50-140			
Isopropylbenzene	49.4 ug/L	1	ug/L	50.0	<1 ug/L	98.8	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Matrix Spike (BBJ0107-MS1)

Source: 18J0111-02

Prepared & Analyzed: 10/03/2018

m+p-Xylenes	101 ug/L	2	ug/L	100	<2 ug/L	101	75-130			
m+p-Xylenes	101 ug/L	2	ug/L	100	<2 ug/L	101	75-130			
Methylene chloride	44.7 ug/L	4	ug/L	50.0	<4 ug/L	88.9	55-140			
Methylene chloride	44.7 ug/L	4	ug/L	50.0	<4 ug/L	88.9	55-140			
Methyl-t-butyl ether (MTBE)	49.2 ug/L	1	ug/L	50.0	<1 ug/L	98.3	65-125			
Naphthalene	34.6 ug/L	1	ug/L	50.0	<1 ug/L	69.1	55-140			
n-Butylbenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.7	70-135			
o-Xylene	49.8 ug/L	1	ug/L	50.0	<1 ug/L	99.6	80-120			
n-Propylbenzene	49.3 ug/L	1	ug/L	50.0	<1 ug/L	98.5	70-130			
o-Xylene	49.8 ug/L	1	ug/L	50.0	<1 ug/L	99.6	80-120			
Styrene	51.7 ug/L	1	ug/L	50.0	<1 ug/L	103	65-135			
sec-Butylbenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	70-125			
Styrene	51.7 ug/L	1	ug/L	50.0	<1 ug/L	103	65-135			
Tetrachloroethylene (PCE)	70.1 ug/L	1	ug/L	50.0	<1 ug/L	140	45-150			
tert-Butylbenzene	50.9 ug/L	1	ug/L	50.0	<1 ug/L	102	70-130			
Toluene	46.1 ug/L	1	ug/L	50.0	<1 ug/L	92.1	75-120			
Tetrachloroethylene (PCE)	70.1 ug/L	1	ug/L	50.0	<1 ug/L	140	45-150			
Toluene	46.1 ug/L	1	ug/L	50.0	<1 ug/L	92.1	75-120			
trans-1,2-Dichloroethylene	45.3 ug/L	1	ug/L	50.0	<1 ug/L	90.7	60-140			
trans-1,3-Dichloropropene	38.2 ug/L	1	ug/L	50.0	<1 ug/L	76.4	55-140			
trans-1,2-Dichloroethylene	45.3 ug/L	1	ug/L	50.0	<1 ug/L	90.7	60-140			
trans-1,3-Dichloropropene	38.2 ug/L	1	ug/L	50.0	<1 ug/L	76.4	55-140			
Trichloroethylene	45.6 ug/L	1	ug/L	50.0	<1 ug/L	91.1	70-125			
Trichlorofluoromethane	41.8 ug/L	1	ug/L	50.0	<1 ug/L	83.5	60-145			
Trichloroethylene	45.6 ug/L	1	ug/L	50.0	<1 ug/L	91.1	70-125			
Trichlorofluoromethane	41.8 ug/L	1	ug/L	50.0	<1 ug/L	83.5	60-145			
Vinyl chloride	39.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	79.6	50-145			
Vinyl chloride	39.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	79.6	50-145			
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	50.9		ug/L	50.0	ug/L	102	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	50.9		ug/L	50.0	ug/L	102	70-120			
Surr: 4-Bromofluorobenzene (Surr)	50.4		ug/L	50.0	ug/L	101	75-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0107 - SW5030B

Matrix Spike (BBJ0107-MS1)

Source: 18J0111-02

Prepared & Analyzed: 10/03/2018

Surr: 4-Bromofluorobenzene (Surr)	50.4		ug/L	50.0	ug/L	101	75-120			
Surr: Dibromofluoromethane (Surr)	48.6		ug/L	50.0	ug/L	97.3	70-130			
Surr: Dibromofluoromethane (Surr)	48.6		ug/L	50.0	ug/L	97.3	70-130			
Surr: Toluene-d8 (Surr)	49.2		ug/L	50.0	ug/L	98.4	70-130			
Surr: Toluene-d8 (Surr)	49.2		ug/L	50.0	ug/L	98.4	70-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0193 - SW3510C

Blank (BBJ0193-BLK1)

Prepared: 10/05/2018 Analyzed: 10/09/2018

2,3,7,8-TCDD (SIM)	Not Detected -		-						
1,2,4,5-Tetrachlorobenzene	<10.0 ug/L	10.0	ug/L						
1,3,5-Trinitrobenzene	<5.00 ug/L	5.00	ug/L						
1,3-Dinitrobenzene	<2.50 ug/L	2.50	ug/L						
1,4-Naphthoquinone	<10.0 ug/L	10.0	ug/L						
1-Naphthylamine	<10.0 ug/L	10.0	ug/L						
2,3,4,6-Tetrachlorophenol	<10.0 ug/L	10.0	ug/L						
2,4,5-Trichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4,6-Trichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4-Dichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4-Dimethylphenol	<0.50 ug/L	0.50	ug/L						
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L						
2,4-Dinitrotoluene	<10.0 ug/L	10.0	ug/L						
2,6-Dichlorophenol	<10.0 ug/L	10.0	ug/L						
2,6-Dinitrotoluene	<10.0 ug/L	10.0	ug/L						
2-Acetylaminofluorene	<2.50 ug/L	2.50	ug/L						
2-Chloronaphthalene	<10.0 ug/L	10.0	ug/L						
2-Chlorophenol	<10.0 ug/L	10.0	ug/L						
2-Methylnaphthalene	<10.0 ug/L	10.0	ug/L						
2-Naphthylamine	<10.0 ug/L	10.0	ug/L						
2-Nitroaniline	<20.0 ug/L	20.0	ug/L						
2-Nitrophenol	<10.0 ug/L	10.0	ug/L						
3,3'-Dichlorobenzidine	<10.0 ug/L	10.0	ug/L						
3,3'-Dimethylbenzidine	<2.50 ug/L	2.50	ug/L						
3-Methylcholanthrene	<10.0 ug/L	10.0	ug/L						
3-Nitroaniline	<20.0 ug/L	20.0	ug/L						
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L						
4-Aminobiphenyl	<10.0 ug/L	10.0	ug/L						
4-Bromophenyl phenyl ether	<10.0 ug/L	10.0	ug/L						
4-Chloroaniline	<10.0 ug/L	10.0	ug/L						
4-Chlorophenyl phenyl ether	<10.0 ug/L	10.0	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0193 - SW3510C

Blank (BBJ0193-BLK1)

Prepared & Analyzed: 10/05/2018

4-Nitroaniline	<20.0 ug/L	20.0	ug/L						
4-Nitrophenol	<50.0 ug/L	50.0	ug/L						
5-Nitro-o-toluidine	<10.0 ug/L	10.0	ug/L						
7,12-Dimethylbenz (a) anthracene	<10.0 ug/L	10.0	ug/L						
Acenaphthene	<10.0 ug/L	10.0	ug/L						
Acenaphthylene	<10.0 ug/L	10.0	ug/L						
Acetophenone	<20.0 ug/L	20.0	ug/L						
Anthracene	<10.0 ug/L	10.0	ug/L						
Benzo (a) anthracene	<0.05 ug/L	0.05	ug/L						
Benzo (a) pyrene	<0.10 ug/L	0.10	ug/L						
Benzo (b) fluoranthene	<10.0 ug/L	10.0	ug/L						
Benzo (g,h,i) perylene	<10.0 ug/L	10.0	ug/L						
Benzo (k) fluoranthene	<10.0 ug/L	10.0	ug/L						
Benzyl alcohol	<20.0 ug/L	20.0	ug/L						
bis (2-Chloroethoxy) methane	<10.0 ug/L	10.0	ug/L						
bis (2-Chloroethyl) ether	<10.0 ug/L	10.0	ug/L						
2,2'-Oxybis (1-chloropropane)	<10.0 ug/L	10.0	ug/L						
bis (2-Ethylhexyl) phthalate	<2.50 ug/L	2.50	ug/L						
Butyl benzyl phthalate	<10.0 ug/L	10.0	ug/L						
Chlorobenzilate	<2.50 ug/L	2.50	ug/L						
Chrysene	<10.0 ug/L	10.0	ug/L						
Diallate	<2.50 ug/L	2.50	ug/L						
Dibenz (a,h) anthracene	<10.0 ug/L	10.0	ug/L						
Dibenzofuran	<5.00 ug/L	5.00	ug/L						
Diethyl phthalate	<10.0 ug/L	10.0	ug/L						
Dimethoate	<2.50 ug/L	2.50	ug/L						
Dimethyl phthalate	<10.0 ug/L	10.0	ug/L						
Di-n-butyl phthalate	<10.0 ug/L	10.0	ug/L						
Di-n-octyl phthalate	<10.0 ug/L	10.0	ug/L						
Diphenylamine	<10.0 ug/L	10.0	ug/L						
Disulfoton	<2.50 ug/L	2.50	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0193 - SW3510C

Blank (BBJ0193-BLK1)

Prepared & Analyzed: 10/05/2018

Ethyl methanesulfonate	<20.0 ug/L	20.0	ug/L						
Ethyl parathion	<2.50 ug/L	2.50	ug/L						
Famphur	<2.50 ug/L	2.50	ug/L						
Fluoranthene	<10.0 ug/L	10.0	ug/L						
Fluorene	<10.0 ug/L	10.0	ug/L						
Hexachlorobenzene	<0.05 ug/L	0.05	ug/L						
Hexachlorobutadiene	<10.0 ug/L	10.0	ug/L						
Hexachlorocyclopentadiene	<10.0 ug/L	10.0	ug/L						
Hexachloroethane	<10.0 ug/L	10.0	ug/L						
Hexachloropropene	<2.50 ug/L	2.50	ug/L						
Indeno (1,2,3-cd) pyrene	<10.0 ug/L	10.0	ug/L						
Isodrin	<10.0 ug/L	10.0	ug/L						
Isophorone	<10.0 ug/L	10.0	ug/L						
Isosafrole	<10.0 ug/L	10.0	ug/L						
Kepon	<2.50 ug/L	2.50	ug/L						
m+p-Cresols	<10.0 ug/L	10.0	ug/L						
Methapyrilene	<10.0 ug/L	10.0	ug/L						
Methyl methanesulfonate	<10.0 ug/L	10.0	ug/L						
Methyl parathion	<2.50 ug/L	2.50	ug/L						
Naphthalene	<10.0 ug/L	10.0	ug/L						
Nitrobenzene	<10.0 ug/L	10.0	ug/L						
n-Nitrosodiethylamine	<2.50 ug/L	2.50	ug/L						
n-Nitrosodimethylamine	<10.0 ug/L	10.0	ug/L						
n-Nitrosodi-n-butylamine	<10.0 ug/L	10.0	ug/L						
n-Nitrosodi-n-propylamine	<10.0 ug/L	10.0	ug/L						
n-Nitrosodiphenylamine	<10.0 ug/L	10.0	ug/L						
n-Nitrosomethylethylamine	<2.50 ug/L	2.50	ug/L						
n-Nitrosopiperidine	<10.0 ug/L	10.0	ug/L						
n-Nitrosopyrrolidine	<2.50 ug/L	2.50	ug/L						
o,o,o-Triethyl phosphorothioate	<10.0 ug/L	10.0	ug/L						
o,o-Diethyl o-2-pyrazinyl phosphorothioate	<10.0 ug/L	10.0	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Blank (BBJ0193-BLK1)

Prepared & Analyzed: 10/05/2018

o+m+p-Cresols	<10.0 ug/L	10.0	ug/L							
o-Cresol	<10.0 ug/L	10.0	ug/L							
o-Toluidine	<2.50 ug/L	2.50	ug/L							
p-(Dimethylamino) azobenzene	<2.50 ug/L	2.50	ug/L							
p-Chloro-m-cresol	<10.0 ug/L	10.0	ug/L							
Pentachlorobenzene	<10.0 ug/L	10.0	ug/L							
Pentachloronitrobenzene (quintozene)	<1.00 ug/L	1.00	ug/L							
Phenacetin	<10.0 ug/L	10.0	ug/L							
Phenanthrene	<10.0 ug/L	10.0	ug/L							
Phenol	<10.0 ug/L	10.0	ug/L							
Phorate	<2.50 ug/L	2.50	ug/L							
p-Phenylenediamine	<10.0 ug/L	10.0	ug/L							
Pronamide	<10.0 ug/L	10.0	ug/L							
Pyrene	<10.0 ug/L	10.0	ug/L							
Safrole	<2.50 ug/L	2.50	ug/L							
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	75.0		ug/L	100		75.0	10-86			
Surr: 2-Fluorobiphenyl (Surr)	32.7		ug/L	50.0		65.5	9-87			
Surr: 2-Fluorophenol (Surr)	68.8		ug/L	100		68.8	10-52			S
Surr: Nitrobenzene-d5 (Surr)	39.3		ug/L	50.0		78.7	10-98.5			
Surr: Phenol-d5 (Surr)	31.6		ug/L	100		31.6	5-33			
Surr: p-Terphenyl-d14 (Surr)	55.9		ug/L	50.0		112	27-133			

LCS (BBJ0193-BS1)

Prepared & Analyzed: 10/05/2018

1,2,4-Trichlorobenzene	26.4 ug/L	10.0	ug/L	50.0	ug/L	52.8	21.8-66.7			
1,2-Dichlorobenzene	25.5 ug/L	10.0	ug/L	50.0	ug/L	51.0	22-60			
1,3-Dichlorobenzene	22.6 ug/L	10.0	ug/L	50.0	ug/L	45.3	22-60			
1,4-Dichlorobenzene	25.4 ug/L	10.0	ug/L	50.0	ug/L	50.8	13-68			
1-Chloronaphthalene	36.3 ug/L	10.0	ug/L		ug/L		0-200			
2,4,6-Trichlorophenol	42.3 ug/L	10.0	ug/L	50.0	ug/L	84.7	50-115			
2,4-Dichlorophenol	42.0 ug/L	10.0	ug/L	50.0	ug/L	83.9	50-105			
2,4-Dimethylphenol	43.0 ug/L	0.50	ug/L	50.0	ug/L	86.1	30-110			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

LCS (BBJ0193-BS1)

Prepared & Analyzed: 10/05/2018

2,4-Dinitrophenol	64.7 ug/L	50.0	ug/L	50.0	ug/L	129	15-140			
2,4-Dinitrotoluene	50.6 ug/L	10.0	ug/L	50.0	ug/L	101	21-99			L
2,6-Dinitrotoluene	46.3 ug/L	10.0	ug/L	50.0	ug/L	92.6	15-140			
2-Chloronaphthalene	34.8 ug/L	10.0	ug/L	50.0	ug/L	69.6	45-105			
2-Chlorophenol	37.6 ug/L	10.0	ug/L	50.0	ug/L	75.2	15-74			L
2-Nitrophenol	40.8 ug/L	10.0	ug/L	50.0	ug/L	81.7	40-115			
3,3'-Dichlorobenzidine	30.9 ug/L	10.0	ug/L	50.0	ug/L	61.9	20-110			
4,6-Dinitro-2-methylphenol	56.4 ug/L	50.0	ug/L	50.0	ug/L	113	40-130			
4-Bromophenyl phenyl ether	37.3 ug/L	10.0	ug/L	50.0	ug/L	74.6	15-110			
4-Chlorophenyl phenyl ether	35.0 ug/L	10.0	ug/L	50.0	ug/L	70.1	15-110			
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	33.3	0-125			
Acenaphthene	39.7 ug/L	10.0	ug/L	50.0	ug/L	79.5	27.7-85.5			
Acenaphthylene	43.8 ug/L	10.0	ug/L	50.0	ug/L	87.5	50-105			
Acetophenone	42.4 ug/L	20.0	ug/L	50.0	ug/L	84.7	0-200			
alpha-Terpineol	57.5 ug/L	2.50	ug/L	50.0	ug/L	115	0-200			
Anthracene	45.4 ug/L	10.0	ug/L	50.0	ug/L	90.8	55-110			
Benzo (a) anthracene	43.4 ug/L	0.05	ug/L	50.0	ug/L	86.9	55-110			
Benzo (a) pyrene	39.7 ug/L	0.10	ug/L	50.0	ug/L	79.3	55-110			
Benzo (b) fluoranthene	45.9 ug/L	10.0	ug/L	50.0	ug/L	91.8	45-120			
Benzo (g,h,i) perylene	41.6 ug/L	10.0	ug/L	50.0	ug/L	83.2	40-125			
Benzo (k) fluoranthene	42.3 ug/L	10.0	ug/L	50.0	ug/L	84.6	45-125			
bis (2-Chloroethoxy) methane	44.1 ug/L	10.0	ug/L	50.0	ug/L	88.2	40-125			
bis (2-Chloroethyl) ether	37.8 ug/L	10.0	ug/L	50.0	ug/L	75.5	40-125			
2,2'-Oxybis (1-chloropropane)	32.7 ug/L	10.0	ug/L	50.0	ug/L	65.3	40-125			
bis (2-Ethylhexyl) phthalate	70.5 ug/L	2.50	ug/L	50.0	ug/L	141	40-125			L
Butyl benzyl phthalate	65.9 ug/L	10.0	ug/L	50.0	ug/L	132	45-115			L
Carbazole	46.5 ug/L	2.50	ug/L	50.0	ug/L	93.0	0-200			
Chrysene	52.2 ug/L	10.0	ug/L	50.0	ug/L	104	55-110			
Dibenz (a,h) anthracene	41.9 ug/L	10.0	ug/L	50.0	ug/L	83.7	40-125			
Diethyl phthalate	48.8 ug/L	10.0	ug/L	50.0	ug/L	97.5	40-120			
Dimethyl phthalate	44.9 ug/L	10.0	ug/L	50.0	ug/L	89.8	25-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

LCS (BBJ0193-BS1)

Prepared & Analyzed: 10/05/2018

Di-n-butyl phthalate	56.4 ug/L	10.0	ug/L	50.0	ug/L	113	55-115			
Di-n-octyl phthalate	72.1 ug/L	10.0	ug/L	50.0	ug/L	144	35-135			L
Fluoranthene	45.6 ug/L	10.0	ug/L	50.0	ug/L	91.3	55-115			
Fluorene	42.0 ug/L	10.0	ug/L	50.0	ug/L	84.0	50-110			
Hexachlorobenzene	38.4 ug/L	0.05	ug/L	50.0	ug/L	76.9	25-125			
Hexachlorobutadiene	26.3 ug/L	10.0	ug/L	50.0	ug/L	52.5	25-125			
Hexachlorocyclopentadiene	16.5 ug/L	10.0	ug/L	50.0	ug/L	33.1	25-125			
Hexachloroethane	24.7 ug/L	10.0	ug/L	50.0	ug/L	49.4	25-125			
Indeno (1,2,3-cd) pyrene	41.4 ug/L	10.0	ug/L	50.0	ug/L	82.9	45-125			
Isophorone	41.7 ug/L	10.0	ug/L	50.0	ug/L	83.4	10-110			
Naphthalene	35.2 ug/L	10.0	ug/L	50.0	ug/L	70.5	40-100			
Nitrobenzene	41.9 ug/L	10.0	ug/L	50.0	ug/L	83.8	40-100			
n-Nitrosodimethylamine	28.9 ug/L	10.0	ug/L	50.0	ug/L	57.9	25-110			
n-Nitrosodi-n-propylamine	43.3 ug/L	10.0	ug/L	50.0	ug/L	86.5	12-97			
n-Nitrosodiphenylamine	35.2 ug/L	10.0	ug/L	50.0	ug/L	70.5	12-97			
p-Chloro-m-cresol	43.7 ug/L	10.0	ug/L	50.0	ug/L	87.5	10-91			
Pentachlorophenol	31.9 ug/L	20.0	ug/L	50.0	ug/L	63.8	30-109			
Phenanthrene	50.0 ug/L	10.0	ug/L	50.0	ug/L	100	50-115			
Phenol	16.9 ug/L	10.0	ug/L	50.5	ug/L	33.5	0-115			
Pyrene	58.5 ug/L	10.0	ug/L	50.0	ug/L	117	27-110			L
Pyridine	29.8 ug/L	10.0	ug/L	50.0	ug/L	59.7	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	83.8		ug/L	100	ug/L	83.8	10-86			
Surr: 2-Fluorobiphenyl (Surr)	39.4		ug/L	50.0	ug/L	78.9	9-87			
Surr: 2-Fluorophenol (Surr)	76.2		ug/L	100	ug/L	76.2	10-52			S
Surr: Nitrobenzene-d5 (Surr)	44.0		ug/L	50.0	ug/L	87.9	10-98.5			
Surr: Phenol-d5 (Surr)	33.7		ug/L	100	ug/L	33.7	5-33			S
Surr: p-Terphenyl-d14 (Surr)	56.8		ug/L	50.0	ug/L	114	27-133			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Matrix Spike (BBJ0193-MS1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

1,2,4-Trichlorobenzene	19.8 ug/L	10.2	ug/L	51.0	<10.2 ug/L	38.8	21.8-66.7			
1,2-Dichlorobenzene	19.5 ug/L	10.2	ug/L	51.0	<10.2 ug/L	38.3	22-60			
1,3-Dichlorobenzene	18.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	35.5	22-60			
1,4-Dichlorobenzene	19.9 ug/L	10.2	ug/L	51.0	<10.2 ug/L	39.1	22-60			
1-Chloronaphthalene	23.3 ug/L	10.2	ug/L		<10.2 ug/L		0-200			
2,4,6-Trichlorophenol	22.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	43.5	50-115			M
2,4-Dichlorophenol	22.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	43.2	50-105			M
2,4-Dimethylphenol	22.0 ug/L	0.51	ug/L	51.0	<0.51 ug/L	43.2	30-110			
2,4-Dinitrophenol	<51.0 ug/L	51.0	ug/L	51.0	<51.0 ug/L	92.4	15-140			
2,4-Dinitrotoluene	40.3 ug/L	10.2	ug/L	51.0	<10.2 ug/L	78.9	17-111			
2,6-Dinitrotoluene	29.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	58.1	15-140			
2-Chloronaphthalene	22.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.3	45-105			M
2-Chlorophenol	21.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	41.5	19-64			
2-Nitrophenol	23.3 ug/L	10.2	ug/L	51.0	<10.2 ug/L	45.6	40-115			
3,3'-Dichlorobenzidine	22.8 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.7	10-85			
4,6-Dinitro-2-methylphenol	<51.0 ug/L	51.0	ug/L	51.0	<51.0 ug/L	88.2	40-130			
4-Bromophenyl phenyl ether	26.4 ug/L	10.2	ug/L	51.0	<10.2 ug/L	51.8	15-110			
4-Chlorophenyl phenyl ether	22.4 ug/L	10.2	ug/L	51.0	<10.2 ug/L	43.9	15-110			
4-Nitrophenol	<51.0 ug/L	51.0	ug/L	51.0	<51.0 ug/L	27.5	0-125			
Acenaphthene	23.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	46.3	24-90			
Acenaphthylene	25.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	50.3	50-105			
Acetophenone	23.4 ug/L	20.4	ug/L	51.0	<20.4 ug/L	45.8	0-200			
alpha-Terpineol	32.1 ug/L	2.55	ug/L	51.0	<2.55 ug/L	62.8	0-200			
Anthracene	37.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	73.6	55-110			
Benzo (a) anthracene	40.0 ug/L	0.05	ug/L	51.0	<0.05 ug/L	78.4	55-110			
Benzo (a) pyrene	35.8 ug/L	0.10	ug/L	51.0	<0.10 ug/L	70.1	55-110			
Benzo (b) fluoranthene	40.9 ug/L	10.2	ug/L	51.0	<10.2 ug/L	80.2	45-120			
Benzo (g,h,i) perylene	33.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	66.0	40-125			
Benzo (k) fluoranthene	41.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	81.6	45-125			
bis (2-Chloroethoxy) methane	22.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.3	40-125			
bis (2-Chloroethyl) ether	20.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	40.6	40-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Matrix Spike (BBJ0193-MS1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

2,2'-Oxybis (1-chloropropane)	19.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	38.4	40-125			M
bis (2-Ethylhexyl) phthalate	65.4 ug/L	2.55	ug/L	51.0	<2.55 ug/L	128	40-125			M
Butyl benzyl phthalate	62.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	122	45-115			M
Carbazole	40.6 ug/L	2.55	ug/L	51.0	<2.55 ug/L	79.6	0-200			
Chrysene	47.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	92.5	55-110			
Dibenz (a,h) anthracene	33.8 ug/L	10.2	ug/L	51.0	<10.2 ug/L	66.3	40-125			
Diethyl phthalate	36.3 ug/L	10.2	ug/L	51.0	<10.2 ug/L	71.1	40-120			
Dimethyl phthalate	28.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	55.0	25-125			
Di-n-butyl phthalate	49.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	97.2	55-115			
Di-n-octyl phthalate	77.0 ug/L	10.2	ug/L	51.0	<10.2 ug/L	151	35-135			M
Fluoranthene	42.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	82.7	55-115			
Fluorene	27.4 ug/L	10.2	ug/L	51.0	<10.2 ug/L	53.6	50-110			
Hexachlorobenzene	31.9 ug/L	0.05	ug/L	51.0	<0.05 ug/L	62.5	25-125			
Hexachlorobutadiene	20.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	40.7	25-125			
Hexachlorocyclopentadiene	12.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	23.7	10-90			
Hexachloroethane	19.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	38.3	25-125			
Indeno (1,2,3-cd) pyrene	34.5 ug/L	10.2	ug/L	51.0	<10.2 ug/L	67.6	45-125			
Isophorone	22.4 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.0	10-110			
Naphthalene	23.6 ug/L	10.2	ug/L	51.0	<10.2 ug/L	46.2	40-100			
Nitrobenzene	24.9 ug/L	10.2	ug/L	51.0	<10.2 ug/L	48.8	40-100			
n-Nitrosodimethylamine	17.8 ug/L	10.2	ug/L	51.0	<10.2 ug/L	34.8	25-110			
n-Nitrosodi-n-propylamine	24.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	47.5	12-97			
n-Nitrosodiphenylamine	26.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	51.2	12-97			
p-Chloro-m-cresol	22.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	44.6	10-91			
Pentachlorophenol	26.9 ug/L	20.4	ug/L	51.0	<20.4 ug/L	52.7	27-109			
Phenanthrene	42.2 ug/L	10.2	ug/L	51.0	<10.2 ug/L	82.6	50-115			
Phenol	<10.2 ug/L	10.2	ug/L	51.5	<10.2 ug/L	17.9	0-115			
Pyrene	56.1 ug/L	10.2	ug/L	51.0	<10.2 ug/L	110	23-110			
Pyridine	18.7 ug/L	10.2	ug/L	51.0	<10.2 ug/L	36.6	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	59.7		ug/L	102	ug/L	58.5	10-86			
Surr: 2-Fluorobiphenyl (Surr)	23.8		ug/L	51.0	ug/L	46.6	9-87			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Matrix Spike (BBJ0193-MS1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

Surr: 2-Fluorophenol (Surr)	39.7		ug/L	102	ug/L	38.9	10-52			
Surr: Nitrobenzene-d5 (Surr)	26.3		ug/L	51.0	ug/L	51.6	10-98.5			
Surr: Phenol-d5 (Surr)	19.0		ug/L	102	ug/L	18.6	5-33			
Surr: p-Terphenyl-d14 (Surr)	52.6		ug/L	51.0	ug/L	103	27-133			

Matrix Spike Dup (BBJ0193-MSD1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

1,2,4-Trichlorobenzene	20.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	40.4	21.8-66.7	1.92	20	
1,2-Dichlorobenzene	18.9 ug/L	10.0	ug/L	50.0	<10.0 ug/L	37.8	22-60	3.34	20	
1,3-Dichlorobenzene	17.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	34.3	22-60	5.57	20	
1,4-Dichlorobenzene	18.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	37.5	22-60	6.25	20	
1-Chloronaphthalene	24.2 ug/L	10.0	ug/L		<10.0 ug/L		0-200	3.72	20	
2,4,6-Trichlorophenol	22.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	44.3	50-115	0.0616	20	M
2,4-Dichlorophenol	23.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	46.2	50-105	4.51	20	M
2,4-Dimethylphenol	23.4 ug/L	0.50	ug/L	50.0	<0.50 ug/L	46.8	30-110	6.12	20	
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L	50.0	<50.0 ug/L	91.7	15-140	2.76	20	
2,4-Dinitrotoluene	37.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	74.4	17-111	7.89	20	
2,6-Dinitrotoluene	29.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	58.3	15-140	1.68	20	
2-Chloronaphthalene	23.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	46.9	45-105	3.55	20	
2-Chlorophenol	20.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	41.5	19-64	1.92	20	
2-Nitrophenol	24.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.2	40-115	3.65	20	
3,3'-Dichlorobenzidine	20.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	41.5	10-85	9.30	20	
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L	50.0	<50.0 ug/L	83.2	40-130	7.85	20	
4-Bromophenyl phenyl ether	26.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	52.2	15-110	1.14	20	
4-Chlorophenyl phenyl ether	22.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	44.9	15-110	0.186	20	
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	<50.0 ug/L	25.7	0-125	8.64	20	
Acenaphthene	24.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.6	24-90	2.87	20	
Acenaphthylene	26.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	53.1	50-105	3.36	20	
Acetophenone	23.8 ug/L	20.0	ug/L	50.0	<20.0 ug/L	47.6	0-200	1.84	20	
alpha-Terpineol	32.0 ug/L	2.50	ug/L	50.0	<2.50 ug/L	64.1	0-200	0.0662	20	
Anthracene	34.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	68.8	55-110	8.76	20	
Benzo (a) anthracene	35.2 ug/L	0.05	ug/L	50.0	<0.05 ug/L	70.4	55-110	12.8	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0193 - SW3510C

Matrix Spike Dup (BBJ0193-MSD1)

Source: 18J0080-01

Prepared & Analyzed: 10/05/2018

Benzo (a) pyrene	31.2 ug/L	0.10	ug/L	50.0	<0.10 ug/L	62.5	55-110	13.5	20	
Benzo (b) fluoranthene	35.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	70.0	45-120	15.5	20	
Benzo (g,h,i) perylene	35.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	70.9	40-125	5.23	20	
Benzo (k) fluoranthene	34.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	68.5	45-125	19.4	20	
bis (2-Chloroethoxy) methane	23.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	46.9	40-125	3.64	20	
bis (2-Chloroethyl) ether	19.9 ug/L	10.0	ug/L	50.0	<10.0 ug/L	39.7	40-125	4.21	20	M
2,2'-Oxybis (1-chloropropane)	19.5 ug/L	10.0	ug/L	50.0	<10.0 ug/L	39.0	40-125	0.522	20	M
bis (2-Ethylhexyl) phthalate	58.5 ug/L	2.50	ug/L	50.0	<2.50 ug/L	117	40-125	11.2	20	
Butyl benzyl phthalate	56.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	114	45-115	9.08	20	
Carbazole	33.8 ug/L	2.50	ug/L	50.0	<2.50 ug/L	67.7	0-200	18.2	20	
Chrysene	41.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	83.6	55-110	12.2	20	
Dibenz (a,h) anthracene	34.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	68.5	40-125	1.30	20	
Diethyl phthalate	34.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	69.6	40-120	4.15	20	
Dimethyl phthalate	28.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	56.1	25-125	0.0400	20	
Di-n-butyl phthalate	44.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	88.0	55-115	11.9	20	
Di-n-octyl phthalate	56.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	113	35-135	30.3	20	P
Fluoranthene	35.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	70.0	55-115	18.6	20	
Fluorene	27.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	54.3	50-110	0.834	20	
Hexachlorobenzene	30.2 ug/L	0.05	ug/L	50.0	<0.05 ug/L	60.4	25-125	5.44	20	
Hexachlorobutadiene	21.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	42.6	25-125	2.55	20	
Hexachlorocyclopentadiene	13.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	26.4	10-90	8.76	20	
Hexachloroethane	19.3 ug/L	10.0	ug/L	50.0	<10.0 ug/L	38.7	25-125	1.09	20	
Indeno (1,2,3-cd) pyrene	34.1 ug/L	10.0	ug/L	50.0	<10.0 ug/L	68.2	45-125	1.08	20	
Isophorone	22.7 ug/L	10.0	ug/L	50.0	<10.0 ug/L	45.4	10-110	1.25	20	
Naphthalene	23.8 ug/L	10.0	ug/L	50.0	<10.0 ug/L	47.6	40-100	1.05	20	
Nitrobenzene	24.0 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.1	40-100	3.63	20	
n-Nitrosodimethylamine	18.6 ug/L	10.0	ug/L	50.0	<10.0 ug/L	37.1	25-110	4.37	20	
n-Nitrosodi-n-propylamine	24.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.4	12-97	0.142	20	
n-Nitrosodiphenylamine	24.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	48.5	12-97	7.51	20	
p-Chloro-m-cresol	23.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	46.8	10-91	2.92	20	
Pentachlorophenol	24.2 ug/L	20.0	ug/L	50.0	<20.0 ug/L	48.4	27-109	10.4	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBJ0193 - SW3510C

Matrix Spike Dup (BBJ0193-MSD1)	Source: 18J0080-01			Prepared & Analyzed: 10/05/2018					
Phenanthrene	38.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	76.9	50-115	9.19	20
Phenol	<10.0 ug/L	10.0	ug/L	50.5	<10.0 ug/L	18.8	0-115	3.27	20
Pyrene	53.4 ug/L	10.0	ug/L	50.0	<10.0 ug/L	107	23-110	4.86	20
Pyridine	19.2 ug/L	10.0	ug/L	50.0	<10.0 ug/L	38.5	0-200	3.05	20

Surr: 2,4,6-Tribromophenol (Surr)	55.7		ug/L	100	ug/L	55.7	10-86		
Surr: 2-Fluorobiphenyl (Surr)	24.5		ug/L	50.0	ug/L	49.0	9-87		
Surr: 2-Fluorophenol (Surr)	39.6		ug/L	100	ug/L	39.6	10-52		
Surr: Nitrobenzene-d5 (Surr)	25.2		ug/L	50.0	ug/L	50.4	10-98.5		
Surr: Phenol-d5 (Surr)	17.9		ug/L	100	ug/L	17.9	5-33		
Surr: p-Terphenyl-d14 (Surr)	48.1		ug/L	50.0	ug/L	96.3	27-133		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Hydrocarbons by GC - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0237 - SW3510C

LCS (BBJ0237-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

TPH-Semi-Volatiles (DRO)	3.4 mg/L	0.500	mg/L	5.00	mg/L	68.7	40-160			
Surr: Pentacosane (Surr)	0.132		mg/L	0.250	mg/L	52.9	40-160			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-------------	-----	-----------	------

Batch BBJ0256 - SW3510C

Blank (BBJ0256-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

4,4'-DDD	<0.050 ug/L	0.050	ug/L						
PCB as Aroclor 1016	<0.200 ug/L	0.200	ug/L						
PCB as Aroclor 1221	<0.200 ug/L	0.200	ug/L						
4,4'-DDE	<0.050 ug/L	0.050	ug/L						
PCB as Aroclor 1232	<0.200 ug/L	0.200	ug/L						
PCB as Aroclor 1242	<0.200 ug/L	0.200	ug/L						
4,4'-DDT	<0.050 ug/L	0.050	ug/L						
PCB as Aroclor 1248	<0.200 ug/L	0.200	ug/L						
PCB as Aroclor 1254	<0.200 ug/L	0.200	ug/L						
PCB as Aroclor 1260	<0.200 ug/L	0.200	ug/L						
Aldrin	<0.050 ug/L	0.050	ug/L						
alpha-BHC	<0.050 ug/L	0.050	ug/L						
beta-BHC	<0.050 ug/L	0.050	ug/L						
Chlordane	<0.200 ug/L	0.200	ug/L						
delta-BHC	<0.050 ug/L	0.050	ug/L						
Dieldrin	<0.050 ug/L	0.050	ug/L						
Endosulfan I	<0.050 ug/L	0.050	ug/L						
Endosulfan II	<0.050 ug/L	0.050	ug/L						
Endosulfan sulfate	<0.050 ug/L	0.050	ug/L						
Endrin	<0.050 ug/L	0.050	ug/L						
Endrin aldehyde	<0.050 ug/L	0.050	ug/L						
gamma-BHC (Lindane)	<0.050 ug/L	0.050	ug/L						
Heptachlor	<0.050 ug/L	0.050	ug/L						
Heptachlor epoxide	<0.050 ug/L	0.050	ug/L						
Methoxychlor	<0.050 ug/L	0.050	ug/L						
Toxaphene	<1.00 ug/L	1.00	ug/L						
<hr style="border-top: 1px dashed black;"/>									
Surr: DCB	0.110		ug/L	0.200		55.0	30-105		
Surr: TCMX	0.0900		ug/L	0.200		45.0	30-105		
Surr: TCMX	0.120		ug/L	0.200		60.0	18-112		
Surr: DCB	0.160		ug/L	0.200		80.0	27-131		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0256 - SW3510C

LCS (BBJ0256-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

4,4'-DDD	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
4,4'-DDE	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134		
4,4'-DDT	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
Aldrin	0.060 ug/L	0.050	ug/L	0.100	ug/L	60.0	23-134		
alpha-BHC	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
beta-BHC	0.100 ug/L	0.050	ug/L	0.100	ug/L	100	23-134		
delta-BHC	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
Dieldrin	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134		
Endosulfan I	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134		
Endosulfan II	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
Endosulfan sulfate	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
Endrin	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
Endrin aldehyde	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
gamma-BHC (Lindane)	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
Heptachlor	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134		
Heptachlor epoxide	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134		
Methoxychlor	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134		
Mirex	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134		

Surr: TCMX

0.140 ug/L 0.200 ug/L 70.0 18-112

Surr: DCB

0.150 ug/L 0.200 ug/L 75.0 27-131

LCS (BBJ0256-BS2)

Prepared: 10/08/2018 Analyzed: 10/09/2018

PCB as Aroclor 1016	0.740 ug/L	0.200	ug/L	1.00	ug/L	74.0	40-90		
PCB as Aroclor 1260	0.610 ug/L	0.200	ug/L	1.00	ug/L	61.0	40-90		
Surr: DCB	0.120		ug/L	0.200	ug/L	60.0	30-105		
Surr: TCMX	0.100		ug/L	0.200	ug/L	50.0	30-105		

LCS (BBJ0256-BS3)

Prepared: 10/08/2018 Analyzed: 10/09/2018

Toxaphene	1.62 ug/L	1.00	ug/L	2.50	ug/L	64.8	23-134		
Surr: TCMX	0.0900		ug/L	0.200	ug/L	45.0	18-112		
Surr: DCB	0.140		ug/L	0.200	ug/L	70.0	27-131		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0256 - SW3510C

LCS (BBJ0256-BS4)

Prepared: 10/08/2018 Analyzed: 10/09/2018

Chlordane	1.79 ug/L	0.200	ug/L	2.50	ug/L	71.6	23-134			
<i>Surr: TCMX</i>	0.110		ug/L	0.200	ug/L	55.0	18-112			
<i>Surr: DCB</i>	0.140		ug/L	0.200	ug/L	70.0	27-131			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Herbicides by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0120 - SW3510C

Blank (BBJ0120-BLK1)

Prepared: 10/03/2018 Analyzed: 10/08/2018

2,4,5-T	<0.500 ug/L	0.500	ug/L						
2,4,5-TP (Silvex)	<0.500 ug/L	0.500	ug/L						
2,4-D	<0.500 ug/L	0.500	ug/L						
Dinoseb	<0.500 ug/L	0.500	ug/L						
Pentachlorophenol	<0.500 ug/L	0.500	ug/L						

Surr: DCAA (Surr) 1.06 ug/L 1.11 95.0 60-112

LCS (BBJ0120-BS1)

Prepared: 10/03/2018 Analyzed: 10/08/2018

2,4,5-T	0.667 ug/L	0.500	ug/L	0.556 ug/L	120	53-144			
2,4,5-TP (Silvex)	0.667 ug/L	0.500	ug/L	0.556 ug/L	120	52-129			
2,4-D	0.611 ug/L	0.500	ug/L	0.556 ug/L	110	53-126			
Dinoseb	0.667 ug/L	0.500	ug/L	0.556 ug/L	120	60-137			
Pentachlorophenol	0.611 ug/L	0.500	ug/L	0.556 ug/L	110	52-124			

Surr: DCAA (Surr) 0.944 ug/L 1.11 ug/L 85.0 60-112

Matrix Spike (BBJ0120-MS1)

Source: 18I1081-01

Prepared: 10/03/2018 Analyzed: 10/08/2018

2,4,5-T	0.500 ug/L	0.500	ug/L	0.556	<0.500 ug/L	90.0	53-144		
2,4,5-TP (Silvex)	0.556 ug/L	0.500	ug/L	0.556	<0.500 ug/L	100	52-129		
2,4-D	0.500 ug/L	0.500	ug/L	0.556	<0.500 ug/L	90.0	53-126		
Dinoseb	0.500 ug/L	0.500	ug/L	0.556	<0.500 ug/L	90.0	60-137		
Pentachlorophenol	0.556 ug/L	0.500	ug/L	0.556	<0.500 ug/L	100	52-124		

Surr: DCAA (Surr) 1.11 ug/L 1.11 ug/L 100 60-112

Matrix Spike Dup (BBJ0120-MSD1)

Source: 18I1081-01

Prepared: 10/03/2018 Analyzed: 10/08/2018

2,4,5-T	0.556 ug/L	0.500	ug/L	0.556	<0.500 ug/L	100	53-144	10.5	20
2,4,5-TP (Silvex)	0.556 ug/L	0.500	ug/L	0.556	<0.500 ug/L	100	52-129	0.00	20
2,4-D	0.556 ug/L	0.500	ug/L	0.556	<0.500 ug/L	100	53-126	10.5	20
Dinoseb	0.556 ug/L	0.500	ug/L	0.556	<0.500 ug/L	100	60-137	10.5	20
Pentachlorophenol	0.556 ug/L	0.500	ug/L	0.556	<0.500 ug/L	100	52-124	0.00	20

Surr: DCAA (Surr) 0.944 ug/L 1.11 ug/L 85.0 60-112



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Micro-extractables by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0246 - SW8011

Blank (BBJ0246-BLK1)

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	<0.010 ug/L	0.010	ug/L					
1,2,3-Trichloropropane	<0.010 ug/L	0.010	ug/L					
1,2-Dibromo-3-chloropropane (DBCP)	<0.010 ug/L	0.010	ug/L					

LCS (BBJ0246-BS1)

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.322 ug/L	0.010	ug/L	0.250 ug/L	129	65-135		
1,2,3-Trichloropropane	0.293 ug/L	0.010	ug/L	0.250 ug/L	117	65-135		
1,2-Dibromo-3-chloropropane (DBCP)	0.279 ug/L	0.010	ug/L	0.250 ug/L	112	65-135		

LCS Dup (BBJ0246-BSD1)

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.313 ug/L	0.010	ug/L	0.250 ug/L	125	65-135	2.74	20
1,2,3-Trichloropropane	0.284 ug/L	0.010	ug/L	0.250 ug/L	114	65-135	3.04	20
1,2-Dibromo-3-chloropropane (DBCP)	0.270 ug/L	0.010	ug/L	0.250 ug/L	108	65-135	3.32	20

Matrix Spike (BBJ0246-MS1)

Source: 18J0280-02

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.255 ug/L	0.010	ug/L	0.260 <0.010 ug/L	98.1	65-135		
1,2,3-Trichloropropane	0.259 ug/L	0.010	ug/L	0.260 <0.010 ug/L	99.7	65-135		
1,2-Dibromo-3-chloropropane (DBCP)	0.232 ug/L	0.010	ug/L	0.260 <0.010 ug/L	89.2	65-135		

Matrix Spike Dup (BBJ0246-MSD1)

Source: 18J0280-02

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.241 ug/L	0.010	ug/L	0.256 <0.010 ug/L	93.9	65-135	5.65	20
1,2,3-Trichloropropane	0.226 ug/L	0.010	ug/L	0.256 <0.010 ug/L	88.2	65-135	13.6	20
1,2-Dibromo-3-chloropropane (DBCP)	0.215 ug/L	0.010	ug/L	0.256 <0.010 ug/L	84.0	65-135	7.40	20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0156 - No Prep Wet Chem

Blank (BBJ0156-BLK1)

Prepared: 10/03/2008 Analyzed: 10/03/2018

Chromium, Hexavalent	<0.005 mg/L	0.005	mg/L	
----------------------	-------------	-------	------	--

LCS (BBJ0156-BS1)

Prepared: 10/03/2008 Analyzed: 10/03/2018

Chromium, Hexavalent	0.095 mg/L	0.005	mg/L	0.100	mg/L	95.0	80-120
----------------------	------------	-------	------	-------	------	------	--------

Matrix Spike (BBJ0156-MS1)

Source: 18J0081-02

Prepared: 10/03/2008 Analyzed: 10/03/2018

Chromium, Hexavalent	0.106 mg/L	0.005	mg/L	0.100	<0.005 mg/L	106	80-120
----------------------	------------	-------	------	-------	-------------	-----	--------

Matrix Spike Dup (BBJ0156-MSD1)

Source: 18J0081-02

Prepared: 10/03/2008 Analyzed: 10/03/2018

Chromium, Hexavalent	0.105 mg/L	0.005	mg/L	0.100	<0.005 mg/L	105	80-120	0.948	20
----------------------	------------	-------	------	-------	-------------	-----	--------	-------	----

Batch BBJ0161 - No Prep Wet Chem

Blank (BBJ0161-BLK1)

Prepared & Analyzed: 10/04/2018

Sulfide	<1.00 mg/L	1.00	mg/L	
---------	------------	------	------	--

LCS (BBJ0161-BS1)

Prepared & Analyzed: 10/04/2018

Sulfide	5.02 mg/L	1	mg/L	5.00	mg/L	100	80-120
---------	-----------	---	------	------	------	-----	--------

LCS Dup (BBJ0161-BSD1)

Prepared & Analyzed: 10/04/2018

Sulfide	4.78 mg/L	1	mg/L	5.00	mg/L	95.6	80-120	4.90	20
---------	-----------	---	------	------	------	------	--------	------	----

Matrix Spike (BBJ0161-MS1)

Source: 18I1110-05

Prepared & Analyzed: 10/04/2018

Sulfide	3.34 mg/L	1.00	mg/L	5.00	<1.00 mg/L	66.8	75-125		M
---------	-----------	------	------	------	------------	------	--------	--	---

Matrix Spike Dup (BBJ0161-MSD1)

Source: 18I1110-05

Prepared & Analyzed: 10/04/2018

Sulfide	3.26 mg/L	1.00	mg/L	5.00	<1.00 mg/L	65.2	75-125	2.42	20	M
---------	-----------	------	------	------	------------	------	--------	------	----	---



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BBJ0260 - No Prep Wet Chem										
Blank (BBJ0260-BLK1) Prepared & Analyzed: 10/08/2018										
Cyanide	<0.01 mg/L	0.01	mg/L							
LCS (BBJ0260-BS1) Prepared & Analyzed: 10/08/2018										
Cyanide	0.24 mg/L	0.01	mg/L	0.250	mg/L	95.2	80-120			
LCS Dup (BBJ0260-BSD1) Prepared & Analyzed: 10/08/2018										
Cyanide	0.25 mg/L	0.01	mg/L	0.250	mg/L	98.6	80-120	3.47	20	
Matrix Spike (BBJ0260-MS1) Source: 18I1011-06 Prepared & Analyzed: 10/08/2018										
Cyanide	0.26 mg/L	0.01	mg/L	0.250	<0.01 mg/L	102	80-120			
Matrix Spike (BBJ0260-MS2) Source: 18I1028-02 Prepared & Analyzed: 10/08/2018										
Cyanide	0.24 mg/L	0.01	mg/L	0.250	<0.01 mg/L	96.6	80-120			
Matrix Spike Dup (BBJ0260-MSD1) Source: 18I1011-06 Prepared & Analyzed: 10/08/2018										
Cyanide	0.25 mg/L	0.01	mg/L	0.250	<0.01 mg/L	99.5	80-120	2.46	20	
Matrix Spike Dup (BBJ0260-MSD2) Source: 18I1028-02 Prepared & Analyzed: 10/08/2018										
Cyanide	0.25 mg/L	0.01	mg/L	0.250	<0.01 mg/L	98.2	80-120	1.72	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Non-Potable Water	
Aluminum	VELAP,WVDEP
Barium	VELAP,WVDEP
Beryllium	VELAP,WVDEP
Cadmium	VELAP,WVDEP
Calcium	VELAP,WVDEP
Chromium	VELAP,WVDEP
Cobalt	VELAP,WVDEP
Copper	VELAP,WVDEP
Iron	VELAP,WVDEP
Lead	VELAP,WVDEP
Magnesium	VELAP,WVDEP
Manganese	VELAP,WVDEP
Nickel	VELAP,WVDEP
Potassium	VELAP,WVDEP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Sodium	VELAP,WVDEP
Tin	VELAP,WVDEP
Vanadium	VELAP,WVDEP
Zinc	VELAP,WVDEP
SW6020A in Non-Potable Water	
Antimony	VELAP,NC,WVDEP
Arsenic	VELAP,WVDEP
Selenium	VELAP,WVDEP
Thallium	VELAP,WVDEP
SW7196A in Non-Potable Water	
Chromium, Hexavalent	VELAP
SW7470A in Non-Potable Water	
Mercury	VELAP,NC,WVDEP
SW8011 in Non-Potable Water	
1,2-Dibromoethane (EDB)	VELAP,NC
1,2,3-Trichloropropane	VELAP,NC
1,2-Dibromo-3-chloropropane (DBCP)	VELAP,NC
SW8015C in Non-Potable Water	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
TPH-Volatiles (GRO)	VELAP,NC,WVDEP
SW8081B in Non-Potable Water	
4,4'-DDD	NC,VELAP,WVDEP
4,4'-DDE	NC,VELAP,WVDEP
4,4'-DDT	NC,VELAP,WVDEP
Aldrin	NC,VELAP,WVDEP
alpha-BHC	NC,VELAP,WVDEP
beta-BHC	NC,VELAP,WVDEP
Chlordane	NC,VELAP,WVDEP
delta-BHC	NC,VELAP,WVDEP
Dieldrin	NC,VELAP,WVDEP
Endosulfan I	NC,VELAP,WVDEP
Endosulfan II	NC,VELAP,WVDEP
Endosulfan sulfate	NC,VELAP,WVDEP
Endrin	NC,VELAP,WVDEP
Endrin aldehyde	NC,VELAP,WVDEP
gamma-BHC (Lindane)	NC,VELAP,WVDEP
Heptachlor	NC,VELAP,WVDEP
Heptachlor epoxide	NC,VELAP,WVDEP
Methoxychlor	NC,VELAP,WVDEP
Toxaphene	NC,VELAP,WVDEP
SW8082A in Non-Potable Water	
PCB as Aroclor 1016	VELAP,NC,WVDEP
PCB as Aroclor 1221	VELAP,NC,WVDEP
PCB as Aroclor 1232	VELAP,NC,WVDEP
PCB as Aroclor 1242	VELAP,NC,WVDEP
PCB as Aroclor 1248	VELAP,NC,WVDEP
PCB as Aroclor 1254	VELAP,NC,WVDEP
PCB as Aroclor 1260	VELAP,NC,WVDEP
SW8151A in Non-Potable Water	
2,4,5-T	VELAP,NC
2,4,5-TP (Silvex)	VELAP,NC
2,4-D	VELAP,NC
Dinoseb	VELAP,NC
Pentachlorophenol	VELAP,NC
SW8260B in Non-Potable Water	
1,1,1,2-Tetrachloroethane	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
1,1,1-Trichloroethane	NC,VELAP,WVDEP
1,1,2,2-Tetrachloroethane	NC,VELAP,WVDEP
1,1,2-Trichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethylene	NC,VELAP,WVDEP
1,1-Dichloropropene	NC,VELAP,WVDEP
1,2,3-Trichlorobenzene	NC,VELAP,WVDEP
1,2,3-Trichloropropane	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2,4-Trimethylbenzene	NC,VELAP,WVDEP
1,2-Dibromo-3-chloropropane (DBCP)	NC,VELAP,WVDEP
1,2-Dibromoethane (EDB)	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,2-Dichloroethane	NC,VELAP,WVDEP
1,2-Dichloropropane	NC,VELAP,WVDEP
1,3,5-Trimethylbenzene	NC,VELAP,WVDEP
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,3-Dichloropropane	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
2,2-Dichloropropane	NC,VELAP,WVDEP
2-Butanone (MEK)	NC,VELAP,WVDEP
2-Chlorotoluene	NC,VELAP,WVDEP
2-Hexanone (MBK)	NC,VELAP,WVDEP
4-Chlorotoluene	NC,VELAP,WVDEP
4-Isopropyltoluene	NC,VELAP,WVDEP
4-Methyl-2-pentanone (MIBK)	NC,VELAP,WVDEP
Acetone	NC,VELAP,WVDEP
Acetonitrile	NC,VELAP,WVDEP
Acrolein	NC,VELAP,WVDEP
Acrylonitrile	NC,VELAP,WVDEP
Allyl chloride	NC,VELAP,WVDEP
Benzene	NC,VELAP,WVDEP
Bromobenzene	NC,VELAP,WVDEP
Bromochloromethane	NC,VELAP,WVDEP
Bromodichloromethane	NC,VELAP,WVDEP
Bromoform	NC,VELAP,WVDEP
Bromomethane	NC,VELAP,WVDEP
Carbon disulfide	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
Carbon tetrachloride	NC,VELAP,WVDEP
Chlorobenzene	NC,VELAP,WVDEP
Chloroethane	NC,VELAP,WVDEP
Chloroform	NC,VELAP,WVDEP
Chloromethane	NC,VELAP,WVDEP
Chloroprene	NC,VELAP,WVDEP
cis-1,2-Dichloroethylene	NC,VELAP,WVDEP
cis-1,3-Dichloropropene	NC,VELAP,WVDEP
Dibromochloromethane	NC,VELAP,WVDEP
Dibromomethane	NC,VELAP,WVDEP
Dichlorodifluoromethane	NC,VELAP,WVDEP
Di-isopropyl ether (DIPE)	NC,VELAP,WVDEP
Ethyl methacrylate	NC,VELAP,WVDEP
Ethylbenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Iodomethane	NC,VELAP,WVDEP
Isobutyl Alcohol	NC,VELAP,WVDEP
Isopropylbenzene	NC,VELAP,WVDEP
m+p-Xylenes	NC,VELAP,WVDEP
m+p-Xylenes	NC,VELAP,WVDEP
Methacrylonitrile	NC,VELAP,WVDEP
Methyl methacrylate	NC,VELAP,WVDEP
Methylene chloride	NC,VELAP,WVDEP
Methylene chloride	NC,VELAP,WVDEP
Methyl-t-butyl ether (MTBE)	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP
n-Butylbenzene	NC,VELAP,WVDEP
n-Propylbenzene	NC,VELAP,WVDEP
o-Xylene	NC,VELAP,WVDEP
o-Xylene	NC,VELAP,WVDEP
Propionitrile	NC,VELAP,WVDEP
sec-Butylbenzene	NC,VELAP,WVDEP
Styrene	NC,VELAP,WVDEP
Styrene	NC,VELAP,WVDEP
tert-Butylbenzene	NC,VELAP,WVDEP
Tetrachloroethylene (PCE)	NC,VELAP,WVDEP
Tetrachloroethylene (PCE)	NC,VELAP,WVDEP
Toluene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Toluene	NC,VELAP,WVDEP
trans-1,2-Dichloroethylene	NC,VELAP,WVDEP
trans-1,2-Dichloroethylene	NC,VELAP,WVDEP
trans-1,3-Dichloropropene	NC,VELAP,WVDEP
trans-1,3-Dichloropropene	NC,VELAP,WVDEP
trans-1,4-Dichloro-2-butene	NC,VELAP,WVDEP
Trichloroethylene	NC,VELAP,WVDEP
Trichloroethylene	NC,VELAP,WVDEP
Trichlorofluoromethane	NC,VELAP,WVDEP
Trichlorofluoromethane	NC,VELAP,WVDEP
Vinyl acetate	NC,VELAP,WVDEP
Vinyl acetate	NC,VELAP,WVDEP
Vinyl chloride	NC,VELAP,WVDEP
Vinyl chloride	NC,VELAP,WVDEP
Xylenes, Total	NC,VELAP,WVDEP
Xylenes, Total	NC,VELAP,WVDEP
SW8270D in Non-Potable Water	
1,2,4,5-Tetrachlorobenzene	NC,VELAP,WVDEP
1,3,5-Trinitrobenzene	NC,VELAP,WVDEP
1,3-Dinitrobenzene	NC,VELAP,WVDEP
1,4-Naphthoquinone	NC,VELAP,WVDEP
1-Naphthylamine	NC,VELAP,WVDEP
2,3,4,6-Tetrachlorophenol	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dichlorophenol	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Acetylaminofluorene	NC,VELAP,WVDEP
2-Chloronaphthalene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
2-Naphthylamine	NC,VELAP,WVDEP
2-Nitroaniline	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
2-Nitrophenol	NC,VELAP,WVDEP
3,3'-Dichlorobenzidine	NC,VELAP,WVDEP
3,3'-Dimethylbenzidine	NC,VELAP,WVDEP
3-Methylcholanthrene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4,6-Dinitro-2-methylphenol	NC,VELAP,WVDEP
4-Aminobiphenyl	NC,VELAP,WVDEP
4-Bromophenyl phenyl ether	NC,VELAP,WVDEP
4-Chloroaniline	NC,VELAP,WVDEP
4-Chlorophenyl phenyl ether	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
4-Nitrophenol	NC,VELAP,WVDEP
5-Nitro-o-toluidine	NC,VELAP,WVDEP
7,12-Dimethylbenz (a) anthracene	NC,VELAP,WVDEP
Acenaphthene	NC,VELAP,WVDEP
Acenaphthylene	NC,VELAP,WVDEP
Acetophenone	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (g,h,i) perylene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
Benzyl alcohol	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chlorobenzilate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Diallate	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Dibenzofuran	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethoate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Di-n-octyl phthalate	NC,VELAP,WVDEP
Diphenylamine	NC,VELAP,WVDEP
Disulfoton	NC,VELAP,WVDEP
Ethyl methanesulfonate	NC,VELAP,WVDEP
Ethyl parathion	NC,VELAP,WVDEP
Famphur	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP
Hexachloroethane	NC,VELAP,WVDEP
Hexachloropropene	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isodrin	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
Isosafrole	NC,VELAP,WVDEP
Kepone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Methapyrilene	NC,VELAP,WVDEP
Methyl methanesulfonate	NC,VELAP,WVDEP
Methyl parathion	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodiethylamine	NC,VELAP,WVDEP
n-Nitrosodimethylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-butylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
n-Nitrosomethylethylamine	NC,VELAP,WVDEP
n-Nitrosopiperidine	NC,VELAP,WVDEP
n-Nitrosopyrrolidine	NC,VELAP,WVDEP
o,o,o-Triethyl phosphorothioate	NC,VELAP,WVDEP
o,o-Diethyl o-2-pyrazinyl phosphorothioate	NC,VELAP,WVDEP
o+m+p-Cresols	VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
o-Toluidine	NC,VELAP,WVDEP
p-(Dimethylamino) azobenzene	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/10/2018 16:12
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachlorobenzene	NC,VELAP,WVDEP
Pentachloronitrobenzene (quintozene)	NC,VELAP,WVDEP
Phenacetin	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Phorate	NC,VELAP,WVDEP
p-Phenylenediamine	NC,VELAP,WVDEP
Pronamide	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
Safrole	NC,VELAP,WVDEP
SW9012B in Non-Potable Water	
Cyanide	VELAP
SW9215 in Non-Potable Water	
Sulfide	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

C Continuing calibration verification response for this analyte is outside specifications.

Cl Residual Chlorine or other oxidizing agent was detected in the container used to analyze this sample.

DND Not Detected

E Estimated concentration, outside calibration range

L LCS recovery is outside of established acceptance limits

M Matrix spike recovery is outside established acceptance limits

P Duplicate analysis does not meet the acceptance criteria for precision

S Surrogate recovery was outside acceptance criteria

RPD Relative Percent Difference

Qual Qualifiers

-RE Denotes sample was re-analyzed

D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

COMPANY NAME: <u>EEE Consulting</u>	INVOICE TO: <u>same</u>	PROJECT NAME/Quote #: <u>18-700</u>
CONTACT: <u>Jeff Fisher</u>	INVOICE CONTACT: ↓	SITE NAME: <u>CVTC</u>
ADDRESS: <u>201 Church St</u>	INVOICE ADDRESS: ↓	PROJECT NUMBER: <u>18-700</u>
PHONE #: <u>540 953 0170</u>	INVOICE PHONE #: ↓	P.O. #: <u>18-760</u>
FAX #: <u>540 953 0171</u>	EMAIL: <u>jfisher@eee-consulting.com</u>	Pretreatment Program: <u>NA</u>
Is sample for compliance reporting? YES <input checked="" type="checkbox"/> NO	Is sample from a chlorinated supply? YES <input checked="" type="checkbox"/> NO	PWS I.D. #: <u>NA</u>
SAMPLER NAME (PRINT): <u>Josh Hepler</u>	SAMPLER SIGNATURE:	Turn Around Time: Circle: <u>10</u> 5 Days or <u> </u> Day(s)

Matrix Codes: WW=Waste Water/Storm Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other											COMMENTS								
CLIENT SAMPLE I.D.	Grab	Composite	Field Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)								
											TPH-DRO / TPH-GRO	VOC 8260	Total TAL	Hex Chrome 7190A	App II 40 CFR P258				
1) 10-1 Task 2.2	X	N	NA	NA	10-2	1035	NA	GW	9	X	X	X	X						
2) 10-2 Task 2.2	X					0915			9	X	X	X	X						
3) 13-1 Task 2.3	X					1145			12					X					
4) 13-2 Task 2.3	X					1415			12					X					
5) 14-3 Task 2.4	X					1520			12					X					
6) 14-1 Task 2.4	X	N				1625			12					X					
7)																			
8)																			
9)																			
10)																			

Preservative Codes: N=Nitric Acid
 C=Hydrochloric Acid S=Sulfuric Acid
 H=Sodium Hydroxide A=Ascorbic Acid
 Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol

PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)

QUILISHED: DATE / TIME: <u>10-2-18 1720</u>	RECEIVED: DATE / TIME: <u>10-2-18 1910</u>	QC Data Package Level III <input type="checkbox"/> Level IV <input type="checkbox"/>	LAB USE ONLY Custody Seals used and intact? (Y/N): <input checked="" type="checkbox"/>	COOLER TEMP °C Received on ice? <input checked="" type="checkbox"/>
QUILISHED: DATE / TIME: <u>10-3-18 8:09</u>	RECEIVED: DATE / TIME: <u>10/3/18 8:09</u>			

EEE-Blacksburg 18J0081
CVTC
Recd: 10/03/2018 Due: 10/10/2018

Page 121 of 124

Sample Preservation Log

Order ID 18J0081

Date Performed: 10/03/18

Analyst Performing Check: BPC

Sample ID	Container ID	Metals		Cyanide		Sulfide		Ammonia		TKN		Phos, Tot		NO3+NO2		DRO		Pesticide (8081/608/508)			SVOC (525.2/8270/625)			CrVI*		Pest/PCB (508) / SVOC(525)			
		pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)	Res.Cl as Received	Res.Cl P/A (if adjust.)	Res.Cl as Received	Res.Cl P/A (if adjust.)	pH as Received	Adjusted final pH	pH as Received	Final pH (if adjust.)	pH as Received	Final pH (if adjust.)		
		< 2	Other	> 12	Other	> 9	Other	< 2	Other	< 2	Other	< 2	Other	< 2	Other	< 2	Other	Present	Absent	Present	Absent			< 2	Other		Other		
01	A																												
01	B	/																											
02	A																												
02	B	/																											
03	A																		/		/								
03	E	/																											
03	F			/																									
03	G					/																							
04	A																		/		/								
04	E	/																											
04	F			/																									
04	G					/																							
05	A																		/		/								
05	E	/																											
05	F			/																									

NaOH ID: _____ HNO3 ID: _____
 SO4 ID: _____ Na2S2O3 ID: _____
 CL ID: _____ Na2SO3 ID: _____

CrVI preserved date/time: _____ Analyst Initials: _____
 * pH must be adjusted between 9.3 - 9.7
 Buffer Sol'n ID: _____
 1N NaOH ID: _____ 5N NaOH: _____

Page 122 of 124



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/10/2018 16:12
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	5.70°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	No
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	Yes
Are all volatile organic and TOX containers free of headspace?	Yes
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	No
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments

Trip Blank for GRO and VOC 8260 received with samples and added to work order. Trip Blank date and time (08/23/18 1410) logged as per container label. BAR 10/03/18 0910.

No Trip Blank received for VOC8011. Jeff Fisher notified via email. BAR 10/03/18 0910

Samples logged for Tbl 3.1B and 2,3,7,8 TCDD as per project requirements. MMR 10/3/18



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 18J0154

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg, VA 24060

Date Received: October 4, 2018 8:05
Date Issued: October 11, 2018 16:43

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 10/04/2018 08:05. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18J0154

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
14-2	18J0154-01	Ground Water	10/03/2018 10:00	10/04/2018 08:05
16-4	18J0154-02	Ground Water	10/03/2018 13:50	10/04/2018 08:05
15-1	18J0154-03	Ground Water	10/03/2018 11:30	10/04/2018 08:05
16-5	18J0154-04	Ground Water	10/03/2018 15:30	10/04/2018 08:05
16-3	18J0154-05	Ground Water	10/03/2018 16:50	10/04/2018 08:05
Trip Blank	18J0154-06	Ground Water	08/23/2018 14:10	10/04/2018 08:05
Trip Blank	18J0154-07	Ground Water	09/25/2018 11:25	10/04/2018 08:05



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2	Laboratory Sample ID: 18J0154-01
Grab Date/Time: 10/03/2018 10:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 14:59	BG
Arsenic	01	SW6020A	2.0 ug/L		1.0	1	10/04/18 10:20	10/05/18 15:22	RCV
Barium	01	SW6010C	0.0740 mg/L		0.0100	1	10/04/18 10:20	10/04/18 14:59	BG
Beryllium	01	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 14:59	BG
Cadmium	01	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 14:59	BG
Cobalt	01	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 14:59	BG
Chromium	01	SW6010C	0.0109 mg/L		0.0100	1	10/04/18 10:20	10/04/18 14:59	BG
Copper	01	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 14:59	BG
Mercury	01	SW7470A	<0.00020 mg/L		0.00020	1	10/05/18 15:41	10/08/18 14:45	MWL
Nickel	01	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 14:59	BG
Lead	01	SW6010C	0.0207 mg/L		0.0100	1	10/04/18 10:20	10/04/18 14:59	BG
Antimony	01	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/05/18 15:22	RCV
Selenium	01	SW6010C	<0.0500 mg/L		0.0500	1	10/04/18 10:20	10/04/18 14:59	BG
Tin	01	SW6010C	<0.0200 mg/L		0.0200	1	10/04/18 10:20	10/05/18 13:11	BG
Thallium	01	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/09/18 11:39	RCV
Vanadium	01	SW6010C	0.0131 mg/L		0.0100	1	10/04/18 10:20	10/04/18 14:59	BG
Zinc	01	SW6010C	0.0451 mg/L		0.0100	1	10/04/18 10:20	10/04/18 14:59	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	10/04/18 14:18	10/04/18 14:18	KCS
1,1,1-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,1,2,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	10/04/18 14:18	10/04/18 14:18	KCS
1,1,2-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,1-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,1-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,1-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2

Laboratory Sample ID: 18J0154-01

Grab Date/Time: 10/03/2018 10:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,2,4-Trichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,2-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,2-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,2-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,3-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,3-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
1,4-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
2,2-Dichloropropane	01	SW8260B	<2.00 ug/L		2.00	1	10/04/18 14:18	10/04/18 14:18	KCS
2-Butanone (MEK)	01	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:18	10/04/18 14:18	KCS
2-Hexanone (MBK)	01	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:18	10/04/18 14:18	KCS
4-Methyl-2-pentanone (MIBK)	01	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Acetone	01	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:18	10/04/18 14:18	KCS
Acetonitrile	01	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:18	10/04/18 14:18	KCS
Acrolein	01	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:18	10/04/18 14:18	KCS
Acrylonitrile	01	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Allyl chloride	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Benzene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Bromochloromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Bromodichloromethane	01	SW8260B	<0.50 ug/L		0.50	1	10/04/18 14:18	10/04/18 14:18	KCS
Bromoform	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Bromomethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Carbon disulfide	01	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:18	10/04/18 14:18	KCS
Carbon tetrachloride	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Chlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2	Laboratory Sample ID: 18J0154-01
Grab Date/Time: 10/03/2018 10:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Chloroform	01	SW8260B	<0.50 ug/L		0.50	1	10/04/18 14:18	10/04/18 14:18	KCS
Chloromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Chloroprene	01	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:18	10/04/18 14:18	KCS
cis-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
cis-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Dibromochloromethane	01	SW8260B	<0.50 ug/L		0.50	1	10/04/18 14:18	10/04/18 14:18	KCS
Dibromomethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Dichlorodifluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Ethyl methacrylate	01	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Ethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Hexachlorobutadiene	01	SW8260B	<0.80 ug/L		0.80	1	10/04/18 14:18	10/04/18 14:18	KCS
Iodomethane	01	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:18	10/04/18 14:18	KCS
Isobutyl Alcohol	01	SW8260B	<40.0 ug/L		40.0	1	10/04/18 14:18	10/04/18 14:18	KCS
m+p-Xylenes	01	SW8260B	<2.00 ug/L		2.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Methacrylonitrile	01	SW8260B	<1.50 ug/L		1.50	1	10/04/18 14:18	10/04/18 14:18	KCS
Methyl methacrylate	01	SW8260B	<2.00 ug/L		2.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Methylene chloride	01	SW8260B	<4.00 ug/L		4.00	1	10/04/18 14:18	10/04/18 14:18	KCS
o-Xylene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Propionitrile	01	SW8260B	<40.0 ug/L		40.0	1	10/04/18 14:18	10/04/18 14:18	KCS
Styrene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Tetrachloroethylene (PCE)	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Toluene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
trans-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
trans-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2

Laboratory Sample ID: 18J0154-01

Grab Date/Time: 10/03/2018 10:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	01	SW8260B	<4.00 ug/L		4.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Trichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Trichlorofluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Vinyl acetate	01	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:18	10/04/18 14:18	KCS
Vinyl chloride	01	SW8260B	<0.50 ug/L		0.50	1	10/04/18 14:18	10/04/18 14:18	KCS
Xylenes, Total	01	SW8260B	<3.00 ug/L		3.00	1	10/04/18 14:18	10/04/18 14:18	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	01	SW8260B	103 %		70-120		10/04/18 14:18	10/04/18 14:18	KCS
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260B	94.3 %		75-120		10/04/18 14:18	10/04/18 14:18	KCS
Surr: Dibromofluoromethane (Surr)	01	SW8260B	101 %		70-130		10/04/18 14:18	10/04/18 14:18	KCS
Surr: Toluene-d8 (Surr)	01	SW8260B	101 %		70-130		10/04/18 14:18	10/04/18 14:18	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	01	EPA625	Not Detected			1	10/08/18 09:35	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
1,3,5-Trinitrobenzene	01	SW8270D	<5.88 ug/L		5.88	1	10/08/18 09:35	10/08/18 18:53	SKS
1,3-Dinitrobenzene	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
1,4-Naphthoquinone	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
1-Naphthylamine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2,3,4,6-Tetrachlorophenol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2,4,5-Trichlorophenol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2,4,6-Trichlorophenol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2,4-Dichlorophenol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2,4-Dimethylphenol	01	SW8270D	<0.59 ug/L		0.59	1	10/08/18 09:35	10/08/18 18:53	SKS
2,4-Dinitrophenol	01	SW8270D	<58.8 ug/L		58.8	1	10/08/18 09:35	10/08/18 18:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2	Laboratory Sample ID: 18J0154-01
Grab Date/Time: 10/03/2018 10:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2,6-Dichlorophenol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2,6-Dinitrotoluene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2-Acetylaminofluorene	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
2-Chloronaphthalene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2-Chlorophenol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2-Methylnaphthalene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2-Naphthylamine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2-Nitroaniline	01	SW8270D	<23.5 ug/L		23.5	1	10/08/18 09:35	10/08/18 18:53	SKS
2-Nitrophenol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
3,3'-Dichlorobenzidine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
3,3'-Dimethylbenzidine	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
3-Methylcholanthrene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
3-Nitroaniline	01	SW8270D	<23.5 ug/L		23.5	1	10/08/18 09:35	10/08/18 18:53	SKS
4,6-Dinitro-2-methylphenol	01	SW8270D	<58.8 ug/L		58.8	1	10/08/18 09:35	10/08/18 18:53	SKS
4-Aminobiphenyl	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
4-Bromophenyl phenyl ether	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
4-Chloroaniline	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
4-Chlorophenyl phenyl ether	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
4-Nitroaniline	01	SW8270D	<23.5 ug/L		23.5	1	10/08/18 09:35	10/08/18 18:53	SKS
4-Nitrophenol	01	SW8270D	<58.8 ug/L		58.8	1	10/08/18 09:35	10/08/18 18:53	SKS
5-Nitro-o-toluidine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
7,12-Dimethylbenz (a) anthracene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Acenaphthene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Acenaphthylene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2	Laboratory Sample ID: 18J0154-01
Grab Date/Time: 10/03/2018 10:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	01	SW8270D	<23.5 ug/L		23.5	1	10/08/18 09:35	10/08/18 18:53	SKS
Anthracene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Benzo (a) anthracene	01	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 18:53	SKS
Benzo (a) pyrene	01	SW8270D	<0.12 ug/L		0.12	1	10/08/18 09:35	10/08/18 18:53	SKS
Benzo (b) fluoranthene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Benzo (g,h,i) perylene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Benzo (k) fluoranthene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Benzyl alcohol	01	SW8270D	<23.5 ug/L		23.5	1	10/08/18 09:35	10/08/18 18:53	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
2,2'-Oxybis (1-chloropropane)	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
Butyl benzyl phthalate	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Chlorobenzilate	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
Chrysene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Diallate	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
Dibenz (a,h) anthracene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Dibenzofuran	01	SW8270D	<5.88 ug/L		5.88	1	10/08/18 09:35	10/08/18 18:53	SKS
Diethyl phthalate	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Dimethoate	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
Dimethyl phthalate	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Di-n-butyl phthalate	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Di-n-octyl phthalate	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Diphenylamine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Disulfoton	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2

Laboratory Sample ID: 18J0154-01

Grab Date/Time: 10/03/2018 10:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	01	SW8270D	<23.5 ug/L		23.5	1	10/08/18 09:35	10/08/18 18:53	SKS
Ethyl parathion	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
Famphur	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
Fluoranthene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Fluorene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Hexachlorobenzene	01	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 18:53	SKS
Hexachlorobutadiene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Hexachlorocyclopentadiene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Hexachloroethane	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Hexachloropropene	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Isodrin	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Isophorone	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Isosafrole	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Kepon	01	SW8270D	<2.94 ug/L	C	2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
m+p-Cresols	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Methapyrilene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Methyl methanesulfonate	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Methyl parathion	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
Naphthalene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Nitrobenzene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
n-Nitrosodiethylamine	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
n-Nitrosodimethylamine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
n-Nitrosodi-n-butylamine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2	Laboratory Sample ID: 18J0154-01
Grab Date/Time: 10/03/2018 10:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
n-Nitrosomethylethylamine	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
n-Nitrosopiperidine	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
n-Nitrosopyrrolidine	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
o,o,o-Triethyl phosphorothioate	01	SW8270D	<11.8 ug/L	C	11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
o+m+p-Cresols	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
o-Cresol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
o-Toluidine	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
p-(Dimethylamino) azobenzene	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
p-Chloro-m-cresol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Pentachlorobenzene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Pentachloronitrobenzene (quintozene)	01	SW8270D	<1.18 ug/L		1.18	1	10/08/18 09:35	10/08/18 18:53	SKS
Phenacetin	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Phenanthrene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Phenol	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Phorate	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
p-Phenylenediamine	01	SW8270D	<11.8 ug/L	C	11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Pronamide	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Pyrene	01	SW8270D	<11.8 ug/L		11.8	1	10/08/18 09:35	10/08/18 18:53	SKS
Safrole	01	SW8270D	<2.94 ug/L		2.94	1	10/08/18 09:35	10/08/18 18:53	SKS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270D	62.0 %		10-86		10/08/18 09:35	10/08/18 18:53	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2	Laboratory Sample ID: 18J0154-01
Grab Date/Time: 10/03/2018 10:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270D	63.2 %		9-87		10/08/18 09:35	10/08/18 18:53	SKS
Surr: 2-Fluorophenol (Surr)	01	SW8270D	60.2 %	S	10-52		10/08/18 09:35	10/08/18 18:53	SKS
Surr: Nitrobenzene-d5 (Surr)	01	SW8270D	64.3 %		10-98.5		10/08/18 09:35	10/08/18 18:53	SKS
Surr: Phenol-d5 (Surr)	01	SW8270D	31.1 %		5-33		10/08/18 09:35	10/08/18 18:53	SKS
Surr: p-Terphenyl-d14 (Surr)	01	SW8270D	85.3 %		27-133		10/08/18 09:35	10/08/18 18:53	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 14:14	HLM
PCB as Aroclor 1221	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 14:14	HLM
PCB as Aroclor 1232	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 14:14	HLM
PCB as Aroclor 1242	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 14:14	HLM
PCB as Aroclor 1248	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 14:14	HLM
PCB as Aroclor 1254	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 14:14	HLM
PCB as Aroclor 1260	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 14:14	HLM
Surr: DCB	01	SW8082A	20.0 %	S	30-105		10/08/18 14:02	10/09/18 14:14	HLM
Surr: TCMX	01	SW8082A	50.0 %		30-105		10/08/18 14:02	10/09/18 14:14	HLM
4,4'-DDD	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
4,4'-DDE	01	SW8081B	<0.057 ug/L	C	0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
4,4'-DDT	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Aldrin	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
alpha-BHC	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
beta-BHC	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Chlordane	01	SW8081B	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 14:14	HLM
delta-BHC	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Dieldrin	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Endosulfan I	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2	Laboratory Sample ID: 18J0154-01
Grab Date/Time: 10/03/2018 10:00	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan II	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Endosulfan sulfate	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Endrin	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Endrin aldehyde	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
gamma-BHC (Lindane)	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Heptachlor	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Heptachlor epoxide	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Methoxychlor	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 14:14	HLM
Toxaphene	01	SW8081B	<1.15 ug/L		1.15	1	10/08/18 14:02	10/09/18 14:14	HLM
<i>Surr: TCMX</i>	<i>01</i>	<i>SW8081B</i>	<i>60.0 %</i>		<i>18-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 14:14</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>01</i>	<i>SW8081B</i>	<i>25.0 %</i>	<i>S</i>	<i>27-131</i>		<i>10/08/18 14:02</i>	<i>10/09/18 14:14</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 12:55	SKS
2,4,5-TP (Silvex)	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 12:55	SKS
2,4-D	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 12:55	SKS
Dinoseb	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 12:55	SKS
Pentachlorophenol	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 12:55	SKS
<i>Surr: DCAA (Surr)</i>	<i>01</i>	<i>SW8151A</i>	<i>110 %</i>		<i>60-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 12:55</i>	<i>SKS</i>
Micro-extractables by GC/ECD									
1,2-Dibromoethane (EDB)	01	SW8011	<0.011 ug/L		0.011	1	10/08/18 12:52	10/08/18 20:15	HLM
1,2,3-Trichloropropane	01	SW8011	<0.011 ug/L		0.011	1	10/08/18 12:52	10/08/18 20:15	HLM
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8011	<0.011 ug/L		0.011	1	10/08/18 12:52	10/08/18 20:15	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 14-2	Laboratory Sample ID: 18J0154-01
Grab Date/Time: 10/03/2018 10:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	01	SW9012B	<0.01 mg/L	CN	0.01	1	10/11/18 13:28	10/11/18 13:28	BBP
Chromium, Hexavalent	01	SW7196A	<0.005 mg/L		0.005	1	10/04/18 09:00	10/04/18 11:00	MWL
Sulfide	01	SW9215	<1.00 mg/L		1.00	1	10/08/18 15:00	10/08/18 15:00	TMB



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4	Laboratory Sample ID: 18J0154-02
Grab Date/Time: 10/03/2018 13:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:02	BG
Arsenic	02	SW6020A	<1.0 ug/L		1.0	1	10/04/18 10:20	10/05/18 15:26	RCV
Barium	02	SW6010C	0.0111 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:02	BG
Beryllium	02	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:02	BG
Cadmium	02	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:02	BG
Cobalt	02	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:02	BG
Chromium	02	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:02	BG
Copper	02	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:02	BG
Mercury	02	SW7470A	<0.00020 mg/L		0.00020	1	10/05/18 15:41	10/08/18 14:47	MWL
Nickel	02	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:02	BG
Lead	02	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:02	BG
Antimony	02	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/05/18 15:26	RCV
Selenium	02	SW6010C	<0.0500 mg/L		0.0500	1	10/04/18 10:20	10/04/18 15:02	BG
Tin	02	SW6010C	<0.0200 mg/L		0.0200	1	10/04/18 10:20	10/05/18 13:13	BG
Thallium	02	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/09/18 11:41	RCV
Vanadium	02	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:02	BG
Zinc	02	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:02	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	10/04/18 14:40	10/04/18 14:40	KCS
1,1,1-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,1,2,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	10/04/18 14:40	10/04/18 14:40	KCS
1,1,2-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,1-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,1-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,1-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4	Laboratory Sample ID: 18J0154-02
Grab Date/Time: 10/03/2018 13:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,2,4-Trichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,2-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,2-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,2-Dichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,3-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,3-Dichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
1,4-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
2,2-Dichloropropane	02	SW8260B	<2.00 ug/L		2.00	1	10/04/18 14:40	10/04/18 14:40	KCS
2-Butanone (MEK)	02	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:40	10/04/18 14:40	KCS
2-Hexanone (MBK)	02	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:40	10/04/18 14:40	KCS
4-Methyl-2-pentanone (MIBK)	02	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Acetone	02	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:40	10/04/18 14:40	KCS
Acetonitrile	02	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:40	10/04/18 14:40	KCS
Acrolein	02	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:40	10/04/18 14:40	KCS
Acrylonitrile	02	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Allyl chloride	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Benzene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Bromochloromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Bromodichloromethane	02	SW8260B	<0.50 ug/L		0.50	1	10/04/18 14:40	10/04/18 14:40	KCS
Bromoform	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Bromomethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Carbon disulfide	02	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:40	10/04/18 14:40	KCS
Carbon tetrachloride	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Chlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4

Laboratory Sample ID: 18J0154-02

Grab Date/Time: 10/03/2018 13:50

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Chloroform	02	SW8260B	<0.50 ug/L		0.50	1	10/04/18 14:40	10/04/18 14:40	KCS
Chloromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Chloroprene	02	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:40	10/04/18 14:40	KCS
cis-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
cis-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Dibromochloromethane	02	SW8260B	<0.50 ug/L		0.50	1	10/04/18 14:40	10/04/18 14:40	KCS
Dibromomethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Dichlorodifluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Ethyl methacrylate	02	SW8260B	<5.00 ug/L		5.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Ethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Hexachlorobutadiene	02	SW8260B	<0.80 ug/L		0.80	1	10/04/18 14:40	10/04/18 14:40	KCS
Iodomethane	02	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:40	10/04/18 14:40	KCS
Isobutyl Alcohol	02	SW8260B	<40.0 ug/L		40.0	1	10/04/18 14:40	10/04/18 14:40	KCS
m+p-Xylenes	02	SW8260B	<2.00 ug/L		2.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Methacrylonitrile	02	SW8260B	<1.50 ug/L		1.50	1	10/04/18 14:40	10/04/18 14:40	KCS
Methyl methacrylate	02	SW8260B	<2.00 ug/L		2.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Methylene chloride	02	SW8260B	<4.00 ug/L		4.00	1	10/04/18 14:40	10/04/18 14:40	KCS
o-Xylene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Propionitrile	02	SW8260B	<40.0 ug/L		40.0	1	10/04/18 14:40	10/04/18 14:40	KCS
Styrene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Tetrachloroethylene (PCE)	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Toluene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
trans-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
trans-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4	Laboratory Sample ID: 18J0154-02
Grab Date/Time: 10/03/2018 13:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	02	SW8260B	<4.00 ug/L		4.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Trichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Trichlorofluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Vinyl acetate	02	SW8260B	<10.0 ug/L		10.0	1	10/04/18 14:40	10/04/18 14:40	KCS
Vinyl chloride	02	SW8260B	<0.50 ug/L		0.50	1	10/04/18 14:40	10/04/18 14:40	KCS
Xylenes, Total	02	SW8260B	<3.00 ug/L		3.00	1	10/04/18 14:40	10/04/18 14:40	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	02	SW8260B	103 %		70-120		10/04/18 14:40	10/04/18 14:40	KCS
Surr: 4-Bromofluorobenzene (Surr)	02	SW8260B	96.1 %		75-120		10/04/18 14:40	10/04/18 14:40	KCS
Surr: Dibromofluoromethane (Surr)	02	SW8260B	102 %		70-130		10/04/18 14:40	10/04/18 14:40	KCS
Surr: Toluene-d8 (Surr)	02	SW8260B	99.7 %		70-130		10/04/18 14:40	10/04/18 14:40	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	02	EPA625	Not Detected			1	10/08/18 09:35	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
1,3,5-Trinitrobenzene	02	SW8270D	<5.32 ug/L		5.32	1	10/08/18 09:35	10/08/18 19:24	SKS
1,3-Dinitrobenzene	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
1,4-Naphthoquinone	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
1-Naphthylamine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2,3,4,6-Tetrachlorophenol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2,4,5-Trichlorophenol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2,4,6-Trichlorophenol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2,4-Dichlorophenol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2,4-Dimethylphenol	02	SW8270D	<0.53 ug/L		0.53	1	10/08/18 09:35	10/08/18 19:24	SKS
2,4-Dinitrophenol	02	SW8270D	<53.2 ug/L		53.2	1	10/08/18 09:35	10/08/18 19:24	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4

Laboratory Sample ID: 18J0154-02

Grab Date/Time: 10/03/2018 13:50

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2,6-Dichlorophenol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2,6-Dinitrotoluene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2-Acetylaminofluorene	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
2-Chloronaphthalene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2-Chlorophenol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2-Methylnaphthalene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2-Naphthylamine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2-Nitroaniline	02	SW8270D	<21.3 ug/L		21.3	1	10/08/18 09:35	10/08/18 19:24	SKS
2-Nitrophenol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
3,3'-Dimethylbenzidine	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
3-Methylcholanthrene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
3-Nitroaniline	02	SW8270D	<21.3 ug/L		21.3	1	10/08/18 09:35	10/08/18 19:24	SKS
4,6-Dinitro-2-methylphenol	02	SW8270D	<53.2 ug/L		53.2	1	10/08/18 09:35	10/08/18 19:24	SKS
4-Aminobiphenyl	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
4-Bromophenyl phenyl ether	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
4-Chloroaniline	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
4-Chlorophenyl phenyl ether	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
4-Nitroaniline	02	SW8270D	<21.3 ug/L		21.3	1	10/08/18 09:35	10/08/18 19:24	SKS
4-Nitrophenol	02	SW8270D	<53.2 ug/L		53.2	1	10/08/18 09:35	10/08/18 19:24	SKS
5-Nitro-o-toluidine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
7,12-Dimethylbenz (a) anthracene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Acenaphthene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Acenaphthylene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4	Laboratory Sample ID: 18J0154-02
Grab Date/Time: 10/03/2018 13:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	02	SW8270D	<21.3 ug/L		21.3	1	10/08/18 09:35	10/08/18 19:24	SKS
Anthracene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Benzo (a) anthracene	02	SW8270D	<0.05 ug/L		0.05	1	10/08/18 09:35	10/08/18 19:24	SKS
Benzo (a) pyrene	02	SW8270D	<0.11 ug/L		0.11	1	10/08/18 09:35	10/08/18 19:24	SKS
Benzo (b) fluoranthene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Benzo (g,h,i) perylene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Benzo (k) fluoranthene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Benzyl alcohol	02	SW8270D	<21.3 ug/L		21.3	1	10/08/18 09:35	10/08/18 19:24	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
2,2'-Oxybis (1-chloropropane)	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
Butyl benzyl phthalate	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Chlorobenzilate	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
Chrysene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Diallate	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
Dibenz (a,h) anthracene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Dibenzofuran	02	SW8270D	<5.32 ug/L		5.32	1	10/08/18 09:35	10/08/18 19:24	SKS
Diethyl phthalate	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Dimethoate	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
Dimethyl phthalate	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Di-n-butyl phthalate	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Di-n-octyl phthalate	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Diphenylamine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Disulfoton	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4	Laboratory Sample ID: 18J0154-02
Grab Date/Time: 10/03/2018 13:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	02	SW8270D	<21.3 ug/L		21.3	1	10/08/18 09:35	10/08/18 19:24	SKS
Ethyl parathion	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
Famphur	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
Fluoranthene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Fluorene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Hexachlorobenzene	02	SW8270D	<0.05 ug/L		0.05	1	10/08/18 09:35	10/08/18 19:24	SKS
Hexachlorobutadiene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Hexachlorocyclopentadiene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Hexachloroethane	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Hexachloropropene	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Isodrin	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Isophorone	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Isosafrole	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Kepon	02	SW8270D	<2.66 ug/L	C	2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
m+p-Cresols	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Methapyrilene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Methyl methanesulfonate	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Methyl parathion	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
Naphthalene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Nitrobenzene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
n-Nitrosodiethylamine	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
n-Nitrosodimethylamine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
n-Nitrosodi-n-butylamine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4	Laboratory Sample ID: 18J0154-02
Grab Date/Time: 10/03/2018 13:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
n-Nitrosomethylethylamine	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
n-Nitrosopiperidine	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
n-Nitrosopyrrolidine	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
o,o,o-Triethyl phosphorothioate	02	SW8270D	<10.6 ug/L	C	10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
o+m+p-Cresols	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
o-Cresol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
o-Toluidine	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
p-(Dimethylamino) azobenzene	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
p-Chloro-m-cresol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Pentachlorobenzene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Pentachloronitrobenzene (quintozene)	02	SW8270D	<1.06 ug/L		1.06	1	10/08/18 09:35	10/08/18 19:24	SKS
Phenacetin	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Phenanthrene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Phenol	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Phorate	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
p-Phenylenediamine	02	SW8270D	<10.6 ug/L	C	10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Pronamide	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Pyrene	02	SW8270D	<10.6 ug/L		10.6	1	10/08/18 09:35	10/08/18 19:24	SKS
Safrole	02	SW8270D	<2.66 ug/L		2.66	1	10/08/18 09:35	10/08/18 19:24	SKS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270D	85.6 %		10-86		10/08/18 09:35	10/08/18 19:24	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4

Laboratory Sample ID: 18J0154-02

Grab Date/Time: 10/03/2018 13:50

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270D	88.8 %	S	9-87		10/08/18 09:35	10/08/18 19:24	SKS
Surr: 2-Fluorophenol (Surr)	02	SW8270D	83.3 %	S	10-52		10/08/18 09:35	10/08/18 19:24	SKS
Surr: Nitrobenzene-d5 (Surr)	02	SW8270D	92.5 %		10-98.5		10/08/18 09:35	10/08/18 19:24	SKS
Surr: Phenol-d5 (Surr)	02	SW8270D	42.0 %	S	5-33		10/08/18 09:35	10/08/18 19:24	SKS
Surr: p-Terphenyl-d14 (Surr)	02	SW8270D	116 %		27-133		10/08/18 09:35	10/08/18 19:24	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:32	HLM
PCB as Aroclor 1221	02	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:32	HLM
PCB as Aroclor 1232	02	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:32	HLM
PCB as Aroclor 1242	02	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:32	HLM
PCB as Aroclor 1248	02	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:32	HLM
PCB as Aroclor 1254	02	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:32	HLM
PCB as Aroclor 1260	02	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:32	HLM
Surr: DCB	02	SW8082A	65.0 %		30-105		10/08/18 14:02	10/09/18 14:32	HLM
Surr: TCMX	02	SW8082A	50.0 %		30-105		10/08/18 14:02	10/09/18 14:32	HLM
4,4'-DDD	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
4,4'-DDE	02	SW8081B	<0.058 ug/L	C	0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
4,4'-DDT	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Aldrin	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
alpha-BHC	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
beta-BHC	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Chlordane	02	SW8081B	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:32	HLM
delta-BHC	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Dieldrin	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Endosulfan I	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4	Laboratory Sample ID: 18J0154-02
Grab Date/Time: 10/03/2018 13:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan II	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Endosulfan sulfate	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Endrin	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Endrin aldehyde	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
gamma-BHC (Lindane)	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Heptachlor	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Heptachlor epoxide	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Methoxychlor	02	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:32	HLM
Toxaphene	02	SW8081B	<1.16 ug/L		1.16	1	10/08/18 14:02	10/09/18 14:32	HLM
<i>Surr: TCMX</i>	02	SW8081B	70.0 %		18-112		10/08/18 14:02	10/09/18 14:32	HLM
<i>Surr: DCB</i>	02	SW8081B	85.0 %		27-131		10/08/18 14:02	10/09/18 14:32	HLM
Organochlorine Herbicides by GC/ECD									
2,4,5-T	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:13	SKS
2,4,5-TP (Silvex)	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:13	SKS
2,4-D	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:13	SKS
Dinoseb	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:13	SKS
Pentachlorophenol	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:13	SKS
<i>Surr: DCAA (Surr)</i>	02	SW8151A	80.0 %		60-112		10/08/18 14:02	10/09/18 13:13	SKS
Micro-extractables by GC/ECD									
1,2-Dibromoethane (EDB)	02	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 20:34	HLM
1,2,3-Trichloropropane	02	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 20:34	HLM
1,2-Dibromo-3-chloropropane (DBCP)	02	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 20:34	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-4		Laboratory Sample ID:	18J0154-02
Grab Date/Time:	10/03/2018 13:50	Field pH:	
Field Residual Cl:			

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	02	SW9012B	<0.01 mg/L		0.01	1	10/11/18 13:31	10/11/18 13:31	BBP
Chromium, Hexavalent	02	SW7196A	<0.005 mg/L		0.005	1	10/04/18 09:00	10/04/18 11:00	MWL
Sulfide	02	SW9215	<1.00 mg/L		1.00	1	10/08/18 15:00	10/08/18 15:00	TMB



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1	Laboratory Sample ID: 18J0154-03
Grab Date/Time: 10/03/2018 11:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	03	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:04	BG
Arsenic	03	SW6020A	<1.0 ug/L		1.0	1	10/04/18 10:20	10/05/18 15:30	RCV
Barium	03	SW6010C	0.0624 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:04	BG
Beryllium	03	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:04	BG
Cadmium	03	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:04	BG
Cobalt	03	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:04	BG
Chromium	03	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:04	BG
Copper	03	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:04	BG
Mercury	03	SW7470A	<0.00020 mg/L		0.00020	1	10/05/18 15:41	10/08/18 14:49	MWL
Nickel	03	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:04	BG
Lead	03	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:04	BG
Antimony	03	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/05/18 15:30	RCV
Selenium	03	SW6010C	<0.0500 mg/L		0.0500	1	10/04/18 10:20	10/04/18 15:04	BG
Tin	03	SW6010C	<0.0200 mg/L		0.0200	1	10/04/18 10:20	10/05/18 13:15	BG
Thallium	03	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/09/18 11:43	RCV
Vanadium	03	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:04	BG
Zinc	03	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:04	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	10/04/18 15:03	10/04/18 15:03	KCS
1,1,1-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,1,2,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	10/04/18 15:03	10/04/18 15:03	KCS
1,1,2-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,1-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,1-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,1-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1	Laboratory Sample ID: 18J0154-03
Grab Date/Time: 10/03/2018 11:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,2,4-Trichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,2-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,2-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,2-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,3-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,3-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
1,4-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
2,2-Dichloropropane	03	SW8260B	<2.00 ug/L		2.00	1	10/04/18 15:03	10/04/18 15:03	KCS
2-Butanone (MEK)	03	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:03	10/04/18 15:03	KCS
2-Hexanone (MBK)	03	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:03	10/04/18 15:03	KCS
4-Methyl-2-pentanone (MIBK)	03	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Acetone	03	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:03	10/04/18 15:03	KCS
Acetonitrile	03	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:03	10/04/18 15:03	KCS
Acrolein	03	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:03	10/04/18 15:03	KCS
Acrylonitrile	03	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Allyl chloride	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Benzene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Bromochloromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Bromodichloromethane	03	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:03	10/04/18 15:03	KCS
Bromoform	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Bromomethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Carbon disulfide	03	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:03	10/04/18 15:03	KCS
Carbon tetrachloride	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Chlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1	Laboratory Sample ID: 18J0154-03
Grab Date/Time: 10/03/2018 11:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Chloroform	03	SW8260B	1.07 ug/L		0.50	1	10/04/18 15:03	10/04/18 15:03	KCS
Chloromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Chloroprene	03	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:03	10/04/18 15:03	KCS
cis-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
cis-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Dibromochloromethane	03	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:03	10/04/18 15:03	KCS
Dibromomethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Dichlorodifluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Ethyl methacrylate	03	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Ethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Hexachlorobutadiene	03	SW8260B	<0.80 ug/L		0.80	1	10/04/18 15:03	10/04/18 15:03	KCS
Iodomethane	03	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:03	10/04/18 15:03	KCS
Isobutyl Alcohol	03	SW8260B	<40.0 ug/L		40.0	1	10/04/18 15:03	10/04/18 15:03	KCS
m+p-Xylenes	03	SW8260B	<2.00 ug/L		2.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Methacrylonitrile	03	SW8260B	<1.50 ug/L		1.50	1	10/04/18 15:03	10/04/18 15:03	KCS
Methyl methacrylate	03	SW8260B	<2.00 ug/L		2.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Methylene chloride	03	SW8260B	<4.00 ug/L		4.00	1	10/04/18 15:03	10/04/18 15:03	KCS
o-Xylene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Propionitrile	03	SW8260B	<40.0 ug/L		40.0	1	10/04/18 15:03	10/04/18 15:03	KCS
Styrene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Tetrachloroethylene (PCE)	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Toluene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
trans-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
trans-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1

Laboratory Sample ID: 18J0154-03

Grab Date/Time: 10/03/2018 11:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	03	SW8260B	<4.00 ug/L		4.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Trichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Trichlorofluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Vinyl acetate	03	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:03	10/04/18 15:03	KCS
Vinyl chloride	03	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:03	10/04/18 15:03	KCS
Xylenes, Total	03	SW8260B	<3.00 ug/L		3.00	1	10/04/18 15:03	10/04/18 15:03	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	03	SW8260B	102 %		70-120		10/04/18 15:03	10/04/18 15:03	KCS
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260B	94.2 %		75-120		10/04/18 15:03	10/04/18 15:03	KCS
Surr: Dibromofluoromethane (Surr)	03	SW8260B	102 %		70-130		10/04/18 15:03	10/04/18 15:03	KCS
Surr: Toluene-d8 (Surr)	03	SW8260B	101 %		70-130		10/04/18 15:03	10/04/18 15:03	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	03	EPA625	Not Detected			1	10/08/18 09:35	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
1,3,5-Trinitrobenzene	03	SW8270D	<5.68 ug/L		5.68	1	10/08/18 09:35	10/08/18 19:55	SKS
1,3-Dinitrobenzene	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
1,4-Naphthoquinone	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
1-Naphthylamine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2,3,4,6-Tetrachlorophenol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2,4,5-Trichlorophenol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2,4,6-Trichlorophenol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2,4-Dichlorophenol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2,4-Dimethylphenol	03	SW8270D	<0.57 ug/L		0.57	1	10/08/18 09:35	10/08/18 19:55	SKS
2,4-Dinitrophenol	03	SW8270D	<56.8 ug/L		56.8	1	10/08/18 09:35	10/08/18 19:55	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1	Laboratory Sample ID: 18J0154-03
Grab Date/Time: 10/03/2018 11:30	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2,6-Dichlorophenol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2,6-Dinitrotoluene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2-Acetylaminofluorene	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
2-Chloronaphthalene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2-Chlorophenol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2-Methylnaphthalene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2-Naphthylamine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2-Nitroaniline	03	SW8270D	<22.7 ug/L		22.7	1	10/08/18 09:35	10/08/18 19:55	SKS
2-Nitrophenol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
3,3'-Dichlorobenzidine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
3,3'-Dimethylbenzidine	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
3-Methylcholanthrene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
3-Nitroaniline	03	SW8270D	<22.7 ug/L		22.7	1	10/08/18 09:35	10/08/18 19:55	SKS
4,6-Dinitro-2-methylphenol	03	SW8270D	<56.8 ug/L		56.8	1	10/08/18 09:35	10/08/18 19:55	SKS
4-Aminobiphenyl	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
4-Bromophenyl phenyl ether	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
4-Chloroaniline	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
4-Chlorophenyl phenyl ether	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
4-Nitroaniline	03	SW8270D	<22.7 ug/L		22.7	1	10/08/18 09:35	10/08/18 19:55	SKS
4-Nitrophenol	03	SW8270D	<56.8 ug/L		56.8	1	10/08/18 09:35	10/08/18 19:55	SKS
5-Nitro-o-toluidine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
7,12-Dimethylbenz (a) anthracene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Acenaphthene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Acenaphthylene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1

Laboratory Sample ID: 18J0154-03

Grab Date/Time: 10/03/2018 11:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	03	SW8270D	<22.7 ug/L		22.7	1	10/08/18 09:35	10/08/18 19:55	SKS
Anthracene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Benzo (a) anthracene	03	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 19:55	SKS
Benzo (a) pyrene	03	SW8270D	<0.11 ug/L		0.11	1	10/08/18 09:35	10/08/18 19:55	SKS
Benzo (b) fluoranthene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Benzo (g,h,i) perylene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Benzo (k) fluoranthene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Benzyl alcohol	03	SW8270D	<22.7 ug/L		22.7	1	10/08/18 09:35	10/08/18 19:55	SKS
bis (2-Chloroethoxy) methane	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
bis (2-Chloroethyl) ether	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
2,2'-Oxybis (1-chloropropane)	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
bis (2-Ethylhexyl) phthalate	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
Butyl benzyl phthalate	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Chlorobenzilate	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
Chrysene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Diallate	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
Dibenz (a,h) anthracene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Dibenzofuran	03	SW8270D	<5.68 ug/L		5.68	1	10/08/18 09:35	10/08/18 19:55	SKS
Diethyl phthalate	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Dimethoate	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
Dimethyl phthalate	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Di-n-butyl phthalate	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Di-n-octyl phthalate	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Diphenylamine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Disulfoton	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1	Laboratory Sample ID: 18J0154-03
Grab Date/Time: 10/03/2018 11:30	
Field Residual Cl:	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	03	SW8270D	<22.7 ug/L		22.7	1	10/08/18 09:35	10/08/18 19:55	SKS
Ethyl parathion	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
Famphur	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
Fluoranthene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Fluorene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Hexachlorobenzene	03	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 19:55	SKS
Hexachlorobutadiene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Hexachlorocyclopentadiene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Hexachloroethane	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Hexachloropropene	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
Indeno (1,2,3-cd) pyrene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Isodrin	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Isophorone	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Isosafrole	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Kepon	03	SW8270D	<2.84 ug/L	C	2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
m+p-Cresols	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Methapyrilene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Methyl methanesulfonate	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Methyl parathion	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
Naphthalene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Nitrobenzene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
n-Nitrosodiethylamine	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
n-Nitrosodimethylamine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
n-Nitrosodi-n-butylamine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
n-Nitrosodi-n-propylamine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1	Laboratory Sample ID: 18J0154-03
Grab Date/Time: 10/03/2018 11:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
n-Nitrosomethylethylamine	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
n-Nitrosopiperidine	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
n-Nitrosopyrrolidine	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
o,o,o-Triethyl phosphorothioate	03	SW8270D	<11.4 ug/L	C	11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
o+m+p-Cresols	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
o-Cresol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
o-Toluidine	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
p-(Dimethylamino) azobenzene	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
p-Chloro-m-cresol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Pentachlorobenzene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Pentachloronitrobenzene (quintozene)	03	SW8270D	<1.14 ug/L		1.14	1	10/08/18 09:35	10/08/18 19:55	SKS
Phenacetin	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Phenanthrene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Phenol	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Phorate	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
p-Phenylenediamine	03	SW8270D	<11.4 ug/L	C	11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Pronamide	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Pyrene	03	SW8270D	<11.4 ug/L		11.4	1	10/08/18 09:35	10/08/18 19:55	SKS
Safrole	03	SW8270D	<2.84 ug/L		2.84	1	10/08/18 09:35	10/08/18 19:55	SKS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270D	82.2 %		10-86		10/08/18 09:35	10/08/18 19:55	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1

Laboratory Sample ID: 18J0154-03

Grab Date/Time: 10/03/2018 11:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270D	86.4 %		9-87		10/08/18 09:35	10/08/18 19:55	SKS
Surr: 2-Fluorophenol (Surr)	03	SW8270D	82.6 %	S	10-52		10/08/18 09:35	10/08/18 19:55	SKS
Surr: Nitrobenzene-d5 (Surr)	03	SW8270D	88.6 %		10-98.5		10/08/18 09:35	10/08/18 19:55	SKS
Surr: Phenol-d5 (Surr)	03	SW8270D	37.7 %	S	5-33		10/08/18 09:35	10/08/18 19:55	SKS
Surr: p-Terphenyl-d14 (Surr)	03	SW8270D	100 %		27-133		10/08/18 09:35	10/08/18 19:55	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	03	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:50	HLM
PCB as Aroclor 1221	03	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:50	HLM
PCB as Aroclor 1232	03	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:50	HLM
PCB as Aroclor 1242	03	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:50	HLM
PCB as Aroclor 1248	03	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:50	HLM
PCB as Aroclor 1254	03	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:50	HLM
PCB as Aroclor 1260	03	SW8082A	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:50	HLM
Surr: DCB	03	SW8082A	45.0 %		30-105		10/08/18 14:02	10/09/18 14:50	HLM
Surr: TCMX	03	SW8082A	40.0 %		30-105		10/08/18 14:02	10/09/18 14:50	HLM
4,4'-DDD	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
4,4'-DDE	03	SW8081B	<0.058 ug/L	C	0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
4,4'-DDT	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Aldrin	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
alpha-BHC	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
beta-BHC	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Chlordane	03	SW8081B	<0.233 ug/L		0.233	1	10/08/18 14:02	10/09/18 14:50	HLM
delta-BHC	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Dieldrin	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Endosulfan I	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1	Laboratory Sample ID: 18J0154-03
Grab Date/Time: 10/03/2018 11:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan II	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Endosulfan sulfate	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Endrin	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Endrin aldehyde	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
gamma-BHC (Lindane)	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Heptachlor	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Heptachlor epoxide	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Methoxychlor	03	SW8081B	<0.058 ug/L		0.058	1	10/08/18 14:02	10/09/18 14:50	HLM
Toxaphene	03	SW8081B	<1.16 ug/L		1.16	1	10/08/18 14:02	10/09/18 14:50	HLM
<i>Surr: TCMX</i>	<i>03</i>	<i>SW8081B</i>	<i>65.0 %</i>		<i>18-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 14:50</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>03</i>	<i>SW8081B</i>	<i>80.0 %</i>		<i>27-131</i>		<i>10/08/18 14:02</i>	<i>10/09/18 14:50</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	03	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:31	SKS
2,4,5-TP (Silvex)	03	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:31	SKS
2,4-D	03	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:31	SKS
Dinoseb	03	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:31	SKS
Pentachlorophenol	03	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:31	SKS
<i>Surr: DCAA (Surr)</i>	<i>03</i>	<i>SW8151A</i>	<i>85.0 %</i>		<i>60-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 13:31</i>	<i>SKS</i>
Micro-extractables by GC/ECD									
1,2-Dibromoethane (EDB)	03	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 20:54	HLM
1,2,3-Trichloropropane	03	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 20:54	HLM
1,2-Dibromo-3-chloropropane (DBCP)	03	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 20:54	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 15-1		Laboratory Sample ID: 18J0154-03
Grab Date/Time:	10/03/2018 11:30	
Field Residual Cl:		Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	03	SW9012B	<0.01 mg/L	CN	0.01	1	10/11/18 13:34	10/11/18 13:34	BBP
Chromium, Hexavalent	03	SW7196A	<0.005 mg/L		0.005	1	10/04/18 09:00	10/04/18 11:00	MWL
Sulfide	03	SW9215	<1.00 mg/L		1.00	1	10/08/18 15:00	10/08/18 15:00	TMB



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5

Laboratory Sample ID: 18J0154-04

Grab Date/Time: 10/03/2018 15:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	04	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:07	BG
Arsenic	04	SW6020A	2.3 ug/L		1.0	1	10/04/18 10:20	10/05/18 15:47	RCV
Barium	04	SW6010C	0.0732 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:07	BG
Beryllium	04	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:07	BG
Cadmium	04	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:07	BG
Cobalt	04	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:07	BG
Chromium	04	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:07	BG
Copper	04	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:07	BG
Mercury	04	SW7470A	<0.00020 mg/L		0.00020	1	10/05/18 15:41	10/08/18 14:51	MWL
Nickel	04	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:07	BG
Lead	04	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:07	BG
Antimony	04	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/05/18 15:47	RCV
Selenium	04	SW6010C	<0.0500 mg/L		0.0500	1	10/04/18 10:20	10/04/18 15:07	BG
Tin	04	SW6010C	<0.0200 mg/L		0.0200	1	10/04/18 10:20	10/05/18 13:17	BG
Thallium	04	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/09/18 11:45	RCV
Vanadium	04	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:07	BG
Zinc	04	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:07	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	04	SW8260B	<0.40 ug/L		0.40	1	10/04/18 15:26	10/04/18 15:26	KCS
1,1,1-Trichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,1,2,2-Tetrachloroethane	04	SW8260B	<0.40 ug/L		0.40	1	10/04/18 15:26	10/04/18 15:26	KCS
1,1,2-Trichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,1-Dichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,1-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,1-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5	Laboratory Sample ID: 18J0154-04
Grab Date/Time: 10/03/2018 15:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,2,4-Trichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,2-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,2-Dichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,2-Dichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,3-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,3-Dichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
1,4-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
2,2-Dichloropropane	04	SW8260B	<2.00 ug/L		2.00	1	10/04/18 15:26	10/04/18 15:26	KCS
2-Butanone (MEK)	04	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:26	10/04/18 15:26	KCS
2-Hexanone (MBK)	04	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:26	10/04/18 15:26	KCS
4-Methyl-2-pentanone (MIBK)	04	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Acetone	04	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:26	10/04/18 15:26	KCS
Acetonitrile	04	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:26	10/04/18 15:26	KCS
Acrolein	04	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:26	10/04/18 15:26	KCS
Acrylonitrile	04	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Allyl chloride	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Benzene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Bromochloromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Bromodichloromethane	04	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:26	10/04/18 15:26	KCS
Bromoform	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Bromomethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Carbon disulfide	04	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:26	10/04/18 15:26	KCS
Carbon tetrachloride	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Chlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5

Laboratory Sample ID: 18J0154-04

Grab Date/Time: 10/03/2018 15:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Chloroform	04	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:26	10/04/18 15:26	KCS
Chloromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Chloroprene	04	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:26	10/04/18 15:26	KCS
cis-1,2-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
cis-1,3-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Dibromochloromethane	04	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:26	10/04/18 15:26	KCS
Dibromomethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Dichlorodifluoromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Ethyl methacrylate	04	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Ethylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Hexachlorobutadiene	04	SW8260B	<0.80 ug/L		0.80	1	10/04/18 15:26	10/04/18 15:26	KCS
Iodomethane	04	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:26	10/04/18 15:26	KCS
Isobutyl Alcohol	04	SW8260B	<40.0 ug/L		40.0	1	10/04/18 15:26	10/04/18 15:26	KCS
m+p-Xylenes	04	SW8260B	<2.00 ug/L		2.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Methacrylonitrile	04	SW8260B	<1.50 ug/L		1.50	1	10/04/18 15:26	10/04/18 15:26	KCS
Methyl methacrylate	04	SW8260B	<2.00 ug/L		2.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Methylene chloride	04	SW8260B	<4.00 ug/L		4.00	1	10/04/18 15:26	10/04/18 15:26	KCS
o-Xylene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Propionitrile	04	SW8260B	<40.0 ug/L		40.0	1	10/04/18 15:26	10/04/18 15:26	KCS
Styrene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Tetrachloroethylene (PCE)	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Toluene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
trans-1,2-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
trans-1,3-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5	Laboratory Sample ID: 18J0154-04
Grab Date/Time: 10/03/2018 15:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	04	SW8260B	<4.00 ug/L		4.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Trichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Trichlorofluoromethane	04	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Vinyl acetate	04	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:26	10/04/18 15:26	KCS
Vinyl chloride	04	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:26	10/04/18 15:26	KCS
Xylenes, Total	04	SW8260B	<3.00 ug/L		3.00	1	10/04/18 15:26	10/04/18 15:26	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	04	SW8260B	103 %		70-120		10/04/18 15:26	10/04/18 15:26	KCS
Surr: 4-Bromofluorobenzene (Surr)	04	SW8260B	96.9 %		75-120		10/04/18 15:26	10/04/18 15:26	KCS
Surr: Dibromofluoromethane (Surr)	04	SW8260B	102 %		70-130		10/04/18 15:26	10/04/18 15:26	KCS
Surr: Toluene-d8 (Surr)	04	SW8260B	99.5 %		70-130		10/04/18 15:26	10/04/18 15:26	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	04	EPA625	Not Detected			1	10/08/18 09:35	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
1,3,5-Trinitrobenzene	04	SW8270D	<5.56 ug/L		5.56	1	10/08/18 09:35	10/08/18 20:26	SKS
1,3-Dinitrobenzene	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
1,4-Naphthoquinone	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
1-Naphthylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2,3,4,6-Tetrachlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2,4,5-Trichlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2,4,6-Trichlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2,4-Dichlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2,4-Dimethylphenol	04	SW8270D	<0.56 ug/L		0.56	1	10/08/18 09:35	10/08/18 20:26	SKS
2,4-Dinitrophenol	04	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 20:26	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5	Laboratory Sample ID: 18J0154-04
Grab Date/Time: 10/03/2018 15:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2,6-Dichlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2,6-Dinitrotoluene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2-Acetylaminofluorene	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
2-Chloronaphthalene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2-Chlorophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2-Methylnaphthalene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2-Naphthylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2-Nitroaniline	04	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:26	SKS
2-Nitrophenol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
3,3'-Dichlorobenzidine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
3,3'-Dimethylbenzidine	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
3-Methylcholanthrene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
3-Nitroaniline	04	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:26	SKS
4,6-Dinitro-2-methylphenol	04	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 20:26	SKS
4-Aminobiphenyl	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
4-Bromophenyl phenyl ether	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
4-Chloroaniline	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
4-Chlorophenyl phenyl ether	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
4-Nitroaniline	04	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:26	SKS
4-Nitrophenol	04	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 20:26	SKS
5-Nitro-o-toluidine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
7,12-Dimethylbenz (a) anthracene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Acenaphthene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Acenaphthylene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5 **Laboratory Sample ID:** 18J0154-04

Grab Date/Time: 10/03/2018 15:30

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	04	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:26	SKS
Anthracene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Benzo (a) anthracene	04	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 20:26	SKS
Benzo (a) pyrene	04	SW8270D	<0.11 ug/L		0.11	1	10/08/18 09:35	10/08/18 20:26	SKS
Benzo (b) fluoranthene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Benzo (g,h,i) perylene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Benzo (k) fluoranthene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Benzyl alcohol	04	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:26	SKS
bis (2-Chloroethoxy) methane	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
bis (2-Chloroethyl) ether	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
2,2'-Oxybis (1-chloropropane)	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
bis (2-Ethylhexyl) phthalate	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
Butyl benzyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Chlorobenzilate	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
Chrysene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Diallate	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
Dibenz (a,h) anthracene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Dibenzofuran	04	SW8270D	<5.56 ug/L		5.56	1	10/08/18 09:35	10/08/18 20:26	SKS
Diethyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Dimethoate	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
Dimethyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Di-n-butyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Di-n-octyl phthalate	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Diphenylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Disulfoton	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5

Laboratory Sample ID: 18J0154-04

Grab Date/Time: 10/03/2018 15:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	04	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:26	SKS
Ethyl parathion	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
Famphur	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
Fluoranthene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Fluorene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Hexachlorobenzene	04	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 20:26	SKS
Hexachlorobutadiene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Hexachlorocyclopentadiene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Hexachloroethane	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Hexachloropropene	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
Indeno (1,2,3-cd) pyrene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Isodrin	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Isophorone	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Isosafrole	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Kepon	04	SW8270D	<2.78 ug/L	C	2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
m+p-Cresols	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Methapyrilene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Methyl methanesulfonate	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Methyl parathion	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
Naphthalene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Nitrobenzene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
n-Nitrosodiethylamine	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
n-Nitrosodimethylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
n-Nitrosodi-n-butylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
n-Nitrosodi-n-propylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5

Laboratory Sample ID: 18J0154-04

Grab Date/Time: 10/03/2018 15:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
n-Nitrosomethylethylamine	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
n-Nitrosopiperidine	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
n-Nitrosopyrrolidine	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
o,o,o-Triethyl phosphorothioate	04	SW8270D	<11.1 ug/L	C	11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
o+m+p-Cresols	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
o-Cresol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
o-Toluidine	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
p-(Dimethylamino) azobenzene	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
p-Chloro-m-cresol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Pentachlorobenzene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Pentachloronitrobenzene (quintozene)	04	SW8270D	<1.11 ug/L		1.11	1	10/08/18 09:35	10/08/18 20:26	SKS
Phenacetin	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Phenanthrene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Phenol	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Phorate	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
p-Phenylenediamine	04	SW8270D	<11.1 ug/L	C	11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Pronamide	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Pyrene	04	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:26	SKS
Safrole	04	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:26	SKS
Surr: 2,4,6-Tribromophenol (Surr)	04	SW8270D	77.2 %		10-86		10/08/18 09:35	10/08/18 20:26	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5

Laboratory Sample ID: 18J0154-04

Grab Date/Time: 10/03/2018 15:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	04	SW8270D	75.3 %		9-87		10/08/18 09:35	10/08/18 20:26	SKS
Surr: 2-Fluorophenol (Surr)	04	SW8270D	62.2 %	S	10-52		10/08/18 09:35	10/08/18 20:26	SKS
Surr: Nitrobenzene-d5 (Surr)	04	SW8270D	77.4 %		10-98.5		10/08/18 09:35	10/08/18 20:26	SKS
Surr: Phenol-d5 (Surr)	04	SW8270D	34.8 %	S	5-33		10/08/18 09:35	10/08/18 20:26	SKS
Surr: p-Terphenyl-d14 (Surr)	04	SW8270D	106 %		27-133		10/08/18 09:35	10/08/18 20:26	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	04	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:07	HLM
PCB as Aroclor 1221	04	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:07	HLM
PCB as Aroclor 1232	04	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:07	HLM
PCB as Aroclor 1242	04	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:07	HLM
PCB as Aroclor 1248	04	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:07	HLM
PCB as Aroclor 1254	04	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:07	HLM
PCB as Aroclor 1260	04	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:07	HLM
Surr: DCB	04	SW8082A	65.0 %		30-105		10/08/18 14:02	10/09/18 15:07	HLM
Surr: TCMX	04	SW8082A	55.0 %		30-105		10/08/18 14:02	10/09/18 15:07	HLM
4,4'-DDD	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
4,4'-DDE	04	SW8081B	<0.057 ug/L	C	0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
4,4'-DDT	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Aldrin	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
alpha-BHC	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
beta-BHC	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Chlordane	04	SW8081B	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:07	HLM
delta-BHC	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Dieldrin	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Endosulfan I	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5	Laboratory Sample ID: 18J0154-04
Grab Date/Time: 10/03/2018 15:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan II	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Endosulfan sulfate	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Endrin	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Endrin aldehyde	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
gamma-BHC (Lindane)	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Heptachlor	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Heptachlor epoxide	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Methoxychlor	04	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:07	HLM
Toxaphene	04	SW8081B	<1.15 ug/L		1.15	1	10/08/18 14:02	10/09/18 15:07	HLM
<i>Surr: TCMX</i>	<i>04</i>	<i>SW8081B</i>	<i>60.0 %</i>		<i>18-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 15:07</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>04</i>	<i>SW8081B</i>	<i>70.0 %</i>		<i>27-131</i>		<i>10/08/18 14:02</i>	<i>10/09/18 15:07</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	04	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:48	SKS
2,4,5-TP (Silvex)	04	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:48	SKS
2,4-D	04	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:48	SKS
Dinoseb	04	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:48	SKS
Pentachlorophenol	04	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 13:48	SKS
<i>Surr: DCAA (Surr)</i>	<i>04</i>	<i>SW8151A</i>	<i>80.0 %</i>		<i>60-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 13:48</i>	<i>SKS</i>
Micro-extractables by GC/ECD									
1,2-Dibromoethane (EDB)	04	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 21:13	HLM
1,2,3-Trichloropropane	04	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 21:13	HLM
1,2-Dibromo-3-chloropropane (DBCP)	04	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 21:13	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-5		Laboratory Sample ID:	18J0154-04
Grab Date/Time:	10/03/2018 15:30	Field pH:	
Field Residual Cl:			

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	04	SW9012B	<0.01 mg/L	CN	0.01	1	10/11/18 13:37	10/11/18 13:37	BBP
Chromium, Hexavalent	04	SW7196A	<0.005 mg/L		0.005	1	10/04/18 09:00	10/04/18 11:00	MWL
Sulfide	04	SW9215	<1.00 mg/L		1.00	1	10/08/18 15:00	10/08/18 15:00	TMB



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3	Laboratory Sample ID: 18J0154-05
Grab Date/Time: 10/03/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	05	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:10	BG
Arsenic	05	SW6020A	<1.0 ug/L		1.0	1	10/04/18 10:20	10/05/18 15:51	RCV
Barium	05	SW6010C	0.0118 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:10	BG
Beryllium	05	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:10	BG
Cadmium	05	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:10	BG
Cobalt	05	SW6010C	<0.0040 mg/L		0.0040	1	10/04/18 10:20	10/04/18 15:10	BG
Chromium	05	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:10	BG
Copper	05	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:10	BG
Mercury	05	SW7470A	<0.00020 mg/L		0.00020	1	10/05/18 15:41	10/08/18 14:53	MWL
Nickel	05	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:10	BG
Lead	05	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:10	BG
Antimony	05	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/05/18 15:51	RCV
Selenium	05	SW6010C	<0.0500 mg/L		0.0500	1	10/04/18 10:20	10/04/18 15:10	BG
Tin	05	SW6010C	<0.0200 mg/L		0.0200	1	10/04/18 10:20	10/05/18 13:19	BG
Thallium	05	SW6020A	<1.00 ug/L		1.00	1	10/04/18 10:20	10/09/18 11:53	RCV
Vanadium	05	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:10	BG
Zinc	05	SW6010C	<0.0100 mg/L		0.0100	1	10/04/18 10:20	10/04/18 15:10	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	05	SW8260B	<0.40 ug/L		0.40	1	10/04/18 15:48	10/04/18 15:48	KCS
1,1,1-Trichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,1,2,2-Tetrachloroethane	05	SW8260B	<0.40 ug/L		0.40	1	10/04/18 15:48	10/04/18 15:48	KCS
1,1,2-Trichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,1-Dichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,1-Dichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,1-Dichloropropene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3	Laboratory Sample ID: 18J0154-05
Grab Date/Time: 10/03/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,2,4-Trichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,2-Dichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,2-Dichloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,2-Dichloropropane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,3-Dichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,3-Dichloropropane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
1,4-Dichlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
2,2-Dichloropropane	05	SW8260B	<2.00 ug/L		2.00	1	10/04/18 15:48	10/04/18 15:48	KCS
2-Butanone (MEK)	05	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:48	10/04/18 15:48	KCS
2-Hexanone (MBK)	05	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:48	10/04/18 15:48	KCS
4-Methyl-2-pentanone (MIBK)	05	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Acetone	05	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:48	10/04/18 15:48	KCS
Acetonitrile	05	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:48	10/04/18 15:48	KCS
Acrolein	05	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:48	10/04/18 15:48	KCS
Acrylonitrile	05	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Allyl chloride	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Benzene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Bromochloromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Bromodichloromethane	05	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:48	10/04/18 15:48	KCS
Bromoform	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Bromomethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Carbon disulfide	05	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:48	10/04/18 15:48	KCS
Carbon tetrachloride	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Chlorobenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3	Laboratory Sample ID: 18J0154-05
Grab Date/Time: 10/03/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Chloroform	05	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:48	10/04/18 15:48	KCS
Chloromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Chloroprene	05	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:48	10/04/18 15:48	KCS
cis-1,2-Dichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
cis-1,3-Dichloropropene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Dibromochloromethane	05	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:48	10/04/18 15:48	KCS
Dibromomethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Dichlorodifluoromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Ethyl methacrylate	05	SW8260B	<5.00 ug/L		5.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Ethylbenzene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Hexachlorobutadiene	05	SW8260B	<0.80 ug/L		0.80	1	10/04/18 15:48	10/04/18 15:48	KCS
Iodomethane	05	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:48	10/04/18 15:48	KCS
Isobutyl Alcohol	05	SW8260B	<40.0 ug/L		40.0	1	10/04/18 15:48	10/04/18 15:48	KCS
m+p-Xylenes	05	SW8260B	<2.00 ug/L		2.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Methacrylonitrile	05	SW8260B	<1.50 ug/L		1.50	1	10/04/18 15:48	10/04/18 15:48	KCS
Methyl methacrylate	05	SW8260B	<2.00 ug/L		2.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Methylene chloride	05	SW8260B	<4.00 ug/L		4.00	1	10/04/18 15:48	10/04/18 15:48	KCS
o-Xylene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Propionitrile	05	SW8260B	<40.0 ug/L		40.0	1	10/04/18 15:48	10/04/18 15:48	KCS
Styrene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Tetrachloroethylene (PCE)	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Toluene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
trans-1,2-Dichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
trans-1,3-Dichloropropene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3	Laboratory Sample ID: 18J0154-05
Grab Date/Time: 10/03/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	05	SW8260B	<4.00 ug/L		4.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Trichloroethylene	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Trichlorofluoromethane	05	SW8260B	<1.00 ug/L		1.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Vinyl acetate	05	SW8260B	<10.0 ug/L		10.0	1	10/04/18 15:48	10/04/18 15:48	KCS
Vinyl chloride	05	SW8260B	<0.50 ug/L		0.50	1	10/04/18 15:48	10/04/18 15:48	KCS
Xylenes, Total	05	SW8260B	<3.00 ug/L		3.00	1	10/04/18 15:48	10/04/18 15:48	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	05	SW8260B	104 %		70-120		10/04/18 15:48	10/04/18 15:48	KCS
Surr: 4-Bromofluorobenzene (Surr)	05	SW8260B	95.4 %		75-120		10/04/18 15:48	10/04/18 15:48	KCS
Surr: Dibromofluoromethane (Surr)	05	SW8260B	100 %		70-130		10/04/18 15:48	10/04/18 15:48	KCS
Surr: Toluene-d8 (Surr)	05	SW8260B	101 %		70-130		10/04/18 15:48	10/04/18 15:48	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	05	EPA625	Not Detected			1	10/08/18 09:35	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
1,3,5-Trinitrobenzene	05	SW8270D	<5.56 ug/L		5.56	1	10/08/18 09:35	10/08/18 20:58	SKS
1,3-Dinitrobenzene	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
1,4-Naphthoquinone	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
1-Naphthylamine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2,3,4,6-Tetrachlorophenol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2,4,5-Trichlorophenol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2,4,6-Trichlorophenol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2,4-Dichlorophenol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2,4-Dimethylphenol	05	SW8270D	<0.56 ug/L		0.56	1	10/08/18 09:35	10/08/18 20:58	SKS
2,4-Dinitrophenol	05	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 20:58	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3	Laboratory Sample ID: 18J0154-05
Grab Date/Time: 10/03/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2,6-Dichlorophenol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2,6-Dinitrotoluene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2-Acetylaminofluorene	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
2-Chloronaphthalene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2-Chlorophenol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2-Methylnaphthalene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2-Naphthylamine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2-Nitroaniline	05	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:58	SKS
2-Nitrophenol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
3,3'-Dichlorobenzidine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
3,3'-Dimethylbenzidine	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
3-Methylcholanthrene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
3-Nitroaniline	05	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:58	SKS
4,6-Dinitro-2-methylphenol	05	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 20:58	SKS
4-Aminobiphenyl	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
4-Bromophenyl phenyl ether	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
4-Chloroaniline	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
4-Chlorophenyl phenyl ether	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
4-Nitroaniline	05	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:58	SKS
4-Nitrophenol	05	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 20:58	SKS
5-Nitro-o-toluidine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
7,12-Dimethylbenz (a) anthracene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Acenaphthene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Acenaphthylene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3	Laboratory Sample ID: 18J0154-05
Grab Date/Time: 10/03/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	05	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:58	SKS
Anthracene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Benzo (a) anthracene	05	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 20:58	SKS
Benzo (a) pyrene	05	SW8270D	<0.11 ug/L		0.11	1	10/08/18 09:35	10/08/18 20:58	SKS
Benzo (b) fluoranthene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Benzo (g,h,i) perylene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Benzo (k) fluoranthene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Benzyl alcohol	05	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:58	SKS
bis (2-Chloroethoxy) methane	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
bis (2-Chloroethyl) ether	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
2,2'-Oxybis (1-chloropropane)	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
bis (2-Ethylhexyl) phthalate	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
Butyl benzyl phthalate	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Chlorobenzilate	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
Chrysene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Diallate	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
Dibenz (a,h) anthracene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Dibenzofuran	05	SW8270D	<5.56 ug/L		5.56	1	10/08/18 09:35	10/08/18 20:58	SKS
Diethyl phthalate	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Dimethoate	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
Dimethyl phthalate	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Di-n-butyl phthalate	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Di-n-octyl phthalate	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Diphenylamine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Disulfoton	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3 **Laboratory Sample ID:** 18J0154-05

Grab Date/Time: 10/03/2018 16:50

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	05	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 20:58	SKS
Ethyl parathion	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
Famphur	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
Fluoranthene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Fluorene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Hexachlorobenzene	05	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 20:58	SKS
Hexachlorobutadiene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Hexachlorocyclopentadiene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Hexachloroethane	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Hexachloropropene	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
Indeno (1,2,3-cd) pyrene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Isodrin	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Isophorone	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Isosafrole	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Kepon	05	SW8270D	<2.78 ug/L	C	2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
m+p-Cresols	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Methapyrilene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Methyl methanesulfonate	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Methyl parathion	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
Naphthalene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Nitrobenzene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
n-Nitrosodiethylamine	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
n-Nitrosodimethylamine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
n-Nitrosodi-n-butylamine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
n-Nitrosodi-n-propylamine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3	Laboratory Sample ID: 18J0154-05
Grab Date/Time: 10/03/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
n-Nitrosomethylethylamine	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
n-Nitrosopiperidine	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
n-Nitrosopyrrolidine	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
o,o,o-Triethyl phosphorothioate	05	SW8270D	<11.1 ug/L	C	11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
o+m+p-Cresols	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
o-Cresol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
o-Toluidine	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
p-(Dimethylamino) azobenzene	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
p-Chloro-m-cresol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Pentachlorobenzene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Pentachloronitrobenzene (quintozene)	05	SW8270D	<1.11 ug/L		1.11	1	10/08/18 09:35	10/08/18 20:58	SKS
Phenacetin	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Phenanthrene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Phenol	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Phorate	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
p-Phenylenediamine	05	SW8270D	<11.1 ug/L	C	11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Pronamide	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Pyrene	05	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 20:58	SKS
Safrole	05	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 20:58	SKS
Surr: 2,4,6-Tribromophenol (Surr)	05	SW8270D	75.9 %		10-86		10/08/18 09:35	10/08/18 20:58	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3	Laboratory Sample ID: 18J0154-05
Grab Date/Time: 10/03/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	05	SW8270D	56.3 %		9-87		10/08/18 09:35	10/08/18 20:58	SKS
Surr: 2-Fluorophenol (Surr)	05	SW8270D	47.0 %		10-52		10/08/18 09:35	10/08/18 20:58	SKS
Surr: Nitrobenzene-d5 (Surr)	05	SW8270D	58.8 %		10-98.5		10/08/18 09:35	10/08/18 20:58	SKS
Surr: Phenol-d5 (Surr)	05	SW8270D	25.4 %		5-33		10/08/18 09:35	10/08/18 20:58	SKS
Surr: p-Terphenyl-d14 (Surr)	05	SW8270D	98.5 %		27-133		10/08/18 09:35	10/08/18 20:58	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	05	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:25	HLM
PCB as Aroclor 1221	05	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:25	HLM
PCB as Aroclor 1232	05	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:25	HLM
PCB as Aroclor 1242	05	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:25	HLM
PCB as Aroclor 1248	05	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:25	HLM
PCB as Aroclor 1254	05	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:25	HLM
PCB as Aroclor 1260	05	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:25	HLM
Surr: DCB	05	SW8082A	45.0 %		30-105		10/08/18 14:02	10/09/18 15:25	HLM
Surr: TCMX	05	SW8082A	40.0 %		30-105		10/08/18 14:02	10/09/18 15:25	HLM
4,4'-DDD	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
4,4'-DDE	05	SW8081B	<0.057 ug/L	C	0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
4,4'-DDT	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Aldrin	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
alpha-BHC	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
beta-BHC	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Chlordane	05	SW8081B	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 15:25	HLM
delta-BHC	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Dieldrin	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Endosulfan I	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3	Laboratory Sample ID: 18J0154-05
Grab Date/Time: 10/03/2018 16:50	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan II	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Endosulfan sulfate	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Endrin	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Endrin aldehyde	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
gamma-BHC (Lindane)	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Heptachlor	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Heptachlor epoxide	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Methoxychlor	05	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 15:25	HLM
Toxaphene	05	SW8081B	<1.15 ug/L		1.15	1	10/08/18 14:02	10/09/18 15:25	HLM
<i>Surr: TCMX</i>	<i>05</i>	<i>SW8081B</i>	<i>60.0 %</i>		<i>18-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 15:25</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>05</i>	<i>SW8081B</i>	<i>65.0 %</i>		<i>27-131</i>		<i>10/08/18 14:02</i>	<i>10/09/18 15:25</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	05	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:06	SKS
2,4,5-TP (Silvex)	05	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:06	SKS
2,4-D	05	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:06	SKS
Dinoseb	05	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:06	SKS
Pentachlorophenol	05	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:06	SKS
<i>Surr: DCAA (Surr)</i>	<i>05</i>	<i>SW8151A</i>	<i>95.0 %</i>		<i>60-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 14:06</i>	<i>SKS</i>
Micro-extractables by GC/ECD									
1,2-Dibromoethane (EDB)	05	SW8011	<0.011 ug/L		0.011	1	10/08/18 12:52	10/08/18 21:32	HLM
1,2,3-Trichloropropane	05	SW8011	<0.011 ug/L		0.011	1	10/08/18 12:52	10/08/18 21:32	HLM
1,2-Dibromo-3-chloropropane (DBCP)	05	SW8011	<0.011 ug/L		0.011	1	10/08/18 12:52	10/08/18 21:32	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. 16-3		Laboratory Sample ID: 18J0154-05
Grab Date/Time:	10/03/2018 16:50	
Field Residual Cl:		Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	05	SW9012B	<0.01 mg/L	CN	0.01	1	10/11/18 13:40	10/11/18 13:40	BBP
Chromium, Hexavalent	05	SW7196A	<0.005 mg/L		0.005	1	10/04/18 09:00	10/04/18 11:00	MWL
Sulfide	05	SW9215	<1.00 mg/L		1.00	1	10/08/18 15:00	10/08/18 15:00	TMB



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. Trip Blank **Laboratory Sample ID:** 18J0154-06

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	06	SW8260B	<0.40 ug/L		0.40	1	10/04/18 13:09	10/04/18 13:09	KCS
1,1,1-Trichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,1,2,2-Tetrachloroethane	06	SW8260B	<0.40 ug/L		0.40	1	10/04/18 13:09	10/04/18 13:09	KCS
1,1,2-Trichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,1-Dichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,1-Dichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,1-Dichloropropene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,2,3-Trichloropropane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,2,4-Trichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,2-Dichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,2-Dichloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,2-Dichloropropane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,3-Dichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,3-Dichloropropane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
1,4-Dichlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
2,2-Dichloropropane	06	SW8260B	<2.00 ug/L		2.00	1	10/04/18 13:09	10/04/18 13:09	KCS
2-Butanone (MEK)	06	SW8260B	<5.00 ug/L		5.00	1	10/04/18 13:09	10/04/18 13:09	KCS
2-Hexanone (MBK)	06	SW8260B	<5.00 ug/L		5.00	1	10/04/18 13:09	10/04/18 13:09	KCS
4-Methyl-2-pentanone (MIBK)	06	SW8260B	<5.00 ug/L		5.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Acetone	06	SW8260B	<10.0 ug/L		10.0	1	10/04/18 13:09	10/04/18 13:09	KCS
Acetonitrile	06	SW8260B	<10.0 ug/L		10.0	1	10/04/18 13:09	10/04/18 13:09	KCS
Acrolein	06	SW8260B	<10.0 ug/L		10.0	1	10/04/18 13:09	10/04/18 13:09	KCS
Acrylonitrile	06	SW8260B	<5.00 ug/L		5.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Allyl chloride	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Benzene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. Trip Blank

Laboratory Sample ID: 18J0154-06

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Bromochloromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Bromodichloromethane	06	SW8260B	<0.50 ug/L		0.50	1	10/04/18 13:09	10/04/18 13:09	KCS
Bromoform	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Bromomethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Carbon disulfide	06	SW8260B	<10.0 ug/L		10.0	1	10/04/18 13:09	10/04/18 13:09	KCS
Carbon tetrachloride	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Chlorobenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Chloroethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Chloroform	06	SW8260B	<0.50 ug/L		0.50	1	10/04/18 13:09	10/04/18 13:09	KCS
Chloromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Chloroprene	06	SW8260B	<5.00 ug/L		5.00	1	10/04/18 13:09	10/04/18 13:09	KCS
cis-1,2-Dichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
cis-1,3-Dichloropropene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Dibromochloromethane	06	SW8260B	<0.50 ug/L		0.50	1	10/04/18 13:09	10/04/18 13:09	KCS
Dibromomethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Dichlorodifluoromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Ethyl methacrylate	06	SW8260B	<5.00 ug/L		5.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Ethylbenzene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Hexachlorobutadiene	06	SW8260B	<0.80 ug/L		0.80	1	10/04/18 13:09	10/04/18 13:09	KCS
Iodomethane	06	SW8260B	<10.0 ug/L		10.0	1	10/04/18 13:09	10/04/18 13:09	KCS
Isobutyl Alcohol	06	SW8260B	<40.0 ug/L		40.0	1	10/04/18 13:09	10/04/18 13:09	KCS
m+p-Xylenes	06	SW8260B	<2.00 ug/L		2.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Methacrylonitrile	06	SW8260B	<1.50 ug/L		1.50	1	10/04/18 13:09	10/04/18 13:09	KCS
Methyl methacrylate	06	SW8260B	<2.00 ug/L		2.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Methylene chloride	06	SW8260B	<4.00 ug/L		4.00	1	10/04/18 13:09	10/04/18 13:09	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. Trip Blank **Laboratory Sample ID:** 18J0154-06

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
o-Xylene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Propionitrile	06	SW8260B	<40.0 ug/L		40.0	1	10/04/18 13:09	10/04/18 13:09	KCS
Styrene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Tetrachloroethylene (PCE)	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Toluene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
trans-1,2-Dichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
trans-1,3-Dichloropropene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
trans-1,4-Dichloro-2-butene	06	SW8260B	<4.00 ug/L		4.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Trichloroethylene	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Trichlorofluoromethane	06	SW8260B	<1.00 ug/L		1.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Vinyl acetate	06	SW8260B	<10.0 ug/L		10.0	1	10/04/18 13:09	10/04/18 13:09	KCS
Vinyl chloride	06	SW8260B	<0.50 ug/L		0.50	1	10/04/18 13:09	10/04/18 13:09	KCS
Xylenes, Total	06	SW8260B	<3.00 ug/L		3.00	1	10/04/18 13:09	10/04/18 13:09	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	06	SW8260B	101 %		70-120		10/04/18 13:09	10/04/18 13:09	KCS
Surr: 4-Bromofluorobenzene (Surr)	06	SW8260B	95.9 %		75-120		10/04/18 13:09	10/04/18 13:09	KCS
Surr: Dibromofluoromethane (Surr)	06	SW8260B	99.6 %		70-130		10/04/18 13:09	10/04/18 13:09	KCS
Surr: Toluene-d8 (Surr)	06	SW8260B	101 %		70-130		10/04/18 13:09	10/04/18 13:09	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0154

Analytical Results

Sample I.D. Trip Blank	Laboratory Sample ID: 18J0154-07
Grab Date/Time: 09/25/2018 11:25	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Micro-extractables by GC/ECD									
1,2-Dibromoethane (EDB)	07	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 21:51	HLM
1,2,3-Trichloropropane	07	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 21:51	HLM
1,2-Dibromo-3-chloropropane (DBCP)	07	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 21:51	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg VA, 24060

Date Issued: 10/11/2018 16:43

Submitted To: Jeff Fisher
 Client Site I.D.: CVTC

Project Number: 18-760
 Purchase Order: 18-760

Analytical Summary

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.2/R2.8			
18J0154-01	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0173	AJ80018
18J0154-01	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0227	AJ80044
18J0154-02	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0173	AJ80018
18J0154-02	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0227	AJ80044
18J0154-03	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0173	AJ80018
18J0154-03	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0227	AJ80044
18J0154-04	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0173	AJ80018
18J0154-04	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0227	AJ80044
18J0154-05	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0173	AJ80018
18J0154-05	50.0 mL / 50.0 mL	SW6010C	BBJ0128	SBJ0227	AJ80044

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method: EPA200.8 R5.4			
18J0154-01	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0214	AJ80040
18J0154-01	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0275	AJ80052
18J0154-02	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0214	AJ80040
18J0154-02	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0275	AJ80052
18J0154-03	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0214	AJ80040
18J0154-03	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0275	AJ80052
18J0154-04	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0214	AJ80040
18J0154-04	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0275	AJ80052
18J0154-05	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0214	AJ80040
18J0154-05	50.0 mL / 50.0 mL	SW6020A	BBJ0129	SBJ0275	AJ80052

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Wet Chemistry Analysis		Preparation Method: No Prep Wet Chem			
18J0154-01	100 mL / 100 mL	SW7196A	BBJ0159	SBJ0162	AJ80032
18J0154-02	100 mL / 100 mL	SW7196A	BBJ0159	SBJ0162	AJ80032
18J0154-03	100 mL / 100 mL	SW7196A	BBJ0159	SBJ0162	AJ80032



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18J0154-04	100 mL / 100 mL	SW7196A	BBJ0159	SBJ0162	AJ80032
18J0154-05	100 mL / 100 mL	SW7196A	BBJ0159	SBJ0162	AJ80032

Wet Chemistry Analysis **Preparation Method: No Prep Wet Chem**

18J0154-01	6.00 mL / 6.00 mL	SW9215	BBJ0258	SBJ0261	
18J0154-02	6.00 mL / 6.00 mL	SW9215	BBJ0258	SBJ0261	
18J0154-03	6.00 mL / 6.00 mL	SW9215	BBJ0258	SBJ0261	
18J0154-04	6.00 mL / 6.00 mL	SW9215	BBJ0258	SBJ0261	
18J0154-05	6.00 mL / 6.00 mL	SW9215	BBJ0258	SBJ0261	

Wet Chemistry Analysis **Preparation Method: No Prep Wet Chem**

18J0154-01	6.00 mL / 6.00 mL	SW9012B	BBJ0380	SBJ0388	AJ80068
18J0154-02	6.00 mL / 6.00 mL	SW9012B	BBJ0380	SBJ0388	AJ80068
18J0154-03	6.00 mL / 6.00 mL	SW9012B	BBJ0380	SBJ0388	AJ80068
18J0154-04	6.00 mL / 6.00 mL	SW9012B	BBJ0380	SBJ0388	AJ80068
18J0154-05	6.00 mL / 6.00 mL	SW9012B	BBJ0380	SBJ0388	AJ80068

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Semivolatile Organic Compounds by GCMS **Preparation Method: SW3510C**

18J0154-01	850 mL / 1.00 mL	EPA625	BBJ0238	SBJ0280	AF80101
18J0154-02	940 mL / 1.00 mL	EPA625	BBJ0238	SBJ0280	AF80101
18J0154-03	880 mL / 1.00 mL	EPA625	BBJ0238	SBJ0280	AF80101
18J0154-04	900 mL / 1.00 mL	EPA625	BBJ0238	SBJ0280	AF80101
18J0154-05	900 mL / 1.00 mL	EPA625	BBJ0238	SBJ0280	AF80101
18J0154-01	850 mL / 1.00 mL	SW8270D	BBJ0238	SBJ0280	AF80101
18J0154-02	940 mL / 1.00 mL	SW8270D	BBJ0238	SBJ0280	AF80101
18J0154-03	880 mL / 1.00 mL	SW8270D	BBJ0238	SBJ0280	AF80101
18J0154-04	900 mL / 1.00 mL	SW8270D	BBJ0238	SBJ0280	AF80101
18J0154-05	900 mL / 1.00 mL	SW8270D	BBJ0238	SBJ0280	AF80101

Organochlorine Pesticides and PCBs by GC/ECD **Preparation Method: SW3510C**

18J0154-01	870 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0154-02	860 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0154-03	860 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0154-04	870 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0154-05	870 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0154-01	870 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18J0154-02	860 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059
18J0154-03	860 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059
18J0154-04	870 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059
18J0154-05	870 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059

Organochlorine Herbicides by GC/ECD		Preparation Method:			
		SW3510C			
18J0154-01	900 mL / 5.00 mL	SW8151A	BBJ0257	SBJ0295	AG80138
18J0154-02	900 mL / 5.00 mL	SW8151A	BBJ0257	SBJ0295	AG80138
18J0154-03	900 mL / 5.00 mL	SW8151A	BBJ0257	SBJ0295	AG80138
18J0154-04	900 mL / 5.00 mL	SW8151A	BBJ0257	SBJ0295	AG80138
18J0154-05	900 mL / 5.00 mL	SW8151A	BBJ0257	SBJ0295	AG80138

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS		Preparation Method:			
		SW5030B			
18J0154-01	5.00 mL / 5.00 mL	SW8260B	BBJ0184	SBJ0179	AH80138
18J0154-02	5.00 mL / 5.00 mL	SW8260B	BBJ0184	SBJ0179	AH80138
18J0154-03	5.00 mL / 5.00 mL	SW8260B	BBJ0184	SBJ0179	AH80138
18J0154-04	5.00 mL / 5.00 mL	SW8260B	BBJ0184	SBJ0179	AH80138
18J0154-05	5.00 mL / 5.00 mL	SW8260B	BBJ0184	SBJ0179	AH80138
18J0154-06	5.00 mL / 5.00 mL	SW8260B	BBJ0184	SBJ0179	AH80138

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method:			
		SW7470A			
18J0154-01	20.0 mL / 20.0 mL	SW7470A	BBJ0217	SBJ0250	AJ80047
18J0154-02	20.0 mL / 20.0 mL	SW7470A	BBJ0217	SBJ0250	AJ80047
18J0154-03	20.0 mL / 20.0 mL	SW7470A	BBJ0217	SBJ0250	AJ80047
18J0154-04	20.0 mL / 20.0 mL	SW7470A	BBJ0217	SBJ0250	AJ80047
18J0154-05	20.0 mL / 20.0 mL	SW7470A	BBJ0217	SBJ0250	AJ80047

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Micro-extractables by GC/ECD		Preparation Method:			
		SW8011			
18J0154-01	56.0 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/11/2018 16:43
201 Church Street
Blacksburg VA, 24060

Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18J0154-02	57.9 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045
18J0154-03	58.9 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045
18J0154-04	57.8 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045
18J0154-05	56.0 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045
18J0154-07	58.1 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0128 - EPA200.2/R2.8

Blank (BBJ0128-BLK1)

Prepared & Analyzed: 10/04/2018

Barium	<0.0100 mg/L	0.0100	mg/L
Beryllium	<0.0040 mg/L	0.0040	mg/L
Cadmium	<0.0040 mg/L	0.0040	mg/L
Chromium	<0.0100 mg/L	0.0100	mg/L
Cobalt	<0.0040 mg/L	0.0040	mg/L
Copper	<0.0100 mg/L	0.0100	mg/L
Lead	<0.0100 mg/L	0.0100	mg/L
Nickel	<0.0100 mg/L	0.0100	mg/L
Selenium	<0.0500 mg/L	0.0500	mg/L
Silver	<0.0100 mg/L	0.0100	mg/L
Vanadium	<0.0100 mg/L	0.0100	mg/L
Zinc	<0.0100 mg/L	0.0100	mg/L

Blank (BBJ0128-BLK2)

Prepared: 10/04/2018 Analyzed: 10/05/2018

Barium	<0.0100 mg/L	0.0100	mg/L
Cadmium	<0.0040 mg/L	0.0040	mg/L
Chromium	<0.0100 mg/L	0.0100	mg/L
Lead	<0.0100 mg/L	0.0100	mg/L
Selenium	<0.0500 mg/L	0.0500	mg/L
Silver	<0.0100 mg/L	0.0100	mg/L
Tin	<0.0200 mg/L	0.0200	mg/L

LCS (BBJ0128-BS1)

Prepared & Analyzed: 10/04/2018

Barium	0.560 mg/L	0.0100	mg/L	0.500 mg/L	112	80-120
Beryllium	0.532 mg/L	0.0040	mg/L	0.500 mg/L	106	80-120
Cadmium	0.550 mg/L	0.0040	mg/L	0.500 mg/L	110	80-120
Chromium	0.564 mg/L	0.0100	mg/L	0.500 mg/L	113	80-120
Cobalt	0.555 mg/L	0.0040	mg/L	0.500 mg/L	111	80-120
Copper	0.542 mg/L	0.0100	mg/L	0.500 mg/L	108	80-120
Lead	0.559 mg/L	0.0100	mg/L	0.500 mg/L	112	80-120
Nickel	0.5608 mg/L	0.0100	mg/L	0.500 mg/L	112	80-120
Selenium	0.562 mg/L	0.0500	mg/L	0.500 mg/L	112	80-120



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0128 - EPA200.2/R2.8

LCS (BBJ0128-BS1)

Prepared & Analyzed: 10/04/2018

Silver	0.117 mg/L	0.0100	mg/L	0.100	mg/L	117	80-120			E
Vanadium	0.562 mg/L	0.0100	mg/L	0.500	mg/L	112	80-120			
Zinc	0.560 mg/L	0.0100	mg/L	0.500	mg/L	112	80-120			

LCS (BBJ0128-BS2)

Prepared: 10/04/2018 Analyzed: 10/05/2018

Barium	0.513 mg/L	0.0100	mg/L	0.500	mg/L	103	80-120			
Cadmium	0.510 mg/L	0.0040	mg/L	0.500	mg/L	102	80-120			
Chromium	0.514 mg/L	0.0100	mg/L	0.500	mg/L	103	80-120			
Lead	0.519 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120			
Selenium	0.520 mg/L	0.0500	mg/L	0.500	mg/L	104	80-120			
Silver	0.0989 mg/L	0.0100	mg/L	0.100	mg/L	98.9	80-120			
Tin	0.0925 mg/L	0.0200	mg/L	0.100	mg/L	92.5	80-120			

LCS Dup (BBJ0128-BSD1)

Prepared & Analyzed: 10/04/2018

Barium	0.561 mg/L	0.0100	mg/L	0.500	mg/L	112	80-120	0.343	20	
Beryllium	0.537 mg/L	0.0040	mg/L	0.500	mg/L	107	80-120	0.981	20	
Cadmium	0.553 mg/L	0.0040	mg/L	0.500	mg/L	111	80-120	0.377	20	
Chromium	0.566 mg/L	0.0100	mg/L	0.500	mg/L	113	80-120	0.290	20	
Cobalt	0.558 mg/L	0.0040	mg/L	0.500	mg/L	112	80-120	0.413	20	
Copper	0.546 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120	0.769	20	
Lead	0.565 mg/L	0.0100	mg/L	0.500	mg/L	113	80-120	1.02	20	
Nickel	0.5628 mg/L	0.0100	mg/L	0.500	mg/L	113	80-120	0.351	20	
Selenium	0.561 mg/L	0.0500	mg/L	0.500	mg/L	112	80-120	0.176	20	
Silver	0.116 mg/L	0.0100	mg/L	0.100	mg/L	116	80-120	0.775	20	E
Vanadium	0.563 mg/L	0.0100	mg/L	0.500	mg/L	113	80-120	0.215	20	
Zinc	0.560 mg/L	0.0100	mg/L	0.500	mg/L	112	80-120	0.0159	20	

LCS Dup (BBJ0128-BSD2)

Prepared: 10/04/2018 Analyzed: 10/05/2018

Barium	0.520 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	1.25	20	
Cadmium	0.515 mg/L	0.0040	mg/L	0.500	mg/L	103	80-120	0.895	20	
Chromium	0.519 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	1.03	20	
Lead	0.518 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	0.105	20	
Selenium	0.512 mg/L	0.0500	mg/L	0.500	mg/L	102	80-120	1.50	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0128 - EPA200.2/R2.8

LCS Dup (BBJ0128-BSD2)

Prepared: 10/04/2018 Analyzed: 10/05/2018

Silver	0.100 mg/L	0.0100	mg/L	0.100	mg/L	100	80-120	1.27	20	E
Tin	0.0940 mg/L	0.0200	mg/L	0.100	mg/L	94.0	80-120	1.51	20	

Matrix Spike (BBJ0128-MS1)

Source: 18J0142-01

Prepared & Analyzed: 10/04/2018

Barium	0.564 mg/L	0.0100	mg/L	0.500	0.0274 mg/L	107	75-125			
Beryllium	0.516 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	103	75-125			
Cadmium	0.535 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	107	75-125			
Chromium	0.550 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	110	75-125			
Cobalt	0.537 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	107	75-125			
Copper	0.531 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	106	75-125			
Lead	0.546 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	109	75-125			
Nickel	0.5427 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	109	75-125			
Selenium	0.539 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	108	75-125			
Silver	0.114 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	114	75-125			E
Vanadium	0.549 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	110	75-125			
Zinc	0.546 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	109	75-125			

Matrix Spike (BBJ0128-MS2)

Source: 18J0142-01

Prepared: 10/04/2018 Analyzed: 10/05/2018

Barium	0.529 mg/L	0.0100	mg/L	0.500	0.0274 mg/L	100	75-125			
Cadmium	0.505 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	101	75-125			
Chromium	0.506 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Lead	0.506 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125			
Selenium	0.500 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	100	75-125			
Silver	0.0971 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	97.1	75-125			
Tin	0.0921 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L	92.1	75-125			

Matrix Spike Dup (BBJ0128-MSD1)

Source: 18J0142-01

Prepared & Analyzed: 10/04/2018

Barium	0.569 mg/L	0.0100	mg/L	0.500	0.0274 mg/L	108	75-125	0.834	20	
Beryllium	0.529 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	106	75-125	2.53	20	
Cadmium	0.549 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	110	75-125	2.54	20	
Chromium	0.568 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	114	75-125	3.21	20	
Cobalt	0.551 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	110	75-125	2.51	20	
Copper	0.546 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	109	75-125	2.76	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0128 - EPA200.2/R2.8

Matrix Spike Dup (BBJ0128-MSD1)		Source: 18J0142-01			Prepared & Analyzed: 10/04/2018					
Lead	0.556 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	111	75-125	1.87	20	
Nickel	0.5554 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	111	75-125	2.31	20	
Selenium	0.550 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	110	75-125	2.12	20	
Silver	0.114 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	114	75-125	0.391	20	E
Vanadium	0.561 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	112	75-125	2.08	20	
Zinc	0.552 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	110	75-125	1.05	20	

Matrix Spike Dup (BBJ0128-MSD2)		Source: 18J0142-01			Prepared: 10/04/2018 Analyzed: 10/05/2018					
Barium	0.532 mg/L	0.0100	mg/L	0.500	0.0274 mg/L	101	75-125	0.593	20	
Cadmium	0.509 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	102	75-125	0.731	20	
Chromium	0.510 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125	0.657	20	
Lead	0.510 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	102	75-125	0.861	20	
Selenium	0.511 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	102	75-125	1.98	20	
Silver	0.0978 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	97.8	75-125	0.672	20	
Tin	0.0926 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L	92.6	75-125	0.539	20	

Batch BBJ0129 - EPA200.8 R5.4

Blank (BBJ0129-BLK1)		Prepared: 10/04/2018 Analyzed: 10/05/2018								
Antimony	<1.00 ug/L	1.00	ug/L							
Arsenic	<1.0 ug/L	1.0	ug/L							

Blank (BBJ0129-BLK2)		Prepared: 10/04/2018 Analyzed: 10/09/2018								
Antimony	<1.00 ug/L	1.00	ug/L							
Arsenic	<1.0 ug/L	1.0	ug/L							
Thallium	<1.00 ug/L	1.00	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BBJ0129 - EPA200.8 R5.4										
LCS (BBJ0129-BS1) Prepared: 10/04/2018 Analyzed: 10/05/2018										
Antimony	50.4 ug/L	1.00	ug/L	50.0	ug/L	101	80-120			
Arsenic	52 ug/L	1.0	ug/L	50.0	ug/L	103	80-120			
LCS (BBJ0129-BS2) Prepared: 10/04/2018 Analyzed: 10/09/2018										
Antimony	53.3 ug/L	1.00	ug/L	50.0	ug/L	107	80-120			
Arsenic	52 ug/L	1.0	ug/L	50.0	ug/L	104	80-120			
Thallium	55.3 ug/L	1.00	ug/L	50.0	ug/L	111	80-120			
LCS Dup (BBJ0129-BSD1) Prepared: 10/04/2018 Analyzed: 10/05/2018										
Antimony	51.5 ug/L	1.00	ug/L	50.0	ug/L	103	80-120	2.23	20	
Arsenic	52 ug/L	1.0	ug/L	50.0	ug/L	104	80-120	0.262	20	
Matrix Spike (BBJ0129-MS1) Source: 18J0142-01 Prepared: 10/04/2018 Analyzed: 10/05/2018										
Antimony	51.4 ug/L	1.00	ug/L	50.0	<1.00 ug/L	103	75-125			
Arsenic	53 ug/L	1.0	ug/L	50.0	<1.0 ug/L	106	75-125			
Matrix Spike (BBJ0129-MS2) Source: 18J0142-01 Prepared: 10/04/2018 Analyzed: 10/09/2018										
Antimony	52.7 ug/L	1.00	ug/L	50.0	<1.00 ug/L	105	75-125			
Arsenic	51 ug/L	1.0	ug/L	50.0	<1.0 ug/L	102	75-125			
Thallium	54.2 ug/L	1.00	ug/L	50.0	<1.00 ug/L	108	75-125			
Matrix Spike Dup (BBJ0129-MSD1) Source: 18J0142-01 Prepared: 10/04/2018 Analyzed: 10/05/2018										
Antimony	52.8 ug/L	1.00	ug/L	50.0	<1.00 ug/L	106	75-125	2.77	20	
Arsenic	53 ug/L	1.0	ug/L	50.0	<1.0 ug/L	105	75-125	0.216	20	
Matrix Spike Dup (BBJ0129-MSD2) Source: 18J0142-01 Prepared: 10/04/2018 Analyzed: 10/09/2018										
Antimony	53.9 ug/L	1.00	ug/L	50.0	<1.00 ug/L	108	75-125	2.20	20	
Arsenic	52 ug/L	1.0	ug/L	50.0	<1.0 ug/L	105	75-125	2.66	20	
Thallium	54.6 ug/L	1.00	ug/L	50.0	<1.00 ug/L	109	75-125	0.797	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BBJ0217 - SW7470A										
Blank (BBJ0217-BLK1) Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	<0.00020 mg/L	0.00020	mg/L							
LCS (BBJ0217-BS1) Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00254 mg/L	0.00020	mg/L	0.00250 mg/L		102	80-120			
LCS Dup (BBJ0217-BSD1) Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00254 mg/L	0.00020	mg/L	0.00250 mg/L		102	80-120	0.146	20	
Matrix Spike (BBJ0217-MS1) Source: 1811076-02 Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00241 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		96.6	80-120			
Matrix Spike (BBJ0217-MS2) Source: 1811081-01 Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00182 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		72.7	80-120			M
Matrix Spike (BBJ0217-MS3) Source: 1811110-05 Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00256 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		103	80-120			
Matrix Spike Dup (BBJ0217-MSD1) Source: 1811076-02 Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00238 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		95.3	80-120	1.30	20	
Matrix Spike Dup (BBJ0217-MSD2) Source: 1811081-01 Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00176 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		70.3	80-120	3.32	20	M
Matrix Spike Dup (BBJ0217-MSD3) Source: 1811110-05 Prepared: 10/05/2018 Analyzed: 10/08/2018										
Mercury	0.00272 mg/L	0.00020	mg/L	0.00250 <0.00020 mg/L		109	80-120	5.83	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0184 - SW5030B

Blank (BBJ0184-BLK1)

Prepared & Analyzed: 10/04/2018

1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L							
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L							
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,2-Dichloropropane	<1.00 ug/L	1.00	ug/L							
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L							
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
2,2-Dichloropropane	<2.00 ug/L	2.00	ug/L							
2-Butanone (MEK)	<5.00 ug/L	5.00	ug/L							
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L							
Acetone	<10.0 ug/L	10.0	ug/L							
Acetonitrile	<10.0 ug/L	10.0	ug/L							
Acrolein	<10.0 ug/L	10.0	ug/L							
Acrylonitrile	<5.00 ug/L	5.00	ug/L							
Allyl chloride	<1.00 ug/L	1.00	ug/L							
Benzene	<1.00 ug/L	1.00	ug/L							
Bromochloromethane	<1.00 ug/L	1.00	ug/L							
Bromodichloromethane	<0.50 ug/L	0.50	ug/L							
Bromoform	<1.00 ug/L	1.00	ug/L							
Bromomethane	<1.00 ug/L	1.00	ug/L							
Carbon disulfide	<10.0 ug/L	10.0	ug/L							
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0184 - SW5030B

Blank (BBJ0184-BLK1)

Prepared & Analyzed: 10/04/2018

Chlorobenzene	<1.00 ug/L	1.00	ug/L							
Chloroethane	<1.00 ug/L	1.00	ug/L							
Chloroform	<0.50 ug/L	0.50	ug/L							
Chloromethane	<1.00 ug/L	1.00	ug/L							
Chloroprene	<5.00 ug/L	5.00	ug/L							
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
Dibromochloromethane	<0.50 ug/L	0.50	ug/L							
Dibromomethane	<1.00 ug/L	1.00	ug/L							
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L							
Ethyl methacrylate	<5.00 ug/L	5.00	ug/L							
Ethylbenzene	<1.00 ug/L	1.00	ug/L							
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L							
Iodomethane	<10.0 ug/L	10.0	ug/L							
Isobutyl Alcohol	<40.0 ug/L	40.0	ug/L							
m+p-Xylenes	<2.00 ug/L	2.00	ug/L							
Methacrylonitrile	<1.50 ug/L	1.50	ug/L							
Methyl methacrylate	<2.00 ug/L	2.00	ug/L							
Methylene chloride	<4.00 ug/L	4.00	ug/L							
o-Xylene	<1.00 ug/L	1.00	ug/L							
Propionitrile	<40.0 ug/L	40.0	ug/L							
Styrene	<1.00 ug/L	1.00	ug/L							
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L							
Toluene	<1.00 ug/L	1.00	ug/L							
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
trans-1,4-Dichloro-2-butene	<4.00 ug/L	4.00	ug/L							
Trichloroethylene	<1.00 ug/L	1.00	ug/L							
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L							
Vinyl acetate	<10.0 ug/L	10.0	ug/L							
Vinyl chloride	<0.50 ug/L	0.50	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0184 - SW5030B

Blank (BBJ0184-BLK1)

Prepared & Analyzed: 10/04/2018

Xylenes, Total	<3.00 ug/L	3.00	ug/L						
Surr: 1,2-Dichloroethane-d4 (Surr)	49.7		ug/L	50.0		99.4	70-120		
Surr: 4-Bromofluorobenzene (Surr)	47.2		ug/L	50.0		94.4	75-120		
Surr: Dibromofluoromethane (Surr)	50.8		ug/L	50.0		102	70-130		
Surr: Toluene-d8 (Surr)	50.4		ug/L	50.0		101	70-130		

LCS (BBJ0184-BS1)

Prepared & Analyzed: 10/04/2018

1,1,1,2-Tetrachloroethane	45.8 ug/L	0.4	ug/L	50.0	ug/L	91.6	80-130		
1,1,1-Trichloroethane	45.2 ug/L	1	ug/L	50.0	ug/L	90.5	65-130		
1,1,2,2-Tetrachloroethane	43.8 ug/L	0.4	ug/L	50.0	ug/L	87.5	65-130		
1,1,2-Trichloroethane	46.2 ug/L	1	ug/L	50.0	ug/L	92.4	75-125		
1,1-Dichloroethane	43.5 ug/L	1	ug/L	50.0	ug/L	87.1	70-135		
1,1-Dichloroethylene	42.4 ug/L	1	ug/L	50.0	ug/L	84.8	70-130		
1,1-Dichloropropene	46.5 ug/L	1	ug/L	50.0	ug/L	93.0	75-135		
1,2,3-Trichloropropane	45.8 ug/L	1	ug/L	50.0	ug/L	91.7	75-125		
1,2,4-Trichlorobenzene	42.8 ug/L	1	ug/L	50.0	ug/L	85.5	65-135		
1,2-Dichlorobenzene	46.2 ug/L	1	ug/L	50.0	ug/L	92.5	70-120		
1,2-Dichloroethane	40.0 ug/L	1	ug/L	50.0	ug/L	80.0	70-130		
1,2-Dichloropropane	41.9 ug/L	1	ug/L	50.0	ug/L	83.9	75-125		
1,3-Dichlorobenzene	49.0 ug/L	1	ug/L	50.0	ug/L	97.9	75-125		
1,3-Dichloropropane	42.3 ug/L	1	ug/L	50.0	ug/L	84.5	75-125		
1,4-Dichlorobenzene	47.6 ug/L	1	ug/L	50.0	ug/L	95.2	75-125		
2,2-Dichloropropane	48.2 ug/L	2	ug/L	50.0	ug/L	96.3	70-135		
2-Butanone (MEK)	42.6 ug/L	5	ug/L	50.0	ug/L	85.2	30-150		
2-Hexanone (MBK)	49.2 ug/L	5	ug/L	50.0	ug/L	98.3	55-130		
4-Methyl-2-pentanone (MIBK)	44.9 ug/L	5	ug/L	50.0	ug/L	89.9	60-135		
Acetone	43.9 ug/L	10	ug/L	50.0	ug/L	87.8	40-140		
Acrylonitrile	236 ug/L	5	ug/L	250	ug/L	94.4	70-130		
Benzene	44.7 ug/L	1	ug/L	50.0	ug/L	89.4	80-120		
Bromochloromethane	44.1 ug/L	1	ug/L	50.0	ug/L	88.2	65-130		
Bromodichloromethane	45.2 ug/L	0.5	ug/L	50.0	ug/L	90.5	75-120		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0184 - SW5030B

LCS (BBJ0184-BS1)

Prepared & Analyzed: 10/04/2018

Bromoform	48.9 ug/L	1	ug/L	50.0	ug/L	97.8	70-130			
Bromomethane	37.9 ug/L	1	ug/L	50.0	ug/L	75.8	30-145			
Carbon disulfide	46.1 ug/L	10	ug/L	50.0	ug/L	92.2	35-160			
Carbon tetrachloride	48.6 ug/L	1	ug/L	50.0	ug/L	97.3	65-140			
Chlorobenzene	46.1 ug/L	1	ug/L	50.0	ug/L	92.2	80-120			
Chloroethane	41.5 ug/L	1	ug/L	50.0	ug/L	83.0	60-135			
Chloroform	43.7 ug/L	0.5	ug/L	50.0	ug/L	87.4	65-135			
Chloromethane	36.4 ug/L	1	ug/L	50.0	ug/L	72.9	40-125			
cis-1,2-Dichloroethylene	43.9 ug/L	1	ug/L	50.0	ug/L	87.9	70-125			
cis-1,3-Dichloropropene	44.5 ug/L	1	ug/L	50.0	ug/L	88.9	70-130			
Dibromochloromethane	46.3 ug/L	0.5	ug/L	50.0	ug/L	92.7	60-135			
Dibromomethane	43.4 ug/L	1	ug/L	50.0	ug/L	86.7	75-125			
Dichlorodifluoromethane	32.4 ug/L	1	ug/L	50.0	ug/L	64.9	30-155			
Ethylbenzene	48.4 ug/L	1	ug/L	50.0	ug/L	96.8	75-125			
Hexachlorobutadiene	47.3 ug/L	0.8	ug/L	50.0	ug/L	94.7	50-140			
m+p-Xylenes	98.3 ug/L	2	ug/L	100	ug/L	98.3	75-130			
Methylene chloride	41.4 ug/L	4	ug/L	50.0	ug/L	82.8	55-140			
o-Xylene	47.8 ug/L	1	ug/L	50.0	ug/L	95.6	80-120			
Styrene	50.6 ug/L	1	ug/L	50.0	ug/L	101	65-135			
Tetrachloroethylene (PCE)	69.2 ug/L	1	ug/L	50.0	ug/L	138	45-150			
Toluene	44.2 ug/L	1	ug/L	50.0	ug/L	88.4	75-120			
trans-1,2-Dichloroethylene	43.4 ug/L	1	ug/L	50.0	ug/L	86.8	60-140			
trans-1,3-Dichloropropene	39.5 ug/L	1	ug/L	50.0	ug/L	79.0	55-140			
Trichloroethylene	43.9 ug/L	1	ug/L	50.0	ug/L	87.8	70-125			
Trichlorofluoromethane	40.3 ug/L	1	ug/L	50.0	ug/L	80.6	60-145			
Vinyl chloride	37.7 ug/L	0.5	ug/L	50.0	ug/L	75.4	50-145			
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	50.0		ug/L	50.0	ug/L	99.9	70-120			
Surr: 4-Bromofluorobenzene (Surr)	50.3		ug/L	50.0	ug/L	101	75-120			
Surr: Dibromofluoromethane (Surr)	47.8		ug/L	50.0	ug/L	95.5	70-130			
Surr: Toluene-d8 (Surr)	49.4		ug/L	50.0	ug/L	98.7	70-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0184 - SW5030B

Duplicate (BBJ0184-DUP1)	Source: 18J0076-01			Prepared & Analyzed: 10/04/2018						
1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40 ug/L				NA	30	
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L	<0.40 ug/L				NA	30	
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,2-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
2,2-Dichloropropane	<2.00 ug/L	2.00	ug/L	<2.00 ug/L				NA	30	
2-Butanone (MEK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L				NA	30	
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L				NA	30	
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L	<5.00 ug/L				NA	30	
Acetone	22.8 ug/L	10.0	ug/L	19.5 ug/L				15.8	30	
Acetonitrile	<10.0 ug/L	10.0	ug/L	<10.0 ug/L				NA	30	
Acrolein	<10.0 ug/L	10.0	ug/L	<10.0 ug/L				NA	30	
Acrylonitrile	<5.00 ug/L	5.00	ug/L	<5.00 ug/L				NA	30	
Allyl chloride	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Benzene	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Bromochloromethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Bromodichloromethane	<0.50 ug/L	0.50	ug/L	<0.50 ug/L				NA	30	
Bromoform	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Bromomethane	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	
Carbon disulfide	<10.0 ug/L	10.0	ug/L	<10.0 ug/L				NA	30	
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L	<1.00 ug/L				NA	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0184 - SW5030B

Duplicate (BBJ0184-DUP1)

Source: 18J0076-01

Prepared & Analyzed: 10/04/2018

Chlorobenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Chloroethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Chloroform	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Chloromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Chloroprene	<5.00 ug/L	5.00	ug/L		<5.00 ug/L			NA	30	
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Dibromochloromethane	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	
Dibromomethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Ethyl methacrylate	<5.00 ug/L	5.00	ug/L		<5.00 ug/L			NA	30	
Ethylbenzene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L		<0.80 ug/L			NA	30	
Iodomethane	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Isobutyl Alcohol	<40.0 ug/L	40.0	ug/L		<40.0 ug/L			NA	30	
m+p-Xylenes	<2.00 ug/L	2.00	ug/L		<2.00 ug/L			NA	30	
Methacrylonitrile	<1.50 ug/L	1.50	ug/L		<1.50 ug/L			NA	30	
Methyl methacrylate	<2.00 ug/L	2.00	ug/L		<2.00 ug/L			NA	30	
Methylene chloride	<4.00 ug/L	4.00	ug/L		<4.00 ug/L			NA	30	
o-Xylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Propionitrile	<40.0 ug/L	40.0	ug/L		<40.0 ug/L			NA	30	
Styrene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Toluene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
trans-1,4-Dichloro-2-butene	<4.00 ug/L	4.00	ug/L		<4.00 ug/L			NA	30	
Trichloroethylene	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L		<1.00 ug/L			NA	30	
Vinyl acetate	<10.0 ug/L	10.0	ug/L		<10.0 ug/L			NA	30	
Vinyl chloride	<0.50 ug/L	0.50	ug/L		<0.50 ug/L			NA	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0184 - SW5030B

Duplicate (BBJ0184-DUP1)	Source: 18J0076-01			Prepared & Analyzed: 10/04/2018						
Xylenes, Total	<3.00 ug/L	3.00	ug/L	<3.00 ug/L				NA	30	
Surr: 1,2-Dichloroethane-d4 (Surr)	49.8		ug/L	50.0	ug/L	99.5	70-120			
Surr: 4-Bromofluorobenzene (Surr)	46.9		ug/L	50.0	ug/L	93.8	75-120			
Surr: Dibromofluoromethane (Surr)	50.7		ug/L	50.0	ug/L	101	70-130			
Surr: Toluene-d8 (Surr)	50.1		ug/L	50.0	ug/L	100	70-130			

Matrix Spike (BBJ0184-MS1)	Source: 18J0076-01			Prepared & Analyzed: 10/04/2018						
1,1,1,2-Tetrachloroethane	44.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	89.3	80-130			
1,1,1-Trichloroethane	44.2 ug/L	1	ug/L	50.0	<1 ug/L	88.4	65-130			
1,1,2,2-Tetrachloroethane	42.3 ug/L	0.4	ug/L	50.0	<0.4 ug/L	84.7	65-130			
1,1,2-Trichloroethane	44.6 ug/L	1	ug/L	50.0	<1 ug/L	89.2	75-125			
1,1-Dichloroethane	42.7 ug/L	1	ug/L	50.0	<1 ug/L	85.5	70-135			
1,1-Dichloroethylene	41.6 ug/L	1	ug/L	50.0	<1 ug/L	83.1	70-130			
1,1-Dichloropropene	45.0 ug/L	1	ug/L	50.0	<1 ug/L	90.0	75-135			
1,2,3-Trichloropropane	45.5 ug/L	1	ug/L	50.0	<1 ug/L	90.9	75-125			
1,2,4-Trichlorobenzene	36.7 ug/L	1	ug/L	50.0	<1 ug/L	73.5	65-135			
1,2-Dichlorobenzene	43.5 ug/L	1	ug/L	50.0	<1 ug/L	87.0	70-120			
1,2-Dichloroethane	39.6 ug/L	1	ug/L	50.0	<1 ug/L	79.3	70-130			
1,2-Dichloropropane	40.5 ug/L	1	ug/L	50.0	<1 ug/L	81.0	75-125			
1,3-Dichlorobenzene	45.5 ug/L	1	ug/L	50.0	<1 ug/L	91.1	75-125			
1,3-Dichloropropane	41.2 ug/L	1	ug/L	50.0	<1 ug/L	82.3	75-125			
1,4-Dichlorobenzene	44.8 ug/L	1	ug/L	50.0	<1 ug/L	89.6	75-125			
2,2-Dichloropropane	41.5 ug/L	2	ug/L	50.0	<2 ug/L	82.9	70-135			
2-Butanone (MEK)	39.1 ug/L	5	ug/L	50.0	<5 ug/L	78.1	30-150			
2-Hexanone (MBK)	43.4 ug/L	5	ug/L	50.0	<5 ug/L	86.7	55-130			
4-Methyl-2-pentanone (MIBK)	39.6 ug/L	5	ug/L	50.0	<5 ug/L	79.2	60-135			
Acetone	62.4 ug/L	10	ug/L	50.0	19.5 ug/L	85.7	40-140			
Acrylonitrile	229 ug/L	5	ug/L	250	<5 ug/L	91.7	70-130			
Benzene	43.2 ug/L	1	ug/L	50.0	<1 ug/L	86.4	80-120			
Bromochloromethane	43.8 ug/L	1	ug/L	50.0	<1 ug/L	87.5	65-130			
Bromodichloromethane	44.3 ug/L	0.5	ug/L	50.0	<0.5 ug/L	88.7	75-120			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0184 - SW5030B

Matrix Spike (BBJ0184-MS1)

Source: 18J0076-01

Prepared & Analyzed: 10/04/2018

Bromoform	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.2	70-130			
Bromomethane	35.7 ug/L	1	ug/L	50.0	<1 ug/L	71.4	30-145			
Carbon disulfide	43.6 ug/L	10	ug/L	50.0	<10 ug/L	87.1	35-160			
Carbon tetrachloride	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.8	65-140			
Chlorobenzene	44.9 ug/L	1	ug/L	50.0	<1 ug/L	89.8	80-120			
Chloroethane	40.9 ug/L	1	ug/L	50.0	<1 ug/L	81.8	60-135			
Chloroform	43.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	86.7	65-135			
Chloromethane	36.2 ug/L	1	ug/L	50.0	<1 ug/L	72.3	40-125			
cis-1,2-Dichloroethylene	43.6 ug/L	1	ug/L	50.0	<1 ug/L	87.2	70-125			
cis-1,3-Dichloropropene	41.6 ug/L	1	ug/L	50.0	<1 ug/L	83.2	70-130			
Dibromochloromethane	44.7 ug/L	0.5	ug/L	50.0	<0.5 ug/L	89.4	60-135			
Dibromomethane	42.1 ug/L	1	ug/L	50.0	<1 ug/L	84.2	75-125			
Dichlorodifluoromethane	31.0 ug/L	1	ug/L	50.0	<1 ug/L	62.0	30-155			
Ethylbenzene	46.7 ug/L	1	ug/L	50.0	<1 ug/L	93.3	75-125			
Hexachlorobutadiene	39.2 ug/L	0.8	ug/L	50.0	<0.8 ug/L	78.4	50-140			
m+p-Xylenes	94.8 ug/L	2	ug/L	100	<2 ug/L	94.8	75-130			
Methylene chloride	41.5 ug/L	4	ug/L	50.0	<4 ug/L	83.1	55-140			
o-Xylene	47.3 ug/L	1	ug/L	50.0	<1 ug/L	94.6	80-120			
Styrene	49.4 ug/L	1	ug/L	50.0	<1 ug/L	98.7	65-135			
Tetrachloroethylene (PCE)	67.4 ug/L	1	ug/L	50.0	<1 ug/L	135	45-150			
Toluene	43.0 ug/L	1	ug/L	50.0	<1 ug/L	86.0	75-120			
trans-1,2-Dichloroethylene	42.7 ug/L	1	ug/L	50.0	<1 ug/L	85.5	60-140			
trans-1,3-Dichloropropene	36.2 ug/L	1	ug/L	50.0	<1 ug/L	72.4	55-140			
Trichloroethylene	42.4 ug/L	1	ug/L	50.0	<1 ug/L	84.9	70-125			
Trichlorofluoromethane	39.6 ug/L	1	ug/L	50.0	<1 ug/L	79.2	60-145			
Vinyl chloride	37.1 ug/L	0.5	ug/L	50.0	<0.5 ug/L	74.1	50-145			
<hr style="border-top: 1px dashed #000;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	48.9		ug/L	50.0	ug/L	97.7	70-120			
Surr: 4-Bromofluorobenzene (Surr)	51.1		ug/L	50.0	ug/L	102	75-120			
Surr: Dibromofluoromethane (Surr)	49.7		ug/L	50.0	ug/L	99.5	70-130			
Surr: Toluene-d8 (Surr)	49.6		ug/L	50.0	ug/L	99.2	70-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Blank (BBJ0238-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

2,3,7,8-TCDD (SIM)	Not Detected -		-						
1,2,4,5-Tetrachlorobenzene	<10.0 ug/L	10.0	ug/L						
1,3,5-Trinitrobenzene	<5.00 ug/L	5.00	ug/L						
1,3-Dinitrobenzene	<2.50 ug/L	2.50	ug/L						
1,4-Naphthoquinone	<10.0 ug/L	10.0	ug/L						
1-Naphthylamine	<10.0 ug/L	10.0	ug/L						
2,3,4,6-Tetrachlorophenol	<10.0 ug/L	10.0	ug/L						
2,4,5-Trichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4,6-Trichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4-Dichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4-Dimethylphenol	<0.50 ug/L	0.50	ug/L						
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L						
2,4-Dinitrotoluene	<10.0 ug/L	10.0	ug/L						
2,6-Dichlorophenol	<10.0 ug/L	10.0	ug/L						
2,6-Dinitrotoluene	<10.0 ug/L	10.0	ug/L						
2-Acetylaminofluorene	<2.50 ug/L	2.50	ug/L						
2-Chloronaphthalene	<10.0 ug/L	10.0	ug/L						
2-Chlorophenol	<10.0 ug/L	10.0	ug/L						
2-Methylnaphthalene	<10.0 ug/L	10.0	ug/L						
2-Naphthylamine	<10.0 ug/L	10.0	ug/L						
2-Nitroaniline	<20.0 ug/L	20.0	ug/L						
2-Nitrophenol	<10.0 ug/L	10.0	ug/L						
3,3'-Dichlorobenzidine	<10.0 ug/L	10.0	ug/L						
3,3'-Dimethylbenzidine	<2.50 ug/L	2.50	ug/L						
3-Methylcholanthrene	<10.0 ug/L	10.0	ug/L						
3-Nitroaniline	<20.0 ug/L	20.0	ug/L						
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L						
4-Aminobiphenyl	<10.0 ug/L	10.0	ug/L						
4-Bromophenyl phenyl ether	<10.0 ug/L	10.0	ug/L						
4-Chloroaniline	<10.0 ug/L	10.0	ug/L						
4-Chlorophenyl phenyl ether	<10.0 ug/L	10.0	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Blank (BBJ0238-BLK1)

Prepared & Analyzed: 10/08/2018

4-Nitroaniline	<20.0 ug/L	20.0	ug/L							
4-Nitrophenol	<50.0 ug/L	50.0	ug/L							
5-Nitro-o-toluidine	<10.0 ug/L	10.0	ug/L							
7,12-Dimethylbenz (a) anthracene	<10.0 ug/L	10.0	ug/L							
Acenaphthene	<10.0 ug/L	10.0	ug/L							
Acenaphthylene	<10.0 ug/L	10.0	ug/L							
Acetophenone	<20.0 ug/L	20.0	ug/L							
Anthracene	<10.0 ug/L	10.0	ug/L							
Benzo (a) anthracene	<0.05 ug/L	0.05	ug/L							
Benzo (a) pyrene	<0.10 ug/L	0.10	ug/L							
Benzo (b) fluoranthene	<10.0 ug/L	10.0	ug/L							
Benzo (g,h,i) perylene	<10.0 ug/L	10.0	ug/L							
Benzo (k) fluoranthene	<10.0 ug/L	10.0	ug/L							
Benzyl alcohol	<20.0 ug/L	20.0	ug/L							
bis (2-Chloroethoxy) methane	<10.0 ug/L	10.0	ug/L							
bis (2-Chloroethyl) ether	<10.0 ug/L	10.0	ug/L							
2,2'-Oxybis (1-chloropropane)	<10.0 ug/L	10.0	ug/L							
bis (2-Ethylhexyl) phthalate	5.75 ug/L	2.50	ug/L							B
Butyl benzyl phthalate	<10.0 ug/L	10.0	ug/L							
Chlorobenzilate	<2.50 ug/L	2.50	ug/L							
Chrysene	<10.0 ug/L	10.0	ug/L							
Diallate	<2.50 ug/L	2.50	ug/L							
Dibenz (a,h) anthracene	<10.0 ug/L	10.0	ug/L							
Dibenzofuran	<5.00 ug/L	5.00	ug/L							
Diethyl phthalate	<10.0 ug/L	10.0	ug/L							
Dimethoate	<2.50 ug/L	2.50	ug/L							
Dimethyl phthalate	<10.0 ug/L	10.0	ug/L							
Di-n-butyl phthalate	<10.0 ug/L	10.0	ug/L							
Di-n-octyl phthalate	<10.0 ug/L	10.0	ug/L							
Diphenylamine	<10.0 ug/L	10.0	ug/L							
Disulfoton	<2.50 ug/L	2.50	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0238 - SW3510C

Blank (BBJ0238-BLK1)

Prepared & Analyzed: 10/08/2018

Ethyl methanesulfonate	<20.0 ug/L	20.0	ug/L						
Ethyl parathion	<2.50 ug/L	2.50	ug/L						
Famphur	<2.50 ug/L	2.50	ug/L						
Fluoranthene	<10.0 ug/L	10.0	ug/L						
Fluorene	<10.0 ug/L	10.0	ug/L						
Hexachlorobenzene	<0.05 ug/L	0.05	ug/L						
Hexachlorobutadiene	<10.0 ug/L	10.0	ug/L						
Hexachlorocyclopentadiene	<10.0 ug/L	10.0	ug/L						
Hexachloroethane	<10.0 ug/L	10.0	ug/L						
Hexachloropropene	<2.50 ug/L	2.50	ug/L						
Indeno (1,2,3-cd) pyrene	<10.0 ug/L	10.0	ug/L						
Isodrin	<10.0 ug/L	10.0	ug/L						
Isophorone	<10.0 ug/L	10.0	ug/L						
Isosafrole	<10.0 ug/L	10.0	ug/L						
Kepon	<2.50 ug/L	2.50	ug/L						
m+p-Cresols	<10.0 ug/L	10.0	ug/L						
Methapyrilene	<10.0 ug/L	10.0	ug/L						
Methyl methanesulfonate	<10.0 ug/L	10.0	ug/L						
Methyl parathion	<2.50 ug/L	2.50	ug/L						
Naphthalene	<10.0 ug/L	10.0	ug/L						
Nitrobenzene	<10.0 ug/L	10.0	ug/L						
n-Nitrosodiethylamine	<2.50 ug/L	2.50	ug/L						
n-Nitrosodimethylamine	<10.0 ug/L	10.0	ug/L						
n-Nitrosodi-n-butylamine	<10.0 ug/L	10.0	ug/L						
n-Nitrosodi-n-propylamine	<10.0 ug/L	10.0	ug/L						
n-Nitrosodiphenylamine	<10.0 ug/L	10.0	ug/L						
n-Nitrosomethylethylamine	<2.50 ug/L	2.50	ug/L						
n-Nitrosopiperidine	<10.0 ug/L	10.0	ug/L						
n-Nitrosopyrrolidine	<2.50 ug/L	2.50	ug/L						
o,o,o-Triethyl phosphorothioate	<10.0 ug/L	10.0	ug/L						
o,o-Diethyl o-2-pyrazinyl phosphorothioate	<10.0 ug/L	10.0	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Blank (BBJ0238-BLK1)

Prepared & Analyzed: 10/08/2018

o+m+p-Cresols	<10.0 ug/L	10.0	ug/L							
o-Cresol	<10.0 ug/L	10.0	ug/L							
o-Toluidine	<2.50 ug/L	2.50	ug/L							
p-(Dimethylamino) azobenzene	<2.50 ug/L	2.50	ug/L							
p-Chloro-m-cresol	<10.0 ug/L	10.0	ug/L							
Pentachlorobenzene	<10.0 ug/L	10.0	ug/L							
Pentachloronitrobenzene (quintozene)	<1.00 ug/L	1.00	ug/L							
Phenacetin	<10.0 ug/L	10.0	ug/L							
Phenanthrene	<10.0 ug/L	10.0	ug/L							
Phenol	<10.0 ug/L	10.0	ug/L							
Phorate	<2.50 ug/L	2.50	ug/L							
p-Phenylenediamine	<10.0 ug/L	10.0	ug/L							
Pronamide	<10.0 ug/L	10.0	ug/L							
Pyrene	<10.0 ug/L	10.0	ug/L							
Safrole	<2.50 ug/L	2.50	ug/L							
<hr/>										
Surr: 2,4,6-Tribromophenol (Surr)	77.9		ug/L	100		77.9	10-86			
Surr: 2-Fluorobiphenyl (Surr)	42.6		ug/L	50.0		85.3	9-87			
Surr: 2-Fluorophenol (Surr)	78.1		ug/L	100		78.1	10-52			S
Surr: Nitrobenzene-d5 (Surr)	43.8		ug/L	50.0		87.6	10-98.5			
Surr: Phenol-d5 (Surr)	35.0		ug/L	100		35.0	5-33			S
Surr: p-Terphenyl-d14 (Surr)	55.5		ug/L	50.0		111	27-133			

LCS (BBJ0238-BS1)

Prepared & Analyzed: 10/08/2018

1,2,4-Trichlorobenzene	29.7 ug/L	10.0	ug/L	50.0	ug/L	59.5	21.8-66.7			
1,2-Dichlorobenzene	28.5 ug/L	10.0	ug/L	50.0	ug/L	57.1	22-60			
1,3-Dichlorobenzene	26.9 ug/L	10.0	ug/L	50.0	ug/L	53.7	22-60			
1,4-Dichlorobenzene	28.8 ug/L	10.0	ug/L	50.0	ug/L	57.6	13-68			
1-Chloronaphthalene	40.4 ug/L	10.0	ug/L		ug/L		0-200			
2,4,6-Trichlorophenol	42.9 ug/L	10.0	ug/L	50.0	ug/L	85.8	50-115			
2,4-Dichlorophenol	38.9 ug/L	10.0	ug/L	50.0	ug/L	77.8	50-105			
2,4-Dimethylphenol	38.3 ug/L	0.50	ug/L	50.0	ug/L	76.6	30-110			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0238 - SW3510C

LCS (BBJ0238-BS1)

Prepared & Analyzed: 10/08/2018

2,4-Dinitrophenol	68.0 ug/L	50.0	ug/L	50.0	ug/L	136	15-140		
2,4-Dinitrotoluene	49.1 ug/L	10.0	ug/L	50.0	ug/L	98.1	21-99		
2,6-Dinitrotoluene	44.1 ug/L	10.0	ug/L	50.0	ug/L	88.1	15-140		
2-Chloronaphthalene	38.5 ug/L	10.0	ug/L	50.0	ug/L	77.1	45-105		
2-Chlorophenol	35.4 ug/L	10.0	ug/L	50.0	ug/L	70.8	15-74		
2-Nitrophenol	39.0 ug/L	10.0	ug/L	50.0	ug/L	78.0	40-115		
3,3'-Dichlorobenzidine	27.6 ug/L	10.0	ug/L	50.0	ug/L	55.2	20-110		
4,6-Dinitro-2-methylphenol	59.9 ug/L	50.0	ug/L	50.0	ug/L	120	40-130		
4-Bromophenyl phenyl ether	36.4 ug/L	10.0	ug/L	50.0	ug/L	72.8	15-110		
4-Chlorophenyl phenyl ether	35.7 ug/L	10.0	ug/L	50.0	ug/L	71.5	15-110		
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	36.6	0-125		
Acenaphthene	41.1 ug/L	10.0	ug/L	50.0	ug/L	82.2	27.7-85.5		
Acenaphthylene	45.0 ug/L	10.0	ug/L	50.0	ug/L	89.9	50-105		
Acetophenone	40.1 ug/L	20.0	ug/L	50.0	ug/L	80.1	0-200		
alpha-Terpineol	54.7 ug/L	2.50	ug/L	50.0	ug/L	109	0-200		
Anthracene	45.6 ug/L	10.0	ug/L	50.0	ug/L	91.2	55-110		
Benzo (a) anthracene	43.5 ug/L	0.05	ug/L	50.0	ug/L	87.0	55-110		
Benzo (a) pyrene	39.6 ug/L	0.10	ug/L	50.0	ug/L	79.3	55-110		
Benzo (b) fluoranthene	43.1 ug/L	10.0	ug/L	50.0	ug/L	86.2	45-120		
Benzo (g,h,i) perylene	45.3 ug/L	10.0	ug/L	50.0	ug/L	90.7	40-125		
Benzo (k) fluoranthene	44.2 ug/L	10.0	ug/L	50.0	ug/L	88.3	45-125		
bis (2-Chloroethoxy) methane	40.2 ug/L	10.0	ug/L	50.0	ug/L	80.4	40-125		
bis (2-Chloroethyl) ether	34.4 ug/L	10.0	ug/L	50.0	ug/L	68.9	40-125		
2,2'-Oxybis (1-chloropropane)	30.8 ug/L	10.0	ug/L	50.0	ug/L	61.5	40-125		
bis (2-Ethylhexyl) phthalate	60.8 ug/L	2.50	ug/L	50.0	ug/L	122	40-125		
Butyl benzyl phthalate	55.5 ug/L	10.0	ug/L	50.0	ug/L	111	45-115		
Carbazole	48.2 ug/L	2.50	ug/L	50.0	ug/L	96.4	0-200		
Chrysene	54.0 ug/L	10.0	ug/L	50.0	ug/L	108	55-110		
Dibenz (a,h) anthracene	45.8 ug/L	10.0	ug/L	50.0	ug/L	91.7	40-125		
Diethyl phthalate	47.6 ug/L	10.0	ug/L	50.0	ug/L	95.1	40-120		
Dimethyl phthalate	44.1 ug/L	10.0	ug/L	50.0	ug/L	88.3	25-125		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

LCS (BBJ0238-BS1)

Prepared & Analyzed: 10/08/2018

Di-n-butyl phthalate	55.8 ug/L	10.0	ug/L	50.0	ug/L	112	55-115			
Di-n-octyl phthalate	58.1 ug/L	10.0	ug/L	50.0	ug/L	116	35-135			
Fluoranthene	48.9 ug/L	10.0	ug/L	50.0	ug/L	97.7	55-115			
Fluorene	43.4 ug/L	10.0	ug/L	50.0	ug/L	86.8	50-110			
Hexachlorobenzene	38.7 ug/L	0.05	ug/L	50.0	ug/L	77.4	25-125			
Hexachlorobutadiene	31.6 ug/L	10.0	ug/L	50.0	ug/L	63.1	25-125			
Hexachlorocyclopentadiene	22.7 ug/L	10.0	ug/L	50.0	ug/L	45.4	25-125			
Hexachloroethane	28.6 ug/L	10.0	ug/L	50.0	ug/L	57.2	25-125			
Indeno (1,2,3-cd) pyrene	45.9 ug/L	10.0	ug/L	50.0	ug/L	91.8	45-125			
Isophorone	38.1 ug/L	10.0	ug/L	50.0	ug/L	76.2	10-110			
Naphthalene	36.5 ug/L	10.0	ug/L	50.0	ug/L	73.0	40-100			
Nitrobenzene	38.0 ug/L	10.0	ug/L	50.0	ug/L	76.1	40-100			
n-Nitrosodimethylamine	28.3 ug/L	10.0	ug/L	50.0	ug/L	56.6	25-110			
n-Nitrosodi-n-propylamine	40.1 ug/L	10.0	ug/L	50.0	ug/L	80.3	12-97			
n-Nitrosodiphenylamine	33.7 ug/L	10.0	ug/L	50.0	ug/L	67.4	12-97			
p-Chloro-m-cresol	40.9 ug/L	10.0	ug/L	50.0	ug/L	81.8	10-91			
Pentachlorophenol	31.9 ug/L	20.0	ug/L	50.0	ug/L	63.8	30-109			
Phenanthrene	50.4 ug/L	10.0	ug/L	50.0	ug/L	101	50-115			
Phenol	15.7 ug/L	10.0	ug/L	50.5	ug/L	31.0	0-115			
Pyrene	48.7 ug/L	10.0	ug/L	50.0	ug/L	97.4	27-110			
Pyridine	28.0 ug/L	10.0	ug/L	50.0	ug/L	55.9	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	85.6		ug/L	100	ug/L	85.6	10-86			
Surr: 2-Fluorobiphenyl (Surr)	43.8		ug/L	50.0	ug/L	87.6	9-87			S
Surr: 2-Fluorophenol (Surr)	68.8		ug/L	100	ug/L	68.8	10-52			S
Surr: Nitrobenzene-d5 (Surr)	41.1		ug/L	50.0	ug/L	82.2	10-98.5			
Surr: Phenol-d5 (Surr)	32.6		ug/L	100	ug/L	32.6	5-33			
Surr: p-Terphenyl-d14 (Surr)	51.2		ug/L	50.0	ug/L	102	27-133			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Matrix Spike (BBJ0238-MS1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

1,2,4-Trichlorobenzene	39.1 ug/L	10.6	ug/L	53.2	<10.6 ug/L	73.6	21.8-66.7			M
1,2-Dichlorobenzene	37.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	71.2	22-60			M
1,3-Dichlorobenzene	35.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	67.5	22-60			M
1,4-Dichlorobenzene	38.5 ug/L	10.6	ug/L	53.2	<10.6 ug/L	72.3	22-60			M
1-Chloronaphthalene	51.1 ug/L	10.6	ug/L		<10.6 ug/L		0-200			
2,4,6-Trichlorophenol	53.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	99.6	50-115			
2,4-Dichlorophenol	45.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	86.3	50-105			
2,4-Dimethylphenol	45.1 ug/L	0.53	ug/L	53.2	<0.53 ug/L	84.8	30-110			
2,4-Dinitrophenol	87.5 ug/L	53.2	ug/L	53.2	<53.2 ug/L	164	15-140			M
2,4-Dinitrotoluene	55.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	104	17-111			
2,6-Dinitrotoluene	49.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	93.8	15-140			
2-Chloronaphthalene	48.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	91.5	45-105			
2-Chlorophenol	38.4 ug/L	10.6	ug/L	53.2	<10.6 ug/L	72.2	19-64			M
3,3'-Dichlorobenzidine	11.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	21.0	10-85			
4,6-Dinitro-2-methylphenol	73.8 ug/L	53.2	ug/L	53.2	<53.2 ug/L	139	40-130			M
4-Bromophenyl phenyl ether	44.5 ug/L	10.6	ug/L	53.2	<10.6 ug/L	83.7	15-110			
4-Chlorophenyl phenyl ether	44.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	83.1	15-110			
4-Nitrophenol	<53.2 ug/L	53.2	ug/L	53.2	<53.2 ug/L	42.7	0-125			
Acenaphthene	50.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	94.0	24-90			M
Acenaphthylene	54.4 ug/L	10.6	ug/L	53.2	<10.6 ug/L	102	50-105			
Acetophenone	43.3 ug/L	21.3	ug/L	53.2	<21.3 ug/L	81.5	0-200			
alpha-Terpineol	61.4 ug/L	2.66	ug/L	53.2	<2.66 ug/L	115	0-200			
Anthracene	53.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	100	55-110			
Benzo (a) anthracene	50.6 ug/L	0.05	ug/L	53.2	<0.05 ug/L	95.1	55-110			
Benzo (a) pyrene	50.3 ug/L	0.11	ug/L	53.2	<0.11 ug/L	94.5	55-110			
Benzo (b) fluoranthene	62.7 ug/L	10.6	ug/L	53.2	<10.6 ug/L	118	45-120			
Benzo (g,h,i) perylene	47.8 ug/L	10.6	ug/L	53.2	<10.6 ug/L	89.8	40-125			
Benzo (k) fluoranthene	54.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	102	45-125			
bis (2-Chloroethoxy) methane	45.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	85.7	40-125			
bis (2-Chloroethyl) ether	36.4 ug/L	10.6	ug/L	53.2	<10.6 ug/L	68.5	40-125			
2,2'-Oxybis (1-chloropropane)	36.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	68.8	40-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Matrix Spike (BBJ0238-MS1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

bis (2-Ethylhexyl) phthalate	73.9 ug/L	2.66	ug/L	53.2	<2.66 ug/L	139	40-125			M
Butyl benzyl phthalate	65.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	124	45-115			M
Carbazole	57.1 ug/L	2.66	ug/L	53.2	<2.66 ug/L	107	0-200			
Chrysene	62.4 ug/L	10.6	ug/L	53.2	<10.6 ug/L	117	55-110			M
Dibenz (a,h) anthracene	48.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	90.3	40-125			
Diethyl phthalate	53.8 ug/L	10.6	ug/L	53.2	<10.6 ug/L	101	40-120			
Dimethyl phthalate	49.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	93.2	25-125			
Di-n-butyl phthalate	68.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	128	55-115			M
Di-n-octyl phthalate	88.3 ug/L	10.6	ug/L	53.2	<10.6 ug/L	166	35-135			M
Fluoranthene	58.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	110	55-115			
Fluorene	51.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	97.5	50-110			
Hexachlorobenzene	45.6 ug/L	0.05	ug/L	53.2	<0.05 ug/L	85.7	25-125			
Hexachlorobutadiene	42.8 ug/L	10.6	ug/L	53.2	<10.6 ug/L	80.5	25-125			
Hexachlorocyclopentadiene	28.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	53.7	10-90			
Hexachloroethane	39.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	73.2	25-125			
Indeno (1,2,3-cd) pyrene	47.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	90.0	45-125			
Isophorone	44.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	83.0	10-110			
Naphthalene	45.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	86.4	40-100			
Nitrobenzene	44.5 ug/L	10.6	ug/L	53.2	<10.6 ug/L	83.6	40-100			
n-Nitrosodimethylamine	36.3 ug/L	10.6	ug/L	53.2	<10.6 ug/L	68.3	25-110			
n-Nitrosodi-n-propylamine	45.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	84.7	12-97			
n-Nitrosodiphenylamine	39.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	74.5	12-97			
p-Chloro-m-cresol	45.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	86.3	10-91			
Pentachlorophenol	52.3 ug/L	21.3	ug/L	53.2	<21.3 ug/L	98.3	27-109			
Phenanthrene	58.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	110	50-115			
Phenol	18.4 ug/L	10.6	ug/L	53.7	<10.6 ug/L	34.3	0-115			
Pyrene	61.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	115	23-110			M
Pyridine	36.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	68.9	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	111		ug/L	106	ug/L	104	10-86			S
Surr: 2-Fluorobiphenyl (Surr)	50.7		ug/L	53.2	ug/L	95.3	9-87			S
Surr: 2-Fluorophenol (Surr)	74.5		ug/L	106	ug/L	70.0	10-52			S



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Matrix Spike (BBJ0238-MS1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

Surr: Nitrobenzene-d5 (Surr)	45.4		ug/L	53.2	ug/L	85.3	10-98.5			
Surr: Phenol-d5 (Surr)	36.3		ug/L	106	ug/L	34.1	5-33			S
Surr: p-Terphenyl-d14 (Surr)	59.1		ug/L	53.2	ug/L	111	27-133			

Matrix Spike Dup (BBJ0238-MSD1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

1,2,4-Trichlorobenzene	22.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	41.5	21.8-66.7	53.7	20	P
1,2-Dichlorobenzene	22.3 ug/L	10.9	ug/L	54.3	<10.9 ug/L	41.1	22-60	51.6	20	P
1,3-Dichlorobenzene	20.7 ug/L	10.9	ug/L	54.3	<10.9 ug/L	38.2	22-60	53.5	20	P
1,4-Dichlorobenzene	22.9 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.1	22-60	50.7	20	P
1-Chloronaphthalene	26.5 ug/L	10.9	ug/L		<10.9 ug/L		0-200	63.3	20	P
2,4,6-Trichlorophenol	29.9 ug/L	10.9	ug/L	54.3	<10.9 ug/L	54.9	50-115	55.8	20	P
2,4-Dichlorophenol	24.3 ug/L	10.9	ug/L	54.3	<10.9 ug/L	44.7	50-105	61.5	20	M, P
2,4-Dimethylphenol	25.0 ug/L	0.54	ug/L	54.3	<0.54 ug/L	46.0	30-110	57.4	20	P
2,4-Dinitrophenol	79.8 ug/L	54.3	ug/L	54.3	<54.3 ug/L	147	15-140	9.26	20	M
2,4-Dinitrotoluene	49.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	91.0	17-111	11.6	20	
2,6-Dinitrotoluene	36.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	66.5	15-140	31.9	20	P
2-Chloronaphthalene	25.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	46.8	45-105	62.6	20	P
2-Chlorophenol	23.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.6	19-64	49.6	20	P
2-Nitrophenol	27.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	50.0	40-115	53.8	20	P
3,3'-Dichlorobenzidine	15.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	28.8	10-85	33.4	20	P
4,6-Dinitro-2-methylphenol	71.2 ug/L	54.3	ug/L	54.3	<54.3 ug/L	131	40-130	3.49	20	M
4-Bromophenyl phenyl ether	33.8 ug/L	10.9	ug/L	54.3	<10.9 ug/L	62.3	15-110	27.2	20	P
4-Chlorophenyl phenyl ether	27.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	50.8	15-110	46.2	20	P
4-Nitrophenol	<54.3 ug/L	54.3	ug/L	54.3	<54.3 ug/L	42.7	0-125	2.20	20	
Acenaphthene	28.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	51.7	24-90	56.1	20	P
Acenaphthylene	30.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	55.6	50-105	57.0	20	P
Acetophenone	25.5 ug/L	21.7	ug/L	54.3	<21.7 ug/L	46.9	0-200	52.0	20	P
alpha-Terpineol	32.1 ug/L	2.72	ug/L	54.3	<2.72 ug/L	59.1	0-200	62.6	20	P
Anthracene	47.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	87.6	55-110	11.1	20	
Benzo (a) anthracene	49.8 ug/L	0.05	ug/L	54.3	<0.05 ug/L	91.6	55-110	1.60	20	
Benzo (a) pyrene	46.3 ug/L	0.11	ug/L	54.3	<0.11 ug/L	85.2	55-110	8.27	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Matrix Spike Dup (BBJ0238-MSD1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

Benzo (b) fluoranthene	50.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	92.9	45-120	21.5	20	P
Benzo (g,h,i) perylene	48.9 ug/L	10.9	ug/L	54.3	<10.9 ug/L	90.0	40-125	2.37	20	
Benzo (k) fluoranthene	53.7 ug/L	10.9	ug/L	54.3	<10.9 ug/L	98.8	45-125	0.899	20	
bis (2-Chloroethoxy) methane	24.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	44.9	40-125	60.6	20	P
bis (2-Chloroethyl) ether	23.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.6	40-125	44.6	20	P
2,2'-Oxybis (1-chloropropane)	22.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	40.7	40-125	49.5	20	P
bis (2-Ethylhexyl) phthalate	75.1 ug/L	2.72	ug/L	54.3	<2.72 ug/L	138	40-125	1.54	20	M
Butyl benzyl phthalate	68.8 ug/L	10.9	ug/L	54.3	<10.9 ug/L	126	45-115	4.19	20	M
Carbazole	53.5 ug/L	2.72	ug/L	54.3	<2.72 ug/L	98.5	0-200	6.41	20	
Chrysene	61.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	113	55-110	1.21	20	M
Dibenz (a,h) anthracene	50.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	92.7	40-125	4.75	20	
Diethyl phthalate	46.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	85.0	40-120	15.2	20	
Dimethyl phthalate	34.7 ug/L	10.9	ug/L	54.3	<10.9 ug/L	63.9	25-125	35.2	20	P
Di-n-butyl phthalate	65.0 ug/L	10.9	ug/L	54.3	<10.9 ug/L	120	55-115	4.90	20	M
Di-n-octyl phthalate	75.7 ug/L	10.9	ug/L	54.3	<10.9 ug/L	139	35-135	15.3	20	M
Fluoranthene	53.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	97.7	55-115	9.89	20	
Fluorene	33.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	61.7	50-110	42.9	20	P
Hexachlorobenzene	37.8 ug/L	0.05	ug/L	54.3	<0.05 ug/L	69.5	25-125	18.8	20	
Hexachlorobutadiene	24.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	44.4	25-125	55.9	20	P
Hexachlorocyclopentadiene	13.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	25.1	10-90	70.8	20	P
Hexachloroethane	23.0 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.3	25-125	51.5	20	P
Indeno (1,2,3-cd) pyrene	50.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	93.0	45-125	5.41	20	
Isophorone	23.3 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.9	10-110	61.8	20	P
Naphthalene	26.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	48.1	40-100	54.9	20	P
Nitrobenzene	26.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	48.6	40-100	51.0	20	P
n-Nitrosodimethylamine	22.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	40.6	25-110	48.8	20	P
n-Nitrosodi-n-propylamine	26.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	48.7	12-97	51.9	20	P
n-Nitrosodiphenylamine	32.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	59.7	12-97	19.9	20	
p-Chloro-m-cresol	28.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	51.9	10-91	47.8	20	P
Pentachlorophenol	52.0 ug/L	21.7	ug/L	54.3	<21.7 ug/L	95.7	27-109	0.489	20	
Phenanthrene	52.3 ug/L	10.9	ug/L	54.3	<10.9 ug/L	96.3	50-115	11.4	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBJ0238 - SW3510C

Matrix Spike Dup (BBJ0238-MSD1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

Phenol	11.7 ug/L	10.9	ug/L	54.9	<10.9 ug/L	21.2	0-115	44.8	20	P
Pyrene	61.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	113	23-110	0.957	20	M
Pyridine	22.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	41.3	0-200	48.0	20	P
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	92.1		ug/L	109	ug/L	84.8	10-86			
Surr: 2-Fluorobiphenyl (Surr)	26.2		ug/L	54.3	ug/L	48.3	9-87			
Surr: 2-Fluorophenol (Surr)	46.5		ug/L	109	ug/L	42.7	10-52			
Surr: Nitrobenzene-d5 (Surr)	28.2		ug/L	54.3	ug/L	51.8	10-98.5			
Surr: Phenol-d5 (Surr)	23.3		ug/L	109	ug/L	21.4	5-33			
Surr: p-Terphenyl-d14 (Surr)	57.0		ug/L	54.3	ug/L	105	27-133			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0256 - SW3510C

Blank (BBJ0256-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

PCB as Aroclor 1016	<0.200 ug/L	0.200	ug/L							
4,4'-DDD	<0.050 ug/L	0.050	ug/L							
PCB as Aroclor 1221	<0.200 ug/L	0.200	ug/L							
4,4'-DDE	<0.050 ug/L	0.050	ug/L							
PCB as Aroclor 1232	<0.200 ug/L	0.200	ug/L							
PCB as Aroclor 1242	<0.200 ug/L	0.200	ug/L							
4,4'-DDT	<0.050 ug/L	0.050	ug/L							
PCB as Aroclor 1248	<0.200 ug/L	0.200	ug/L							
PCB as Aroclor 1254	<0.200 ug/L	0.200	ug/L							
Aldrin	<0.050 ug/L	0.050	ug/L							
PCB as Aroclor 1260	<0.200 ug/L	0.200	ug/L							
alpha-BHC	<0.050 ug/L	0.050	ug/L							
beta-BHC	<0.050 ug/L	0.050	ug/L							
Chlordane	<0.200 ug/L	0.200	ug/L							
delta-BHC	<0.050 ug/L	0.050	ug/L							
Dieldrin	<0.050 ug/L	0.050	ug/L							
Endosulfan I	<0.050 ug/L	0.050	ug/L							
Endosulfan II	<0.050 ug/L	0.050	ug/L							
Endosulfan sulfate	<0.050 ug/L	0.050	ug/L							
Endrin	<0.050 ug/L	0.050	ug/L							
Endrin aldehyde	<0.050 ug/L	0.050	ug/L							
gamma-BHC (Lindane)	<0.050 ug/L	0.050	ug/L							
Heptachlor	<0.050 ug/L	0.050	ug/L							
Heptachlor epoxide	<0.050 ug/L	0.050	ug/L							
Methoxychlor	<0.050 ug/L	0.050	ug/L							
Toxaphene	<1.00 ug/L	1.00	ug/L							
<hr style="border-top: 1px dashed black;"/>										
Surr: DCB	0.110		ug/L	0.200		55.0	30-105			
Surr: TCMX	0.120		ug/L	0.200		60.0	18-112			
Surr: TCMX	0.0900		ug/L	0.200		45.0	30-105			
Surr: DCB	0.160		ug/L	0.200		80.0	27-131			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0256 - SW3510C

LCS (BBJ0256-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

4,4'-DDD	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
4,4'-DDE	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
4,4'-DDT	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Aldrin	0.060 ug/L	0.050	ug/L	0.100	ug/L	60.0	23-134
alpha-BHC	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
beta-BHC	0.100 ug/L	0.050	ug/L	0.100	ug/L	100	23-134
delta-BHC	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Dieldrin	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
Endosulfan I	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
Endosulfan II	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Endosulfan sulfate	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Endrin	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Endrin aldehyde	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
gamma-BHC (Lindane)	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Heptachlor	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
Heptachlor epoxide	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
Methoxychlor	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Mirex	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134

Surr: TCMX

0.140 ug/L 0.200 ug/L 70.0 18-112

Surr: DCB

0.150 ug/L 0.200 ug/L 75.0 27-131

LCS (BBJ0256-BS2)

Prepared: 10/08/2018 Analyzed: 10/09/2018

PCB as Aroclor 1016	0.740 ug/L	0.200	ug/L	1.00	ug/L	74.0	40-90
PCB as Aroclor 1260	0.610 ug/L	0.200	ug/L	1.00	ug/L	61.0	40-90

Surr: DCB

0.120 ug/L 0.200 ug/L 60.0 30-105

Surr: TCMX

0.100 ug/L 0.200 ug/L 50.0 30-105

LCS (BBJ0256-BS3)

Prepared: 10/08/2018 Analyzed: 10/09/2018

Toxaphene	1.62 ug/L	1.00	ug/L	2.50	ug/L	64.8	23-134
-----------	-----------	------	------	------	------	------	--------

Surr: TCMX

0.0900 ug/L 0.200 ug/L 45.0 18-112

Surr: DCB

0.140 ug/L 0.200 ug/L 70.0 27-131



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0256 - SW3510C

LCS (BBJ0256-BS4)

Prepared: 10/08/2018 Analyzed: 10/09/2018

Chlordane	1.79 ug/L	0.200	ug/L	2.50	ug/L	71.6	23-134			
<i>Surr: TCMX</i>	0.110		ug/L	0.200	ug/L	55.0	18-112			
<i>Surr: DCB</i>	0.140		ug/L	0.200	ug/L	70.0	27-131			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Herbicides by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0257 - SW3510C

Blank (BBJ0257-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

2,4,5-T	<0.500 ug/L	0.500	ug/L							
2,4,5-TP (Silvex)	<0.500 ug/L	0.500	ug/L							
2,4-D	<0.500 ug/L	0.500	ug/L							
Dinoseb	<0.500 ug/L	0.500	ug/L							
Pentachlorophenol	<0.500 ug/L	0.500	ug/L							
<hr style="border-top: 1px dashed black;"/>										
Surr: DCAA (Surr)	1.17		ug/L	1.11		105	60-112			

LCS (BBJ0257-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

2,4,5-T	0.722 ug/L	0.500	ug/L	0.556	ug/L	130	53-144			
2,4,5-TP (Silvex)	0.722 ug/L	0.500	ug/L	0.556	ug/L	130	52-129			L
2,4-D	0.667 ug/L	0.500	ug/L	0.556	ug/L	120	53-126			
Dinoseb	0.778 ug/L	0.500	ug/L	0.556	ug/L	140	60-137			L
Pentachlorophenol	0.722 ug/L	0.500	ug/L	0.556	ug/L	130	52-124			L
<hr style="border-top: 1px dashed black;"/>										
Surr: DCAA (Surr)	1.17		ug/L	1.11	ug/L	105	60-112			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Micro-extractables by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0246 - SW8011

Blank (BBJ0246-BLK1)

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	<0.010 ug/L	0.010	ug/L					
1,2,3-Trichloropropane	<0.010 ug/L	0.010	ug/L					
1,2-Dibromo-3-chloropropane (DBCP)	<0.010 ug/L	0.010	ug/L					

LCS (BBJ0246-BS1)

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.322 ug/L	0.010	ug/L	0.250 ug/L	129	65-135		
1,2,3-Trichloropropane	0.293 ug/L	0.010	ug/L	0.250 ug/L	117	65-135		
1,2-Dibromo-3-chloropropane (DBCP)	0.279 ug/L	0.010	ug/L	0.250 ug/L	112	65-135		

LCS Dup (BBJ0246-BSD1)

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.313 ug/L	0.010	ug/L	0.250 ug/L	125	65-135	2.74	20
1,2,3-Trichloropropane	0.284 ug/L	0.010	ug/L	0.250 ug/L	114	65-135	3.04	20
1,2-Dibromo-3-chloropropane (DBCP)	0.270 ug/L	0.010	ug/L	0.250 ug/L	108	65-135	3.32	20

Matrix Spike (BBJ0246-MS1)

Source: 18J0280-02

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.255 ug/L	0.010	ug/L	0.260	<0.010 ug/L	98.1	65-135	
1,2,3-Trichloropropane	0.259 ug/L	0.010	ug/L	0.260	<0.010 ug/L	99.7	65-135	
1,2-Dibromo-3-chloropropane (DBCP)	0.232 ug/L	0.010	ug/L	0.260	<0.010 ug/L	89.2	65-135	

Matrix Spike Dup (BBJ0246-MSD1)

Source: 18J0280-02

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.241 ug/L	0.010	ug/L	0.256	<0.010 ug/L	93.9	65-135	5.65	20
1,2,3-Trichloropropane	0.226 ug/L	0.010	ug/L	0.256	<0.010 ug/L	88.2	65-135	13.6	20
1,2-Dibromo-3-chloropropane (DBCP)	0.215 ug/L	0.010	ug/L	0.256	<0.010 ug/L	84.0	65-135	7.40	20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0159 - No Prep Wet Chem

Blank (BBJ0159-BLK1)				Prepared & Analyzed: 10/04/2018						
Chromium, Hexavalent	<0.005 mg/L	0.005	mg/L							
LCS (BBJ0159-BS1)				Prepared & Analyzed: 10/04/2018						
Chromium, Hexavalent	0.093 mg/L	0.005	mg/L	0.100	mg/L	93.0	80-120			
Matrix Spike (BBJ0159-MS1)				Source: 18J0154-05 Prepared & Analyzed: 10/04/2018						
Chromium, Hexavalent	0.082 mg/L	0.005	mg/L	0.100	<0.005 mg/L	82.0	80-120			
Matrix Spike Dup (BBJ0159-MSD1)				Source: 18J0154-05 Prepared & Analyzed: 10/04/2018						
Chromium, Hexavalent	0.084 mg/L	0.005	mg/L	0.100	<0.005 mg/L	84.0	80-120	2.41	20	

Batch BBJ0258 - No Prep Wet Chem

Blank (BBJ0258-BLK1)				Prepared & Analyzed: 10/08/2018						
Sulfide	<1.00 mg/L	1.00	mg/L							
LCS (BBJ0258-BS1)				Prepared & Analyzed: 10/08/2018						
Sulfide	5.08 mg/L	1	mg/L	5.00	mg/L	102	80-120			
LCS Dup (BBJ0258-BSD1)				Prepared & Analyzed: 10/08/2018						
Sulfide	5.07 mg/L	1	mg/L	5.00	mg/L	101	80-120	0.197	20	
Matrix Spike (BBJ0258-MS1)				Source: 18J0278-04 Prepared & Analyzed: 10/08/2018						
Sulfide	4.00 mg/L	1.00	mg/L	5.00	<1.00 mg/L	80.0	75-125			
Matrix Spike Dup (BBJ0258-MSD1)				Source: 18J0278-04 Prepared & Analyzed: 10/08/2018						
Sulfide	4.20 mg/L	1.00	mg/L	5.00	<1.00 mg/L	84.0	75-125	4.88	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
Batch BBJ0380 - No Prep Wet Chem									
Blank (BBJ0380-BLK1) Prepared & Analyzed: 10/11/2018									
Cyanide	<0.01 mg/L	0.01	mg/L						
LCS (BBJ0380-BS1) Prepared & Analyzed: 10/11/2018									
Cyanide	0.26 mg/L	0.01	mg/L	0.250	mg/L	103	80-120		
LCS Dup (BBJ0380-BSD1) Prepared & Analyzed: 10/11/2018									
Cyanide	0.26 mg/L	0.01	mg/L	0.250	mg/L	106	80-120	3.07	20
Matrix Spike (BBJ0380-MS1) Prepared & Analyzed: 10/11/2018									
		Source: 18J0092-01							
Cyanide	0.25 mg/L	0.01	mg/L	0.250	<0.01 mg/L	101	80-120		
Matrix Spike Dup (BBJ0380-MSD1) Prepared & Analyzed: 10/11/2018									
		Source: 18J0092-01							
Cyanide	0.29 mg/L	0.01	mg/L	0.250	<0.01 mg/L	114	80-120	12.2	20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Non-Potable Water	
Barium	VELAP,WVDEP
Beryllium	VELAP,WVDEP
Cadmium	VELAP,WVDEP
Chromium	VELAP,WVDEP
Cobalt	VELAP,WVDEP
Copper	VELAP,WVDEP
Lead	VELAP,WVDEP
Nickel	VELAP,WVDEP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Tin	VELAP,WVDEP
Vanadium	VELAP,WVDEP
Zinc	VELAP,WVDEP
SW6020A in Non-Potable Water	
Antimony	VELAP,NC,WVDEP
Arsenic	VELAP,WVDEP
Thallium	VELAP,WVDEP
SW7196A in Non-Potable Water	
Chromium, Hexavalent	VELAP
SW7470A in Non-Potable Water	
Mercury	VELAP,NC,WVDEP
SW8011 in Non-Potable Water	
1,2-Dibromoethane (EDB)	VELAP,NC
1,2,3-Trichloropropane	VELAP,NC
1,2-Dibromo-3-chloropropane (DBCP)	VELAP,NC
SW8081B in Non-Potable Water	
4,4'-DDD	NC,VELAP,WVDEP
4,4'-DDE	NC,VELAP,WVDEP
4,4'-DDT	NC,VELAP,WVDEP
Aldrin	NC,VELAP,WVDEP
alpha-BHC	NC,VELAP,WVDEP
beta-BHC	NC,VELAP,WVDEP
Chlordane	NC,VELAP,WVDEP
delta-BHC	NC,VELAP,WVDEP
Dieldrin	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Endosulfan I	NC,VELAP,WVDEP
Endosulfan II	NC,VELAP,WVDEP
Endosulfan sulfate	NC,VELAP,WVDEP
Endrin	NC,VELAP,WVDEP
Endrin aldehyde	NC,VELAP,WVDEP
gamma-BHC (Lindane)	NC,VELAP,WVDEP
Heptachlor	NC,VELAP,WVDEP
Heptachlor epoxide	NC,VELAP,WVDEP
Methoxychlor	NC,VELAP,WVDEP
Toxaphene	NC,VELAP,WVDEP
SW8082A in Non-Potable Water	
PCB as Aroclor 1016	VELAP,NC,WVDEP
PCB as Aroclor 1221	VELAP,NC,WVDEP
PCB as Aroclor 1232	VELAP,NC,WVDEP
PCB as Aroclor 1242	VELAP,NC,WVDEP
PCB as Aroclor 1248	VELAP,NC,WVDEP
PCB as Aroclor 1254	VELAP,NC,WVDEP
PCB as Aroclor 1260	VELAP,NC,WVDEP
SW8151A in Non-Potable Water	
2,4,5-T	VELAP,NC
2,4,5-TP (Silvex)	VELAP,NC
2,4-D	VELAP,NC
Dinoseb	VELAP,NC
Pentachlorophenol	VELAP,NC
SW8260B in Non-Potable Water	
1,1,1,2-Tetrachloroethane	NC,VELAP,WVDEP
1,1,1-Trichloroethane	NC,VELAP,WVDEP
1,1,2,2-Tetrachloroethane	NC,VELAP,WVDEP
1,1,2-Trichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethylene	NC,VELAP,WVDEP
1,1-Dichloropropene	NC,VELAP,WVDEP
1,2,3-Trichloropropane	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,2-Dichloroethane	NC,VELAP,WVDEP
1,2-Dichloropropane	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,3-Dichloropropane	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
2,2-Dichloropropane	NC,VELAP,WVDEP
2-Butanone (MEK)	NC,VELAP,WVDEP
2-Hexanone (MBK)	NC,VELAP,WVDEP
4-Methyl-2-pentanone (MIBK)	NC,VELAP,WVDEP
Acetone	NC,VELAP,WVDEP
Acetonitrile	NC,VELAP,WVDEP
Acrolein	NC,VELAP,WVDEP
Acrylonitrile	NC,VELAP,WVDEP
Allyl chloride	NC,VELAP,WVDEP
Benzene	NC,VELAP,WVDEP
Bromochloromethane	NC,VELAP,WVDEP
Bromodichloromethane	NC,VELAP,WVDEP
Bromoform	NC,VELAP,WVDEP
Bromomethane	NC,VELAP,WVDEP
Carbon disulfide	NC,VELAP,WVDEP
Carbon tetrachloride	NC,VELAP,WVDEP
Chlorobenzene	NC,VELAP,WVDEP
Chloroethane	NC,VELAP,WVDEP
Chloroform	NC,VELAP,WVDEP
Chloromethane	NC,VELAP,WVDEP
Chloroprene	NC,VELAP,WVDEP
cis-1,2-Dichloroethylene	NC,VELAP,WVDEP
cis-1,3-Dichloropropene	NC,VELAP,WVDEP
Dibromochloromethane	NC,VELAP,WVDEP
Dibromomethane	NC,VELAP,WVDEP
Dichlorodifluoromethane	NC,VELAP,WVDEP
Ethyl methacrylate	NC,VELAP,WVDEP
Ethylbenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Iodomethane	NC,VELAP,WVDEP
Isobutyl Alcohol	NC,VELAP,WVDEP
m+p-Xylenes	NC,VELAP,WVDEP
Methacrylonitrile	NC,VELAP,WVDEP
Methyl methacrylate	NC,VELAP,WVDEP
Methylene chloride	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
o-Xylene	NC,VELAP,WVDEP
Propionitrile	NC,VELAP,WVDEP
Styrene	NC,VELAP,WVDEP
Tetrachloroethylene (PCE)	NC,VELAP,WVDEP
Toluene	NC,VELAP,WVDEP
trans-1,2-Dichloroethylene	NC,VELAP,WVDEP
trans-1,3-Dichloropropene	NC,VELAP,WVDEP
trans-1,4-Dichloro-2-butene	NC,VELAP,WVDEP
Trichloroethylene	NC,VELAP,WVDEP
Trichlorofluoromethane	NC,VELAP,WVDEP
Vinyl acetate	NC,VELAP,WVDEP
Vinyl chloride	NC,VELAP,WVDEP
Xylenes, Total	NC,VELAP,WVDEP
 SW8270D in Non-Potable Water	
1,2,4,5-Tetrachlorobenzene	NC,VELAP,WVDEP
1,3,5-Trinitrobenzene	NC,VELAP,WVDEP
1,3-Dinitrobenzene	NC,VELAP,WVDEP
1,4-Naphthoquinone	NC,VELAP,WVDEP
1-Naphthylamine	NC,VELAP,WVDEP
2,3,4,6-Tetrachlorophenol	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dichlorophenol	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Acetylaminofluorene	NC,VELAP,WVDEP
2-Chloronaphthalene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
2-Naphthylamine	NC,VELAP,WVDEP
2-Nitroaniline	NC,VELAP,WVDEP
2-Nitrophenol	NC,VELAP,WVDEP
3,3'-Dichlorobenzidine	NC,VELAP,WVDEP
3,3'-Dimethylbenzidine	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
3-Methylcholanthrene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4,6-Dinitro-2-methylphenol	NC,VELAP,WVDEP
4-Aminobiphenyl	NC,VELAP,WVDEP
4-Bromophenyl phenyl ether	NC,VELAP,WVDEP
4-Chloroaniline	NC,VELAP,WVDEP
4-Chlorophenyl phenyl ether	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
4-Nitrophenol	NC,VELAP,WVDEP
5-Nitro-o-toluidine	NC,VELAP,WVDEP
7,12-Dimethylbenz (a) anthracene	NC,VELAP,WVDEP
Acenaphthene	NC,VELAP,WVDEP
Acenaphthylene	NC,VELAP,WVDEP
Acetophenone	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (g,h,i) perylene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
Benzyl alcohol	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chlorobenzilate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Diallate	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Dibenzofuran	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethoate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP
Di-n-octyl phthalate	NC,VELAP,WVDEP
Diphenylamine	NC,VELAP,WVDEP
Disulfoton	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
Ethyl methanesulfonate	NC,VELAP,WVDEP
Ethyl parathion	NC,VELAP,WVDEP
Famphur	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP
Hexachloroethane	NC,VELAP,WVDEP
Hexachloropropene	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isodrin	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
Isosafrole	NC,VELAP,WVDEP
Kepone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Methapyrilene	NC,VELAP,WVDEP
Methyl methanesulfonate	NC,VELAP,WVDEP
Methyl parathion	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodiethylamine	NC,VELAP,WVDEP
n-Nitrosodimethylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-butylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
n-Nitrosomethylethylamine	NC,VELAP,WVDEP
n-Nitrosopiperidine	NC,VELAP,WVDEP
n-Nitrosopyrrolidine	NC,VELAP,WVDEP
o,o,o-Triethyl phosphorothioate	NC,VELAP,WVDEP
o,o-Diethyl o-2-pyrazinyl phosphorothioate	NC,VELAP,WVDEP
o+m+p-Cresols	VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
o-Toluidine	NC,VELAP,WVDEP
p-(Dimethylamino) azobenzene	NC,VELAP,WVDEP
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachlorobenzene	NC,VELAP,WVDEP
Pentachloronitrobenzene (quintozene)	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/11/2018 16:43
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Phenacetin	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Phorate	NC,VELAP,WVDEP
p-Phenylenediamine	NC,VELAP,WVDEP
Pronamide	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
Safrole	NC,VELAP,WVDEP
SW9012B in Non-Potable Water	
Cyanide	VELAP
SW9215 in Non-Potable Water	
Sulfide	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

- B Blank contamination. The recorded result is associated with a contaminated blank.
- C Continuing calibration verification response for this analyte is outside specifications.
- CN See case narrative
- DND Not Detected
- E Estimated concentration, outside calibration range
- L LCS recovery is outside of established acceptance limits
- M Matrix spike recovery is outside established acceptance limits
- P Duplicate analysis does not meet the acceptance criteria for precision
- S Surrogate recovery was outside acceptance criteria
- RPD Relative Percent Difference
- Qual Qualifiers
- RE Denotes sample was re-analyzed
- D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
- TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library . A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
- PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.



Sample Preservation Log

Sample Preservation Log
 Form #: F1301
 Rev # 8.0
 Effective: Mar 30, 2018
 Page 1 of 1

Order ID 1830154

Date Performed: 10/4/18

Analyst Performing Check: BR

Sample ID	Container ID	Metals		Cyanide		Sulfide		Ammonia		TKN		Phos, Tot		NO3+NO2		DRO		Pesticide (8081/608/508)			SVOC (525.2/8270/625)			CrVI*		Pest/PCB (508) / SVOC(525)							
		pH as Received	Final pH (if adjust)	pH as Received	Final pH (if adjust)	pH as Received	Final pH (if adjust)	pH as Received	Final pH (if adjust)	pH as Received	Final pH (if adjust)	pH as Received	Final pH (if adjust)	pH as Received	Final pH (if adjust)	pH as Received	Final pH (if adjust)	Present	Absent	Res.Cl as Received	Res.Cl P/A (if adjust)	Present	Absent	Res.Cl as Received	Res.Cl P/A (if adjust)	pH as Received	Adjusted final pH	pH as Received	Final pH (if adjust)	pH as Received	Other	Final pH (if adjust)	
		< 2	Other	> 12	Other	> 9	Other	< 2	Other	< 2	Other	< 2	Other	< 2	Other	< 2	Other	< 2	Other														
01	A																																
01	E	/																															
01	F			/																													
01	G					/																											
02	A																																
02	E	/																															
02	F			/																													
02	G					/																											
03	A																																
03	E	/																															
03	F			/																													
03	G					/																											
04	A																																
04	E	/																															
04	F			/																													

NaOH ID: _____ HNO3 ID: _____
 H2SO4 ID: _____ Na2S2O3 ID: _____
 HCL ID: _____ Na2SO3 ID: _____

CrVI preserved date/time: _____ Analyst Initials: _____
 * pH must be adjusted between 9.3 - 9.7
 Buffer Sol'n ID: _____
 1N NaOH ID: _____ 5N NaOH: _____



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/11/2018 16:43
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	4.80°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	No
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	Yes
Are all volatile organic and TOX containers free of headspace?	Yes
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	Yes
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments

Trip Blank date and time (08/23/18 1410 for 8260, and 09/25/18 1125 for 8011)
logged as per container labels. BAR 10/04/18 0959



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 18J0250

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg, VA 24060

Date Received: October 5, 2018 8:00

Date Issued: October 12, 2018 15:27

Project Number: 18-760

Submitted To: Jeff Fisher

Purchase Order: 18-760

Client Site I.D.: CVTC

Enclosed are the results of analyses for samples received by the laboratory on 10/05/2018 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.





1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 10/12/2018 15:27
201 Church Street
Blacksburg VA, 24060

Submitted To: Jeff Fisher Project Number: 18-760
Client Site I.D.: CVTC Purchase Order: 18-760

ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18J0250

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
16-1 Task 2.6	18J0250-01	Ground Water	10/04/2018 12:30	10/05/2018 08:00
16-2 Task 2.6	18J0250-02	Ground Water	10/04/2018 11:00	10/05/2018 08:00
Trip Blank	18J0250-03	Ground Water	08/23/2018 14:10	10/05/2018 08:00



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6

Laboratory Sample ID: 18J0250-01

Grab Date/Time: 10/04/2018 12:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	01	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:51	BG
Arsenic	01	SW6020A	<1.0 ug/L		1.0	1	10/05/18 17:00	10/09/18 12:43	RCV
Barium	01	SW6010C	0.0424 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:51	BG
Beryllium	01	SW6010C	<0.0040 mg/L		0.0040	1	10/05/18 17:00	10/10/18 12:51	BG
Cadmium	01	SW6010C	<0.0040 mg/L		0.0040	1	10/05/18 17:00	10/10/18 12:51	BG
Cobalt	01	SW6010C	<0.0040 mg/L		0.0040	1	10/05/18 17:00	10/10/18 12:51	BG
Chromium	01	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:51	BG
Copper	01	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:51	BG
Mercury	01	SW7470A	<0.00020 mg/L		0.00020	1	10/08/18 09:30	10/08/18 16:13	MWL
Nickel	01	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:51	BG
Lead	01	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:51	BG
Antimony	01	SW6020A	<1.00 ug/L		1.00	1	10/05/18 17:00	10/09/18 12:43	RCV
Selenium	01	SW6010C	<0.0500 mg/L		0.0500	1	10/05/18 17:00	10/10/18 12:51	BG
Tin	01	SW6010C	<0.0200 mg/L		0.0200	1	10/05/18 17:00	10/10/18 12:51	BG
Thallium	01	SW6020A	<1.00 ug/L		1.00	1	10/05/18 17:00	10/09/18 12:43	RCV
Vanadium	01	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:51	BG
Zinc	01	SW6010C	0.0227 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:51	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	10/05/18 15:24	10/05/18 15:24	KCS
1,1,1-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
1,1,2,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	10/05/18 15:24	10/05/18 15:24	KCS
1,1,2-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
1,1-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
1,1-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
1,1-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6

Laboratory Sample ID: 18J0250-01

Grab Date/Time: 10/04/2018 12:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
1,2,4-Trichlorobenzene	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
1,2-Dichlorobenzene	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
1,2-Dichloroethane	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
1,2-Dichloropropane	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
1,3-Dichlorobenzene	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
1,3-Dichloropropane	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
1,4-Dichlorobenzene	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
2,2-Dichloropropane	01	SW8260B	<2.00 ug/L	2.00	1		10/05/18 15:24	10/05/18 15:24	KCS
2-Butanone (MEK)	01	SW8260B	<5.00 ug/L	5.00	1		10/05/18 15:24	10/05/18 15:24	KCS
2-Hexanone (MBK)	01	SW8260B	<5.00 ug/L	5.00	1		10/05/18 15:24	10/05/18 15:24	KCS
4-Methyl-2-pentanone (MIBK)	01	SW8260B	<5.00 ug/L	5.00	1		10/05/18 15:24	10/05/18 15:24	KCS
Acetone	01	SW8260B	<10.0 ug/L	10.0	1		10/05/18 15:24	10/05/18 15:24	KCS
Acetonitrile	01	SW8260B	<10.0 ug/L	10.0	1		10/05/18 15:24	10/05/18 15:24	KCS
Acrolein	01	SW8260B	<10.0 ug/L	10.0	1		10/05/18 15:24	10/05/18 15:24	KCS
Acrylonitrile	01	SW8260B	<5.00 ug/L	5.00	1		10/05/18 15:24	10/05/18 15:24	KCS
Allyl chloride	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
Benzene	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
Bromochloromethane	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
Bromodichloromethane	01	SW8260B	<0.50 ug/L	0.50	1		10/05/18 15:24	10/05/18 15:24	KCS
Bromoform	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
Bromomethane	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
Carbon disulfide	01	SW8260B	<10.0 ug/L	10.0	1		10/05/18 15:24	10/05/18 15:24	KCS
Carbon tetrachloride	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS
Chlorobenzene	01	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:24	10/05/18 15:24	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6 **Laboratory Sample ID:** 18J0250-01

Grab Date/Time: 10/04/2018 12:30

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Chloroform	01	SW8260B	<0.50 ug/L		0.50	1	10/05/18 15:24	10/05/18 15:24	KCS
Chloromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Chloroprene	01	SW8260B	<5.00 ug/L		5.00	1	10/05/18 15:24	10/05/18 15:24	KCS
cis-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
cis-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Dibromochloromethane	01	SW8260B	<0.50 ug/L		0.50	1	10/05/18 15:24	10/05/18 15:24	KCS
Dibromomethane	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Dichlorodifluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Ethyl methacrylate	01	SW8260B	<5.00 ug/L		5.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Ethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Hexachlorobutadiene	01	SW8260B	<0.80 ug/L		0.80	1	10/05/18 15:24	10/05/18 15:24	KCS
Iodomethane	01	SW8260B	<10.0 ug/L		10.0	1	10/05/18 15:24	10/05/18 15:24	KCS
Isobutyl Alcohol	01	SW8260B	<40.0 ug/L		40.0	1	10/05/18 15:24	10/05/18 15:24	KCS
m+p-Xylenes	01	SW8260B	<2.00 ug/L		2.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Methacrylonitrile	01	SW8260B	<1.50 ug/L		1.50	1	10/05/18 15:24	10/05/18 15:24	KCS
Methyl methacrylate	01	SW8260B	<2.00 ug/L		2.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Methylene chloride	01	SW8260B	<4.00 ug/L		4.00	1	10/05/18 15:24	10/05/18 15:24	KCS
o-Xylene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Propionitrile	01	SW8260B	<40.0 ug/L		40.0	1	10/05/18 15:24	10/05/18 15:24	KCS
Styrene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Tetrachloroethylene (PCE)	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Toluene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
trans-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
trans-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6	Laboratory Sample ID: 18J0250-01
Grab Date/Time: 10/04/2018 12:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	01	SW8260B	<4.00 ug/L		4.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Trichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Trichlorofluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:24	10/05/18 15:24	KCS
Vinyl acetate	01	SW8260B	<10.0 ug/L		10.0	1	10/05/18 15:24	10/05/18 15:24	KCS
Vinyl chloride	01	SW8260B	<0.50 ug/L		0.50	1	10/05/18 15:24	10/05/18 15:24	KCS
Xylenes, Total	01	SW8260B	<3.00 ug/L		3.00	1	10/05/18 15:24	10/05/18 15:24	KCS
<i>Surr: 1,2-Dichloroethane-d4 (Surr)</i>	<i>01</i>	<i>SW8260B</i>	<i>104 %</i>		<i>70-120</i>		<i>10/05/18 15:24</i>	<i>10/05/18 15:24</i>	<i>KCS</i>
<i>Surr: 4-Bromofluorobenzene (Surr)</i>	<i>01</i>	<i>SW8260B</i>	<i>93.6 %</i>		<i>75-120</i>		<i>10/05/18 15:24</i>	<i>10/05/18 15:24</i>	<i>KCS</i>
<i>Surr: Dibromofluoromethane (Surr)</i>	<i>01</i>	<i>SW8260B</i>	<i>101 %</i>		<i>70-130</i>		<i>10/05/18 15:24</i>	<i>10/05/18 15:24</i>	<i>KCS</i>
<i>Surr: Toluene-d8 (Surr)</i>	<i>01</i>	<i>SW8260B</i>	<i>100 %</i>		<i>70-130</i>		<i>10/05/18 15:24</i>	<i>10/05/18 15:24</i>	<i>KCS</i>
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	01	EPA625	Not Detected			1	10/08/18 09:35	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
1,3,5-Trinitrobenzene	01	SW8270D	<5.56 ug/L		5.56	1	10/08/18 09:35	10/08/18 23:02	SKS
1,3-Dinitrobenzene	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
1,4-Naphthoquinone	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
1-Naphthylamine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2,3,4,6-Tetrachlorophenol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2,4,5-Trichlorophenol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2,4,6-Trichlorophenol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2,4-Dichlorophenol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2,4-Dimethylphenol	01	SW8270D	<0.56 ug/L		0.56	1	10/08/18 09:35	10/08/18 23:02	SKS
2,4-Dinitrophenol	01	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 23:02	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/12/2018 15:27

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6

Laboratory Sample ID: 18J0250-01

Grab Date/Time: 10/04/2018 12:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2,6-Dichlorophenol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2,6-Dinitrotoluene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2-Acetylaminofluorene	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
2-Chloronaphthalene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2-Chlorophenol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2-Methylnaphthalene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2-Naphthylamine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2-Nitroaniline	01	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:02	SKS
2-Nitrophenol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
3,3'-Dichlorobenzidine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
3,3'-Dimethylbenzidine	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
3-Methylcholanthrene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
3-Nitroaniline	01	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:02	SKS
4,6-Dinitro-2-methylphenol	01	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 23:02	SKS
4-Aminobiphenyl	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
4-Bromophenyl phenyl ether	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
4-Chloroaniline	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
4-Chlorophenyl phenyl ether	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
4-Nitroaniline	01	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:02	SKS
4-Nitrophenol	01	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 23:02	SKS
5-Nitro-o-toluidine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
7,12-Dimethylbenz (a) anthracene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Acenaphthene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Acenaphthylene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6

Laboratory Sample ID: 18J0250-01

Grab Date/Time: 10/04/2018 12:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	01	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:02	SKS
Anthracene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Benzo (a) anthracene	01	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 23:02	SKS
Benzo (a) pyrene	01	SW8270D	<0.11 ug/L		0.11	1	10/08/18 09:35	10/08/18 23:02	SKS
Benzo (b) fluoranthene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Benzo (g,h,i) perylene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Benzo (k) fluoranthene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Benzyl alcohol	01	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:02	SKS
bis (2-Chloroethoxy) methane	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
bis (2-Chloroethyl) ether	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
2,2'-Oxybis (1-chloropropane)	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
bis (2-Ethylhexyl) phthalate	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
Butyl benzyl phthalate	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Chlorobenzilate	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
Chrysene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Diallate	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
Dibenz (a,h) anthracene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Dibenzofuran	01	SW8270D	<5.56 ug/L		5.56	1	10/08/18 09:35	10/08/18 23:02	SKS
Diethyl phthalate	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Dimethoate	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
Dimethyl phthalate	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Di-n-butyl phthalate	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Di-n-octyl phthalate	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Diphenylamine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Disulfoton	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6 **Laboratory Sample ID:** 18J0250-01

Grab Date/Time: 10/04/2018 12:30

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	01	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:02	SKS
Ethyl parathion	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
Famphur	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
Fluoranthene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Fluorene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Hexachlorobenzene	01	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 23:02	SKS
Hexachlorobutadiene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Hexachlorocyclopentadiene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Hexachloroethane	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Hexachloropropene	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
Indeno (1,2,3-cd) pyrene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Isodrin	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Isophorone	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Isosafrole	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Kepon	01	SW8270D	<2.78 ug/L	C	2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
m+p-Cresols	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Methapyrilene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Methyl methanesulfonate	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Methyl parathion	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
Naphthalene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Nitrobenzene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
n-Nitrosodiethylamine	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
n-Nitrosodimethylamine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
n-Nitrosodi-n-butylamine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
n-Nitrosodi-n-propylamine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6

Laboratory Sample ID: 18J0250-01

Grab Date/Time: 10/04/2018 12:30

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
n-Nitrosomethylethylamine	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
n-Nitrosopiperidine	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
n-Nitrosopyrrolidine	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
o,o,o-Triethyl phosphorothioate	01	SW8270D	<11.1 ug/L	C	11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
o+m+p-Cresols	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
o-Cresol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
o-Toluidine	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
p-(Dimethylamino) azobenzene	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
p-Chloro-m-cresol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Pentachlorobenzene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Pentachloronitrobenzene (quintozene)	01	SW8270D	<1.11 ug/L		1.11	1	10/08/18 09:35	10/08/18 23:02	SKS
Phenacetin	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Phenanthrene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Phenol	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Phorate	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
p-Phenylenediamine	01	SW8270D	<11.1 ug/L	C	11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Pronamide	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Pyrene	01	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:02	SKS
Safrole	01	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:02	SKS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270D	72.7 %		10-86		10/08/18 09:35	10/08/18 23:02	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6 **Laboratory Sample ID:** 18J0250-01

Grab Date/Time: 10/04/2018 12:30

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270D	77.6 %		9-87		10/08/18 09:35	10/08/18 23:02	SKS
Surr: 2-Fluorophenol (Surr)	01	SW8270D	65.1 %	S	10-52		10/08/18 09:35	10/08/18 23:02	SKS
Surr: Nitrobenzene-d5 (Surr)	01	SW8270D	75.3 %		10-98.5		10/08/18 09:35	10/08/18 23:02	SKS
Surr: Phenol-d5 (Surr)	01	SW8270D	32.4 %		5-33		10/08/18 09:35	10/08/18 23:02	SKS
Surr: p-Terphenyl-d14 (Surr)	01	SW8270D	96.6 %		27-133		10/08/18 09:35	10/08/18 23:02	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:00	HLM
PCB as Aroclor 1221	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:00	HLM
PCB as Aroclor 1232	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:00	HLM
PCB as Aroclor 1242	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:00	HLM
PCB as Aroclor 1248	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:00	HLM
PCB as Aroclor 1254	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:00	HLM
PCB as Aroclor 1260	01	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:00	HLM
Surr: DCB	01	SW8082A	45.0 %		30-105		10/08/18 14:02	10/09/18 16:00	HLM
Surr: TCMX	01	SW8082A	55.0 %		30-105		10/08/18 14:02	10/09/18 16:00	HLM
4,4'-DDD	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
4,4'-DDE	01	SW8081B	<0.057 ug/L	C	0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
4,4'-DDT	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Aldrin	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
alpha-BHC	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
beta-BHC	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Chlordane	01	SW8081B	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:00	HLM
delta-BHC	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Dieldrin	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Endosulfan I	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6 **Laboratory Sample ID:** 18J0250-01

Grab Date/Time: 10/04/2018 12:30

Field Residual Cl: **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Organochlorine Pesticides and PCBs by GC/ECD									
Endosulfan II	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Endosulfan sulfate	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Endrin	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Endrin aldehyde	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
gamma-BHC (Lindane)	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Heptachlor	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Heptachlor epoxide	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Methoxychlor	01	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:00	HLM
Toxaphene	01	SW8081B	<1.15 ug/L		1.15	1	10/08/18 14:02	10/09/18 16:00	HLM
<i>Surr: TCMX</i>	<i>01</i>	<i>SW8081B</i>	<i>80.0 %</i>		<i>18-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 16:00</i>	<i>HLM</i>
<i>Surr: DCB</i>	<i>01</i>	<i>SW8081B</i>	<i>60.0 %</i>		<i>27-131</i>		<i>10/08/18 14:02</i>	<i>10/09/18 16:00</i>	<i>HLM</i>
Organochlorine Herbicides by GC/ECD									
2,4,5-T	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:24	SKS
2,4,5-TP (Silvex)	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:24	SKS
2,4-D	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:24	SKS
Dinoseb	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:24	SKS
Pentachlorophenol	01	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:24	SKS
<i>Surr: DCAA (Surr)</i>	<i>01</i>	<i>SW8151A</i>	<i>80.0 %</i>		<i>60-112</i>		<i>10/08/18 14:02</i>	<i>10/09/18 14:24</i>	<i>SKS</i>
Micro-extractables by GC/ECD									
1,2-Dibromoethane (EDB)	01	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 22:11	HLM
1,2,3-Trichloropropane	01	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 22:11	HLM
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 22:11	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-1 Task 2.6	Laboratory Sample ID: 18J0250-01
Grab Date/Time: 10/04/2018 12:30	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	01	SW9012B	<0.01 mg/L		0.01	1	10/11/18 13:43	10/11/18 13:43	BBP
Chromium, Hexavalent	01	SW7196A	<0.005 mg/L		0.005	1	10/05/18 14:56	10/05/18 14:56	MWL
Sulfide	01	SW9215	<1.00 mg/L		1.00	1	10/08/18 15:00	10/08/18 15:00	TMB



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6

Laboratory Sample ID: 18J0250-02

Grab Date/Time: 10/04/2018 11:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Metals (Total) by EPA 6000/7000 Series Methods									
Silver	02	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:54	BG
Arsenic	02	SW6020A	<1.0 ug/L		1.0	1	10/05/18 17:00	10/09/18 12:45	RCV
Barium	02	SW6010C	0.0191 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:54	BG
Beryllium	02	SW6010C	<0.0040 mg/L		0.0040	1	10/05/18 17:00	10/10/18 12:54	BG
Cadmium	02	SW6010C	<0.0040 mg/L		0.0040	1	10/05/18 17:00	10/10/18 12:54	BG
Cobalt	02	SW6010C	<0.0040 mg/L		0.0040	1	10/05/18 17:00	10/10/18 12:54	BG
Chromium	02	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:54	BG
Copper	02	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:54	BG
Mercury	02	SW7470A	<0.00020 mg/L		0.00020	1	10/08/18 09:30	10/08/18 16:24	MWL
Nickel	02	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:54	BG
Lead	02	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:54	BG
Antimony	02	SW6020A	<1.00 ug/L		1.00	1	10/05/18 17:00	10/09/18 12:45	RCV
Selenium	02	SW6010C	<0.0500 mg/L		0.0500	1	10/05/18 17:00	10/10/18 12:54	BG
Tin	02	SW6010C	<0.0200 mg/L		0.0200	1	10/05/18 17:00	10/10/18 12:54	BG
Thallium	02	SW6020A	<1.00 ug/L		1.00	1	10/05/18 17:00	10/09/18 12:45	RCV
Vanadium	02	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:54	BG
Zinc	02	SW6010C	<0.0100 mg/L		0.0100	1	10/05/18 17:00	10/10/18 12:54	BG
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	10/05/18 15:46	10/05/18 15:46	KCS
1,1,1-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
1,1,2,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	10/05/18 15:46	10/05/18 15:46	KCS
1,1,2-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
1,1-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
1,1-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
1,1-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6

Laboratory Sample ID: 18J0250-02

Grab Date/Time: 10/04/2018 11:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,2,3-Trichloropropane	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
1,2,4-Trichlorobenzene	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
1,2-Dichlorobenzene	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
1,2-Dichloroethane	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
1,2-Dichloropropane	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
1,3-Dichlorobenzene	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
1,3-Dichloropropane	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
1,4-Dichlorobenzene	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
2,2-Dichloropropane	02	SW8260B	<2.00 ug/L	2.00	1		10/05/18 15:46	10/05/18 15:46	KCS
2-Butanone (MEK)	02	SW8260B	<5.00 ug/L	5.00	1		10/05/18 15:46	10/05/18 15:46	KCS
2-Hexanone (MBK)	02	SW8260B	<5.00 ug/L	5.00	1		10/05/18 15:46	10/05/18 15:46	KCS
4-Methyl-2-pentanone (MIBK)	02	SW8260B	<5.00 ug/L	5.00	1		10/05/18 15:46	10/05/18 15:46	KCS
Acetone	02	SW8260B	<10.0 ug/L	10.0	1		10/05/18 15:46	10/05/18 15:46	KCS
Acetonitrile	02	SW8260B	<10.0 ug/L	10.0	1		10/05/18 15:46	10/05/18 15:46	KCS
Acrolein	02	SW8260B	<10.0 ug/L	10.0	1		10/05/18 15:46	10/05/18 15:46	KCS
Acrylonitrile	02	SW8260B	<5.00 ug/L	5.00	1		10/05/18 15:46	10/05/18 15:46	KCS
Allyl chloride	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
Benzene	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
Bromochloromethane	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
Bromodichloromethane	02	SW8260B	<0.50 ug/L	0.50	1		10/05/18 15:46	10/05/18 15:46	KCS
Bromoform	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
Bromomethane	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
Carbon disulfide	02	SW8260B	<10.0 ug/L	10.0	1		10/05/18 15:46	10/05/18 15:46	KCS
Carbon tetrachloride	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS
Chlorobenzene	02	SW8260B	<1.00 ug/L	1.00	1		10/05/18 15:46	10/05/18 15:46	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6

Laboratory Sample ID: 18J0250-02

Grab Date/Time: 10/04/2018 11:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Chloroethane	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Chloroform	02	SW8260B	<0.50 ug/L		0.50	1	10/05/18 15:46	10/05/18 15:46	KCS
Chloromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Chloroprene	02	SW8260B	<5.00 ug/L		5.00	1	10/05/18 15:46	10/05/18 15:46	KCS
cis-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
cis-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Dibromochloromethane	02	SW8260B	<0.50 ug/L		0.50	1	10/05/18 15:46	10/05/18 15:46	KCS
Dibromomethane	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Dichlorodifluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Ethyl methacrylate	02	SW8260B	<5.00 ug/L		5.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Ethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Hexachlorobutadiene	02	SW8260B	<0.80 ug/L		0.80	1	10/05/18 15:46	10/05/18 15:46	KCS
Iodomethane	02	SW8260B	<10.0 ug/L		10.0	1	10/05/18 15:46	10/05/18 15:46	KCS
Isobutyl Alcohol	02	SW8260B	<40.0 ug/L		40.0	1	10/05/18 15:46	10/05/18 15:46	KCS
m+p-Xylenes	02	SW8260B	<2.00 ug/L		2.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Methacrylonitrile	02	SW8260B	<1.50 ug/L		1.50	1	10/05/18 15:46	10/05/18 15:46	KCS
Methyl methacrylate	02	SW8260B	<2.00 ug/L		2.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Methylene chloride	02	SW8260B	<4.00 ug/L		4.00	1	10/05/18 15:46	10/05/18 15:46	KCS
o-Xylene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Propionitrile	02	SW8260B	<40.0 ug/L		40.0	1	10/05/18 15:46	10/05/18 15:46	KCS
Styrene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Tetrachloroethylene (PCE)	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Toluene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
trans-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
trans-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6	Laboratory Sample ID: 18J0250-02
Grab Date/Time: 10/04/2018 11:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
trans-1,4-Dichloro-2-butene	02	SW8260B	<4.00 ug/L		4.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Trichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Trichlorofluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	10/05/18 15:46	10/05/18 15:46	KCS
Vinyl acetate	02	SW8260B	<10.0 ug/L		10.0	1	10/05/18 15:46	10/05/18 15:46	KCS
Vinyl chloride	02	SW8260B	<0.50 ug/L		0.50	1	10/05/18 15:46	10/05/18 15:46	KCS
Xylenes, Total	02	SW8260B	<3.00 ug/L		3.00	1	10/05/18 15:46	10/05/18 15:46	KCS
<i>Surr: 1,2-Dichloroethane-d4 (Surr)</i>	02	SW8260B	102 %		70-120		10/05/18 15:46	10/05/18 15:46	KCS
<i>Surr: 4-Bromofluorobenzene (Surr)</i>	02	SW8260B	94.9 %		75-120		10/05/18 15:46	10/05/18 15:46	KCS
<i>Surr: Dibromofluoromethane (Surr)</i>	02	SW8260B	102 %		70-130		10/05/18 15:46	10/05/18 15:46	KCS
<i>Surr: Toluene-d8 (Surr)</i>	02	SW8260B	101 %		70-130		10/05/18 15:46	10/05/18 15:46	KCS
Semivolatile Organic Compounds by GCMS									
2,3,7,8-TCDD (SIM)	02	EPA625	Not Detected			1	10/08/18 09:35	10/09/18 13:28	SKS
1,2,4,5-Tetrachlorobenzene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
1,3,5-Trinitrobenzene	02	SW8270D	<5.56 ug/L		5.56	1	10/08/18 09:35	10/08/18 23:34	SKS
1,3-Dinitrobenzene	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
1,4-Naphthoquinone	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
1-Naphthylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2,3,4,6-Tetrachlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2,4,5-Trichlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2,4,6-Trichlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2,4-Dichlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2,4-Dimethylphenol	02	SW8270D	<0.56 ug/L		0.56	1	10/08/18 09:35	10/08/18 23:34	SKS
2,4-Dinitrophenol	02	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 23:34	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/12/2018 15:27

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6

Laboratory Sample ID: 18J0250-02

Grab Date/Time: 10/04/2018 11:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
2,4-Dinitrotoluene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2,6-Dichlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2,6-Dinitrotoluene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2-Acetylaminofluorene	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
2-Chloronaphthalene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2-Chlorophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2-Methylnaphthalene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2-Naphthylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2-Nitroaniline	02	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:34	SKS
2-Nitrophenol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
3,3'-Dichlorobenzidine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
3,3'-Dimethylbenzidine	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
3-Methylcholanthrene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
3-Nitroaniline	02	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:34	SKS
4,6-Dinitro-2-methylphenol	02	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 23:34	SKS
4-Aminobiphenyl	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
4-Bromophenyl phenyl ether	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
4-Chloroaniline	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
4-Chlorophenyl phenyl ether	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
4-Nitroaniline	02	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:34	SKS
4-Nitrophenol	02	SW8270D	<55.6 ug/L		55.6	1	10/08/18 09:35	10/08/18 23:34	SKS
5-Nitro-o-toluidine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
7,12-Dimethylbenz (a) anthracene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Acenaphthene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Acenaphthylene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6

Laboratory Sample ID: 18J0250-02

Grab Date/Time: 10/04/2018 11:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Acetophenone	02	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:34	SKS
Anthracene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Benzo (a) anthracene	02	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 23:34	SKS
Benzo (a) pyrene	02	SW8270D	<0.11 ug/L		0.11	1	10/08/18 09:35	10/08/18 23:34	SKS
Benzo (b) fluoranthene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Benzo (g,h,i) perylene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Benzo (k) fluoranthene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Benzyl alcohol	02	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:34	SKS
bis (2-Chloroethoxy) methane	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
bis (2-Chloroethyl) ether	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
2,2'-Oxybis (1-chloropropane)	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
bis (2-Ethylhexyl) phthalate	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
Butyl benzyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Chlorobenzilate	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
Chrysene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Diallate	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
Dibenz (a,h) anthracene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Dibenzofuran	02	SW8270D	<5.56 ug/L		5.56	1	10/08/18 09:35	10/08/18 23:34	SKS
Diethyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Dimethoate	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
Dimethyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Di-n-butyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Di-n-octyl phthalate	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Diphenylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Disulfoton	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6

Laboratory Sample ID: 18J0250-02

Grab Date/Time: 10/04/2018 11:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Ethyl methanesulfonate	02	SW8270D	<22.2 ug/L		22.2	1	10/08/18 09:35	10/08/18 23:34	SKS
Ethyl parathion	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
Famphur	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
Fluoranthene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Fluorene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Hexachlorobenzene	02	SW8270D	<0.06 ug/L		0.06	1	10/08/18 09:35	10/08/18 23:34	SKS
Hexachlorobutadiene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Hexachlorocyclopentadiene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Hexachloroethane	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Hexachloropropene	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
Indeno (1,2,3-cd) pyrene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Isodrin	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Isophorone	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Isosafrole	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Kepon	02	SW8270D	<2.78 ug/L	C	2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
m+p-Cresols	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Methapyrilene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Methyl methanesulfonate	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Methyl parathion	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
Naphthalene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Nitrobenzene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
n-Nitrosodiethylamine	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
n-Nitrosodimethylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
n-Nitrosodi-n-butylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
n-Nitrosodi-n-propylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/12/2018 15:27

Submitted To: Jeff Fisher

Project Number: 18-760

Client Site I.D.: CVTC

Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6

Laboratory Sample ID: 18J0250-02

Grab Date/Time: 10/04/2018 11:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
n-Nitrosodiphenylamine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
n-Nitrosomethylethylamine	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
n-Nitrosopiperidine	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
n-Nitrosopyrrolidine	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
o,o,o-Triethyl phosphorothioate	02	SW8270D	<11.1 ug/L	C	11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
o,o-Diethyl o-2-pyrazinyl phosphorothioate	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
o+m+p-Cresols	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
o-Cresol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
o-Toluidine	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
p-(Dimethylamino) azobenzene	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
p-Chloro-m-cresol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Pentachlorobenzene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Pentachloronitrobenzene (quintozene)	02	SW8270D	<1.11 ug/L		1.11	1	10/08/18 09:35	10/08/18 23:34	SKS
Phenacetin	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Phenanthrene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Phenol	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Phorate	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
p-Phenylenediamine	02	SW8270D	<11.1 ug/L	C	11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Pronamide	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Pyrene	02	SW8270D	<11.1 ug/L		11.1	1	10/08/18 09:35	10/08/18 23:34	SKS
Safrole	02	SW8270D	<2.78 ug/L		2.78	1	10/08/18 09:35	10/08/18 23:34	SKS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270D	69.9 %		10-86		10/08/18 09:35	10/08/18 23:34	SKS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6

Laboratory Sample ID: 18J0250-02

Grab Date/Time: 10/04/2018 11:00

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Semivolatile Organic Compounds by GCMS									
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270D	73.6 %		9-87		10/08/18 09:35	10/08/18 23:34	SKS
Surr: 2-Fluorophenol (Surr)	02	SW8270D	50.4 %		10-52		10/08/18 09:35	10/08/18 23:34	SKS
Surr: Nitrobenzene-d5 (Surr)	02	SW8270D	68.8 %		10-98.5		10/08/18 09:35	10/08/18 23:34	SKS
Surr: Phenol-d5 (Surr)	02	SW8270D	30.2 %		5-33		10/08/18 09:35	10/08/18 23:34	SKS
Surr: p-Terphenyl-d14 (Surr)	02	SW8270D	107 %		27-133		10/08/18 09:35	10/08/18 23:34	SKS
Organochlorine Pesticides and PCBs by GC/ECD									
PCB as Aroclor 1016	02	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:17	HLM
PCB as Aroclor 1221	02	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:17	HLM
PCB as Aroclor 1232	02	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:17	HLM
PCB as Aroclor 1242	02	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:17	HLM
PCB as Aroclor 1248	02	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:17	HLM
PCB as Aroclor 1254	02	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:17	HLM
PCB as Aroclor 1260	02	SW8082A	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:17	HLM
Surr: DCB	02	SW8082A	70.0 %		30-105		10/08/18 14:02	10/09/18 16:17	HLM
Surr: TCMX	02	SW8082A	60.0 %		30-105		10/08/18 14:02	10/09/18 16:17	HLM
4,4'-DDD	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
4,4'-DDE	02	SW8081B	<0.057 ug/L	C	0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
4,4'-DDT	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Aldrin	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
alpha-BHC	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
beta-BHC	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Chlordane	02	SW8081B	<0.230 ug/L		0.230	1	10/08/18 14:02	10/09/18 16:17	HLM
delta-BHC	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Dieldrin	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Endosulfan I	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6	Laboratory Sample ID: 18J0250-02
Grab Date/Time: 10/04/2018 11:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
-----------	---------	--------	--------	------	-----------------	------	-----------------------	--------------------	---------

Organochlorine Pesticides and PCBs by GC/ECD

Endosulfan II	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Endosulfan sulfate	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Endrin	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Endrin aldehyde	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
gamma-BHC (Lindane)	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Heptachlor	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Heptachlor epoxide	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Methoxychlor	02	SW8081B	<0.057 ug/L		0.057	1	10/08/18 14:02	10/09/18 16:17	HLM
Toxaphene	02	SW8081B	<1.15 ug/L		1.15	1	10/08/18 14:02	10/09/18 16:17	HLM
<hr style="border-top: 1px dashed black;"/>									
Surr: TCMX	02	SW8081B	80.0 %		18-112		10/08/18 14:02	10/09/18 16:17	HLM
Surr: DCB	02	SW8081B	100 %		27-131		10/08/18 14:02	10/09/18 16:17	HLM

Organochlorine Herbicides by GC/ECD

2,4,5-T	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:42	SKS
2,4,5-TP (Silvex)	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:42	SKS
2,4-D	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:42	SKS
Dinoseb	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:42	SKS
Pentachlorophenol	02	SW8151A	<0.500 ug/L		0.500	1	10/08/18 14:02	10/09/18 14:42	SKS
<hr style="border-top: 1px dashed black;"/>									
Surr: DCAA (Surr)	02	SW8151A	85.0 %		60-112		10/08/18 14:02	10/09/18 14:42	SKS

Micro-extractables by GC/ECD

1,2-Dibromoethane (EDB)	02	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 22:30	HLM
1,2,3-Trichloropropane	02	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 22:30	HLM
1,2-Dibromo-3-chloropropane (DBCP)	02	SW8011	<0.010 ug/L		0.010	1	10/08/18 12:52	10/08/18 22:30	HLM



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. 16-2 Task 2.6	Laboratory Sample ID: 18J0250-02
Grab Date/Time: 10/04/2018 11:00	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Wet Chemistry Analysis									
Cyanide	02	SW9012B	<0.01 mg/L	Cl	0.01	1	10/11/18 13:46	10/11/18 13:46	BBP
Chromium, Hexavalent	02	SW7196A	<0.005 mg/L		0.005	1	10/05/18 14:56	10/05/18 14:56	MWL
Sulfide	02	SW9215	<1.00 mg/L		1.00	1	10/08/18 15:00	10/08/18 15:00	TMB



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
201 Church Street
Blacksburg VA, 24060

Date Issued: 10/12/2018 15:27

Submitted To: Jeff Fisher
Client Site I.D.: CVTC

Project Number: 18-760
Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. Trip Blank

Laboratory Sample ID: 18J0250-03

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
1,1,1,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	10/05/18 13:55	10/05/18 13:55	KCS
1,1,1-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,1,2,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	10/05/18 13:55	10/05/18 13:55	KCS
1,1,2-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,1-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,1-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,1-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,2,3-Trichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,2,4-Trichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,2-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,2-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,2-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,3-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,3-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
1,4-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
2,2-Dichloropropane	03	SW8260B	<2.00 ug/L		2.00	1	10/05/18 13:55	10/05/18 13:55	KCS
2-Butanone (MEK)	03	SW8260B	<5.00 ug/L		5.00	1	10/05/18 13:55	10/05/18 13:55	KCS
2-Hexanone (MBK)	03	SW8260B	<5.00 ug/L		5.00	1	10/05/18 13:55	10/05/18 13:55	KCS
4-Methyl-2-pentanone (MIBK)	03	SW8260B	<5.00 ug/L		5.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Acetone	03	SW8260B	<10.0 ug/L		10.0	1	10/05/18 13:55	10/05/18 13:55	KCS
Acetonitrile	03	SW8260B	<10.0 ug/L		10.0	1	10/05/18 13:55	10/05/18 13:55	KCS
Acrolein	03	SW8260B	<10.0 ug/L		10.0	1	10/05/18 13:55	10/05/18 13:55	KCS
Acrylonitrile	03	SW8260B	<5.00 ug/L		5.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Allyl chloride	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Benzene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA)
 201 Church Street
 Blacksburg VA, 24060

Date Issued: 10/12/2018 15:27

Submitted To: Jeff Fisher
 Client Site I.D.: CVTC

Project Number: 18-760
 Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. Trip Blank

Laboratory Sample ID: 18J0250-03

Grab Date/Time: 08/23/2018 14:10

Field Residual Cl:

Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
Bromochloromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Bromodichloromethane	03	SW8260B	<0.50 ug/L		0.50	1	10/05/18 13:55	10/05/18 13:55	KCS
Bromoform	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Bromomethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Carbon disulfide	03	SW8260B	<10.0 ug/L		10.0	1	10/05/18 13:55	10/05/18 13:55	KCS
Carbon tetrachloride	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Chlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Chloroethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Chloroform	03	SW8260B	<0.50 ug/L		0.50	1	10/05/18 13:55	10/05/18 13:55	KCS
Chloromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Chloroprene	03	SW8260B	<5.00 ug/L		5.00	1	10/05/18 13:55	10/05/18 13:55	KCS
cis-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
cis-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Dibromochloromethane	03	SW8260B	<0.50 ug/L		0.50	1	10/05/18 13:55	10/05/18 13:55	KCS
Dibromomethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Dichlorodifluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Ethyl methacrylate	03	SW8260B	<5.00 ug/L		5.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Ethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Hexachlorobutadiene	03	SW8260B	<0.80 ug/L		0.80	1	10/05/18 13:55	10/05/18 13:55	KCS
Iodomethane	03	SW8260B	<10.0 ug/L		10.0	1	10/05/18 13:55	10/05/18 13:55	KCS
Isobutyl Alcohol	03	SW8260B	<40.0 ug/L		40.0	1	10/05/18 13:55	10/05/18 13:55	KCS
m+p-Xylenes	03	SW8260B	<2.00 ug/L		2.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Methacrylonitrile	03	SW8260B	<1.50 ug/L		1.50	1	10/05/18 13:55	10/05/18 13:55	KCS
Methyl methacrylate	03	SW8260B	<2.00 ug/L		2.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Methylene chloride	03	SW8260B	<4.00 ug/L		4.00	1	10/05/18 13:55	10/05/18 13:55	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Laboratory Order ID: 18J0250

Analytical Results

Sample I.D. Trip Blank	Laboratory Sample ID: 18J0250-03
Grab Date/Time: 08/23/2018 14:10	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds by GCMS									
o-Xylene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Propionitrile	03	SW8260B	<40.0 ug/L		40.0	1	10/05/18 13:55	10/05/18 13:55	KCS
Styrene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Tetrachloroethylene (PCE)	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Toluene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
trans-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
trans-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
trans-1,4-Dichloro-2-butene	03	SW8260B	<4.00 ug/L		4.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Trichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Trichlorofluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Vinyl acetate	03	SW8260B	<10.0 ug/L		10.0	1	10/05/18 13:55	10/05/18 13:55	KCS
Vinyl chloride	03	SW8260B	<0.50 ug/L		0.50	1	10/05/18 13:55	10/05/18 13:55	KCS
Xylenes, Total	03	SW8260B	<3.00 ug/L		3.00	1	10/05/18 13:55	10/05/18 13:55	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	03	SW8260B	99.1 %		70-120		10/05/18 13:55	10/05/18 13:55	KCS
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260B	95.9 %		75-120		10/05/18 13:55	10/05/18 13:55	KCS
Surr: Dibromofluoromethane (Surr)	03	SW8260B	103 %		70-130		10/05/18 13:55	10/05/18 13:55	KCS
Surr: Toluene-d8 (Surr)	03	SW8260B	101 %		70-130		10/05/18 13:55	10/05/18 13:55	KCS



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Analytical Summary

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method: EPA200.2/R2.8

18J0250-01	50.0 mL / 50.0 mL	SW6010C	BBJ0219	SBJ0329	AJ80060
18J0250-02	50.0 mL / 50.0 mL	SW6010C	BBJ0219	SBJ0329	AJ80060

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Metals (Total) by EPA 6000/7000 Series Methods

Preparation Method: EPA200.8 R5.4

18J0250-01	50.0 mL / 50.0 mL	SW6020A	BBJ0220	SBJ0275	AJ80052
18J0250-02	50.0 mL / 50.0 mL	SW6020A	BBJ0220	SBJ0275	AJ80052

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Wet Chemistry Analysis

Preparation Method: No Prep Wet Chem

18J0250-01	100 mL / 100 mL	SW7196A	BBJ0208	SBJ0213	AJ80042
18J0250-02	100 mL / 100 mL	SW7196A	BBJ0208	SBJ0213	AJ80042

Wet Chemistry Analysis

Preparation Method: No Prep Wet Chem

18J0250-01	6.00 mL / 6.00 mL	SW9215	BBJ0259	SBJ0261	
18J0250-02	6.00 mL / 6.00 mL	SW9215	BBJ0259	SBJ0261	

Wet Chemistry Analysis

Preparation Method: No Prep Wet Chem

18J0250-01	6.00 mL / 6.00 mL	SW9012B	BBJ0380	SBJ0388	AJ80068
18J0250-02	6.00 mL / 6.00 mL	SW9012B	BBJ0380	SBJ0388	AJ80068

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
-----------	--	--------	----------	-------------	----------------

Semivolatile Organic Compounds by GC/MS

Preparation Method: SW3510C

18J0250-01	900 mL / 1.00 mL	EPA625	BBJ0238	SBJ0280	AF80101
18J0250-02	900 mL / 1.00 mL	EPA625	BBJ0238	SBJ0280	AF80101
18J0250-01	900 mL / 1.00 mL	SW8270D	BBJ0238	SBJ0280	AF80101
18J0250-02	900 mL / 1.00 mL	SW8270D	BBJ0238	SBJ0280	AF80101

Organochlorine Pesticides and PCBs by GC/ECD

Preparation Method: SW3510C



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
18J0250-01	870 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0250-02	870 mL / 1.00 mL	SW8081B	BBJ0256	SBJ0337	AH80143
18J0250-01	870 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059
18J0250-02	870 mL / 1.00 mL	SW8082A	BBJ0256	SBJ0341	AH80059

Organochlorine Herbicides by GC/ECD		Preparation Method:	SW3510C		
18J0250-01	900 mL / 5.00 mL	SW8151A	BBJ0257	SBJ0295	AG80138
18J0250-02	900 mL / 5.00 mL	SW8151A	BBJ0257	SBJ0295	AG80138

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS		Preparation Method:	SW5030B		
18J0250-01	5.00 mL / 5.00 mL	SW8260B	BBJ0275	SBJ0272	AH80138
18J0250-02	5.00 mL / 5.00 mL	SW8260B	BBJ0275	SBJ0272	AH80138
18J0250-03	5.00 mL / 5.00 mL	SW8260B	BBJ0275	SBJ0272	AH80138

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Metals (Total) by EPA 6000/7000 Series Methods		Preparation Method:	SW7470A		
18J0250-01	20.0 mL / 20.0 mL	SW7470A	BBJ0218	SBJ0250	AJ80047
18J0250-02	20.0 mL / 20.0 mL	SW7470A	BBJ0218	SBJ0250	AJ80047

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Micro-extractables by GC/ECD		Preparation Method:	SW8011		
18J0250-01	58.1 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045
18J0250-02	58.6 mL / 2.00 mL	SW8011	BBJ0246	SBJ0248	AH80045



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	--------	-----	-----------	------

Batch BBJ0218 - SW7470A

Blank (BBJ0218-BLK1)				Prepared & Analyzed: 10/08/2018						
Mercury	<0.00020 mg/L	0.00020	mg/L							
LCS (BBJ0218-BS1)				Prepared & Analyzed: 10/08/2018						
Mercury	0.00235 mg/L	0.00020	mg/L	0.00250 mg/L	93.9	80-120				
LCS Dup (BBJ0218-BS1)				Prepared & Analyzed: 10/08/2018						
Mercury	0.00229 mg/L	0.00020	mg/L	0.00250 mg/L	91.4	80-120	2.61	20		
Matrix Spike (BBJ0218-MS2)				Source: 18J0278-04		Prepared & Analyzed: 10/08/2018				
Mercury	0.00249 mg/L	0.00020	mg/L	0.00250	<0.00020 mg/L	99.5	80-120			
Matrix Spike Dup (BBJ0218-MS2)				Source: 18J0278-04		Prepared & Analyzed: 10/08/2018				
Mercury	0.00237 mg/L	0.00020	mg/L	0.00250	<0.00020 mg/L	94.9	80-120	4.65	20	

Batch BBJ0219 - EPA200.2/R2.8

Blank (BBJ0219-BLK1)				Prepared: 10/05/2018 Analyzed: 10/08/2018						
Zinc	<0.0100 mg/L	0.0100	mg/L							
Blank (BBJ0219-BLK2)				Prepared: 10/05/2018 Analyzed: 10/10/2018						
Barium	<0.0100 mg/L	0.0100	mg/L							
Beryllium	<0.0040 mg/L	0.0040	mg/L							
Cadmium	<0.0040 mg/L	0.0040	mg/L							
Chromium	<0.0100 mg/L	0.0100	mg/L							
Cobalt	<0.0040 mg/L	0.0040	mg/L							
Copper	<0.0100 mg/L	0.0100	mg/L							
Lead	<0.0100 mg/L	0.0100	mg/L							
Nickel	<0.0100 mg/L	0.0100	mg/L							
Selenium	<0.0500 mg/L	0.0500	mg/L							
Silver	<0.0100 mg/L	0.0100	mg/L							
Tin	<0.0200 mg/L	0.0200	mg/L							
Vanadium	<0.0100 mg/L	0.0100	mg/L							
Zinc	<0.0100 mg/L	0.0100	mg/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qual
Batch BBJ0219 - EPA200.2/R2.8										
LCS (BBJ0219-BS1)					Prepared: 10/05/2018 Analyzed: 10/08/2018					
Zinc	0.523 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120			
LCS (BBJ0219-BS2)					Prepared: 10/05/2018 Analyzed: 10/10/2018					
Barium	0.544 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120			
Beryllium	0.498 mg/L	0.0040	mg/L	0.500	mg/L	99.6	80-120			
Cadmium	0.508 mg/L	0.0040	mg/L	0.500	mg/L	102	80-120			
Chromium	0.503 mg/L	0.0100	mg/L	0.500	mg/L	101	80-120			
Cobalt	0.514 mg/L	0.0040	mg/L	0.500	mg/L	103	80-120			
Copper	0.507 mg/L	0.0100	mg/L	0.500	mg/L	101	80-120			
Lead	0.515 mg/L	0.0100	mg/L	0.500	mg/L	103	80-120			
Nickel	0.5161 mg/L	0.0100	mg/L	0.500	mg/L	103	80-120			
Selenium	0.510 mg/L	0.0500	mg/L	0.500	mg/L	102	80-120			
Silver	0.108 mg/L	0.0100	mg/L	0.100	mg/L	108	80-120			E
Tin	0.101 mg/L	0.0200	mg/L	0.100	mg/L	101	80-120			
Vanadium	0.524 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120			
Zinc	0.541 mg/L	0.0100	mg/L	0.500	mg/L	108	80-120			
LCS Dup (BBJ0219-BSD1)					Prepared: 10/05/2018 Analyzed: 10/08/2018					
Zinc	0.510 mg/L	0.0100	mg/L	0.500	mg/L	102	80-120	2.44	20	
LCS Dup (BBJ0219-BSD2)					Prepared: 10/05/2018 Analyzed: 10/10/2018					
Barium	0.568 mg/L	0.0100	mg/L	0.500	mg/L	114	80-120	4.24	20	
Beryllium	0.515 mg/L	0.0040	mg/L	0.500	mg/L	103	80-120	3.32	20	
Cadmium	0.517 mg/L	0.0040	mg/L	0.500	mg/L	103	80-120	1.76	20	
Chromium	0.522 mg/L	0.0100	mg/L	0.500	mg/L	104	80-120	3.64	20	
Cobalt	0.522 mg/L	0.0040	mg/L	0.500	mg/L	104	80-120	1.55	20	
Copper	0.525 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120	3.47	20	
Lead	0.524 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120	1.74	20	
Nickel	0.5253 mg/L	0.0100	mg/L	0.500	mg/L	105	80-120	1.76	20	
Selenium	0.522 mg/L	0.0500	mg/L	0.500	mg/L	104	80-120	2.30	20	
Silver	0.113 mg/L	0.0100	mg/L	0.100	mg/L	113	80-120	4.26	20	E
Tin	0.103 mg/L	0.0200	mg/L	0.100	mg/L	103	80-120	1.25	20	
Vanadium	0.534 mg/L	0.0100	mg/L	0.500	mg/L	107	80-120	1.96	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0219 - EPA200.2/R2.8

LCS Dup (BBJ0219-BSD2)

Prepared: 10/05/2018 Analyzed: 10/10/2018

Zinc	0.544 mg/L	0.0100	mg/L	0.500	mg/L	109	80-120	0.455	20	
------	------------	--------	------	-------	------	-----	--------	-------	----	--

Matrix Spike (BBJ0219-MS1)

Source: 18J0278-04

Prepared: 10/05/2018 Analyzed: 10/10/2018

Barium	0.631 mg/L	0.0100	mg/L	0.500	0.101 mg/L	106	75-125			
Beryllium	0.517 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	103	75-125			
Cadmium	0.493 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	98.7	75-125			
Chromium	0.496 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.1	75-125			
Cobalt	0.492 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	98.5	75-125			
Copper	0.499 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.9	75-125			
Lead	0.495 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.1	75-125			
Nickel	0.5003 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	98.5	75-125			
Selenium	0.497 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	99.3	75-125			
Silver	0.105 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	105	75-125			E
Tin	0.100 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L	100	75-125			
Vanadium	0.498 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.5	75-125			
Zinc	0.498 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.6	75-125			

Matrix Spike (BBJ0219-MS2)

Source: 18J0280-02

Prepared: 10/05/2018 Analyzed: 10/08/2018

Zinc	0.483 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	96.6	75-125			
------	------------	--------	------	-------	--------------	------	--------	--	--	--

Matrix Spike (BBJ0219-MS3)

Source: 18J0280-02

Prepared: 10/05/2018 Analyzed: 10/10/2018

Barium	0.554 mg/L	0.0100	mg/L	0.500	0.0536 mg/L	100	75-125			
Beryllium	0.482 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	96.5	75-125			
Cadmium	0.476 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	95.2	75-125			
Chromium	0.484 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	96.7	75-125			
Cobalt	0.472 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L	94.4	75-125			
Copper	0.477 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	95.5	75-125			
Lead	0.482 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	96.3	75-125			
Nickel	0.4749 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	95.0	75-125			
Selenium	0.481 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L	96.1	75-125			
Silver	0.101 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L	101	75-125			E
Tin	0.0981 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L	98.1	75-125			
Vanadium	0.495 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	99.0	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0219 - EPA200.2/R2.8

Matrix Spike (BBJ0219-MS3)		Source: 18J0280-02		Prepared: 10/05/2018 Analyzed: 10/10/2018	
Zinc	0.487 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 97.3 75-125

Matrix Spike Dup (BBJ0219-MSD1)		Source: 18J0278-04		Prepared: 10/05/2018 Analyzed: 10/10/2018	
Barium	0.604 mg/L	0.0100	mg/L	0.500	0.101 mg/L 101 75-125 4.35 20
Beryllium	0.516 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L 103 75-125 0.146 20
Cadmium	0.494 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L 98.9 75-125 0.226 20
Chromium	0.491 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 98.2 75-125 0.947 20
Cobalt	0.493 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L 98.7 75-125 0.188 20
Copper	0.498 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 99.5 75-125 0.389 20
Lead	0.498 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 99.5 75-125 0.424 20
Nickel	0.5003 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 98.5 75-125 0.0144 20
Selenium	0.502 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L 100 75-125 1.02 20
Silver	0.0988 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L 98.8 75-125 5.76 20
Tin	0.0999 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L 99.9 75-125 0.364 20
Vanadium	0.499 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 99.8 75-125 0.291 20
Zinc	0.501 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 100 75-125 0.540 20

Matrix Spike Dup (BBJ0219-MSD2)		Source: 18J0280-02		Prepared: 10/05/2018 Analyzed: 10/08/2018	
Zinc	0.494 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 98.8 75-125 2.29 20

Matrix Spike Dup (BBJ0219-MSD3)		Source: 18J0280-02		Prepared: 10/05/2018 Analyzed: 10/10/2018	
Barium	0.562 mg/L	0.0100	mg/L	0.500	0.0536 mg/L 102 75-125 1.45 20
Beryllium	0.498 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L 99.5 75-125 3.13 20
Cadmium	0.488 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L 97.6 75-125 2.50 20
Chromium	0.492 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 98.5 75-125 1.77 20
Cobalt	0.483 mg/L	0.0040	mg/L	0.500	<0.0040 mg/L 96.6 75-125 2.33 20
Copper	0.489 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 97.8 75-125 2.43 20
Lead	0.492 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 98.4 75-125 2.16 20
Nickel	0.4861 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 97.2 75-125 2.34 20
Selenium	0.492 mg/L	0.0500	mg/L	0.500	<0.0500 mg/L 98.3 75-125 2.29 20
Silver	0.102 mg/L	0.0100	mg/L	0.100	<0.0100 mg/L 102 75-125 0.365 20
Tin	0.0988 mg/L	0.0200	mg/L	0.100	<0.0200 mg/L 98.8 75-125 0.731 20
Vanadium	0.507 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L 101 75-125 2.37 20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0219 - EPA200.2/R2.8

Matrix Spike Dup (BBJ0219-MSD3)	Source: 18J0280-02	Prepared: 10/05/2018	Analyzed: 10/10/2018							
Zinc	0.505 mg/L	0.0100	mg/L	0.500	<0.0100 mg/L	101	75-125	3.74	20	

Batch BBJ0220 - EPA200.8 R5.4

Blank (BBJ0220-BLK1)	Prepared: 10/05/2018	Analyzed: 10/09/2018								
Antimony	<1.00 ug/L	1.00	ug/L							
Arsenic	<1.0 ug/L	1.0	ug/L							
Thallium	<1.00 ug/L	1.00	ug/L							

LCS (BBJ0220-BS1)	Prepared: 10/05/2018	Analyzed: 10/09/2018								
Antimony	53.3 ug/L	1.00	ug/L	50.0	ug/L	107	80-120			
Arsenic	52 ug/L	1.0	ug/L	50.0	ug/L	103	80-120			
Thallium	54.3 ug/L	1.00	ug/L	50.0	ug/L	109	80-120			

LCS Dup (BBJ0220-BSD1)	Prepared: 10/05/2018	Analyzed: 10/09/2018								
Antimony	53.1 ug/L	1.00	ug/L	50.0	ug/L	106	80-120	0.319	20	
Arsenic	52 ug/L	1.0	ug/L	50.0	ug/L	103	80-120	0.0972	20	
Thallium	54.6 ug/L	1.00	ug/L	50.0	ug/L	109	80-120	0.628	20	

Matrix Spike (BBJ0220-MS1)	Source: 18J0278-04	Prepared: 10/05/2018	Analyzed: 10/09/2018							
Antimony	54.2 ug/L	1.00	ug/L	50.0	<1.00 ug/L	108	75-125			
Arsenic	57 ug/L	1.0	ug/L	50.0	5.8 ug/L	103	75-125			
Thallium	52.9 ug/L	1.00	ug/L	50.0	<1.00 ug/L	106	75-125			

Matrix Spike (BBJ0220-MS2)	Source: 18J0280-02	Prepared: 10/05/2018	Analyzed: 10/09/2018							
Antimony	53.4 ug/L	1.00	ug/L	50.0	<1.00 ug/L	107	75-125			
Arsenic	51 ug/L	1.0	ug/L	50.0	<1.0 ug/L	102	75-125			
Thallium	53.4 ug/L	1.00	ug/L	50.0	<1.00 ug/L	107	75-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Metals (Total) by EPA 6000/7000 Series Methods - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0220 - EPA200.8 R5.4

Matrix Spike Dup (BBJ0220-MSD1)

Source: 18J0278-04

Prepared: 10/05/2018 Analyzed: 10/09/2018

Antimony	53.2 ug/L	1.00	ug/L	50.0	<1.00 ug/L	106	75-125	1.73	20	
Arsenic	56 ug/L	1.0	ug/L	50.0	5.8 ug/L	101	75-125	1.93	20	
Thallium	52.9 ug/L	1.00	ug/L	50.0	<1.00 ug/L	106	75-125	0.0128	20	

Matrix Spike Dup (BBJ0220-MSD2)

Source: 18J0280-02

Prepared: 10/05/2018 Analyzed: 10/09/2018

Antimony	53.9 ug/L	1.00	ug/L	50.0	<1.00 ug/L	108	75-125	0.965	20	
Arsenic	52 ug/L	1.0	ug/L	50.0	<1.0 ug/L	104	75-125	1.65	20	
Thallium	53.6 ug/L	1.00	ug/L	50.0	<1.00 ug/L	107	75-125	0.213	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0275 - SW5030B

Blank (BBJ0275-BLK1)

Prepared & Analyzed: 10/05/2018

1,1,1,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,1-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1,1,2,2-Tetrachloroethane	<0.40 ug/L	0.40	ug/L							
1,1,2-Trichloroethane	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,1-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
1,1-Dichloropropene	<1.00 ug/L	1.00	ug/L							
1,2,3-Trichloropropane	<1.00 ug/L	1.00	ug/L							
1,2,4-Trichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2-Dichloroethane	<1.00 ug/L	1.00	ug/L							
1,2-Dichloropropane	<1.00 ug/L	1.00	ug/L							
1,3-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L							
1,4-Dichlorobenzene	<1.00 ug/L	1.00	ug/L							
2,2-Dichloropropane	<2.00 ug/L	2.00	ug/L							
2-Butanone (MEK)	<5.00 ug/L	5.00	ug/L							
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.00 ug/L	5.00	ug/L							
Acetone	<10.0 ug/L	10.0	ug/L							
Acetonitrile	<10.0 ug/L	10.0	ug/L							
Acrolein	<10.0 ug/L	10.0	ug/L							
Acrylonitrile	<5.00 ug/L	5.00	ug/L							
Allyl chloride	<1.00 ug/L	1.00	ug/L							
Benzene	<1.00 ug/L	1.00	ug/L							
Bromochloromethane	<1.00 ug/L	1.00	ug/L							
Bromodichloromethane	<0.50 ug/L	0.50	ug/L							
Bromoform	<1.00 ug/L	1.00	ug/L							
Bromomethane	<1.00 ug/L	1.00	ug/L							
Carbon disulfide	<10.0 ug/L	10.0	ug/L							
Carbon tetrachloride	<1.00 ug/L	1.00	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0275 - SW5030B

Blank (BBJ0275-BLK1)

Prepared & Analyzed: 10/05/2018

Chlorobenzene	<1.00 ug/L	1.00	ug/L							
Chloroethane	<1.00 ug/L	1.00	ug/L							
Chloroform	<0.50 ug/L	0.50	ug/L							
Chloromethane	<1.00 ug/L	1.00	ug/L							
Chloroprene	<5.00 ug/L	5.00	ug/L							
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
cis-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
Dibromochloromethane	<0.50 ug/L	0.50	ug/L							
Dibromomethane	<1.00 ug/L	1.00	ug/L							
Dichlorodifluoromethane	<1.00 ug/L	1.00	ug/L							
Ethyl methacrylate	<5.00 ug/L	5.00	ug/L							
Ethylbenzene	<1.00 ug/L	1.00	ug/L							
Hexachlorobutadiene	<0.80 ug/L	0.80	ug/L							B
Iodomethane	<10.0 ug/L	10.0	ug/L							
Isobutyl Alcohol	<40.0 ug/L	40.0	ug/L							
m+p-Xylenes	<2.00 ug/L	2.00	ug/L							
Methacrylonitrile	<1.50 ug/L	1.50	ug/L							
Methyl methacrylate	<2.00 ug/L	2.00	ug/L							
Methylene chloride	<4.00 ug/L	4.00	ug/L							
o-Xylene	<1.00 ug/L	1.00	ug/L							
Propionitrile	<40.0 ug/L	40.0	ug/L							
Styrene	<1.00 ug/L	1.00	ug/L							
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L							
Toluene	<1.00 ug/L	1.00	ug/L							
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
trans-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
trans-1,4-Dichloro-2-butene	<4.00 ug/L	4.00	ug/L							
Trichloroethylene	<1.00 ug/L	1.00	ug/L							
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L							
Vinyl acetate	<10.0 ug/L	10.0	ug/L							
Vinyl chloride	<0.50 ug/L	0.50	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0275 - SW5030B

Blank (BBJ0275-BLK1)

Prepared & Analyzed: 10/05/2018

Xylenes, Total	<3.00 ug/L	3.00	ug/L						
Surr: 1,2-Dichloroethane-d4 (Surr)	51.3		ug/L	50.0		103	70-120		
Surr: 4-Bromofluorobenzene (Surr)	47.3		ug/L	50.0		94.6	75-120		
Surr: Dibromofluoromethane (Surr)	50.2		ug/L	50.0		100	70-130		
Surr: Toluene-d8 (Surr)	50.1		ug/L	50.0		100	70-130		

LCS (BBJ0275-BS1)

Prepared & Analyzed: 10/05/2018

1,1,1,2-Tetrachloroethane	50.1 ug/L	0.4	ug/L	50.0	ug/L	100	80-130		
1,1,1-Trichloroethane	48.5 ug/L	1	ug/L	50.0	ug/L	97.0	65-130		
1,1,2,2-Tetrachloroethane	46.9 ug/L	0.4	ug/L	50.0	ug/L	93.7	65-130		
1,1,2-Trichloroethane	48.7 ug/L	1	ug/L	50.0	ug/L	97.5	75-125		
1,1-Dichloroethane	46.2 ug/L	1	ug/L	50.0	ug/L	92.4	70-135		
1,1-Dichloroethylene	45.2 ug/L	1	ug/L	50.0	ug/L	90.4	70-130		
1,1-Dichloropropene	49.7 ug/L	1	ug/L	50.0	ug/L	99.3	75-135		
1,2,3-Trichloropropane	49.9 ug/L	1	ug/L	50.0	ug/L	99.8	75-125		
1,2,4-Trichlorobenzene	45.2 ug/L	1	ug/L	50.0	ug/L	90.4	65-135		
1,2-Dichlorobenzene	49.8 ug/L	1	ug/L	50.0	ug/L	99.6	70-120		
1,2-Dichloroethane	43.5 ug/L	1	ug/L	50.0	ug/L	86.9	70-130		
1,2-Dichloropropane	43.8 ug/L	1	ug/L	50.0	ug/L	87.5	75-125		
1,3-Dichlorobenzene	51.8 ug/L	1	ug/L	50.0	ug/L	104	75-125		
1,3-Dichloropropane	44.6 ug/L	1	ug/L	50.0	ug/L	89.2	75-125		
1,4-Dichlorobenzene	50.6 ug/L	1	ug/L	50.0	ug/L	101	75-125		
2,2-Dichloropropane	51.0 ug/L	2	ug/L	50.0	ug/L	102	70-135		
2-Butanone (MEK)	44.1 ug/L	5	ug/L	50.0	ug/L	88.2	30-150		
2-Hexanone (MBK)	49.8 ug/L	5	ug/L	50.0	ug/L	99.6	55-130		
4-Methyl-2-pentanone (MIBK)	44.1 ug/L	5	ug/L	50.0	ug/L	88.2	60-135		
Acetone	44.6 ug/L	10	ug/L	50.0	ug/L	89.3	40-140		
Acrylonitrile	237 ug/L	5	ug/L	250	ug/L	95.0	70-130		
Benzene	47.0 ug/L	1	ug/L	50.0	ug/L	93.9	80-120		
Bromochloromethane	48.0 ug/L	1	ug/L	50.0	ug/L	95.9	65-130		
Bromodichloromethane	48.4 ug/L	0.5	ug/L	50.0	ug/L	96.7	75-120		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0275 - SW5030B

LCS (BBJ0275-BS1)

Prepared & Analyzed: 10/05/2018

Bromoform	52.6 ug/L	1	ug/L	50.0	ug/L	105	70-130			
Bromomethane	41.8 ug/L	1	ug/L	50.0	ug/L	83.6	30-145			
Carbon disulfide	47.2 ug/L	10	ug/L	50.0	ug/L	94.4	35-160			
Carbon tetrachloride	50.8 ug/L	1	ug/L	50.0	ug/L	102	65-140			
Chlorobenzene	50.1 ug/L	1	ug/L	50.0	ug/L	100	80-120			
Chloroethane	44.9 ug/L	1	ug/L	50.0	ug/L	89.7	60-135			
Chloroform	46.7 ug/L	0.5	ug/L	50.0	ug/L	93.4	65-135			
Chloromethane	39.2 ug/L	1	ug/L	50.0	ug/L	78.3	40-125			
cis-1,2-Dichloroethylene	47.1 ug/L	1	ug/L	50.0	ug/L	94.1	70-125			
cis-1,3-Dichloropropene	46.6 ug/L	1	ug/L	50.0	ug/L	93.3	70-130			
Dibromochloromethane	48.7 ug/L	0.5	ug/L	50.0	ug/L	97.3	60-135			
Dibromomethane	46.5 ug/L	1	ug/L	50.0	ug/L	92.9	75-125			
Dichlorodifluoromethane	34.2 ug/L	1	ug/L	50.0	ug/L	68.5	30-155			
Ethylbenzene	52.4 ug/L	1	ug/L	50.0	ug/L	105	75-125			
Hexachlorobutadiene	49.7 ug/L	0.8	ug/L	50.0	ug/L	99.4	50-140			
m+p-Xylenes	106 ug/L	2	ug/L	100	ug/L	106	75-130			
Methylene chloride	44.7 ug/L	4	ug/L	50.0	ug/L	89.4	55-140			
o-Xylene	52.8 ug/L	1	ug/L	50.0	ug/L	106	80-120			
Styrene	55.7 ug/L	1	ug/L	50.0	ug/L	111	65-135			
Tetrachloroethylene (PCE)	75.8 ug/L	1	ug/L	50.0	ug/L	152	45-150			L
Toluene	47.0 ug/L	1	ug/L	50.0	ug/L	94.1	75-120			
trans-1,2-Dichloroethylene	47.0 ug/L	1	ug/L	50.0	ug/L	94.0	60-140			
trans-1,3-Dichloropropene	40.9 ug/L	1	ug/L	50.0	ug/L	81.9	55-140			
Trichloroethylene	46.2 ug/L	1	ug/L	50.0	ug/L	92.5	70-125			
Trichlorofluoromethane	43.5 ug/L	1	ug/L	50.0	ug/L	86.9	60-145			
Vinyl chloride	40.3 ug/L	0.5	ug/L	50.0	ug/L	80.5	50-145			
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	50.3		ug/L	50.0	ug/L	101	70-120			
Surr: 4-Bromofluorobenzene (Surr)	51.0		ug/L	50.0	ug/L	102	75-120			
Surr: Dibromofluoromethane (Surr)	48.6		ug/L	50.0	ug/L	97.2	70-130			
Surr: Toluene-d8 (Surr)	49.0		ug/L	50.0	ug/L	98.1	70-130			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0275 - SW5030B

Matrix Spike (BBJ0275-MS1)

Source: 18J0265-01

Prepared & Analyzed: 10/05/2018

1,1,1,2-Tetrachloroethane	44.2 ug/L	0.4	ug/L	50.0	<0.4 ug/L	88.4	80-130			
1,1,1-Trichloroethane	43.1 ug/L	1	ug/L	50.0	<1 ug/L	86.2	65-130			
1,1,1,2-Tetrachloroethane	40.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	81.1	65-130			
1,1,2-Trichloroethane	44.0 ug/L	1	ug/L	50.0	<1 ug/L	87.9	75-125			
1,1-Dichloroethane	41.7 ug/L	1	ug/L	50.0	<1 ug/L	82.6	70-135			
1,1-Dichloroethylene	40.8 ug/L	1	ug/L	50.0	<1 ug/L	81.6	70-130			
1,1-Dichloropropene	44.0 ug/L	1	ug/L	50.0	<1 ug/L	88.0	75-135			
1,2,3-Trichloropropane	42.6 ug/L	1	ug/L	50.0	<1 ug/L	85.2	75-125			
1,2,4-Trichlorobenzene	34.9 ug/L	1	ug/L	50.0	<1 ug/L	69.9	65-135			
1,2-Dichlorobenzene	43.5 ug/L	1	ug/L	50.0	<1 ug/L	86.8	70-120			
1,2-Dichloroethane	37.8 ug/L	1	ug/L	50.0	<1 ug/L	75.5	70-130			
1,2-Dichloropropane	40.6 ug/L	1	ug/L	50.0	<1 ug/L	81.2	75-125			
1,3-Dichlorobenzene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.3	75-125			
1,3-Dichloropropane	40.8 ug/L	1	ug/L	50.0	<1 ug/L	81.6	75-125			
1,4-Dichlorobenzene	44.1 ug/L	1	ug/L	50.0	<1 ug/L	87.4	75-125			
2,2-Dichloropropane	40.0 ug/L	2	ug/L	50.0	<2 ug/L	79.9	70-135			
2-Butanone (MEK)	34.4 ug/L	5	ug/L	50.0	<5 ug/L	68.9	30-150			
2-Hexanone (MBK)	45.2 ug/L	5	ug/L	50.0	<5 ug/L	90.3	55-130			
4-Methyl-2-pentanone (MIBK)	41.2 ug/L	5	ug/L	50.0	<5 ug/L	82.3	60-135			
Acetone	37.9 ug/L	10	ug/L	50.0	<10 ug/L	75.8	40-140			
Acrylonitrile	217 ug/L	5	ug/L	250	<5 ug/L	86.9	70-130			
Benzene	43.2 ug/L	1	ug/L	50.0	<1 ug/L	85.6	80-120			
Bromochloromethane	43.0 ug/L	1	ug/L	50.0	<1 ug/L	86.0	65-130			
Bromodichloromethane	44.0 ug/L	0.5	ug/L	50.0	<0.5 ug/L	88.0	75-120			
Bromoform	43.9 ug/L	1	ug/L	50.0	<1 ug/L	87.9	70-130			
Bromomethane	23.7 ug/L	1	ug/L	50.0	<1 ug/L	47.3	30-145			
Carbon disulfide	42.2 ug/L	10	ug/L	50.0	<10 ug/L	84.4	35-160			
Carbon tetrachloride	46.0 ug/L	1	ug/L	50.0	<1 ug/L	92.0	65-140			
Chlorobenzene	44.2 ug/L	1	ug/L	50.0	<1 ug/L	88.4	80-120			
Chloroethane	41.7 ug/L	1	ug/L	50.0	<1 ug/L	83.4	60-135			
Chloroform	41.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	83.7	65-135			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0275 - SW5030B

Matrix Spike (BBJ0275-MS1)

Source: 18J0265-01

Prepared & Analyzed: 10/05/2018

Chloromethane	33.5 ug/L	1	ug/L	50.0	<1 ug/L	67.0	40-125			
cis-1,2-Dichloroethylene	43.1 ug/L	1	ug/L	50.0	<1 ug/L	85.4	70-125			
cis-1,3-Dichloropropene	40.5 ug/L	1	ug/L	50.0	<1 ug/L	80.9	70-130			
Dibromochloromethane	43.7 ug/L	0.5	ug/L	50.0	<0.5 ug/L	87.4	60-135			
Dibromomethane	42.3 ug/L	1	ug/L	50.0	<1 ug/L	84.6	75-125			
Dichlorodifluoromethane	28.4 ug/L	1	ug/L	50.0	<1 ug/L	56.7	30-155			
Ethylbenzene	46.5 ug/L	1	ug/L	50.0	1.47 ug/L	90.0	75-125			
Hexachlorobutadiene	37.9 ug/L	0.8	ug/L	50.0	<0.8 ug/L	75.8	50-140			
m+p-Xylenes	94.1 ug/L	2	ug/L	100	<2 ug/L	93.2	75-130			
Methylene chloride	39.8 ug/L	4	ug/L	50.0	<4 ug/L	79.6	55-140			
o-Xylene	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.3	80-120			
Styrene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	95.9	65-135			
Tetrachloroethylene (PCE)	64.8 ug/L	1	ug/L	50.0	<1 ug/L	130	45-150			
Toluene	42.5 ug/L	1	ug/L	50.0	<1 ug/L	84.6	75-120			
trans-1,2-Dichloroethylene	41.6 ug/L	1	ug/L	50.0	<1 ug/L	83.1	60-140			
trans-1,3-Dichloropropene	35.4 ug/L	1	ug/L	50.0	<1 ug/L	70.7	55-140			
Trichloroethylene	43.3 ug/L	1	ug/L	50.0	<1 ug/L	86.5	70-125			
Trichlorofluoromethane	38.2 ug/L	1	ug/L	50.0	<1 ug/L	76.4	60-145			
Vinyl chloride	35.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	71.6	50-145			

Surr: 1,2-Dichloroethane-d4 (Surr)	49.0		ug/L	50.0	ug/L	98.1	70-120			
Surr: 4-Bromofluorobenzene (Surr)	50.1		ug/L	50.0	ug/L	100	75-120			
Surr: Dibromofluoromethane (Surr)	48.7		ug/L	50.0	ug/L	97.4	70-130			
Surr: Toluene-d8 (Surr)	49.8		ug/L	50.0	ug/L	99.6	70-130			

Matrix Spike Dup (BBJ0275-MSD1)

Source: 18J0265-01

Prepared & Analyzed: 10/05/2018

1,1,1,2-Tetrachloroethane	44.8 ug/L	0.4	ug/L	50.0	<0.4 ug/L	89.6	80-130	1.35	30	
1,1,1-Trichloroethane	44.1 ug/L	1	ug/L	50.0	<1 ug/L	88.1	65-130	2.16	30	
1,1,2,2-Tetrachloroethane	42.8 ug/L	0.4	ug/L	50.0	<0.4 ug/L	85.6	65-130	5.42	30	
1,1,2-Trichloroethane	45.0 ug/L	1	ug/L	50.0	<1 ug/L	90.0	75-125	2.41	30	
1,1-Dichloroethane	42.6 ug/L	1	ug/L	50.0	<1 ug/L	84.4	70-135	2.21	30	
1,1-Dichloroethylene	41.8 ug/L	1	ug/L	50.0	<1 ug/L	83.6	70-130	2.44	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0275 - SW5030B

Matrix Spike Dup (BBJ0275-MSD1)

Source: 18J0265-01

Prepared & Analyzed: 10/05/2018

1,1-Dichloropropene	44.9 ug/L	1	ug/L	50.0	<1 ug/L	89.8	75-135	1.93	30	
1,2,3-Trichloropropane	44.8 ug/L	1	ug/L	50.0	<1 ug/L	89.7	75-125	5.12	30	
1,2,4-Trichlorobenzene	42.1 ug/L	1	ug/L	50.0	<1 ug/L	84.2	65-135	18.5	30	
1,2-Dichlorobenzene	44.8 ug/L	1	ug/L	50.0	<1 ug/L	89.4	70-120	2.97	30	
1,2-Dichloroethane	39.1 ug/L	1	ug/L	50.0	<1 ug/L	78.3	70-130	3.59	30	
1,2-Dichloropropane	41.5 ug/L	1	ug/L	50.0	<1 ug/L	82.9	75-125	2.07	30	
1,3-Dichlorobenzene	47.1 ug/L	1	ug/L	50.0	<1 ug/L	94.2	75-125	4.20	30	
1,3-Dichloropropane	41.6 ug/L	1	ug/L	50.0	<1 ug/L	83.1	75-125	1.82	30	
1,4-Dichlorobenzene	45.1 ug/L	1	ug/L	50.0	<1 ug/L	89.4	75-125	2.20	30	
2,2-Dichloropropane	41.0 ug/L	2	ug/L	50.0	<2 ug/L	82.1	70-135	2.67	30	
2-Butanone (MEK)	40.4 ug/L	5	ug/L	50.0	<5 ug/L	80.7	30-150	15.8	30	
2-Hexanone (MBK)	48.1 ug/L	5	ug/L	50.0	<5 ug/L	96.2	55-130	6.37	30	
4-Methyl-2-pentanone (MIBK)	43.4 ug/L	5	ug/L	50.0	<5 ug/L	86.8	60-135	5.28	30	
Acetone	46.0 ug/L	10	ug/L	50.0	<10 ug/L	91.9	40-140	19.2	30	
Acrylonitrile	232 ug/L	5	ug/L	250	<5 ug/L	93.0	70-130	6.74	30	
Benzene	43.7 ug/L	1	ug/L	50.0	<1 ug/L	86.5	80-120	1.08	30	
Bromochloromethane	43.4 ug/L	1	ug/L	50.0	<1 ug/L	86.7	65-130	0.811	30	
Bromodichloromethane	44.5 ug/L	0.5	ug/L	50.0	<0.5 ug/L	89.0	75-120	1.13	30	
Bromoform	44.8 ug/L	1	ug/L	50.0	<1 ug/L	89.6	70-130	1.92	30	
Bromomethane	26.8 ug/L	1	ug/L	50.0	<1 ug/L	53.6	30-145	12.4	30	
Carbon disulfide	44.9 ug/L	10	ug/L	50.0	<10 ug/L	89.7	35-160	6.16	30	
Carbon tetrachloride	46.3 ug/L	1	ug/L	50.0	<1 ug/L	92.6	65-140	0.650	30	
Chlorobenzene	45.6 ug/L	1	ug/L	50.0	<1 ug/L	91.3	80-120	3.20	30	
Chloroethane	41.2 ug/L	1	ug/L	50.0	<1 ug/L	82.5	60-135	1.13	30	
Chloroform	42.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	84.9	65-135	1.45	30	
Chloromethane	32.8 ug/L	1	ug/L	50.0	<1 ug/L	65.7	40-125	2.08	30	
cis-1,2-Dichloroethylene	43.4 ug/L	1	ug/L	50.0	<1 ug/L	86.1	70-125	0.832	30	
cis-1,3-Dichloropropene	41.2 ug/L	1	ug/L	50.0	<1 ug/L	82.5	70-130	1.91	30	
Dibromochloromethane	44.6 ug/L	0.5	ug/L	50.0	<0.5 ug/L	89.3	60-135	2.06	30	
Dibromomethane	42.8 ug/L	1	ug/L	50.0	<1 ug/L	85.6	75-125	1.22	30	
Dichlorodifluoromethane	29.5 ug/L	1	ug/L	50.0	<1 ug/L	59.1	30-155	4.11	30	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Volatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBJ0275 - SW5030B

Matrix Spike Dup (BBJ0275-MSD1)

Source: 18J0265-01

Prepared & Analyzed: 10/05/2018

Ethylbenzene	48.1 ug/L	1	ug/L	50.0	1.47 ug/L	93.2	75-125	3.43	30
Hexachlorobutadiene	46.3 ug/L	0.8	ug/L	50.0	<0.8 ug/L	92.6	50-140	20.0	30
m+p-Xylenes	96.5 ug/L	2	ug/L	100	<2 ug/L	95.7	75-130	2.58	30
Methylene chloride	41.8 ug/L	4	ug/L	50.0	<4 ug/L	83.5	55-140	4.81	30
o-Xylene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	95.5	80-120	3.37	30
Styrene	49.2 ug/L	1	ug/L	50.0	<1 ug/L	98.3	65-135	2.47	30
Tetrachloroethylene (PCE)	66.5 ug/L	1	ug/L	50.0	<1 ug/L	133	45-150	2.67	30
Toluene	43.0 ug/L	1	ug/L	50.0	<1 ug/L	85.4	75-120	1.03	30
trans-1,2-Dichloroethylene	43.0 ug/L	1	ug/L	50.0	<1 ug/L	85.9	60-140	3.27	30
trans-1,3-Dichloropropene	36.0 ug/L	1	ug/L	50.0	<1 ug/L	71.9	55-140	1.68	30
Trichloroethylene	43.2 ug/L	1	ug/L	50.0	<1 ug/L	86.4	70-125	0.139	30
Trichlorofluoromethane	39.6 ug/L	1	ug/L	50.0	<1 ug/L	79.1	60-145	3.47	30
Vinyl chloride	36.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	72.5	50-145	1.25	30
<hr style="border-top: 1px dashed black;"/>									
Surr: 1,2-Dichloroethane-d4 (Surr)	49.9		ug/L	50.0	ug/L	99.8	70-120		
Surr: 4-Bromofluorobenzene (Surr)	51.1		ug/L	50.0	ug/L	102	75-120		
Surr: Dibromofluoromethane (Surr)	49.0		ug/L	50.0	ug/L	98.0	70-130		
Surr: Toluene-d8 (Surr)	49.7		ug/L	50.0	ug/L	99.4	70-130		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0238 - SW3510C

Blank (BBJ0238-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

2,3,7,8-TCDD (SIM)	Not Detected -		-						
1,2,4,5-Tetrachlorobenzene	<10.0 ug/L	10.0	ug/L						
1,3,5-Trinitrobenzene	<5.00 ug/L	5.00	ug/L						
1,3-Dinitrobenzene	<2.50 ug/L	2.50	ug/L						
1,4-Naphthoquinone	<10.0 ug/L	10.0	ug/L						
1-Naphthylamine	<10.0 ug/L	10.0	ug/L						
2,3,4,6-Tetrachlorophenol	<10.0 ug/L	10.0	ug/L						
2,4,5-Trichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4,6-Trichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4-Dichlorophenol	<10.0 ug/L	10.0	ug/L						
2,4-Dimethylphenol	<0.50 ug/L	0.50	ug/L						
2,4-Dinitrophenol	<50.0 ug/L	50.0	ug/L						
2,4-Dinitrotoluene	<10.0 ug/L	10.0	ug/L						
2,6-Dichlorophenol	<10.0 ug/L	10.0	ug/L						
2,6-Dinitrotoluene	<10.0 ug/L	10.0	ug/L						
2-Acetylaminofluorene	<2.50 ug/L	2.50	ug/L						
2-Chloronaphthalene	<10.0 ug/L	10.0	ug/L						
2-Chlorophenol	<10.0 ug/L	10.0	ug/L						
2-Methylnaphthalene	<10.0 ug/L	10.0	ug/L						
2-Naphthylamine	<10.0 ug/L	10.0	ug/L						
2-Nitroaniline	<20.0 ug/L	20.0	ug/L						
2-Nitrophenol	<10.0 ug/L	10.0	ug/L						
3,3'-Dichlorobenzidine	<10.0 ug/L	10.0	ug/L						
3,3'-Dimethylbenzidine	<2.50 ug/L	2.50	ug/L						
3-Methylcholanthrene	<10.0 ug/L	10.0	ug/L						
3-Nitroaniline	<20.0 ug/L	20.0	ug/L						
4,6-Dinitro-2-methylphenol	<50.0 ug/L	50.0	ug/L						
4-Aminobiphenyl	<10.0 ug/L	10.0	ug/L						
4-Bromophenyl phenyl ether	<10.0 ug/L	10.0	ug/L						
4-Chloroaniline	<10.0 ug/L	10.0	ug/L						
4-Chlorophenyl phenyl ether	<10.0 ug/L	10.0	ug/L						



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Blank (BBJ0238-BLK1)

Prepared & Analyzed: 10/08/2018

4-Nitroaniline	<20.0 ug/L	20.0	ug/L							
4-Nitrophenol	<50.0 ug/L	50.0	ug/L							
5-Nitro-o-toluidine	<10.0 ug/L	10.0	ug/L							
7,12-Dimethylbenz (a) anthracene	<10.0 ug/L	10.0	ug/L							
Acenaphthene	<10.0 ug/L	10.0	ug/L							
Acenaphthylene	<10.0 ug/L	10.0	ug/L							
Acetophenone	<20.0 ug/L	20.0	ug/L							
Anthracene	<10.0 ug/L	10.0	ug/L							
Benzo (a) anthracene	<0.05 ug/L	0.05	ug/L							
Benzo (a) pyrene	<0.10 ug/L	0.10	ug/L							
Benzo (b) fluoranthene	<10.0 ug/L	10.0	ug/L							
Benzo (g,h,i) perylene	<10.0 ug/L	10.0	ug/L							
Benzo (k) fluoranthene	<10.0 ug/L	10.0	ug/L							
Benzyl alcohol	<20.0 ug/L	20.0	ug/L							
bis (2-Chloroethoxy) methane	<10.0 ug/L	10.0	ug/L							
bis (2-Chloroethyl) ether	<10.0 ug/L	10.0	ug/L							
2,2'-Oxybis (1-chloropropane)	<10.0 ug/L	10.0	ug/L							
bis (2-Ethylhexyl) phthalate	5.75 ug/L	2.50	ug/L							B
Butyl benzyl phthalate	<10.0 ug/L	10.0	ug/L							
Chlorobenzilate	<2.50 ug/L	2.50	ug/L							
Chrysene	<10.0 ug/L	10.0	ug/L							
Diallate	<2.50 ug/L	2.50	ug/L							
Dibenz (a,h) anthracene	<10.0 ug/L	10.0	ug/L							
Dibenzofuran	<5.00 ug/L	5.00	ug/L							
Diethyl phthalate	<10.0 ug/L	10.0	ug/L							
Dimethoate	<2.50 ug/L	2.50	ug/L							
Dimethyl phthalate	<10.0 ug/L	10.0	ug/L							
Di-n-butyl phthalate	<10.0 ug/L	10.0	ug/L							
Di-n-octyl phthalate	<10.0 ug/L	10.0	ug/L							
Diphenylamine	<10.0 ug/L	10.0	ug/L							
Disulfoton	<2.50 ug/L	2.50	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Blank (BBJ0238-BLK1)

Prepared & Analyzed: 10/08/2018

Ethyl methanesulfonate	<20.0 ug/L	20.0	ug/L							
Ethyl parathion	<2.50 ug/L	2.50	ug/L							
Famphur	<2.50 ug/L	2.50	ug/L							
Fluoranthene	<10.0 ug/L	10.0	ug/L							
Fluorene	<10.0 ug/L	10.0	ug/L							
Hexachlorobenzene	<0.05 ug/L	0.05	ug/L							
Hexachlorobutadiene	<10.0 ug/L	10.0	ug/L							
Hexachlorocyclopentadiene	<10.0 ug/L	10.0	ug/L							
Hexachloroethane	<10.0 ug/L	10.0	ug/L							
Hexachloropropene	<2.50 ug/L	2.50	ug/L							
Indeno (1,2,3-cd) pyrene	<10.0 ug/L	10.0	ug/L							
Isodrin	<10.0 ug/L	10.0	ug/L							
Isophorone	<10.0 ug/L	10.0	ug/L							
Isosafrole	<10.0 ug/L	10.0	ug/L							
Kepona	<2.50 ug/L	2.50	ug/L							
m+p-Cresols	<10.0 ug/L	10.0	ug/L							
Methapyrilene	<10.0 ug/L	10.0	ug/L							
Methyl methanesulfonate	<10.0 ug/L	10.0	ug/L							
Methyl parathion	<2.50 ug/L	2.50	ug/L							
Naphthalene	<10.0 ug/L	10.0	ug/L							
Nitrobenzene	<10.0 ug/L	10.0	ug/L							
n-Nitrosodiethylamine	<2.50 ug/L	2.50	ug/L							
n-Nitrosodimethylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosodi-n-butylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosodi-n-propylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosodiphenylamine	<10.0 ug/L	10.0	ug/L							
n-Nitrosomethylethylamine	<2.50 ug/L	2.50	ug/L							
n-Nitrosopiperidine	<10.0 ug/L	10.0	ug/L							
n-Nitrosopyrrolidine	<2.50 ug/L	2.50	ug/L							
o,o,o-Triethyl phosphorothioate	<10.0 ug/L	10.0	ug/L							
o,o-Diethyl o-2-pyrazinyl phosphorothioate	<10.0 ug/L	10.0	ug/L							



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Blank (BBJ0238-BLK1)

Prepared & Analyzed: 10/08/2018

o+m+p-Cresols	<10.0 ug/L	10.0	ug/L							
o-Cresol	<10.0 ug/L	10.0	ug/L							
o-Toluidine	<2.50 ug/L	2.50	ug/L							
p-(Dimethylamino) azobenzene	<2.50 ug/L	2.50	ug/L							
p-Chloro-m-cresol	<10.0 ug/L	10.0	ug/L							
Pentachlorobenzene	<10.0 ug/L	10.0	ug/L							
Pentachloronitrobenzene (quintozene)	<1.00 ug/L	1.00	ug/L							
Phenacetin	<10.0 ug/L	10.0	ug/L							
Phenanthrene	<10.0 ug/L	10.0	ug/L							
Phenol	<10.0 ug/L	10.0	ug/L							
Phorate	<2.50 ug/L	2.50	ug/L							
p-Phenylenediamine	<10.0 ug/L	10.0	ug/L							
Pronamide	<10.0 ug/L	10.0	ug/L							
Pyrene	<10.0 ug/L	10.0	ug/L							
Safrole	<2.50 ug/L	2.50	ug/L							
<hr/>										
Surr: 2,4,6-Tribromophenol (Surr)	77.9		ug/L	100		77.9	10-86			
Surr: 2-Fluorobiphenyl (Surr)	42.6		ug/L	50.0		85.3	9-87			
Surr: 2-Fluorophenol (Surr)	78.1		ug/L	100		78.1	10-52			S
Surr: Nitrobenzene-d5 (Surr)	43.8		ug/L	50.0		87.6	10-98.5			
Surr: Phenol-d5 (Surr)	35.0		ug/L	100		35.0	5-33			S
Surr: p-Terphenyl-d14 (Surr)	55.5		ug/L	50.0		111	27-133			

LCS (BBJ0238-BS1)

Prepared & Analyzed: 10/08/2018

1,2,4-Trichlorobenzene	29.7 ug/L	10.0	ug/L	50.0	ug/L	59.5	21.8-66.7			
1,2-Dichlorobenzene	28.5 ug/L	10.0	ug/L	50.0	ug/L	57.1	22-60			
1,3-Dichlorobenzene	26.9 ug/L	10.0	ug/L	50.0	ug/L	53.7	22-60			
1,4-Dichlorobenzene	28.8 ug/L	10.0	ug/L	50.0	ug/L	57.6	13-68			
1-Chloronaphthalene	40.4 ug/L	10.0	ug/L		ug/L		0-200			
2,4,6-Trichlorophenol	42.9 ug/L	10.0	ug/L	50.0	ug/L	85.8	50-115			
2,4-Dichlorophenol	38.9 ug/L	10.0	ug/L	50.0	ug/L	77.8	50-105			
2,4-Dimethylphenol	38.3 ug/L	0.50	ug/L	50.0	ug/L	76.6	30-110			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

LCS (BBJ0238-BS1)

Prepared & Analyzed: 10/08/2018

2,4-Dinitrophenol	68.0 ug/L	50.0	ug/L	50.0	ug/L	136	15-140			
2,4-Dinitrotoluene	49.1 ug/L	10.0	ug/L	50.0	ug/L	98.1	21-99			
2,6-Dinitrotoluene	44.1 ug/L	10.0	ug/L	50.0	ug/L	88.1	15-140			
2-Chloronaphthalene	38.5 ug/L	10.0	ug/L	50.0	ug/L	77.1	45-105			
2-Chlorophenol	35.4 ug/L	10.0	ug/L	50.0	ug/L	70.8	15-74			
2-Nitrophenol	39.0 ug/L	10.0	ug/L	50.0	ug/L	78.0	40-115			
3,3'-Dichlorobenzidine	27.6 ug/L	10.0	ug/L	50.0	ug/L	55.2	20-110			
4,6-Dinitro-2-methylphenol	59.9 ug/L	50.0	ug/L	50.0	ug/L	120	40-130			
4-Bromophenyl phenyl ether	36.4 ug/L	10.0	ug/L	50.0	ug/L	72.8	15-110			
4-Chlorophenyl phenyl ether	35.7 ug/L	10.0	ug/L	50.0	ug/L	71.5	15-110			
4-Nitrophenol	<50.0 ug/L	50.0	ug/L	50.0	ug/L	36.6	0-125			
Acenaphthene	41.1 ug/L	10.0	ug/L	50.0	ug/L	82.2	27.7-85.5			
Acenaphthylene	45.0 ug/L	10.0	ug/L	50.0	ug/L	89.9	50-105			
Acetophenone	40.1 ug/L	20.0	ug/L	50.0	ug/L	80.1	0-200			
alpha-Terpineol	54.7 ug/L	2.50	ug/L	50.0	ug/L	109	0-200			
Anthracene	45.6 ug/L	10.0	ug/L	50.0	ug/L	91.2	55-110			
Benzo (a) anthracene	43.5 ug/L	0.05	ug/L	50.0	ug/L	87.0	55-110			
Benzo (a) pyrene	39.6 ug/L	0.10	ug/L	50.0	ug/L	79.3	55-110			
Benzo (b) fluoranthene	43.1 ug/L	10.0	ug/L	50.0	ug/L	86.2	45-120			
Benzo (g,h,i) perylene	45.3 ug/L	10.0	ug/L	50.0	ug/L	90.7	40-125			
Benzo (k) fluoranthene	44.2 ug/L	10.0	ug/L	50.0	ug/L	88.3	45-125			
bis (2-Chloroethoxy) methane	40.2 ug/L	10.0	ug/L	50.0	ug/L	80.4	40-125			
bis (2-Chloroethyl) ether	34.4 ug/L	10.0	ug/L	50.0	ug/L	68.9	40-125			
2,2'-Oxybis (1-chloropropane)	30.8 ug/L	10.0	ug/L	50.0	ug/L	61.5	40-125			
bis (2-Ethylhexyl) phthalate	60.8 ug/L	2.50	ug/L	50.0	ug/L	122	40-125			
Butyl benzyl phthalate	55.5 ug/L	10.0	ug/L	50.0	ug/L	111	45-115			
Carbazole	48.2 ug/L	2.50	ug/L	50.0	ug/L	96.4	0-200			
Chrysene	54.0 ug/L	10.0	ug/L	50.0	ug/L	108	55-110			
Dibenz (a,h) anthracene	45.8 ug/L	10.0	ug/L	50.0	ug/L	91.7	40-125			
Diethyl phthalate	47.6 ug/L	10.0	ug/L	50.0	ug/L	95.1	40-120			
Dimethyl phthalate	44.1 ug/L	10.0	ug/L	50.0	ug/L	88.3	25-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

LCS (BBJ0238-BS1)

Prepared & Analyzed: 10/08/2018

Di-n-butyl phthalate	55.8 ug/L	10.0	ug/L	50.0	ug/L	112	55-115			
Di-n-octyl phthalate	58.1 ug/L	10.0	ug/L	50.0	ug/L	116	35-135			
Fluoranthene	48.9 ug/L	10.0	ug/L	50.0	ug/L	97.7	55-115			
Fluorene	43.4 ug/L	10.0	ug/L	50.0	ug/L	86.8	50-110			
Hexachlorobenzene	38.7 ug/L	0.05	ug/L	50.0	ug/L	77.4	25-125			
Hexachlorobutadiene	31.6 ug/L	10.0	ug/L	50.0	ug/L	63.1	25-125			
Hexachlorocyclopentadiene	22.7 ug/L	10.0	ug/L	50.0	ug/L	45.4	25-125			
Hexachloroethane	28.6 ug/L	10.0	ug/L	50.0	ug/L	57.2	25-125			
Indeno (1,2,3-cd) pyrene	45.9 ug/L	10.0	ug/L	50.0	ug/L	91.8	45-125			
Isophorone	38.1 ug/L	10.0	ug/L	50.0	ug/L	76.2	10-110			
Naphthalene	36.5 ug/L	10.0	ug/L	50.0	ug/L	73.0	40-100			
Nitrobenzene	38.0 ug/L	10.0	ug/L	50.0	ug/L	76.1	40-100			
n-Nitrosodimethylamine	28.3 ug/L	10.0	ug/L	50.0	ug/L	56.6	25-110			
n-Nitrosodi-n-propylamine	40.1 ug/L	10.0	ug/L	50.0	ug/L	80.3	12-97			
n-Nitrosodiphenylamine	33.7 ug/L	10.0	ug/L	50.0	ug/L	67.4	12-97			
p-Chloro-m-cresol	40.9 ug/L	10.0	ug/L	50.0	ug/L	81.8	10-91			
Pentachlorophenol	31.9 ug/L	20.0	ug/L	50.0	ug/L	63.8	30-109			
Phenanthrene	50.4 ug/L	10.0	ug/L	50.0	ug/L	101	50-115			
Phenol	15.7 ug/L	10.0	ug/L	50.5	ug/L	31.0	0-115			
Pyrene	48.7 ug/L	10.0	ug/L	50.0	ug/L	97.4	27-110			
Pyridine	28.0 ug/L	10.0	ug/L	50.0	ug/L	55.9	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	85.6		ug/L	100	ug/L	85.6	10-86			
Surr: 2-Fluorobiphenyl (Surr)	43.8		ug/L	50.0	ug/L	87.6	9-87			S
Surr: 2-Fluorophenol (Surr)	68.8		ug/L	100	ug/L	68.8	10-52			S
Surr: Nitrobenzene-d5 (Surr)	41.1		ug/L	50.0	ug/L	82.2	10-98.5			
Surr: Phenol-d5 (Surr)	32.6		ug/L	100	ug/L	32.6	5-33			
Surr: p-Terphenyl-d14 (Surr)	51.2		ug/L	50.0	ug/L	102	27-133			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Matrix Spike (BBJ0238-MS1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

1,2,4-Trichlorobenzene	39.1 ug/L	10.6	ug/L	53.2	<10.6 ug/L	73.6	21.8-66.7			M
1,2-Dichlorobenzene	37.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	71.2	22-60			M
1,3-Dichlorobenzene	35.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	67.5	22-60			M
1,4-Dichlorobenzene	38.5 ug/L	10.6	ug/L	53.2	<10.6 ug/L	72.3	22-60			M
1-Chloronaphthalene	51.1 ug/L	10.6	ug/L		<10.6 ug/L		0-200			
2,4,6-Trichlorophenol	53.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	99.6	50-115			
2,4-Dichlorophenol	45.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	86.3	50-105			
2,4-Dimethylphenol	45.1 ug/L	0.53	ug/L	53.2	<0.53 ug/L	84.8	30-110			
2,4-Dinitrophenol	87.5 ug/L	53.2	ug/L	53.2	<53.2 ug/L	164	15-140			M
2,4-Dinitrotoluene	55.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	104	17-111			
2,6-Dinitrotoluene	49.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	93.8	15-140			
2-Chloronaphthalene	48.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	91.5	45-105			
2-Chlorophenol	38.4 ug/L	10.6	ug/L	53.2	<10.6 ug/L	72.2	19-64			M
3,3'-Dichlorobenzidine	11.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	21.0	10-85			
4,6-Dinitro-2-methylphenol	73.8 ug/L	53.2	ug/L	53.2	<53.2 ug/L	139	40-130			M
4-Bromophenyl phenyl ether	44.5 ug/L	10.6	ug/L	53.2	<10.6 ug/L	83.7	15-110			
4-Chlorophenyl phenyl ether	44.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	83.1	15-110			
4-Nitrophenol	<53.2 ug/L	53.2	ug/L	53.2	<53.2 ug/L	42.7	0-125			
Acenaphthene	50.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	94.0	24-90			M
Acenaphthylene	54.4 ug/L	10.6	ug/L	53.2	<10.6 ug/L	102	50-105			
Acetophenone	43.3 ug/L	21.3	ug/L	53.2	<21.3 ug/L	81.5	0-200			
alpha-Terpineol	61.4 ug/L	2.66	ug/L	53.2	<2.66 ug/L	115	0-200			
Anthracene	53.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	100	55-110			
Benzo (a) anthracene	50.6 ug/L	0.05	ug/L	53.2	<0.05 ug/L	95.1	55-110			
Benzo (a) pyrene	50.3 ug/L	0.11	ug/L	53.2	<0.11 ug/L	94.5	55-110			
Benzo (b) fluoranthene	62.7 ug/L	10.6	ug/L	53.2	<10.6 ug/L	118	45-120			
Benzo (g,h,i) perylene	47.8 ug/L	10.6	ug/L	53.2	<10.6 ug/L	89.8	40-125			
Benzo (k) fluoranthene	54.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	102	45-125			
bis (2-Chloroethoxy) methane	45.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	85.7	40-125			
bis (2-Chloroethyl) ether	36.4 ug/L	10.6	ug/L	53.2	<10.6 ug/L	68.5	40-125			
2,2'-Oxybis (1-chloropropane)	36.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	68.8	40-125			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Matrix Spike (BBJ0238-MS1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

bis (2-Ethylhexyl) phthalate	73.9 ug/L	2.66	ug/L	53.2	<2.66 ug/L	139	40-125			M
Butyl benzyl phthalate	65.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	124	45-115			M
Carbazole	57.1 ug/L	2.66	ug/L	53.2	<2.66 ug/L	107	0-200			
Chrysene	62.4 ug/L	10.6	ug/L	53.2	<10.6 ug/L	117	55-110			M
Dibenz (a,h) anthracene	48.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	90.3	40-125			
Diethyl phthalate	53.8 ug/L	10.6	ug/L	53.2	<10.6 ug/L	101	40-120			
Dimethyl phthalate	49.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	93.2	25-125			
Di-n-butyl phthalate	68.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	128	55-115			M
Di-n-octyl phthalate	88.3 ug/L	10.6	ug/L	53.2	<10.6 ug/L	166	35-135			M
Fluoranthene	58.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	110	55-115			
Fluorene	51.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	97.5	50-110			
Hexachlorobenzene	45.6 ug/L	0.05	ug/L	53.2	<0.05 ug/L	85.7	25-125			
Hexachlorobutadiene	42.8 ug/L	10.6	ug/L	53.2	<10.6 ug/L	80.5	25-125			
Hexachlorocyclopentadiene	28.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	53.7	10-90			
Hexachloroethane	39.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	73.2	25-125			
Indeno (1,2,3-cd) pyrene	47.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	90.0	45-125			
Isophorone	44.2 ug/L	10.6	ug/L	53.2	<10.6 ug/L	83.0	10-110			
Naphthalene	45.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	86.4	40-100			
Nitrobenzene	44.5 ug/L	10.6	ug/L	53.2	<10.6 ug/L	83.6	40-100			
n-Nitrosodimethylamine	36.3 ug/L	10.6	ug/L	53.2	<10.6 ug/L	68.3	25-110			
n-Nitrosodi-n-propylamine	45.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	84.7	12-97			
n-Nitrosodiphenylamine	39.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	74.5	12-97			
p-Chloro-m-cresol	45.9 ug/L	10.6	ug/L	53.2	<10.6 ug/L	86.3	10-91			
Pentachlorophenol	52.3 ug/L	21.3	ug/L	53.2	<21.3 ug/L	98.3	27-109			
Phenanthrene	58.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	110	50-115			
Phenol	18.4 ug/L	10.6	ug/L	53.7	<10.6 ug/L	34.3	0-115			
Pyrene	61.0 ug/L	10.6	ug/L	53.2	<10.6 ug/L	115	23-110			M
Pyridine	36.6 ug/L	10.6	ug/L	53.2	<10.6 ug/L	68.9	0-200			
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	111		ug/L	106	ug/L	104	10-86			S
Surr: 2-Fluorobiphenyl (Surr)	50.7		ug/L	53.2	ug/L	95.3	9-87			S
Surr: 2-Fluorophenol (Surr)	74.5		ug/L	106	ug/L	70.0	10-52			S



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Matrix Spike (BBJ0238-MS1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

Surr: Nitrobenzene-d5 (Surr)	45.4		ug/L	53.2	ug/L	85.3	10-98.5			
Surr: Phenol-d5 (Surr)	36.3		ug/L	106	ug/L	34.1	5-33			S
Surr: p-Terphenyl-d14 (Surr)	59.1		ug/L	53.2	ug/L	111	27-133			

Matrix Spike Dup (BBJ0238-MSD1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

1,2,4-Trichlorobenzene	22.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	41.5	21.8-66.7	53.7	20	P
1,2-Dichlorobenzene	22.3 ug/L	10.9	ug/L	54.3	<10.9 ug/L	41.1	22-60	51.6	20	P
1,3-Dichlorobenzene	20.7 ug/L	10.9	ug/L	54.3	<10.9 ug/L	38.2	22-60	53.5	20	P
1,4-Dichlorobenzene	22.9 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.1	22-60	50.7	20	P
1-Chloronaphthalene	26.5 ug/L	10.9	ug/L		<10.9 ug/L		0-200	63.3	20	P
2,4,6-Trichlorophenol	29.9 ug/L	10.9	ug/L	54.3	<10.9 ug/L	54.9	50-115	55.8	20	P
2,4-Dichlorophenol	24.3 ug/L	10.9	ug/L	54.3	<10.9 ug/L	44.7	50-105	61.5	20	M, P
2,4-Dimethylphenol	25.0 ug/L	0.54	ug/L	54.3	<0.54 ug/L	46.0	30-110	57.4	20	P
2,4-Dinitrophenol	79.8 ug/L	54.3	ug/L	54.3	<54.3 ug/L	147	15-140	9.26	20	M
2,4-Dinitrotoluene	49.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	91.0	17-111	11.6	20	
2,6-Dinitrotoluene	36.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	66.5	15-140	31.9	20	P
2-Chloronaphthalene	25.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	46.8	45-105	62.6	20	P
2-Chlorophenol	23.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.6	19-64	49.6	20	P
2-Nitrophenol	27.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	50.0	40-115	53.8	20	P
3,3'-Dichlorobenzidine	15.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	28.8	10-85	33.4	20	P
4,6-Dinitro-2-methylphenol	71.2 ug/L	54.3	ug/L	54.3	<54.3 ug/L	131	40-130	3.49	20	M
4-Bromophenyl phenyl ether	33.8 ug/L	10.9	ug/L	54.3	<10.9 ug/L	62.3	15-110	27.2	20	P
4-Chlorophenyl phenyl ether	27.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	50.8	15-110	46.2	20	P
4-Nitrophenol	<54.3 ug/L	54.3	ug/L	54.3	<54.3 ug/L	42.7	0-125	2.20	20	
Acenaphthene	28.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	51.7	24-90	56.1	20	P
Acenaphthylene	30.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	55.6	50-105	57.0	20	P
Acetophenone	25.5 ug/L	21.7	ug/L	54.3	<21.7 ug/L	46.9	0-200	52.0	20	P
alpha-Terpineol	32.1 ug/L	2.72	ug/L	54.3	<2.72 ug/L	59.1	0-200	62.6	20	P
Anthracene	47.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	87.6	55-110	11.1	20	
Benzo (a) anthracene	49.8 ug/L	0.05	ug/L	54.3	<0.05 ug/L	91.6	55-110	1.60	20	
Benzo (a) pyrene	46.3 ug/L	0.11	ug/L	54.3	<0.11 ug/L	85.2	55-110	8.27	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0238 - SW3510C

Matrix Spike Dup (BBJ0238-MSD1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

Benzo (b) fluoranthene	50.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	92.9	45-120	21.5	20	P
Benzo (g,h,i) perylene	48.9 ug/L	10.9	ug/L	54.3	<10.9 ug/L	90.0	40-125	2.37	20	
Benzo (k) fluoranthene	53.7 ug/L	10.9	ug/L	54.3	<10.9 ug/L	98.8	45-125	0.899	20	
bis (2-Chloroethoxy) methane	24.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	44.9	40-125	60.6	20	P
bis (2-Chloroethyl) ether	23.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.6	40-125	44.6	20	P
2,2'-Oxybis (1-chloropropane)	22.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	40.7	40-125	49.5	20	P
bis (2-Ethylhexyl) phthalate	75.1 ug/L	2.72	ug/L	54.3	<2.72 ug/L	138	40-125	1.54	20	M
Butyl benzyl phthalate	68.8 ug/L	10.9	ug/L	54.3	<10.9 ug/L	126	45-115	4.19	20	M
Carbazole	53.5 ug/L	2.72	ug/L	54.3	<2.72 ug/L	98.5	0-200	6.41	20	
Chrysene	61.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	113	55-110	1.21	20	M
Dibenz (a,h) anthracene	50.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	92.7	40-125	4.75	20	
Diethyl phthalate	46.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	85.0	40-120	15.2	20	
Dimethyl phthalate	34.7 ug/L	10.9	ug/L	54.3	<10.9 ug/L	63.9	25-125	35.2	20	P
Di-n-butyl phthalate	65.0 ug/L	10.9	ug/L	54.3	<10.9 ug/L	120	55-115	4.90	20	M
Di-n-octyl phthalate	75.7 ug/L	10.9	ug/L	54.3	<10.9 ug/L	139	35-135	15.3	20	M
Fluoranthene	53.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	97.7	55-115	9.89	20	
Fluorene	33.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	61.7	50-110	42.9	20	P
Hexachlorobenzene	37.8 ug/L	0.05	ug/L	54.3	<0.05 ug/L	69.5	25-125	18.8	20	
Hexachlorobutadiene	24.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	44.4	25-125	55.9	20	P
Hexachlorocyclopentadiene	13.6 ug/L	10.9	ug/L	54.3	<10.9 ug/L	25.1	10-90	70.8	20	P
Hexachloroethane	23.0 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.3	25-125	51.5	20	P
Indeno (1,2,3-cd) pyrene	50.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	93.0	45-125	5.41	20	
Isophorone	23.3 ug/L	10.9	ug/L	54.3	<10.9 ug/L	42.9	10-110	61.8	20	P
Naphthalene	26.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	48.1	40-100	54.9	20	P
Nitrobenzene	26.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	48.6	40-100	51.0	20	P
n-Nitrosodimethylamine	22.1 ug/L	10.9	ug/L	54.3	<10.9 ug/L	40.6	25-110	48.8	20	P
n-Nitrosodi-n-propylamine	26.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	48.7	12-97	51.9	20	P
n-Nitrosodiphenylamine	32.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	59.7	12-97	19.9	20	
p-Chloro-m-cresol	28.2 ug/L	10.9	ug/L	54.3	<10.9 ug/L	51.9	10-91	47.8	20	P
Pentachlorophenol	52.0 ug/L	21.7	ug/L	54.3	<21.7 ug/L	95.7	27-109	0.489	20	
Phenanthrene	52.3 ug/L	10.9	ug/L	54.3	<10.9 ug/L	96.3	50-115	11.4	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Semivolatile Organic Compounds by GCMS - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	------

Batch BBJ0238 - SW3510C

Matrix Spike Dup (BBJ0238-MSD1)

Source: 18J0265-01

Prepared: 10/08/2018 Analyzed: 10/09/2018

Phenol	11.7 ug/L	10.9	ug/L	54.9	<10.9 ug/L	21.2	0-115	44.8	20	P
Pyrene	61.5 ug/L	10.9	ug/L	54.3	<10.9 ug/L	113	23-110	0.957	20	M
Pyridine	22.4 ug/L	10.9	ug/L	54.3	<10.9 ug/L	41.3	0-200	48.0	20	P
<hr style="border-top: 1px dashed black;"/>										
Surr: 2,4,6-Tribromophenol (Surr)	92.1		ug/L	109	ug/L	84.8	10-86			
Surr: 2-Fluorobiphenyl (Surr)	26.2		ug/L	54.3	ug/L	48.3	9-87			
Surr: 2-Fluorophenol (Surr)	46.5		ug/L	109	ug/L	42.7	10-52			
Surr: Nitrobenzene-d5 (Surr)	28.2		ug/L	54.3	ug/L	51.8	10-98.5			
Surr: Phenol-d5 (Surr)	23.3		ug/L	109	ug/L	21.4	5-33			
Surr: p-Terphenyl-d14 (Surr)	57.0		ug/L	54.3	ug/L	105	27-133			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0256 - SW3510C

Blank (BBJ0256-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

PCB as Aroclor 1016	<0.200 ug/L	0.200	ug/L						
4,4'-DDD	<0.050 ug/L	0.050	ug/L						
PCB as Aroclor 1221	<0.200 ug/L	0.200	ug/L						
4,4'-DDE	<0.050 ug/L	0.050	ug/L						
PCB as Aroclor 1232	<0.200 ug/L	0.200	ug/L						
PCB as Aroclor 1242	<0.200 ug/L	0.200	ug/L						
4,4'-DDT	<0.050 ug/L	0.050	ug/L						
PCB as Aroclor 1248	<0.200 ug/L	0.200	ug/L						
PCB as Aroclor 1254	<0.200 ug/L	0.200	ug/L						
Aldrin	<0.050 ug/L	0.050	ug/L						
PCB as Aroclor 1260	<0.200 ug/L	0.200	ug/L						
alpha-BHC	<0.050 ug/L	0.050	ug/L						
beta-BHC	<0.050 ug/L	0.050	ug/L						
Chlordane	<0.200 ug/L	0.200	ug/L						
delta-BHC	<0.050 ug/L	0.050	ug/L						
Dieldrin	<0.050 ug/L	0.050	ug/L						
Endosulfan I	<0.050 ug/L	0.050	ug/L						
Endosulfan II	<0.050 ug/L	0.050	ug/L						
Endosulfan sulfate	<0.050 ug/L	0.050	ug/L						
Endrin	<0.050 ug/L	0.050	ug/L						
Endrin aldehyde	<0.050 ug/L	0.050	ug/L						
gamma-BHC (Lindane)	<0.050 ug/L	0.050	ug/L						
Heptachlor	<0.050 ug/L	0.050	ug/L						
Heptachlor epoxide	<0.050 ug/L	0.050	ug/L						
Methoxychlor	<0.050 ug/L	0.050	ug/L						
Toxaphene	<1.00 ug/L	1.00	ug/L						
<hr style="border-top: 1px dashed black;"/>									
Surr: DCB	0.110		ug/L	0.200		55.0	30-105		
Surr: TCMX	0.120		ug/L	0.200		60.0	18-112		
Surr: TCMX	0.0900		ug/L	0.200		45.0	30-105		
Surr: DCB	0.160		ug/L	0.200		80.0	27-131		



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0256 - SW3510C

LCS (BBJ0256-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

4,4'-DDD	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
4,4'-DDE	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
4,4'-DDT	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Aldrin	0.060 ug/L	0.050	ug/L	0.100	ug/L	60.0	23-134
alpha-BHC	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
beta-BHC	0.100 ug/L	0.050	ug/L	0.100	ug/L	100	23-134
delta-BHC	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Dieldrin	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
Endosulfan I	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
Endosulfan II	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Endosulfan sulfate	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Endrin	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Endrin aldehyde	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
gamma-BHC (Lindane)	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Heptachlor	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
Heptachlor epoxide	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134
Methoxychlor	0.080 ug/L	0.050	ug/L	0.100	ug/L	80.0	23-134
Mirex	0.070 ug/L	0.050	ug/L	0.100	ug/L	70.0	23-134

Surr: TCMX

0.140 ug/L 0.200 ug/L 70.0 18-112

Surr: DCB

0.150 ug/L 0.200 ug/L 75.0 27-131

LCS (BBJ0256-BS2)

Prepared: 10/08/2018 Analyzed: 10/09/2018

PCB as Aroclor 1016	0.740 ug/L	0.200	ug/L	1.00	ug/L	74.0	40-90
PCB as Aroclor 1260	0.610 ug/L	0.200	ug/L	1.00	ug/L	61.0	40-90

Surr: DCB

0.120 ug/L 0.200 ug/L 60.0 30-105

Surr: TCMX

0.100 ug/L 0.200 ug/L 50.0 30-105

LCS (BBJ0256-BS3)

Prepared: 10/08/2018 Analyzed: 10/09/2018

Toxaphene	1.62 ug/L	1.00	ug/L	2.50	ug/L	64.8	23-134
-----------	-----------	------	------	------	------	------	--------

Surr: TCMX

0.0900 ug/L 0.200 ug/L 45.0 18-112

Surr: DCB

0.140 ug/L 0.200 ug/L 70.0 27-131



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0256 - SW3510C

LCS (BBJ0256-BS4)

Prepared: 10/08/2018 Analyzed: 10/09/2018

Chlordane	1.79 ug/L	0.200	ug/L	2.50	ug/L	71.6	23-134			
<i>Surr: TCMX</i>	0.110		ug/L	0.200	ug/L	55.0	18-112			
<i>Surr: DCB</i>	0.140		ug/L	0.200	ug/L	70.0	27-131			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Organochlorine Herbicides by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0257 - SW3510C

Blank (BBJ0257-BLK1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

2,4,5-T	<0.500 ug/L	0.500	ug/L							
2,4,5-TP (Silvex)	<0.500 ug/L	0.500	ug/L							
2,4-D	<0.500 ug/L	0.500	ug/L							
Dinoseb	<0.500 ug/L	0.500	ug/L							
Pentachlorophenol	<0.500 ug/L	0.500	ug/L							
<hr style="border-top: 1px dashed black;"/>										
Surr: DCAA (Surr)	1.17		ug/L	1.11		105	60-112			

LCS (BBJ0257-BS1)

Prepared: 10/08/2018 Analyzed: 10/09/2018

2,4,5-T	0.722 ug/L	0.500	ug/L	0.556	ug/L	130	53-144			
2,4,5-TP (Silvex)	0.722 ug/L	0.500	ug/L	0.556	ug/L	130	52-129			L
2,4-D	0.667 ug/L	0.500	ug/L	0.556	ug/L	120	53-126			
Dinoseb	0.778 ug/L	0.500	ug/L	0.556	ug/L	140	60-137			L
Pentachlorophenol	0.722 ug/L	0.500	ug/L	0.556	ug/L	130	52-124			L
<hr style="border-top: 1px dashed black;"/>										
Surr: DCAA (Surr)	1.17		ug/L	1.11	ug/L	105	60-112			



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Micro-extractables by GC/ECD - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	----------------	-----	--------------	------

Batch BBJ0246 - SW8011

Blank (BBJ0246-BLK1)

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	<0.010 ug/L	0.010	ug/L					
1,2,3-Trichloropropane	<0.010 ug/L	0.010	ug/L					
1,2-Dibromo-3-chloropropane (DBCP)	<0.010 ug/L	0.010	ug/L					

LCS (BBJ0246-BS1)

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.322 ug/L	0.010	ug/L	0.250	ug/L	129	65-135	
1,2,3-Trichloropropane	0.293 ug/L	0.010	ug/L	0.250	ug/L	117	65-135	
1,2-Dibromo-3-chloropropane (DBCP)	0.279 ug/L	0.010	ug/L	0.250	ug/L	112	65-135	

LCS Dup (BBJ0246-BSD1)

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.313 ug/L	0.010	ug/L	0.250	ug/L	125	65-135	2.74	20
1,2,3-Trichloropropane	0.284 ug/L	0.010	ug/L	0.250	ug/L	114	65-135	3.04	20
1,2-Dibromo-3-chloropropane (DBCP)	0.270 ug/L	0.010	ug/L	0.250	ug/L	108	65-135	3.32	20

Matrix Spike (BBJ0246-MS1)

Source: 18J0280-02

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.255 ug/L	0.010	ug/L	0.260	<0.010 ug/L	98.1	65-135	
1,2,3-Trichloropropane	0.259 ug/L	0.010	ug/L	0.260	<0.010 ug/L	99.7	65-135	
1,2-Dibromo-3-chloropropane (DBCP)	0.232 ug/L	0.010	ug/L	0.260	<0.010 ug/L	89.2	65-135	

Matrix Spike Dup (BBJ0246-MSD1)

Source: 18J0280-02

Prepared & Analyzed: 10/08/2018

1,2-Dibromoethane (EDB)	0.241 ug/L	0.010	ug/L	0.256	<0.010 ug/L	93.9	65-135	5.65	20
1,2,3-Trichloropropane	0.226 ug/L	0.010	ug/L	0.256	<0.010 ug/L	88.2	65-135	13.6	20
1,2-Dibromo-3-chloropropane (DBCP)	0.215 ug/L	0.010	ug/L	0.256	<0.010 ug/L	84.0	65-135	7.40	20



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0208 - No Prep Wet Chem

Blank (BBJ0208-BLK1)				Prepared & Analyzed: 10/05/2018						
Chromium, Hexavalent	<0.005 mg/L	0.005	mg/L							
LCS (BBJ0208-BS1)				Prepared & Analyzed: 10/05/2018						
Chromium, Hexavalent	0.102 mg/L	0.005	mg/L	0.100	mg/L	102	80-120			
Matrix Spike (BBJ0208-MS1)				Source: 18J0227-06 Prepared & Analyzed: 10/05/2018						
Chromium, Hexavalent	0.100 mg/L	0.005	mg/L	0.100	<0.005 mg/L	100	80-120			
Matrix Spike (BBJ0208-MS2)				Source: 18J0264-01 Prepared & Analyzed: 10/05/2018						
Chromium, Hexavalent	0.106 mg/L	0.005	mg/L	0.100	<0.005 mg/L	106	80-120			
Matrix Spike Dup (BBJ0208-MSD1)				Source: 18J0227-06 Prepared & Analyzed: 10/05/2018						
Chromium, Hexavalent	0.101 mg/L	0.005	mg/L	0.100	<0.005 mg/L	101	80-120	0.995	20	
Matrix Spike Dup (BBJ0208-MSD2)				Source: 18J0264-01 Prepared & Analyzed: 10/05/2018						
Chromium, Hexavalent	0.106 mg/L	0.005	mg/L	0.100	<0.005 mg/L	106	80-120	0.00	20	

Batch BBJ0259 - No Prep Wet Chem

Blank (BBJ0259-BLK1)				Prepared & Analyzed: 10/08/2018						
Sulfide	<1.00 mg/L	1.00	mg/L							
LCS (BBJ0259-BS1)				Prepared & Analyzed: 10/08/2018						
Sulfide	5.04 mg/L	1	mg/L	5.00	mg/L	101	80-120			
LCS Dup (BBJ0259-BSD1)				Prepared & Analyzed: 10/08/2018						
Sulfide	5.05 mg/L	1	mg/L	5.00	mg/L	101	80-120	0.198	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Wet Chemistry Analysis - Quality Control

Air Water & Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	------

Batch BBJ0259 - No Prep Wet Chem

Matrix Spike (BBJ0259-MS1)		Source: 18J0268-01		Prepared & Analyzed: 10/08/2018						
Sulfide	3.62 mg/L	1.00	mg/L	5.00	<1.00 mg/L	72.4	75-125			M
Matrix Spike Dup (BBJ0259-MSD1)		Source: 18J0268-01		Prepared & Analyzed: 10/08/2018						
Sulfide	3.94 mg/L	1.00	mg/L	5.00	<1.00 mg/L	78.8	75-125	8.47	20	

Batch BBJ0380 - No Prep Wet Chem

Blank (BBJ0380-BLK1)		Prepared & Analyzed: 10/11/2018								
Cyanide	<0.01 mg/L	0.01	mg/L							
LCS (BBJ0380-BS1)		Prepared & Analyzed: 10/11/2018								
Cyanide	0.26 mg/L	0.01	mg/L	0.250	mg/L	103	80-120			
LCS Dup (BBJ0380-BSD1)		Prepared & Analyzed: 10/11/2018								
Cyanide	0.26 mg/L	0.01	mg/L	0.250	mg/L	106	80-120	3.07	20	
Matrix Spike (BBJ0380-MS1)		Source: 18J0092-01		Prepared & Analyzed: 10/11/2018						
Cyanide	0.25 mg/L	0.01	mg/L	0.250	<0.01 mg/L	101	80-120			
Matrix Spike Dup (BBJ0380-MSD1)		Source: 18J0092-01		Prepared & Analyzed: 10/11/2018						
Cyanide	0.29 mg/L	0.01	mg/L	0.250	<0.01 mg/L	114	80-120	12.2	20	



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
SW6010C in Non-Potable Water	
Barium	VELAP,WVDEP
Beryllium	VELAP,WVDEP
Cadmium	VELAP,WVDEP
Chromium	VELAP,WVDEP
Cobalt	VELAP,WVDEP
Copper	VELAP,WVDEP
Lead	VELAP,WVDEP
Nickel	VELAP,WVDEP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
Tin	VELAP,WVDEP
Vanadium	VELAP,WVDEP
Zinc	VELAP,WVDEP
SW6020A in Non-Potable Water	
Antimony	VELAP,NC,WVDEP
Arsenic	VELAP,WVDEP
Thallium	VELAP,WVDEP
SW7196A in Non-Potable Water	
Chromium, Hexavalent	VELAP
SW7470A in Non-Potable Water	
Mercury	VELAP,NC,WVDEP
SW8011 in Non-Potable Water	
1,2-Dibromoethane (EDB)	VELAP,NC
1,2,3-Trichloropropane	VELAP,NC
1,2-Dibromo-3-chloropropane (DBCP)	VELAP,NC
SW8081B in Non-Potable Water	
4,4'-DDD	NC,VELAP,WVDEP
4,4'-DDE	NC,VELAP,WVDEP
4,4'-DDT	NC,VELAP,WVDEP
Aldrin	NC,VELAP,WVDEP
alpha-BHC	NC,VELAP,WVDEP
beta-BHC	NC,VELAP,WVDEP
Chlordane	NC,VELAP,WVDEP
delta-BHC	NC,VELAP,WVDEP
Dieldrin	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Endosulfan I	NC,VELAP,WVDEP
Endosulfan II	NC,VELAP,WVDEP
Endosulfan sulfate	NC,VELAP,WVDEP
Endrin	NC,VELAP,WVDEP
Endrin aldehyde	NC,VELAP,WVDEP
gamma-BHC (Lindane)	NC,VELAP,WVDEP
Heptachlor	NC,VELAP,WVDEP
Heptachlor epoxide	NC,VELAP,WVDEP
Methoxychlor	NC,VELAP,WVDEP
Toxaphene	NC,VELAP,WVDEP
SW8082A in Non-Potable Water	
PCB as Aroclor 1016	VELAP,NC,WVDEP
PCB as Aroclor 1221	VELAP,NC,WVDEP
PCB as Aroclor 1232	VELAP,NC,WVDEP
PCB as Aroclor 1242	VELAP,NC,WVDEP
PCB as Aroclor 1248	VELAP,NC,WVDEP
PCB as Aroclor 1254	VELAP,NC,WVDEP
PCB as Aroclor 1260	VELAP,NC,WVDEP
SW8151A in Non-Potable Water	
2,4,5-T	VELAP,NC
2,4,5-TP (Silvex)	VELAP,NC
2,4-D	VELAP,NC
Dinoseb	VELAP,NC
Pentachlorophenol	VELAP,NC
SW8260B in Non-Potable Water	
1,1,1,2-Tetrachloroethane	NC,VELAP,WVDEP
1,1,1-Trichloroethane	NC,VELAP,WVDEP
1,1,2,2-Tetrachloroethane	NC,VELAP,WVDEP
1,1,2-Trichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethane	NC,VELAP,WVDEP
1,1-Dichloroethylene	NC,VELAP,WVDEP
1,1-Dichloropropene	NC,VELAP,WVDEP
1,2,3-Trichloropropane	NC,VELAP,WVDEP
1,2,4-Trichlorobenzene	NC,VELAP,WVDEP
1,2-Dichlorobenzene	NC,VELAP,WVDEP
1,2-Dichloroethane	NC,VELAP,WVDEP
1,2-Dichloropropane	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
1,3-Dichlorobenzene	NC,VELAP,WVDEP
1,3-Dichloropropane	NC,VELAP,WVDEP
1,4-Dichlorobenzene	NC,VELAP,WVDEP
2,2-Dichloropropane	NC,VELAP,WVDEP
2-Butanone (MEK)	NC,VELAP,WVDEP
2-Hexanone (MBK)	NC,VELAP,WVDEP
4-Methyl-2-pentanone (MIBK)	NC,VELAP,WVDEP
Acetone	NC,VELAP,WVDEP
Acetonitrile	NC,VELAP,WVDEP
Acrolein	NC,VELAP,WVDEP
Acrylonitrile	NC,VELAP,WVDEP
Allyl chloride	NC,VELAP,WVDEP
Benzene	NC,VELAP,WVDEP
Bromochloromethane	NC,VELAP,WVDEP
Bromodichloromethane	NC,VELAP,WVDEP
Bromoform	NC,VELAP,WVDEP
Bromomethane	NC,VELAP,WVDEP
Carbon disulfide	NC,VELAP,WVDEP
Carbon tetrachloride	NC,VELAP,WVDEP
Chlorobenzene	NC,VELAP,WVDEP
Chloroethane	NC,VELAP,WVDEP
Chloroform	NC,VELAP,WVDEP
Chloromethane	NC,VELAP,WVDEP
Chloroprene	NC,VELAP,WVDEP
cis-1,2-Dichloroethylene	NC,VELAP,WVDEP
cis-1,3-Dichloropropene	NC,VELAP,WVDEP
Dibromochloromethane	NC,VELAP,WVDEP
Dibromomethane	NC,VELAP,WVDEP
Dichlorodifluoromethane	NC,VELAP,WVDEP
Ethyl methacrylate	NC,VELAP,WVDEP
Ethylbenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Iodomethane	NC,VELAP,WVDEP
Isobutyl Alcohol	NC,VELAP,WVDEP
m+p-Xylenes	NC,VELAP,WVDEP
Methacrylonitrile	NC,VELAP,WVDEP
Methyl methacrylate	NC,VELAP,WVDEP
Methylene chloride	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
o-Xylene	NC,VELAP,WVDEP
Propionitrile	NC,VELAP,WVDEP
Styrene	NC,VELAP,WVDEP
Tetrachloroethylene (PCE)	NC,VELAP,WVDEP
Toluene	NC,VELAP,WVDEP
trans-1,2-Dichloroethylene	NC,VELAP,WVDEP
trans-1,3-Dichloropropene	NC,VELAP,WVDEP
trans-1,4-Dichloro-2-butene	NC,VELAP,WVDEP
Trichloroethylene	NC,VELAP,WVDEP
Trichlorofluoromethane	NC,VELAP,WVDEP
Vinyl acetate	NC,VELAP,WVDEP
Vinyl chloride	NC,VELAP,WVDEP
Xylenes, Total	NC,VELAP,WVDEP
SW8270D in Non-Potable Water	
1,2,4,5-Tetrachlorobenzene	NC,VELAP,WVDEP
1,3,5-Trinitrobenzene	NC,VELAP,WVDEP
1,3-Dinitrobenzene	NC,VELAP,WVDEP
1,4-Naphthoquinone	NC,VELAP,WVDEP
1-Naphthylamine	NC,VELAP,WVDEP
2,3,4,6-Tetrachlorophenol	NC,VELAP,WVDEP
2,4,5-Trichlorophenol	NC,VELAP,WVDEP
2,4,6-Trichlorophenol	NC,VELAP,WVDEP
2,4-Dichlorophenol	NC,VELAP,WVDEP
2,4-Dimethylphenol	NC,VELAP,WVDEP
2,4-Dinitrophenol	NC,VELAP,WVDEP
2,4-Dinitrotoluene	NC,VELAP,WVDEP
2,6-Dichlorophenol	NC,VELAP,WVDEP
2,6-Dinitrotoluene	NC,VELAP,WVDEP
2-Acetylaminofluorene	NC,VELAP,WVDEP
2-Chloronaphthalene	NC,VELAP,WVDEP
2-Chlorophenol	NC,VELAP,WVDEP
2-Methylnaphthalene	NC,VELAP,WVDEP
2-Naphthylamine	NC,VELAP,WVDEP
2-Nitroaniline	NC,VELAP,WVDEP
2-Nitrophenol	NC,VELAP,WVDEP
3,3'-Dichlorobenzidine	NC,VELAP,WVDEP
3,3'-Dimethylbenzidine	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
3-Methylcholanthrene	NC,VELAP,WVDEP
3-Nitroaniline	NC,VELAP,WVDEP
4,6-Dinitro-2-methylphenol	NC,VELAP,WVDEP
4-Aminobiphenyl	NC,VELAP,WVDEP
4-Bromophenyl phenyl ether	NC,VELAP,WVDEP
4-Chloroaniline	NC,VELAP,WVDEP
4-Chlorophenyl phenyl ether	NC,VELAP,WVDEP
4-Nitroaniline	NC,VELAP,WVDEP
4-Nitrophenol	NC,VELAP,WVDEP
5-Nitro-o-toluidine	NC,VELAP,WVDEP
7,12-Dimethylbenz (a) anthracene	NC,VELAP,WVDEP
Acenaphthene	NC,VELAP,WVDEP
Acenaphthylene	NC,VELAP,WVDEP
Acetophenone	NC,VELAP,WVDEP
Anthracene	NC,VELAP,WVDEP
Benzo (a) anthracene	NC,VELAP,WVDEP
Benzo (a) pyrene	NC,VELAP,WVDEP
Benzo (b) fluoranthene	NC,VELAP,WVDEP
Benzo (g,h,i) perylene	NC,VELAP,WVDEP
Benzo (k) fluoranthene	NC,VELAP,WVDEP
Benzyl alcohol	NC,VELAP,WVDEP
bis (2-Chloroethoxy) methane	NC,VELAP,WVDEP
bis (2-Chloroethyl) ether	NC,VELAP,WVDEP
2,2'-Oxybis (1-chloropropane)	NC,VELAP,WVDEP
bis (2-Ethylhexyl) phthalate	NC,VELAP,WVDEP
Butyl benzyl phthalate	NC,VELAP,WVDEP
Chlorobenzilate	NC,VELAP,WVDEP
Chrysene	NC,VELAP,WVDEP
Diallate	NC,VELAP,WVDEP
Dibenz (a,h) anthracene	NC,VELAP,WVDEP
Dibenzofuran	NC,VELAP,WVDEP
Diethyl phthalate	NC,VELAP,WVDEP
Dimethoate	NC,VELAP,WVDEP
Dimethyl phthalate	NC,VELAP,WVDEP
Di-n-butyl phthalate	NC,VELAP,WVDEP
Di-n-octyl phthalate	NC,VELAP,WVDEP
Diphenylamine	NC,VELAP,WVDEP
Disulfoton	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Certified Analyses included in this Report

Analyte	Certifications
Ethyl methanesulfonate	NC,VELAP,WVDEP
Ethyl parathion	NC,VELAP,WVDEP
Famphur	NC,VELAP,WVDEP
Fluoranthene	NC,VELAP,WVDEP
Fluorene	NC,VELAP,WVDEP
Hexachlorobenzene	NC,VELAP,WVDEP
Hexachlorobutadiene	NC,VELAP,WVDEP
Hexachlorocyclopentadiene	NC,VELAP,WVDEP
Hexachloroethane	NC,VELAP,WVDEP
Hexachloropropene	NC,VELAP,WVDEP
Indeno (1,2,3-cd) pyrene	NC,VELAP,WVDEP
Isodrin	NC,VELAP,WVDEP
Isophorone	NC,VELAP,WVDEP
Isosafrole	NC,VELAP,WVDEP
Kepone	NC,VELAP,WVDEP
m+p-Cresols	NC,VELAP,WVDEP
Methapyrilene	NC,VELAP,WVDEP
Methyl methanesulfonate	NC,VELAP,WVDEP
Methyl parathion	NC,VELAP,WVDEP
Naphthalene	NC,VELAP,WVDEP
Nitrobenzene	NC,VELAP,WVDEP
n-Nitrosodiethylamine	NC,VELAP,WVDEP
n-Nitrosodimethylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-butylamine	NC,VELAP,WVDEP
n-Nitrosodi-n-propylamine	NC,VELAP,WVDEP
n-Nitrosodiphenylamine	NC,VELAP,WVDEP
n-Nitrosomethylethylamine	NC,VELAP,WVDEP
n-Nitrosopiperidine	NC,VELAP,WVDEP
n-Nitrosopyrrolidine	NC,VELAP,WVDEP
o,o,o-Triethyl phosphorothioate	NC,VELAP,WVDEP
o,o-Diethyl o-2-pyrazinyl phosphorothioate	NC,VELAP,WVDEP
o+m+p-Cresols	VELAP,WVDEP
o-Cresol	NC,VELAP,WVDEP
o-Toluidine	NC,VELAP,WVDEP
p-(Dimethylamino) azobenzene	NC,VELAP,WVDEP
p-Chloro-m-cresol	NC,VELAP,WVDEP
Pentachlorobenzene	NC,VELAP,WVDEP
Pentachloronitrobenzene (quintozene)	NC,VELAP,WVDEP



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 10/12/2018 15:27
Submitted To: Jeff Fisher	Project Number: 18-760
Client Site I.D.: CVTC	Purchase Order: 18-760

Certified Analyses included in this Report

Analyte	Certifications
Phenacetin	NC,VELAP,WVDEP
Phenanthrene	NC,VELAP,WVDEP
Phenol	NC,VELAP,WVDEP
Phorate	NC,VELAP,WVDEP
p-Phenylenediamine	NC,VELAP,WVDEP
Pronamide	NC,VELAP,WVDEP
Pyrene	NC,VELAP,WVDEP
Safrole	NC,VELAP,WVDEP
SW9012B in Non-Potable Water	
Cyanide	VELAP
SW9215 in Non-Potable Water	
Sulfide	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2018
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #9619	460021	06/14/2019
WVDEP	West Virginia DEP	350	11/30/2018



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Summary of Data Qualifiers

- B Blank contamination. The recorded result is associated with a contaminated blank.
- C Continuing calibration verification response for this analyte is outside specifications.
- Cl Residual Chlorine or other oxidizing agent was detected in the container used to analyze this sample.
- DND Not Detected
- E Estimated concentration, outside calibration range
- L LCS recovery is outside of established acceptance limits
- M Matrix spike recovery is outside established acceptance limits
- P Duplicate analysis does not meet the acceptance criteria for precision
- S Surrogate recovery was outside acceptance criteria
- RPD Relative Percent Difference
- Qual Qualifiers
- RE Denotes sample was re-analyzed
- D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.
- TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library .
A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
- PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.

CHAIN OF CUSTODY

PAGE 1 OF 1

COMPANY NAME: <u>EEE Consulting</u>		INVOICE TO: <u>Sau</u>	PROJECT NAME/Quote #: <u>CVTC 18-760</u>
CONTACT: <u>Jeff Fisher</u>		INVOICE CONTACT:	SITE NAME: <u>CVTC</u>
ADDRESS: <u>201 Church St Blacksburg VA 24060</u>		INVOICE ADDRESS:	PROJECT NUMBER: <u>18-760</u>
PHONE #: <u>540 953 0170</u>		INVOICE PHONE #:	P.O. #: <u>18-760</u>
FAX #: <u>540 953 0171</u>	EMAIL: <u>jfisher@eee-consulting.com</u>		Pretreatment Program: <u>NA</u>
Is sample for compliance reporting? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		Is sample from a chlorinated supply? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
PWS I.D. #: <u>NA</u>		Turn Around Time: Circle: <u>10</u> <u>5 Days</u> or ___ Day(s)	
SAMPLER NAME (PRINT): <u>Jason Hepler</u>		SAMPLER SIGNATURE:	

Matrix Codes: WW=Waste Water GW=Ground Water DW=Drinking Water S=Soil/Solids OR=Organic A=Air WP=Wipe OT=Other

CLIENT SAMPLE ID	Grab	Composite	Filtered (Dissolved Metals)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Time Preserved	Matrix (See Codes)	Number of Containers	ANALYSIS / (PRESERVATIVE)		COMMENTS
											App II	Hex Chrome	
1) 16-1 Task 2.6	X	N	NA	NA	10-4	1230	NA	GW	12	X	X	Preservative Codes: N=Nitric Acid C=Hydrochloric Acid S=Sulfuric Acid H=Sodium Hydroxide A=Ascorbic Acid Z=Zinc Acetate T=Sodium Thiosulfate M=Methanol PLEASE NOTE PRESERVATIVE(S), INTERFERENCE CHECKS or PUMP RATE (L/min)	
2) 16-2 Task 2.6	X	N	NA	NA	10-4	1100	NA	GW	12	X	X		
3)													
4)													
5)													
6)													
7)													
8)													
9)													
10)													

RECEIVED: DATE / TIME: <u>10/4/18/3:15</u>	RECEIVED: <u>Michael Foran</u> DATE / TIME: <u>9/4 3:15</u>	QC Data Package Level III <input type="checkbox"/>	LAB USE ONLY COOLER TEMP <u>2.3</u> °C EEE-Blacksburg 18J0250 CVTC Recd: 10/05/2018 Due: 10/12/2018
RECEIVED: <u>Cowier</u> DATE / TIME: <u>10/5/18</u>	RECEIVED: <u>Dr. R</u> DATE / TIME: <u>8:00</u>	QC Data Package Level IV <input type="checkbox"/>	

Page 70 of 72



1941 Reymet Road • Richmond, Virginia 23230 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	10/12/2018 15:27
Submitted To:	Jeff Fisher	Project Number:	18-760
Client Site I.D.:	CVTC	Purchase Order:	18-760

Sample Conditions Checklist

Samples Received at:	2.30°C
How were samples received?	Courier
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	No
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	Yes
Are all volatile organic and TOX containers free of headspace?	Yes
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	No
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

Work Order Comments

Trip Blank for VOC8260 received with samples and added to work order. Trip Blank date and time (08/23/18 1410) logged as per container label. BAR 10/05/18 0904

No Trip Blank received for VOC8011. Jeff Fisher notified via email. BAR 10/05/18 0904

Samples logged for Tbl 3.1B and 2,3,7,8 TCDD as per project requirements. SWS10/5/18

Appendix F: Wetlands Memorandum



TECHNICAL MEMO TO FILE

CVTC Monitoring Well Installation Access Road

September 10, 2018

On Tuesday, September 4th, 3e staff (Jeff Fisher, Josh Hepler, and Katie Shoemaker) performed a site evaluation for the installation of groundwater monitoring wells in the vicinity of the historic landfill associated with the former coal-powered incinerator to the southeast of the CVTC campus. Williams Run, a tributary to the nearby James River, is approximately 400 feet away from the toe of the landfill, as shown on Figure 13-1. The primary purpose of the site visit was to determine the most feasible path to create a temporary access road to install one or more groundwater monitoring wells downhill of the landfill to intercept the potential groundwater flow paths from the landfill for sampling.

The initial concept was to design a road traversing along the slope adjacent to the property line. The excessively steep slope in this area, greater than 50%, was a limiting factor to even traversing the slope tangentially, which would have resulted in extensive cut and fill to provide a stable driving surface. Alternative paths crossing further into the adjacent property were discussed in the field.

Since a portion of the proposed monitoring well installation will occur in areas within the floodplain of a perennial stream, a preliminary site assessment was conducted to determine if wetlands were present within the proposed footprint. Soils in the area exhibited redoximorphic features and reduced soil conditions typically associated with a depleted matrix, which are all considered indicators of hydric soils. Soils were saturated within 12 inches of soil surface during the growing season, thus meeting wetland hydrology requirements. Hydrophytic vegetation dominated the area, meeting regulatory criteria for wetland vegetation. A formal wetland delineation was not performed; however, site conditions indicate a significant portion of the proposed well installation area meets the regulatory criteria for jurisdictional wetlands. Meeting these criteria means that additional permitting and regulatory oversight would be required if an access road were to be installed through this area.

While alternative paths for the access road were discussed, any feasible path would take the access road through what are assumed to be jurisdictional wetlands. The regulatory oversight anticipated for any road installation through jurisdictional wetlands was deemed to be cost- and time-prohibitive for the project. The alternative of manually installing monitoring wells in the floodplain area was determined to be the most effective solution in this situation. Without the use of heavy equipment for installation, impacts to the wetlands requiring regulatory oversight can be avoided and the necessary sampling can occur in a timely and cost-effective manner.

A handwritten signature in black ink that reads 'Katie Shoemaker'.

Katie Shoemaker, PE
Environmental Engineer
EEE Consulting, Inc.