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1998

N  
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S

**Scale:** |-----| 1" = 1,500'



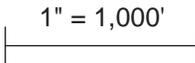
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 **Scale:**  1" = 1,000'

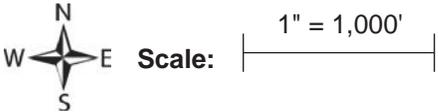


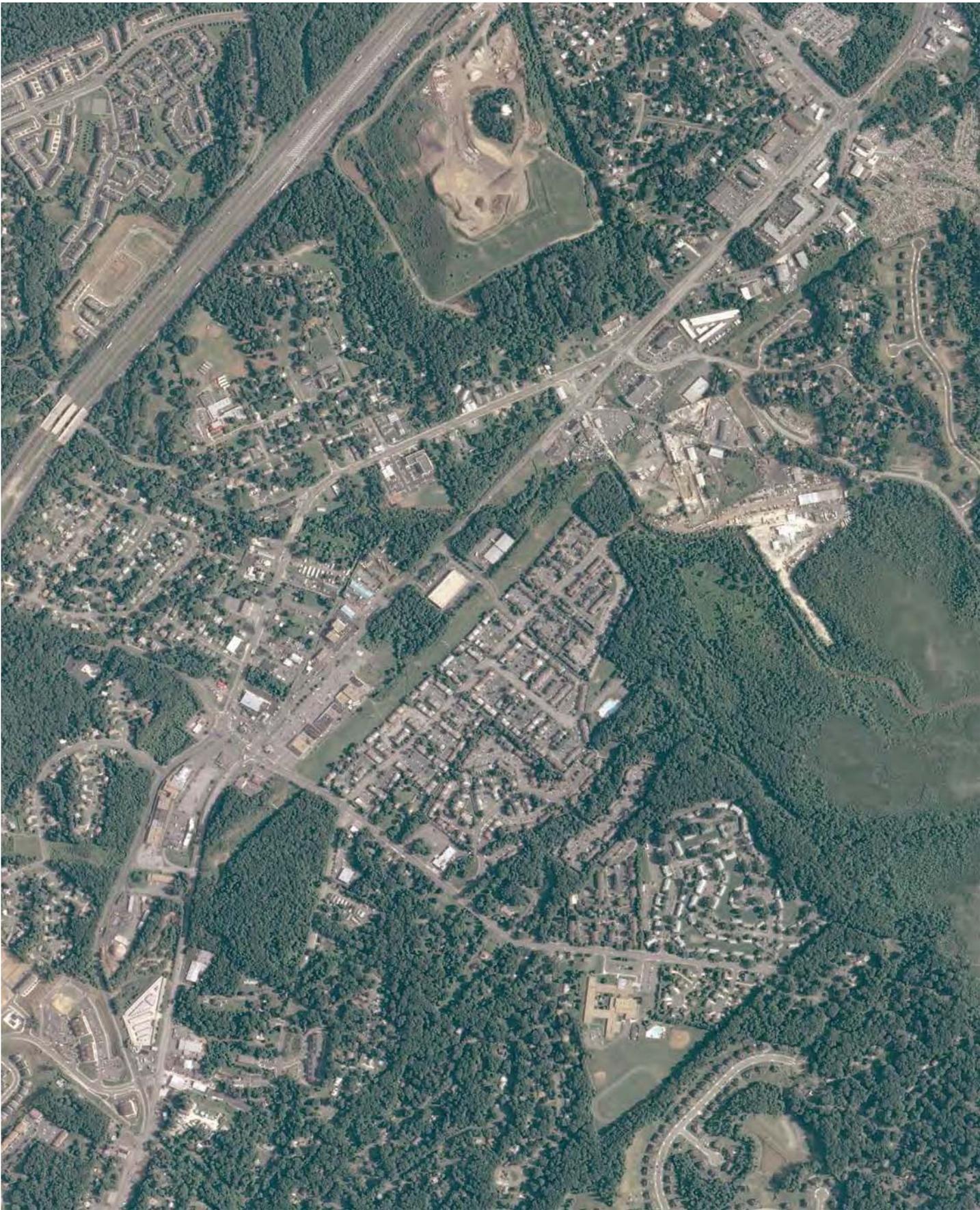
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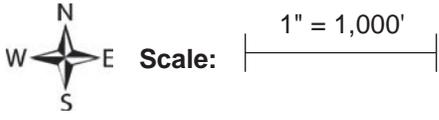


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Scale:  1" = 1,000'



**FLIGHT YEAR:**  
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Scale:  1" = 1,000'



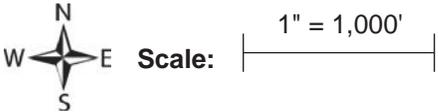
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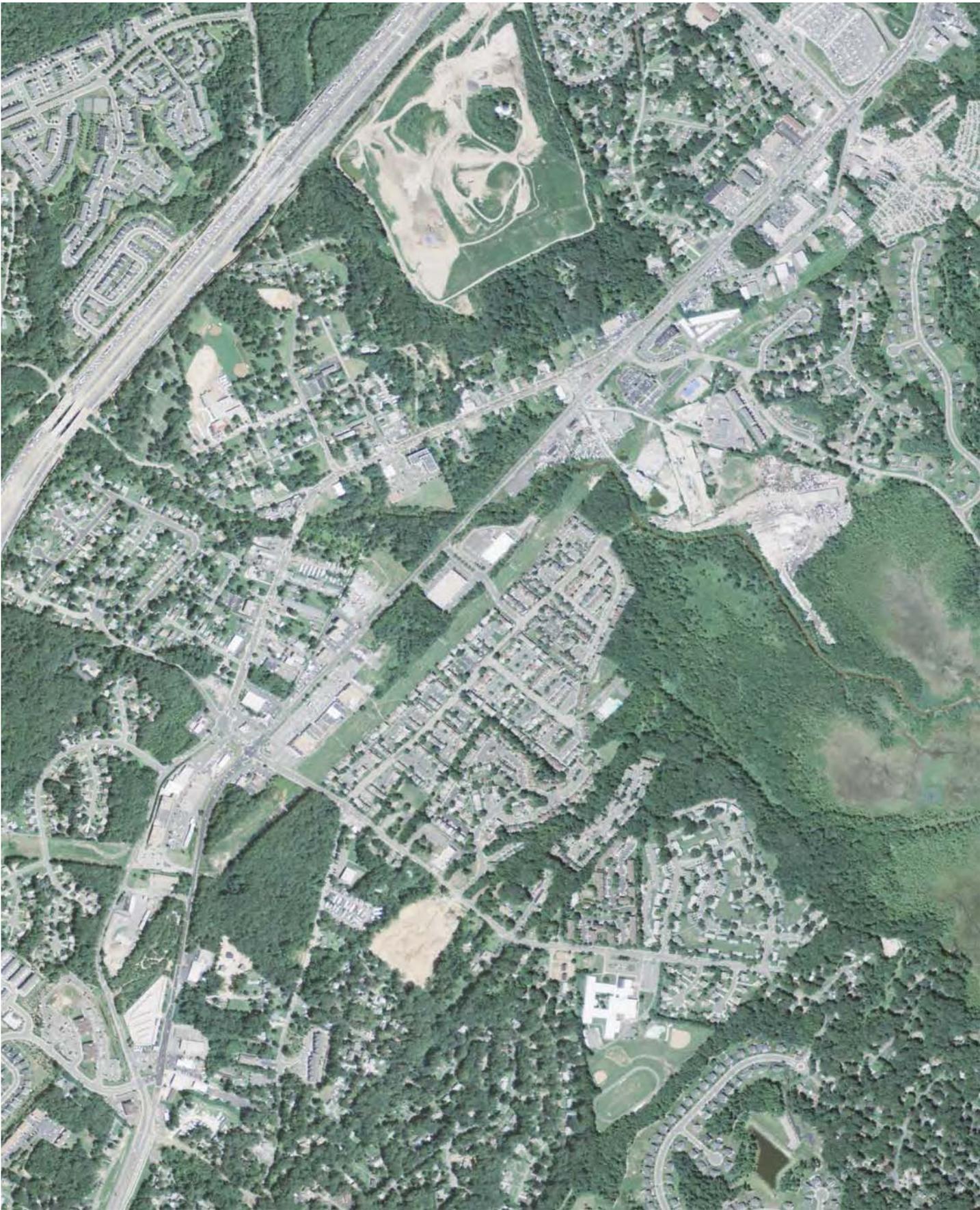
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Scale: |-----| 1" = 1,000'

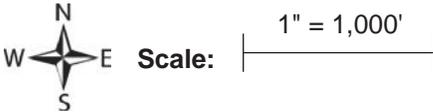


**FLIGHT YEAR:**  
2014

Scale:  1" = 1,000'



**FLIGHT YEAR:**  
2016

Scale:  1" = 1,000'



# **Phase II Environmental Site Assessment Roadway Improvement Project**

**Route 1 Widening Project  
1 Performance Auto Care  
17484 Jefferson Davis Highway  
Dumfries, Virginia 22026  
Prince William County**

**Contract ID: 44115  
VDOT Project: 001-212-249  
VDOT UPC: 90339 Act: 689  
VDOT Task Number: E-FR024.09**

**Prepared for  
Mr. Brutus Cooper  
Regional VDOT HAZMAT Manager  
Virginia Department of Transportation  
NOVA District Office  
4975 Alliance Drive  
Fairfax, VA 22030**

**Prepared by  
EEE Consulting, Inc.  
201 Church Street  
Blacksburg, Virginia 24060**

**February 2019**

**Prepared by: Joshua P. Hepler, PG, Project Scientist**

**Reviewed by: Christopher J. Lalli, Vice President**



**EEE Consulting, Inc.**

Environmental, Engineering and Educational Solutions

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- Appendix B: Boring Logs
- Appendix C: Laboratory Reports and Sample Custody Documentation
- Appendix D: Laboratory Review of Detected TPH Concentrations & Chromatograms
- Appendix E: Table 3 Petroleum Impacted Soil Volume Estimate

## Acronyms

AST	Above Ground Storage Tank
BGS	Below Ground Surface
C	Celsius
COC	Chain of Custody
CL	Center Line
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency – United States
FT	Feet
LT	Left
mg/kg	Milligrams per Kilogram
MW	Monitoring Well
PG	Professional Geologist
PID	Photoionization Detector
PPM	Parts Per Million
REC	Recognized Environmental Condition
RL	Reporting Limit
Rt	Route
RT	Right
R/W	Right-of-Way
STA	Station
TPH-DRO	Total Petroleum Hydrocarbons - Diesel Range Organics
TPH-GRO	Total Petroleum Hydrocarbons – Gasoline Range Organics
UST	Underground Storage Tank
VDOT	Virginia Department of Transportation
VOC	Volatile Organic Compounds
VSWMR	Virginia Solid Waste Management Regulations
<b>3e</b>	EEE Consulting, Inc.

## 1.0 INTRODUCTION AND BACKGROUND

The Virginia Department of Transportation (VDOT) is administering proposed improvements and realignment of 2.3-miles of Route 1 (Fraleley Boulevard) between the intersection with Quantico Gateway Drive and the intersection with Drumfires Road (State Route 234) in Dumfries, Prince William County, Virginia. The general project location and topographic setting are shown on **Figures 1 and 2**, respectively. An aerial photograph of the project area is also presented as **Figure 3**.

The roadway and drainage improvements will occur in existing roadway right-of-way (R/W), proposed R/W, permanent easements (slope & drainage), temporary construction easements (i.e. erosion & sediment control measures) and proposed limited access lines. A Phase I Environmental Site Assessment (ESA) was prepared by EEE Consulting, Inc (**3e**) for the Study Area in August 2018, which identified Recognized Environmental Conditions (REC) throughout the corridor, including the subject property as follows:

- ❖ **1 Performance Auto Care** (Parcel 096) located at 17484 Jefferson Davis Highway, Dumfries, VA 22026 (VDOT Plan Sheet No. 16), which is an active automotive repair shop with a suspect Oil Water Separator (OWS) located proximate to the project limits.

According to the Plan Sheet No. 16, four drainage structures (16-4, 16-7, 16-9, & 16-10) and associated 24-inch (in) pipe connections are proposed in portions of the existing R/W and a proposed slope/drainage easement at Parcel 096 (see **Figure 4**). A cut is also depicted from STA Nos. 341+45 to 343+40 Left (LT) of Centerline (CL), which is reportedly associated with a proposed 10-ft wide asphalt pedestrian walkway. Please note that the depth(s) of this cut is unknown because a corresponding profile or cross-section sheet was not available for this pathway as of the date of this report.

The RECs identified at Parcel 096 have the potential to pose adverse impacts to subsurface media that will likely be disturbed during the installation of the noted drainage and walkway improvements. The constituents of concern are petroleum-based, which are based on the RECs identified above and detailed in the Phase I ESA Corridor Study Report (**3e**, August 2018). Based on this information, the VDOT – NOVA District Hazardous Materials Manager requested the collection of representative samples to confirm the presence/absence of petroleum impacts to soil and groundwater, if encountered, in and proximate to the proposed disturbance areas. On December 6<sup>th</sup>, 2018, **3e** completed a Phase II ESA at Parcel 096 to confirm the presence/absence of impacts to subsurface media that will likely be disturbed in response to the proposed drainage and pathway improvements.

Subsurface boring advancements, sampling methods, corresponding analytical results, and conclusions/recommendations pertaining to the proposed construction activities at Parcel 096 are summarized in the following sections of this report.

## 2.0 PUBLIC/PRIVATE UTILITY CLEARINGS AND MARK OUTS

Prior to implementing the direct push boring installations, the approximate locations of subsurface public utilities were identified and marked by Miss Utility of Virginia. A utility locate request form was also completed with VDOT to identify utilities owned and operated by VDOT. Copies of the Miss Utility and VDOT Tickets are included in **Appendix A**. In addition to public utility identification, private subsurface utilities were also identified and marked in each investigative area prior to commencing drilling activities.

## 3.0 SOIL SAMPLING METHODS

### 3.1. Soil Sampling Methods

On December 6<sup>th</sup>, 2018, a direct push drill rig was utilized to advance four (4) soil borings at the following locations:

- ❖ B1 – Installed proximate to STA No. 343+40; 80-ft LT of CL to a depth of 10-ft BGS upon refusal on consolidated material.
- ❖ B2 – Installed proximate to STA No. 342+60; 75-ft LT of CL to a depth of 15-ft BGS as proposed.
- ❖ B3 – Installed proximate to STA No. 341+85; 90-ft LT of CL to a depth of 13.5-ft BGS upon refusal on consolidated material.
- ❖ B4 – Installed proximate to STA No. 341+20; 90-ft LT of CL to a depth of 18.5-ft BGS upon refusal on consolidated material.

The roadway improvements proposed to date, RECs, and boring locations are depicted on **Figure 4**.

Each soil boring was advanced using a Geoprobe<sup>®</sup> direct push rig. The direct-push rig utilizes a hollow-stem spoon that produced a continuous soil core in five (5)-ft intervals along the vertical depth of each boring. Each boring was advanced to predetermined depths or refusal at depths that ranged from 10- to 18.5-ft BGS. Subsurface conditions (i.e. wet soils) indicative of groundwater were not observed the four borings and therefore, no temporary wells were installed. The detailed boring logs are presented in **Appendix B**.

Composite soil samples were collected to assess soil that will likely be disturbed during construction. The representative composite soil samples were obtained from the borings by collecting aliquots from the following depth intervals:

- ❖ B1: 0-5-ft and 5-10-ft BGS.
- ❖ B2 and B3: 5-10-ft and 10-15-ft BGS.

❖ B4: 5-10-ft and 15-18.5-ft BGS.

Each composite soil sample was placed into two (2) pre-cleaned 4-ounce glass jars. The sample jars were appropriately labeled and placed on ice in a cooler to maintain an appropriate temperature ( $\leq 4^{\circ}\text{C}$ ) while in transit to the certified environmental laboratory. Chain of Custody (COC) documentation was completed for all samples submitted for laboratory analysis.

All composite soil samples obtained from the four (4) direct push borings were submitted for laboratory analysis of TPH-DRO and TPH-ORO. The COC documentation and laboratory analytical data are provided in **Appendix C**. A detailed discussion of the composite soil sample analytical results is presented in **Section 5.0** of this report.

## 4.0 PID SCREENING RESULTS

Photoionization Detector (PID) results for the screened direct push soil cores are presented below in **Table 1**. Measurement units are in parts per million (ppm).

**Table 1 - PID Soil Screening Data: Route 1 – 1 Performance Auto Care**

	PID (ppm)	PID (ppm)	PID (ppm)	PID (ppm)
Depth (ft BGS)	0-5	5-10	10-15	15-20
B1	NA	0.0	NA	NA
B2	0.0	0.0	0.0	NA
B3	0.0	0.0	0.0	NA
B4	0.0	0.0	0.0	0.0

Notes:

ppm = Parts per Million

BGS – Below Ground Surface

Depth Unit – foot BGS

NA – Not Applicable (no soil recovery)

A review of **Table 1** indicates that the screened soil cores did not register detectable PID readings. Visual or olfactory evidence of petroleum-impacted media was also not observed during the soil screening and sampling activities.

The soil samples submitted for laboratory analysis from B2 (5-10-ft & 10-15-ft BGS), and B3 (5-10-ft BGS) contained low TPH-DRO and/or TPH-ORO concentrations. These concentration detections did not register elevated PID readings or contain odors that were noticeable to olfactory senses, which is consistent for low concentration detections in the semi-volatile, hydrocarbon chain ranges (i.e. hydrocarbon chains from C10 – C38).

## 5.0 COMPOSITE SOIL SAMPLE ANALYTICAL RESULTS

The analytical results obtained from the composite soil samples are summarized in **Table 2** on the following page. All results are listed in units of milligrams-per-kilogram (mg/kg). A detailed laboratory analytical report is provided in **Appendix C**.

**Table 2: Soil Sample Analytical Data**

**1 Performance Auto Care**

**Route 1 Widening, Dumfries VA**

**Units = Milligrams per Kilogram (mg/kg)**

Location	<b>B1 0-5</b>		<b>B1 5-10</b>		<b>B2 5-10</b>		<b>B2 10-15</b>	
Laboratory I.D.	18L0345-01		18L0345-02		18L0345-03		18L0345-04	
Depth Below Grade	0-5 feet		5-10-feet		5-10 feet		10-15 feet	
Sample Time	15:05		15:15		15:45		15:55	
	Result	RL	Result	RL	Result	RL	Result	RL
<b>TPH-DRO</b>	ND	10.0	ND	10.0	<b>12.3</b>	10.0	<b>11.2</b>	10.0
<b>TPH-ORO</b>	ND	10.0	ND	10.0	<b>11.3</b>	10.0	ND	10.0
Location	<b>B3 5-10</b>		<b>B3 10-13.5</b>		<b>B4 5-10</b>		<b>B4 15-18.5</b>	
Laboratory I.D.	18L0345-05		18L0345-06		18L0345-07		18L0345-08	
Depth Below Grade	5-10 feet		10-13.5 feet		5-10 feet		15-18.5 feet	
Sample Time	16:05		16:15		16:35		16:55	
	Result	RL	Result	RL	Result	RL	Result	RL
<b>TPH-DRO</b>	<b>12.0</b>	10.0	ND	10.0	ND	10.0	ND	10.0
<b>TPH-ORO</b>	ND	10.0	ND	10.0	ND	10.0	ND	10.0

**Notes:**

**Bold / Underlined** text = Concentration reported above RL

RL = Reporting Limit

ND -Below Laboratory Reporting Limit

A review of **Table 2** indicates that the residual-phase TPH concentrations detected in B2 and B3 BGS **did not exceed** the Virginia Solid Waste Management Regulation (VSWMR) TPH limit of 50-mg/kg for fill material (*9VAC20-81-660D.2.d*).

Please note that per the request of **3e**, the contract laboratory [Air Water & Soil Laboratories (AWS) of Richmond, VA] reviewed the chromatograms to ensure that the detected TPH-DRO and/or TPH-ORO concentrations were not the result of interferences from non-petroleum based organic compounds in the corresponding samples. AWS lab manager’s review of the chromatograms indicates that the detected concentrations are associated with some type of oil that elutes peaks in the latter half of the TPH-DRO range with spill over into the TPH-ORO range. A copy of the correspondence that summarizes AWS’s interpretation of the detected TPH concentrations and associated chromatograms is provided as **Appendix D**.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

Four (4) direct push borings were installed to determine if the RECs identified at Parcel 096 resulted in adverse impacts to subsurface media in the proposed easement and/or disturbance areas. The residual-phase petroleum constituent concentrations detected in B2 and B3 during this investigation **did not exceed** the VSWMR TPH limit of 50-mg/kg. The estimated volumes of petroleum impacted soil that will likely be excavated in the response to select drainage improvements at Parcel 096, and the corresponding soil management options that apply are detailed in the following sections of this report.

### 6.1. Petroleum Impacted Soil Volume Estimates

A review of Plan Sheet No. 16 indicates that the following drainage improvements will require excavation in portions of Parcel 096 that are impacted by low residual-phase petroleum concentrations:

- ❖ Drainage Structure No. 16-7 and portions of the 15-inch diameter pipe that connects to 15-3 and 16-8.
- ❖ Drainage Structure Nos. 16-9 and portion of the 24-inch diameter pipe that connects to 16-10.

Please note that drainage descriptions and associated invert elevations were not available for specific structures as of the date of this report. However, preliminary information provided via e-mail by a VDOT Hydraulics/Drainage Engineer via e-mail indicates that the subject drainage improvements will likely require excavation to depths that range from approximately 7-ft to 15-ft BGS. Based on this preliminary information, **Table 3** below presents the estimated volumes of impacted soil that will likely require Special Management Provisions to the construction contract. A full sized copy of **Table 3** is also included as **Appendix E**.

Table 3: 1 Performance Auto Care  
Petroleum-Impacted Soil Volume Estimates  
Select Drainage Improvements & Pipe Connections

Boring ID	Impacted Soil Depths	Drainage Structure ID	Impacted Excavation Footprint	Excavation Dimensions	Volume Estimate**	Volume Estimate**	Volume Estimate**	Notes
	BGS		STA Nos.	LxWxH	Cubic Feet (ft <sup>3</sup> )	Cubic Yards (yd <sup>3</sup> )	Tons*	
B-2	5-15-ft	16-9 & ~125-ft of 24" Diameter Pipe	341+75 to 343+00, LT of CL	125-ft x 4-ft x 10-ft	5000	185	277	Maximum excavation depth of 15-ft BGS; assumes 0-5-ft BGS will be segregated from the impacted soil
B-3	5-10-ft	16-9 & ~30-ft of 24" Diameter Pipe	341+45 to 341+75, LT of CL	30-ft x 4-ft x 5-ft	600	22	33	Maximum excavation depth of 12-ft BGS; assumes 0-5-ft & 10-12-ft BGS will be segregated from the impacted soil
B-3	5-10-ft	16-7 & ~50' of 15" Diameter Pipe	341+60 to 342+10, LT of CL	50-ft x 3-ft x 2-ft	300	11	17	Maximum excavation depth of 7-ft BGS; assumes 0-5-ft BGS will be segregated from the impacted soil

Notes:

\*Tons calculated with conversion of 1yd<sup>3</sup> = 1.5 tons

\*\*Soil volume estimates are approximate and based on preliminary information available as of the date of this report.

The cut associated with the pedestrian pathway from STA 341+45.00 to 343+40.00 LT of CL will also likely cross the portion of Parcel 096 that contains subsurface petroleum impact to soil. As previously noted, a corresponding profile/cross-section sheet(s) to determine the average depth of this cut was not available as of the date of this report. If excavation in this pathway footprint will trend to depths greater than five (5)-ft BGS, then Special Provisions will likely apply to manage this soil as described below in **Section 6.2**.

## **6.2. Petroleum Impacted Soil Management Options**

The following management options apply to excavated soil that contains low petroleum constituent concentrations (i.e. TPH concentrations < 50-mg/kg):

1. Exempt Materials and Use (i.e. **9VAC20-81-95C.7.d**):
  - Nonhazardous, contaminated soil excavated in response to the proposed drainage improvements can be used to backfill the same excavation or excavations containing similar petroleum concentrations on-site. Excess contaminated soil that cannot be used to backfill the same or similar excavations on-site must be managed in accordance with the applicable requirements of the VSWMR.
2. Manage as petroleum-impacted fill material in accordance with the location restrictions of the VSWMR (**9VAC20-81-660D.2.d**).
  - May not be disposed of within 100-ft of a regularly flowing surface water.
  - 500-ft of any spring, or groundwater source of drinking water.
  - 200-ft from a residence, school, hospital, nursing home, or recreational park.
  - If utilized as fill on an off-site property, then the owner must be notified that it is contaminated and what it is contaminated with (i.e. petroleum).

## **7.0 LIMITATIONS**

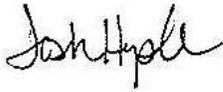
It is impossible to know with certainty the entirety of a site is free of hazardous substances or conditions even with extensive subsurface testing. The conclusions of this investigation are based solely on the scope-of-work and on the sources of information reviewed during this investigation. This report was prepared for the exclusive use of VDOT, 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.

## **8.0 ACKNOWLEDGEMENT**

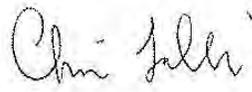
**3e** appreciates the opportunity to provide environmental services to VDOT regarding the 1 Performance - Route 1 roadway improvement project located in Dumfries, VA under the

Professional Services HAZMAT Contract. If we may be of further assistance, or you have any questions or comments regarding the project, please contact our office at (540) 953-0170.

## 9.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS



Joshua P. Hepler, PG  
Project Environmental Scientist  
Preparer



Chris Lalli  
Vice President/Associate  
Reviewer

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## Figures

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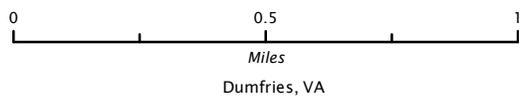
1 Performance Auto Care

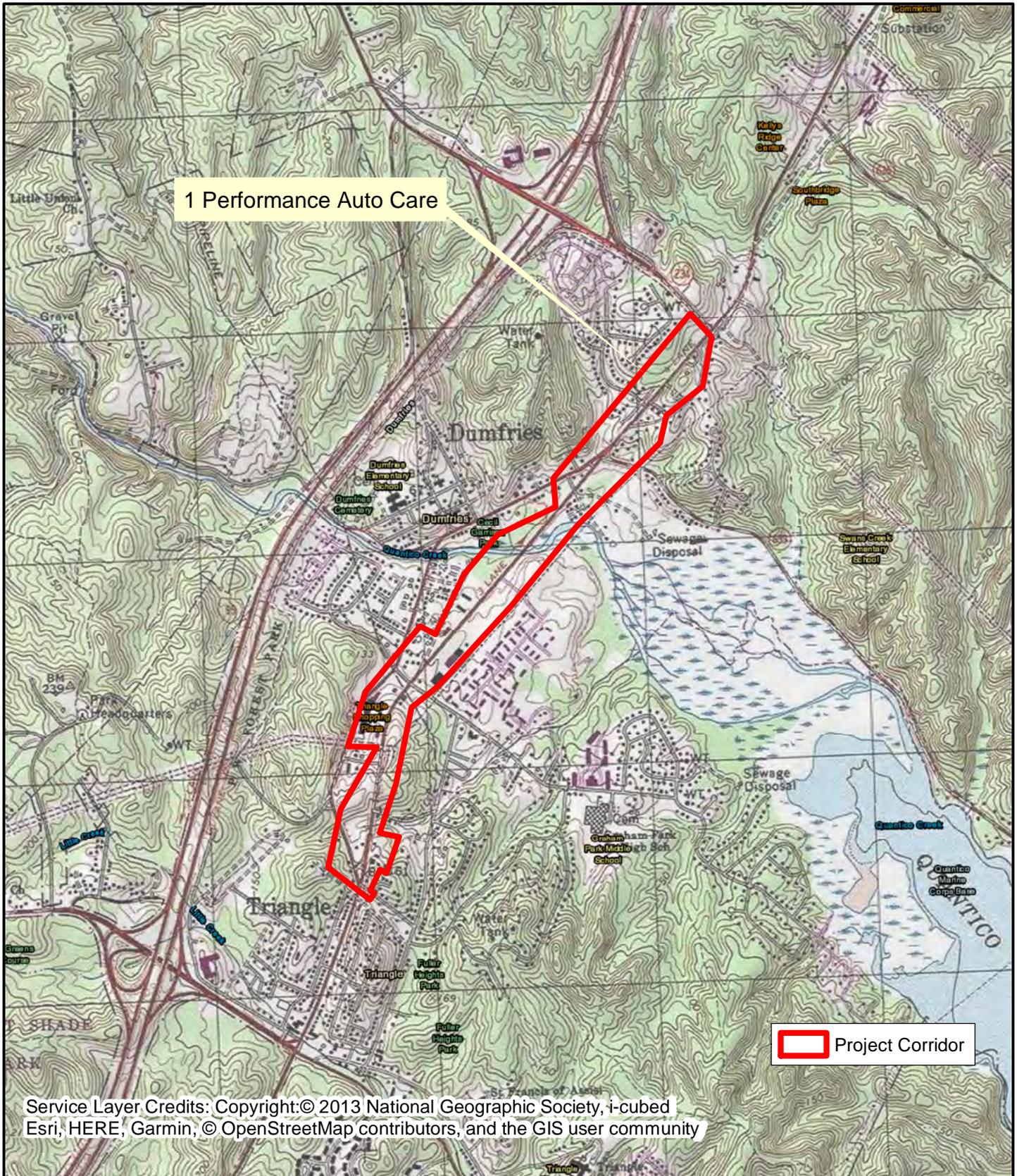
 Project Corridor

Service Layer Credits: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**FIGURE 1**  
**PROJECT CORRIDOR AERIAL**  
 1 PERFORMANCE AUTO CARE





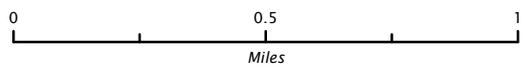
1 Performance Auto Care

 Project Corridor

Service Layer Credits: Copyright: © 2013 National Geographic Society, i-cubed Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community



**FIGURE 2**  
**PROJECT CORRIDOR TOPOGRAPHIC**  
1 PERFORMANCE AUTO CARE



Dumfries, VA

1:24,000

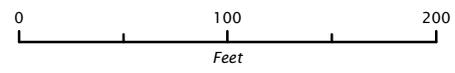


1 Performance Auto Care Property Boundary

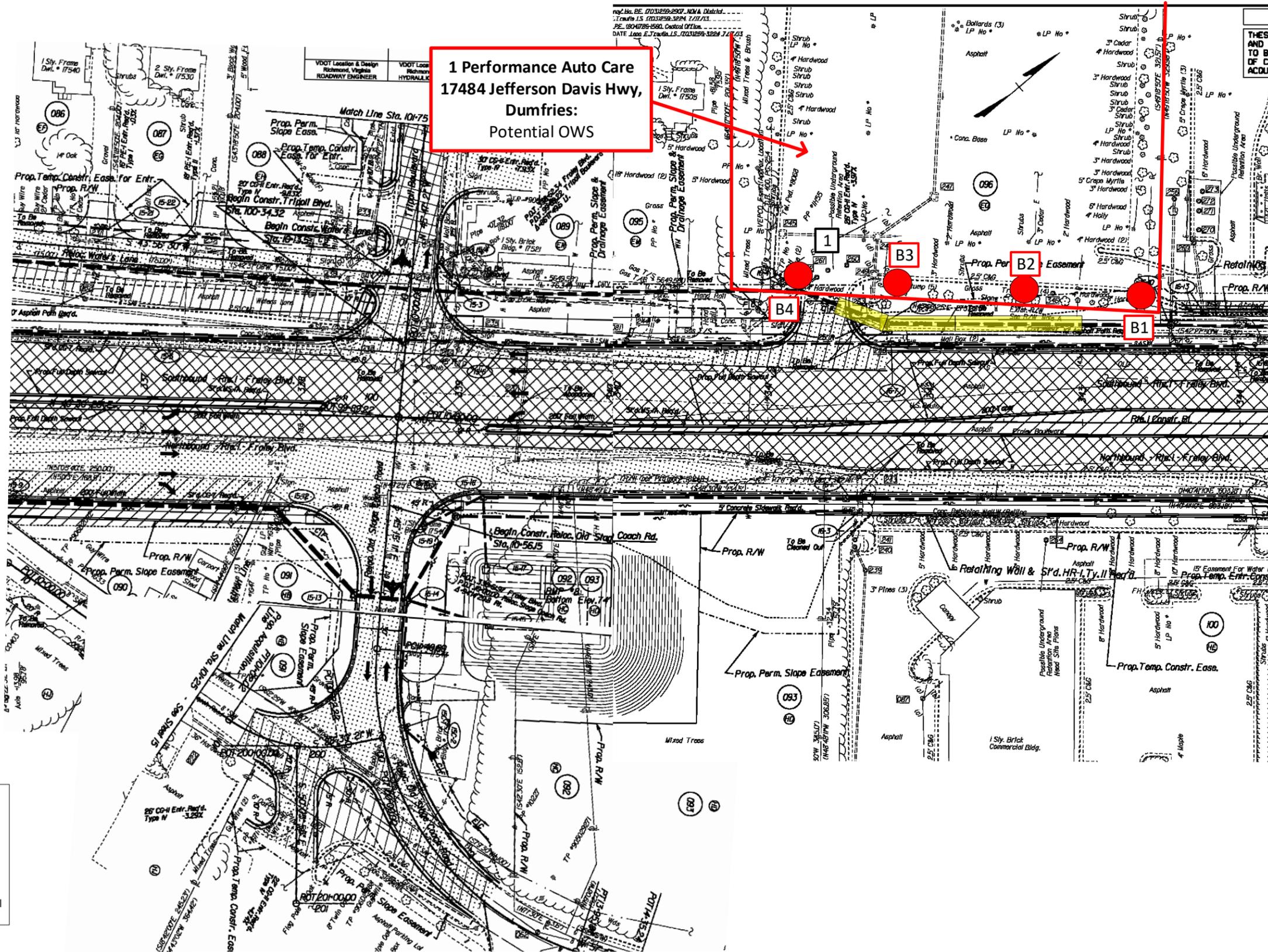


**FIGURE 3**  
**AERIAL WITH PROPERTY BOUNDARIES**

1 PERFORMANCE AUTO CARE

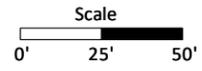


Dumfries, VA



**LEGEND:**

- 1 Suspect OWS Location
- Soil Boring
- Approximate Area of Petroleum Impacted Soil



**3e** **EEE Consulting, Inc.**  
Environmental, Engineering and Educational Solutions

**VDOT**  
Virginia Department of Transportation

Route 1 Widening Project  
Dumfries, Virginia

**FIGURE 4**

Plan Sheet Nos. 15, 15C, & 16 Depicting  
Identified RECs & Boring Locations at 1  
Performance Auto Care.

E-FR024.09 January 2019

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**Appendix A: Miss Utility Ticket & VDOT Utility Ticket**

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**From:** [tickets@missutilityofvirginia.com](mailto:tickets@missutilityofvirginia.com)  
**To:** [Josh Hepler](#)  
**Subject:** VUPS EMLCFM 2018/12/04 #04057 A833101354-01A RUSH RESP LREQ  
**Date:** Tuesday, December 4, 2018 12:56:43 PM  
**Importance:** High

---

EMLCFM 04057 VUPSa 12/04/18 12:56:37 A833101354-01A RESPONSE

Thank you for contacting VA811! This is an automatically generated response from the utilities who received your notice of excavation. If you have questions about the response, call the "field contact" for that utility. For your safety, please respect and protect the marks, excavate carefully around the marked utility lines and contact VA811 if you see clear evidence of unmarked utilities.

**Remember, you can now reach VA811 by dialing 811.**

Ticket : A833101354 Rev: 01A Taken: 12/03/18 02:08 PM

State: VA Cnty: PRINCE WILLIAM Place: DUMFRIES  
Address : 17484 JEFFERSON DAVIS HWY  
Responses due by: 12/03/18 05:09 PM Expires: 12/19/18 07:00 AM

When the member Marking Code is blue, click for additional information that may be provided by the Operator/Locator.

Marking Code	Description	Response
<a href="#">CGV</a>	COLUMBIA GAS (CGV930) Marked Field Contact: UTILIQUEST (703)754-2116 In the event of damage to a facility call: (800)543-8911	12/04/18 12:55 PM 10
CMC	COMCAST (CMC502) No Conflict; utility is outside of stated work area. Field Contact: CABLE PROTECTION SERVICES (804)562-3861 In the event of damage to a facility call: (800)441-6917 ext opt 1	12/03/18 02:51 PM 30
<a href="#">DOM</a>	DOMINION ENERGY ELEC DIST (DOM400) No Conflict; utility is outside of stated work area. Field Contact: UTILIQUEST (703)754-2116 In the event of damage to a facility call: (888)667-3000	11/29/18 01:20 PM 30
PWS	PRINCE WILLIAM - WATER (PWS902) Marked up to privately owned utility; contact private utility owner for locate Field Contact: BUTCH ROGERS (703)609-8097 In the event of damage to a facility call: (703)335-7982	11/29/18 12:04 PM 12
PWS	PRINCE WILLIAM - SEWER (PWS903) Marked up to privately owned utility; contact private utility owner for locate Field Contact: BUTCH ROGERS (703)609-8097 In the event of damage to a facility call: (703)335-7982	11/29/18 12:04 PM 12
<a href="#">VZN</a>	VERIZON (VZN703) Marked Field Contact: UTILIQUEST (703)754-2116 In the event of damage to a facility call: (888)483-1233	12/04/18 12:56 PM 10



Locate Work Order Number: \_\_\_\_\_

Project Location: \_\_\_\_\_

# Utility Location Results Form

## Utility Location Results *(completed by utility location service provider)*

Photos attached Yes No

Was the location that was requested completed? Yes No

Detection cable and/or location tape available Yes No

Accurate As-Built Documents available Yes No

*If no, please check all applicable boxes:*

Accurate As-Built Documents:

Requested? Yes No Provided? Yes No

VDOT on-site assistance:

Requested? Yes No Provided? Yes No

Does the in-field survey area extend 3 feet beyond the border of the intended excavation area? (Required) Yes No

Utility Location Method(s) used: \_\_\_\_\_

### Comments:

Serco/Elite has provided utility markings within the scope of this request for all VDOT owned fiber optic communications cable, and all power cabling from the ITS Device to the ITS Cabinet that was accurately shown on drawings if provided by VDOT, or actual location contained detection cable or tape, and/or VDOT provided on-site assistance.

Where no detection cable/tape and or accurate as-built documents, and/or VDOT assistance was not provided, **we have provided approximate markings or no markings have occurred and the 3rd Party Requestor is advised that hand digging with extreme caution is advised.** Photos have been attached.

Please be advised that in no case will Serco/Elite be held liable or responsible for any power or communication cabling that falls outside our scope and could not be located due to the lack of accurate documentation, detection cable or tape, and/or VDOT assistance

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Certification:** The most appropriate equipment and technology to identify all VDOT underground utilities within the requested zone were used.

Utility Locator: (Print) \_\_\_\_\_  
(signature) \_\_\_\_\_  
Company: \_\_\_\_\_

Start time: \_\_\_\_\_  
End time: \_\_\_\_\_  
Date: \_\_\_\_\_

*This information is valid for 15 days from signed date of marking. Any work performed after 15 days is not covered under this request and will need re-marked.*

---

## **Appendix B: Boring Logs**

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Project Location: **RT 1 Widening**  
 Site: **1 Performance Auto Care**  
 Location: **STA No. 343+40.00; 80-ft LT of CL**  
 Boring Location: **B1**



Date(s) Drilled: <b>12/6/18</b>	Logged By: <b>Josh Hepler/Carroll Ellis</b>	Well Information:
Drill Rig Type: <b>Geo Probe</b>	Total Depth Drilled: <b>10'</b>	Screened Interval: <b>N/A</b>
DTW Within Soil Boring: <b>N/A</b>		Cased Interval: <b>N/A</b>
Static GW Level: <b>N/A</b>	Date GW Measured: <b>N/A</b>	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0		3:05	0-1' Topsoil. 1-5' Brown sandy clay, slightly moist. No odors. 30% recovered.
2				
3				
4				
5				
6	0.0		3:15	6-7' gray sandy clay, slightly moist. 7-10' greenish/brown clay, dry. No odors. Refusal at 10'. 60% recovered.
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

BGS - Below Ground Surface

Project Location: **RT 1 Widening**  
 Site: **1 Performance Auto Care**  
 Location: **STA No. 342+60.00; 75-ft LT of CL**  
 Boring Location: **B2**



Date(s) Drilled: <b>12/6/18</b>	Logged By: <b>Josh Hepler/Carroll Ellis</b>	Well Information:
Drill Rig Type: <b>Geo Probe</b>	Total Depth Drilled: <b>14.5'</b>	Screened Interval: <b>N/A</b>
DTW Within Soil Boring: <b>N/A</b>		Cased Interval: <b>N/A</b>
Static GW Level: <b>N/A</b>	Date GW Measured: <b>N/A</b>	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0			0-1' topsoil. 1-2' sandy brown clay, dry. 2-5' grey sandy clay. No odors. 30% recovered.
2				
3				
4				
5				
6	0.0		3:45	6-9' grey fine sandy clay, slightly moist. 9-10' grey clay with a little sand, slightly moist. No odors. 50% recovered.
7				
8				
9				
10				
11	0.0		3:55	11-14' Grey, medium-grained, sandy clay, slightly moist. 14-14.5' gravel fill. No odors. 40% recovered.
12				
13				
14				
15				
16				
17				
18				
19				
20				

BGS - Below Ground Surface

Project Location: **RT 1 Widening**  
 Site: **1 Performance Auto Care**  
 Location: **STA No. 341+85.00; 90-ft LT of CL**  
 Boring Location: **B3**



Date(s) Drilled: <b>12/6/18</b>	Logged By: <b>Josh Hepler/Carroll Ellis</b>	Well Information:
Drill Rig Type: <b>Geo Probe</b>	Total Depth Drilled: <b>13.5'</b>	Screened Interval: <b>N/A</b>
DTW Within Soil Boring: <b>N/A</b>		Cased Interval: <b>N/A</b>
Static GW Level: <b>N/A</b>	Date GW Measured: <b>N/A</b>	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1 2 3 4 5	0.0			0-0.5' Topsoil. 0.5-1' Grey clay, sandy, moist. 1-5' Orange clay, sandy, moist. At 5', quartz clasts. No odors.
6 7 8 9 10	0.0		4:05	5-6' gravel. 6-10' grey/orange clay, moist, hard. No odor.
11 12 13 14 15	0.0		4:15	10-13' orange/red/grey/white clay, sandy, moist. 13-13.5' very moist blue/green sandy clay. No odors. Refusal at 13.5'.
16 17 18 19 20				

BGS - Below Ground Surface

Project Location: **RT 1 Widening**  
 Site: **1 Performance Auto Care**  
 Location: **STA No. 341+20.00; 90-ft LT of CL**  
 Boring Location: **B4**



Date(s) Drilled: <b>12/6/18</b>	Logged By: <b>Josh Hepler/Carroll Ellis</b>	Well Information:
Drill Rig Type: <b>Geo Probe</b>	Total Depth Drilled: <b>18.5'</b>	Screened Interval: <b>N/A</b>
DTW Within Soil Boring: <b>N/A</b>		Cased Interval: <b>N/A</b>
Static GW Level: <b>N/A</b>	Date GW Measured: <b>N/A</b>	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0			0-0.5' Topsoil. 0.5-5' Orange/grey/brown, fine sandy clay, slightly moist. No odors. 30% recovered.
2				
3				
4				
5				
6	0.0		4:35	5-10' Grey fine sandy clay, moist. No odors.
7				
8				
9				
10	0.0			10-15' Grey/orange clay, moist. No odors.
11				
12				
13	0.0		4:55	15-18.5' Grey/orange sandy clay, moist. No odors.
14				
15				
16				
17				
18				
19				
20				

BGS - Below Ground Surface

---

**Appendix C: Laboratory Reports and Sample Custody Documentation**

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## Certificate of Analysis

*Final Report*

Laboratory Order ID 18L0345

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

Date Received: December 7, 2018 15:15  
Date Issued: December 20, 2018 13:52

Project Number: 18-796.09

Submitted To: Josh Hepler

Purchase Order: 18-796.09

Client Site I.D.: 1 Performance Auto Care

Enclosed are the results of analyses for samples received by the laboratory on 12/07/2018 15:15. 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.





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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 12/20/2018 13:52  
201 Church Street  
Blacksburg VA, 24060  
Submitted To: Josh Hepler Project Number: 18-796.09  
Client Site I.D.: 1 Performance Auto Care Purchase Order: 18-796.09

#### ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18L0345

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1 0-5'	18L0345-01	Soil	12/06/2018 15:05	12/07/2018 15:15
B1 5-10'	18L0345-02	Soil	12/06/2018 15:15	12/07/2018 15:15
B2 5-10'	18L0345-03	Soil	12/06/2018 15:45	12/07/2018 15:15
B2 10-15'	18L0345-04	Soil	12/06/2018 15:55	12/07/2018 15:15
B3 5-10'	18L0345-05	Soil	12/06/2018 16:05	12/07/2018 15:15
B3 10-13.5'	18L0345-06	Soil	12/06/2018 16:15	12/07/2018 15:15
B4 5-10'	18L0345-07	Soil	12/06/2018 16:35	12/07/2018 15:15
B4 15-18.5'	18L0345-08	Soil	12/06/2018 16:55	12/07/2018 15:15



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

**Laboratory Order ID: 18L0345**

**Analytical Results**

Sample I.D. B1 0-5'	Laboratory Sample ID: 18L0345-01
Grab Date/Time: 12/06/2018 15:05	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	01	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 14:40	12/18/18 11:03	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>01</i>	<i>SW8015C</i>	<i>115 %</i>		<i>40-160</i>		<i>12/17/18 14:40</i>	<i>12/18/18 11:03</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	01	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 11:45	12/18/18 22:04	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

**Laboratory Order ID: 18L0345**

**Analytical Results**

**Sample I.D.** B1 5-10' **Laboratory Sample ID:** 18L0345-02

**Grab Date/Time:** 12/06/2018 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
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 14:40	12/18/18 18:49	HLM
<i>Surr: Pentacosane (Surr)</i>	02	SW8015C	83.5 %		40-160		12/17/18 14:40	12/18/18 18:49	HLM
TPH-Semi-Volatiles (ORO)	02	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 11:45	12/18/18 22:29	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

**Laboratory Order ID: 18L0345**

**Analytical Results**

**Sample I.D.** B2 5-10' **Laboratory Sample ID:** 18L0345-03

**Grab Date/Time:** 12/06/2018 15:45

**Field Residual Cl:** **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
<b>TPH-Semi-Volatiles (DRO)</b>	03	SW8015C	<b>12.3 mg/kg</b>		10.0	1	12/17/18 14:40	12/18/18 19:15	HLM
<i>Surr: Pentacosane (Surr)</i>	03	SW8015C	117 %		40-160		12/17/18 14:40	12/18/18 19:15	HLM
<b>TPH-Semi-Volatiles (ORO)</b>	03	SW8015C	<b>11.3 mg/kg</b>		10.0	1	12/17/18 11:45	12/18/18 22:54	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

**Laboratory Order ID: 18L0345**

**Analytical Results**

Sample I.D. B2 10-15'	Laboratory Sample ID: 18L0345-04
Grab Date/Time: 12/06/2018 15:55	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	04	SW8015C	11.2 mg/kg		10.0	1	12/17/18 14:40	12/18/18 19:41	HLM
<i>Surr: Pentacosane (Surr)</i>	04	SW8015C	126 %		40-160		12/17/18 14:40	12/18/18 19:41	HLM
TPH-Semi-Volatiles (ORO)	04	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 11:45	12/18/18 23:18	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

**Laboratory Order ID: 18L0345**

**Analytical Results**

Sample I.D. B3 5-10'	Laboratory Sample ID: 18L0345-05
Grab Date/Time: 12/06/2018 16:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	05	SW8015C	12.0 mg/kg		10.0	1	12/17/18 14:40	12/18/18 20:07	HLM
<i>Surr: Pentacosane (Surr)</i>	05	SW8015C	129 %		40-160		12/17/18 14:40	12/18/18 20:07	HLM
TPH-Semi-Volatiles (ORO)	05	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 11:45	12/18/18 23:43	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

**Laboratory Order ID: 18L0345**

**Analytical Results**

**Sample I.D.** B3 10-13.5' **Laboratory Sample ID:** 18L0345-06

**Grab Date/Time:** 12/06/2018 16:15

**Field Residual Cl:** **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	06	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 14:40	12/18/18 20:32	HLM
<i>Surr: Pentacosane (Surr)</i>	06	SW8015C	109 %		40-160		12/17/18 14:40	12/18/18 20:32	HLM
TPH-Semi-Volatiles (ORO)	06	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 11:45	12/19/18 00:08	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

**Laboratory Order ID: 18L0345**

**Analytical Results**

Sample I.D. B4 5-10'	Laboratory Sample ID: 18L0345-07
Grab Date/Time: 12/06/2018 16:35	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	07	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 14:40	12/18/18 20:58	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>07</i>	<i>SW8015C</i>	<i>109 %</i>		<i>40-160</i>		<i>12/17/18 14:40</i>	<i>12/18/18 20:58</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	07	SW8015C	<10.0 mg/kg		10.0	1	12/19/18 09:10	12/19/18 18:11	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

**Laboratory Order ID: 18L0345**

**Analytical Results**

<b>Sample I.D.</b> B4 15-18.5'	<b>Laboratory Sample ID:</b> 18L0345-08
<b>Grab Date/Time:</b> 12/06/2018 16:55	<b>Field pH:</b>
<b>Field Residual Cl:</b>	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	08	SW8015C	<10.0 mg/kg		10.0	1	12/17/18 14:40	12/18/18 21:24	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>08</i>	<i>SW8015C</i>	<i>84.9 %</i>		<i>40-160</i>		<i>12/17/18 14:40</i>	<i>12/18/18 21:24</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	08	SW8015C	<10.0 mg/kg		10.0	1	12/19/18 09:10	12/19/18 18:36	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

### Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
<b>Semivolatle Hydrocarbons by GC</b>		<b>Preparation Method: SW3550C</b>			
18L0345-01	50.8 g / 1.00 mL	SW8015C	BBL0485	SBL0508	AH80136
18L0345-02	51.6 g / 1.00 mL	SW8015C	BBL0485	SBL0508	AH80136
18L0345-03	50.9 g / 1.00 mL	SW8015C	BBL0485	SBL0508	AH80136
18L0345-04	50.5 g / 1.00 mL	SW8015C	BBL0485	SBL0508	AH80136
18L0345-05	50.5 g / 1.00 mL	SW8015C	BBL0485	SBL0508	AH80136
18L0345-06	50.9 g / 1.00 mL	SW8015C	BBL0485	SBL0508	AH80136
<b>Semivolatle Hydrocarbons by GC</b>		<b>Preparation Method: SW3550C</b>			
18L0345-01	50.8 g / 1.00 mL	SW8015C	BBL0499	SBL0481	AK80056
18L0345-02	50.6 g / 1.00 mL	SW8015C	BBL0499	SBL0487	AK80055
18L0345-03	50.6 g / 1.00 mL	SW8015C	BBL0499	SBL0487	AK80055
18L0345-04	51.1 g / 1.00 mL	SW8015C	BBL0499	SBL0487	AK80055
18L0345-05	50.3 g / 1.00 mL	SW8015C	BBL0499	SBL0487	AK80055
18L0345-06	50.1 g / 1.00 mL	SW8015C	BBL0499	SBL0487	AK80055
18L0345-07	50.3 g / 1.00 mL	SW8015C	BBL0499	SBL0487	AK80055
18L0345-08	50.1 g / 1.00 mL	SW8015C	BBL0499	SBL0487	AK80055
<b>Semivolatle Hydrocarbons by GC</b>		<b>Preparation Method: SW3550C</b>			
18L0345-07	51.6 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136
18L0345-08	50.0 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 13:52
Submitted To:	Josh Hepler	Project Number:	18-796.09
Client Site I.D.:	1 Performance Auto Care	Purchase Order:	18-796.09

### 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 BBL0485 - SW3550C**

**Blank (BBL0485-BLK1)**

Prepared: 12/17/2018 Analyzed: 12/18/2018

TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg						

**LCS (BBL0485-BS1)**

Prepared: 12/17/2018 Analyzed: 12/18/2018

TPH-Semi-Volatiles (ORO)	46.7 mg/kg	10.0	mg/kg	99.6	mg/kg	46.9	40-160		
TPH-Semi-Volatiles (ORO)	46.7 mg/kg	10.0	mg/kg	99.6	mg/kg	46.9	40-160		
TPH-Semi-Volatiles (ORO)	46.7 mg/kg	10.0	mg/kg	99.6	mg/kg	46.9	40-160		
TPH-Semi-Volatiles (ORO)	46.7 mg/kg	10.0	mg/kg	99.6	mg/kg	46.9	40-160		
TPH-Semi-Volatiles (ORO)	46.7 mg/kg	10.0	mg/kg	99.6	mg/kg	46.9	40-160		
TPH-Semi-Volatiles (ORO)	46.7 mg/kg	10.0	mg/kg	99.6	mg/kg	46.9	40-160		

**Matrix Spike (BBL0485-MS1)**

Source: 18L0345-01

Prepared: 12/17/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (ORO)	49.4 mg/kg	10.0	mg/kg	99.2	<10.0 mg/kg	49.8	40-160		
TPH-Semi-Volatiles (ORO)	49.4 mg/kg	10.0	mg/kg	99.2	<10.0 mg/kg	49.8	40-160		
TPH-Semi-Volatiles (ORO)	49.4 mg/kg	10.0	mg/kg	99.2	<10.0 mg/kg	49.8	40-160		
TPH-Semi-Volatiles (ORO)	49.4 mg/kg	10.0	mg/kg	99.2	<10.0 mg/kg	49.8	40-160		
TPH-Semi-Volatiles (ORO)	49.4 mg/kg	10.0	mg/kg	99.2	<10.0 mg/kg	49.8	40-160		
TPH-Semi-Volatiles (ORO)	49.4 mg/kg	10.0	mg/kg	99.2	<10.0 mg/kg	49.8	40-160		

**Matrix Spike Dup (BBL0485-MSD1)**

Source: 18L0345-01

Prepared: 12/17/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (ORO)	47.7 mg/kg	10.0	mg/kg	98.2	<10.0 mg/kg	48.6	40-160	3.52	20
TPH-Semi-Volatiles (ORO)	47.7 mg/kg	10.0	mg/kg	98.2	<10.0 mg/kg	48.6	40-160	3.52	20
TPH-Semi-Volatiles (ORO)	47.7 mg/kg	10.0	mg/kg	98.2	<10.0 mg/kg	48.6	40-160	3.52	20
TPH-Semi-Volatiles (ORO)	47.7 mg/kg	10.0	mg/kg	98.2	<10.0 mg/kg	48.6	40-160	3.52	20
TPH-Semi-Volatiles (ORO)	47.7 mg/kg	10.0	mg/kg	98.2	<10.0 mg/kg	48.6	40-160	3.52	20
TPH-Semi-Volatiles (ORO)	47.7 mg/kg	10.0	mg/kg	98.2	<10.0 mg/kg	48.6	40-160	3.52	20



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 13:52
Submitted To:	Josh Hepler	Project Number:	18-796.09
Client Site I.D.:	1 Performance Auto Care	Purchase Order:	18-796.09

### 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 BBL0499 - SW3550C

##### Blank (BBL0499-BLK1)

Prepared: 12/17/2018 Analyzed: 12/18/2018

TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
<hr style="border-top: 1px dashed black;"/>									
Surr: Pentacosane (Surr)	6.50		mg/kg	4.97		131		40-160	
Surr: Pentacosane (Surr)	6.50		mg/kg	4.97		131		40-160	
Surr: Pentacosane (Surr)	6.50		mg/kg	4.97		131		40-160	
Surr: Pentacosane (Surr)	6.50		mg/kg	4.97		131		40-160	
Surr: Pentacosane (Surr)	6.50		mg/kg	4.97		131		40-160	
Surr: Pentacosane (Surr)	6.50		mg/kg	4.97		131		40-160	
Surr: Pentacosane (Surr)	6.50		mg/kg	4.97		131		40-160	
Surr: Pentacosane (Surr)	6.50		mg/kg	4.97		131		40-160	

##### LCS (BBL0499-BS1)

Prepared: 12/17/2018 Analyzed: 12/18/2018

TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
TPH-Semi-Volatiles (DRO)	71.9 mg/kg	10.0	mg/kg	99.2	mg/kg	72.4		40-160	
<hr style="border-top: 1px dashed black;"/>									
Surr: Pentacosane (Surr)	6.05		mg/kg	5.00	mg/kg	121		40-160	
Surr: Pentacosane (Surr)	6.05		mg/kg	5.00	mg/kg	121		40-160	
Surr: Pentacosane (Surr)	6.05		mg/kg	5.00	mg/kg	121		40-160	
Surr: Pentacosane (Surr)	6.05		mg/kg	5.00	mg/kg	121		40-160	
Surr: Pentacosane (Surr)	6.05		mg/kg	5.00	mg/kg	121		40-160	



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Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 13:52
Submitted To: Josh Hepler	Project Number: 18-796.09
Client Site I.D.: 1 Performance Auto Care	Purchase Order: 18-796.09

### 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 BBL0499 - SW3550C

##### LCS (BBL0499-BS1)

Prepared: 12/17/2018 Analyzed: 12/18/2018

Surr: Pentacosane (Surr)	6.05		mg/kg	5.00	mg/kg	121	40-160			
Surr: Pentacosane (Surr)	6.05		mg/kg	5.00	mg/kg	121	40-160			
Surr: Pentacosane (Surr)	6.05		mg/kg	5.00	mg/kg	121	40-160			

##### Matrix Spike (BBL0499-MS1)

Source: 18L0345-01

Prepared: 12/17/2018 Analyzed: 12/18/2018

TPH-Semi-Volatiles (DRO)	63.5 mg/kg	10.0	mg/kg	99.8	<10.0 mg/kg	63.6	40-160			
TPH-Semi-Volatiles (DRO)	63.5 mg/kg	10.0	mg/kg	99.8	<10.0 mg/kg	63.6	40-160			
TPH-Semi-Volatiles (DRO)	63.5 mg/kg	10.0	mg/kg	99.8	<10.0 mg/kg	63.6	40-160			
TPH-Semi-Volatiles (DRO)	63.5 mg/kg	10.0	mg/kg	99.8	<10.0 mg/kg	63.6	40-160			
TPH-Semi-Volatiles (DRO)	63.5 mg/kg	10.0	mg/kg	99.8	<10.0 mg/kg	63.6	40-160			
TPH-Semi-Volatiles (DRO)	63.5 mg/kg	10.0	mg/kg	99.8	<10.0 mg/kg	63.6	40-160			
TPH-Semi-Volatiles (DRO)	63.5 mg/kg	10.0	mg/kg	99.8	<10.0 mg/kg	63.6	40-160			
TPH-Semi-Volatiles (DRO)	63.5 mg/kg	10.0	mg/kg	99.8	<10.0 mg/kg	63.6	40-160			
TPH-Semi-Volatiles (DRO)	63.5 mg/kg	10.0	mg/kg	99.8	<10.0 mg/kg	63.6	40-160			
Surr: Pentacosane (Surr)	4.56		mg/kg	5.03	mg/kg	90.7	40-160			
Surr: Pentacosane (Surr)	4.56		mg/kg	5.03	mg/kg	90.7	40-160			
Surr: Pentacosane (Surr)	4.56		mg/kg	5.03	mg/kg	90.7	40-160			
Surr: Pentacosane (Surr)	4.56		mg/kg	5.03	mg/kg	90.7	40-160			
Surr: Pentacosane (Surr)	4.56		mg/kg	5.03	mg/kg	90.7	40-160			
Surr: Pentacosane (Surr)	4.56		mg/kg	5.03	mg/kg	90.7	40-160			
Surr: Pentacosane (Surr)	4.56		mg/kg	5.03	mg/kg	90.7	40-160			
Surr: Pentacosane (Surr)	4.56		mg/kg	5.03	mg/kg	90.7	40-160			

##### Matrix Spike Dup (BBL0499-MSD1)

Source: 18L0345-01

Prepared: 12/17/2018 Analyzed: 12/18/2018

TPH-Semi-Volatiles (DRO)	61.7 mg/kg	10.0	mg/kg	99.4	<10.0 mg/kg	62.1	40-160	2.80	20	
TPH-Semi-Volatiles (DRO)	61.7 mg/kg	10.0	mg/kg	99.4	<10.0 mg/kg	62.1	40-160	2.80	20	
TPH-Semi-Volatiles (DRO)	61.7 mg/kg	10.0	mg/kg	99.4	<10.0 mg/kg	62.1	40-160	2.80	20	
TPH-Semi-Volatiles (DRO)	61.7 mg/kg	10.0	mg/kg	99.4	<10.0 mg/kg	62.1	40-160	2.80	20	
TPH-Semi-Volatiles (DRO)	61.7 mg/kg	10.0	mg/kg	99.4	<10.0 mg/kg	62.1	40-160	2.80	20	
TPH-Semi-Volatiles (DRO)	61.7 mg/kg	10.0	mg/kg	99.4	<10.0 mg/kg	62.1	40-160	2.80	20	
TPH-Semi-Volatiles (DRO)	61.7 mg/kg	10.0	mg/kg	99.4	<10.0 mg/kg	62.1	40-160	2.80	20	
TPH-Semi-Volatiles (DRO)	61.7 mg/kg	10.0	mg/kg	99.4	<10.0 mg/kg	62.1	40-160	2.80	20	
TPH-Semi-Volatiles (DRO)	61.7 mg/kg	10.0	mg/kg	99.4	<10.0 mg/kg	62.1	40-160	2.80	20	





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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 13:52
Submitted To:	Josh Hepler	Project Number:	18-796.09
Client Site I.D.:	1 Performance Auto Care	Purchase Order:	18-796.09

### Certified Analyses included in this Report

Analyte	Certifications
<i>SW8015C in Solids</i>	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2019
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #10074	460021	06/14/2019



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### Summary of Data Qualifiers

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 \_\_\_\_\_ OF \_\_\_\_\_

COMPANY NAME: <b>EEE Consulting, Inc.</b>	INVOICE TO: <b>Same</b>	PROJECT NAME/Quote #:
CONTACT: <b>Josh Hepler</b>	INVOICE CONTACT:	SITE NAME: <b>1 Performance Auto Care</b>
ADDRESS: <b>206 Church Street Blacksburg, VA</b>	INVOICE ADDRESS:	PROJECT NUMBER: <b>18-796,09</b>
PHONE #: <b>540-230-3685</b>	INVOICE PHONE #:	P.O. #: <b>18-796,09</b>
FAX #:	EMAIL: <b>jhepler@eee-consulting.com</b>	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): <b>Carroll Ellis III</b>	SAMPLER SIGNATURE: <i>Carroll Ellis III</i>	Turn Around Time: Circle: <b>(10)</b> 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												
											TPH-DRO												
1) B1 0-5'	1					12/6/18	3:05 →	5	S	2	-	-	-	-	-	-	-	-	-	-	-	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) B1 5-10'							3:15 →			2	-	-	-	-	-	-	-	-	-	-			
3) B2 5-10'							3:45 →			2	-	-	-	-	-	-	-	-	-	-			
4) B2 10-15'							3:55 →			2	-	-	-	-	-	-	-	-	-	-			
5) B3 5-10'							4:05 →			2	-	-	-	-	-	-	-	-	-	-			
6) B3 10-13.5'							4:15 →			2	-	-	-	-	-	-	-	-	-	-			
7) B4 5-10'							4:35 →			2	-	-	-	-	-	-	-	-	-	-			
8) B4 15-18.5'							4:55 →			2	-	-	-	-	-	-	-	-	-	-			
9)																							
10)																							

RELINQUISHED: <i>Carroll Ellis III</i>	DATE / TIME: 12/7/18 12:25	RECEIVED: <i>[Signature]</i>	DATE / TIME: 12/20/18 15:15	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"/>
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level III <input type="checkbox"/>	<b>EEE-Blacksburg 18L0345</b> <b>1 Performance Auto Care</b> <b>Recd: 12/07/2018 Due: 12/21/2018</b>	
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level IV <input type="checkbox"/>		

0.8°C



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## Certificate of Analysis

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Submitted To:	Josh Hepler	Project Number:	18-796.09
Client Site I.D.:	1 Performance Auto Care	Purchase Order:	18-796.09

## Sample Conditions Checklist

Samples Received at:	0.80°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?	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

---

**Appendix D: Laboratory Review of Detected TPH Concentrations & Chromatograms**

---

**From:** [Josh Hepler](#)  
**To:** [Josh Hepler](#)  
**Subject:** Chromatograph Review Request  
**Date:** Tuesday, February 5, 2019 11:45:50 AM  
**Attachments:** [image001.jpg](#)

---

**From:** Soyars Ted <[tsoyars@awslabs.com](mailto:tsoyars@awslabs.com)>  
**Sent:** Tuesday, January 29, 2019 12:45 PM  
**To:** Josh Hepler <[jhepler@eee-consulting.com](mailto:jhepler@eee-consulting.com)>  
**Cc:** Katrina Cooke <[kcooke@awslabs.com](mailto:kcooke@awslabs.com)>; Mary-Mullen Ricks <[mmricks@awslabs.com](mailto:mmricks@awslabs.com)>  
**Subject:** FW: Chromatograph Review Request

Hi Josh. Looks like there was a formatting issue with this email that popped up when I hit SENT, so I'm re-sending so you'll be able to read this without going cross-eyed

- **ID 18L0653:** B3 5-10 DRO (ID -05); (Triangle Service Center):
  - Appears to be a very small oil pattern, that's roughly half inside the Diesel Range, and half outside of it (past the heavier end of the range).
- **ID 18L0344:** B3 5-10 DRO (ID -05); (Daniel's Auto Care):
  - Also appears to be a small amount of oil, but more than 18L0653-05, however for this sample it appears that only a third of the oil petroleum pattern falls within the Diesel Range limits, and about 2/3 of the pattern is outside of it (past the heavier end of the range)
- **ID 18L0372:** B4 5-10 DRO & ORO (ID -07); (A&M):
  - DRO: Very similar pattern as that of 18L0653-05, however it appears to be just slightly lighter.... so that a little more than half of the pattern falls within the Diesel range, and 40% of it or so falls outside of it on the heavier end. The pattern itself is much more similar to 653-05 than 344-05. ORO: Classic oil patterning, extremely similar to the petroleum pattern of our ORO standard which is 10W-30.
- **ID 18L0332:** B2 5-10 ORO (ID -03); (Mrs. K's Carwash):
  - This appears to all be within the Oil range, however it looks like it could be a combination of petroleum. There is a petroleum pattern right where 10W-30 is, but also before it, and even a pattern that stretches somewhat past it. Again, this very well may be 2 or even 3 different products mixed together, which makes it impossible for me to speculate on what it could be, other than to confirm it looks to be all within the OIL range, and I don't see anything that looks like it comes before or after it (at least from what I can see).

- **ID 18L0345:** B2 5-10 DRO & ORO (ID -03); B2 10-15 DRO (ID -04); B3 5-10 DRO (ID -05); (1 Performance):
- These three samples appear to be almost identical to each other, with only minor differences (so minor that it wouldn't affect how I would describe them in a PET ID). These 3 are all very small detections that appear to be some sort of oil that falls about half inside the diesel range and half past it into the oil range. It could also be a combination of petroleums, although it's not as clear as the sample above (18L0332-03). So it's either a small amount of two petroleums (possibly more) or a single petroleum that simply has a wider hydrocarbon makeup than 10W-30 (especially on the lighter side / front end of 10W30).

Ted Soyars  
Laboratory Manager  
Air, Water & Soil Laboratories, Inc.  
(804) 358-8295

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---

**From:** Josh Hepler <[jhepler@eee-consulting.com](mailto:jhepler@eee-consulting.com)>  
**Sent:** Friday, January 25, 2019 10:15 AM  
**To:** Mary-Mullen Ricks <[mmricks@awslabs.com](mailto:mmricks@awslabs.com)>  
**Cc:** Chris Lalli <[clalli@eee-consulting.com](mailto:clalli@eee-consulting.com)>  
**Subject:** Chromatograph Review Request

Good Morning Mary-Mullen,

I was wondering if you would consider reviewing the chromatograms for the following low reported concentrations of TPH-DRO and/or TPH-ORO against the standard.

- **ID 18L0653:** B3 5-10 DRO (ID -05); (Triangle Service Center)
- **ID 18L0344:** B3 5-10 DRO (ID -05); (Daniel's Auto Care)
- **ID 18L0372:** B4 5-10 DRO & ORO (ID -07); (A&M)
- **ID 18L0332:** B2 5-10 ORO (ID -03); (Mrs. K's Carwash)
- **ID 18L0345:** B2 5-10 DRO & ORO (ID -03);  
B2 10-15 DRO (ID -04);  
B3 5-10 DRO (ID -05); (1 Performance)

I appreciate these extra services provided in helping us decipher a site's condition. Also, a separate letter for each report stating that a review was performed would be appreciated. Please let me

know if this request is feasible.

Thanks,

**Joshua P. Hepler, PG**

Environmental Scientist

**EEE CONSULTING, INC.**

201 Church Street, Suite C | Blacksburg, VA 24060

540.953.0170 ext. 309; Cell 540-230-3685

[20th Anniversary Email Banner \(fullsize\)](#)



*“Per Title VI of the Civil Rights Act of 1964 and other non-discrimination statutes, EEE Consulting, Inc. will not discriminate on the grounds of race, color, national origin, sex, age, disability, or low income in the selection and retention of subconsultants, including procurement of materials and leases of equipment. EEE Consulting, Inc. will ensure that minorities will be afforded full opportunity to submit proposals and will not be discriminated against in consideration for an award.”*

---

**Appendix E: Full Size Copy of Table 3**

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**Table 3: 1 Performance Auto Care  
 Petroleum-Impacted Soil Volume Estimates  
 Select Drainage Improvements & Pipe Connections**

Boring ID	Impacted Soil Depths	Drainage Structure ID	Impacted Excavation Footprint	Excavation Dimensions	Volume Estimate**	Volume Estimate**	Volume Estimate**	Notes
	BGS		STA Nos.	LxWxH	Cubic Feet (ft <sup>3</sup> )	Cubic Yards (yd <sup>3</sup> )	Tons*	
B-2	5-15-ft	16-9 & ~125-ft of 24" Diameter Pipe	341+75 to 343+00, LT of CL	125-ft x 4-ft x 10-ft	5000	185	277	Maximum excavation depth of 15-ft BGS; assumes 0-5-ft BGS will be segregated from the impacted soil
B-3	5-10-ft	16-9 & ~30-ft of 24" Diameter Pipe	341+45 to 341+75, LT of CL	30-ft x 4-ft x 5-ft	600	22	33	Maximum excavation depth of 12-ft BGS; assumes 0-5-ft & 10-12-ft BGS will be segregated from the impacted soil
B-3	5-10-ft	16-7 & ~50' of 15" Diameter Pipe	341+60 to 342+10, LT of CL	50-ft x 3-ft x 2-ft	300	11	17	Maximum excavation depth of 7-ft BGS; assumes 0-5-ft BGS will be segregated from the impacted soil

**Notes:**

\*Tons calculated with conversion of 1yd<sup>3</sup> = 1.5 tons

\*\*Soil volume estimates are approximate and based on preliminary information available as of the date of this report.

# **Phase II Environmental Site Assessment Roadway Improvement Project**

## **Route 1 Widening Project**

**A&M Mechanic and Tire/Edgardo Ayala**

**17691 Fraley Boulevard**

**Dumfries, Virginia 22026**

**Prince William County**

**Contract ID: 44115**

**VDOT Project: 001-212-249**

**VDOT UPC: 90339 Act: 689**

**VDOT Task Number: E-FR024.05**

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## Acronyms

AST	Above Ground Storage Tank
BGS	Below Ground Surface
C	Celsius
COC	Chain of Custody
CL	Center Line
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency – United States
FT	Feet
LT	Left
mg/kg	Milligrams per Kilogram
MW	Monitoring Well
PG	Professional Geologist
PID	Photoionization Detector
PPM	Parts Per Million
REC	Recognized Environmental Condition
RL	Reporting Limit
Rt	Route
RT	Right
R/W	Right-of-Way
STA	Station
TPH-DRO	Total Petroleum Hydrocarbons - Diesel Range Organics
TPH-GRO	Total Petroleum Hydrocarbons – Gasoline Range Organics
UST	Underground Storage Tank
VDOT	Virginia Department of Transportation
VOC	Volatile Organic Compounds
VSWMR	Virginia Solid Waste Management Regulations
<b>3e</b>	EEE Consulting, Inc.

## 1.0 INTRODUCTION AND BACKGROUND

The Virginia Department of Transportation (VDOT) is administering proposed improvements and realignment of 2.3-miles of Route 1 (Fraley Boulevard) between the intersection with Quantico Gateway Drive and the intersection with Drumfires Road (State Route 234) in Dumfries, Prince William County, Virginia. The general project location and topographic setting are shown on **Figures 1 and 2**, respectively. An aerial photograph of the project area is also presented as **Figure 3**.

The roadway and drainage improvements will occur in existing roadway right-of-way (R/W), proposed R/W, permanent easements (slope & drainage), temporary construction easements (i.e. erosion & sediment control measures) and proposed limited access lines. A Phase I Environmental Site Assessment (ESA) was prepared by EEE Consulting, Inc (**3e**) for the Study Area in August 2018, which identified Recognized Environmental Conditions (REC) throughout the corridor, including the subject property as follows:

- ❖ **A & M Mechanical and Tire/ Edgardo Ayala** (Parcel 069) is located at 17691 Fraley Boulevard, Dumfries, VA 22026 (VDOT Plan Sheet No. 13) which is currently a vehicle repair shop, body shop, and has multiple dismantled vehicles on-site. A 1,000-gallon used oil Aboveground Storage Tank (AST) and multiple 55-gallon drums are also stored on-site with evident surface staining.

According to the Plan Sheet No. 13, the property is a potential full take for the installation of Storm Water Basin BMP #5 and associated Drainage Structures Nos. 13-8, 13-9, 13-12, 13-13, 13-14, 13-16, and 13-17 (see **Figure 4**).

The RECs identified at Parcel 069 have the potential to pose adverse impacts to subsurface media that will likely be disturbed during the installation of the noted drainage improvements and storm water basin. The constituents of concern are petroleum-based, which are based on the RECs identified above and detailed in the Phase I ESA Corridor Study Report (**3e**, August 2018). Based on this information, the VDOT – NOVA District Hazardous Materials Manager requested the collection of representative samples to confirm the presence/absence of petroleum impacts to soil and groundwater in and proximate to the proposed acquisition and disturbance areas. On December 6<sup>th</sup>, 2018, **3e** completed a Phase II ESA at Parcel 069 to confirm the presence/absence of impacts to subsurface media that will likely be disturbed in response to the proposed drainage improvements.

The results of this investigation documented a petroleum release (i.e. concentrations > 100-mg/kg) to surface soil proximate to the 1,000-gallon used oil AST. **Prior to R/W acquisition, it is recommended that the current property owner report a documented petroleum release to the environment to the Virginia Department of Environmental Quality – Northern Regional Office (DEQ-NRO).**

Subsurface boring advancements, sampling methods, corresponding analytical results, and conclusions/recommendations pertaining to the proposed construction activities at Parcel 069 are summarized in the following sections of this report.

## **2.0 PUBLIC/PRIVATE UTILITY CLEARINGS AND MARK OUTS**

Prior to implementing the direct push boring installations, the approximate locations of subsurface public utilities were identified and marked by Miss Utility of Virginia. A utility locate request form was also completed with VDOT to identify utilities owned and operated by VDOT. Copies of the Miss Utility and VDOT Tickets are included in **Appendix A**. In addition to public utility identification, private subsurface utilities were also identified and marked in each investigative area prior to commencing drilling activities.

## **3.0 SOIL AND GROUNDWATER SAMPLING METHODS**

### **3.1. Soil Sampling Methods**

On December 5<sup>th</sup>, 2018, a direct push drill rig was utilized to advance four (4) soil borings and convert three (3) to temporary groundwater monitoring well (MW) at the locations below. One (1) composite soil sample was also collected at the following locations below:

- ❖ B1 – Installed proximate to STA No. 323+05; 90-ft RT of CL to a depth of 14-ft BGS upon refusal on consolidated material with subsequent conversion to a temporary groundwater MW.
- ❖ B2 – Installed proximate to STA No. 323+50; 90-ft RT of CL to a depth of 18-ft BGS upon refusal on consolidated material with subsequent conversion to a temporary groundwater MW.
- ❖ B3 – Installed proximate to STA No. 323+90; 90-ft RT of CL to a depth of 15-ft BGS as proposed with subsequent conversion to a temporary groundwater MW
- ❖ B4 – Installed proximate to STA No. 323+70; 165-ft RT of CL to a depth of 14-ft BGS upon refusal on consolidated material with subsequent conversion to a temporary groundwater MW.
- ❖ B5 Composite Surface Sample – Collected proximate to STA No. 323+80; 150-ft RT.

The roadway improvements proposed to date, RECs, and boring locations are depicted on **Figure 4**.

Each soil boring was advanced using a Geoprobe® direct push rig. The direct-push rig utilizes a hollow-stem spoon that produced a continuous soil core in five (5)-ft intervals along the vertical depth of each boring. Each boring was advanced to predetermined depths or refusal at depths that ranged from 14-18-ft BGS. Borings B-2, B-3 and B-4 were installed to 18-ft, 15-ft and 14-ft BGS,

respectively, for the proposed installations of temporary groundwater monitoring wells. However; subsurface conditions (i.e. wet soils) indicative of groundwater were only observed in B-2 and B-3. The detailed boring logs are presented in **Appendix B**.

Composite soil samples were collected in the proposed project limits to characterize subsurface conditions prior to roadway R/W acquisition, and assess soil that will likely be disturbed during construction. The representative composite soil samples were obtained from the borings by collecting aliquots from the following depth intervals:

- ❖ B1: 0-5- and 5-10-ft BGS.
- ❖ B2 and B3: 5-10- and 10-15-ft BGS.
- ❖ B4: 0-5- and 7-12-ft BGS.

A composite sample of surficial soil was also collected proximate to the concrete pad that provides foundational support for the 1,000-gallon used oil AST. The composite sample was obtained by collecting six aliquots of soil from an approximate 10-ft x 10-ft area surrounding the pad, which were placed in a pre-cleaned stainless steel bowl. The contents of the mixing bowl were then carefully mixed and composited into the sample containers.

Each composite soil sample was placed into two (2) pre-cleaned 4-ounce glass jars. The sample jars were appropriately labeled and placed on ice in a cooler to maintain an appropriate temperature ( $\leq 4^{\circ}\text{C}$ ) while in transit to the certified environmental laboratory. Chain of Custody (COC) documentation was completed for all samples submitted for laboratory analysis.

The composite soil samples were submitted for laboratory analysis of TPH-DRO and TPH-ORO. The composite soil collected to characterize surface soil proximate to the used oil AST (labeled “B5 Comp”) was also submitted for laboratory analysis of Total RCRA 8 Metals. The COC documentation and laboratory analytical data are provided in **Appendix C**. A detailed discussion of the composite soil sample analytical results is presented in **Section 5.0** of this report.

### 3.2. Groundwater Sampling Methods

Temporary monitoring wells were constructed in B2, B3, and B4 to collect representative groundwater samples and confirm the presence/absence of petroleum impact to the shallow groundwater table. Each temporary well was constructed with 1-inch diameter, PVC well screen (slotted at 0.01-ft intervals) and solid 1-inch diameter casing. Screen and casing intervals for the temporary monitoring well are documented on the boring log for each boring (see **Appendix B**). PVC caps were fitted over each well to prevent intrusion of foreign material. Clean sand was then placed in the remaining annular space of the borehole to form a filter pack around the well screen.

On December 11<sup>th</sup>, 2018, an oil/water interface probe was utilized to determine the depth-to-groundwater and confirm the presence or absence of separate-phase petroleum in the temporary monitoring well. The static groundwater levels in the temporary wells were measured as follows:

- B2 at 6.5-ft BGS
- B3 at 6.5-ft BGS
- B4 at 9.8-ft BGS

Separate-phase petroleum or petroleum odors were not detected in the temporary monitoring wells (see **Appendix B**).

To account for Volatile Organic Compound (VOC) analysis, a representative groundwater sample was collected from B2, B3 and B4 using a low flow capable bladder pump in 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*. Water quality parameters (pH, temperature, and specific conductance) were stable (i.e., readings are within 10% of the previous measurement) prior to collecting each sample. The groundwater samples were prepared for transport to the laboratory in accordance the following procedures: 1): placed into containers provided by the laboratory with the appropriate preservative, 2): placed on ice in a cooler to maintain appropriate temperature while in transport to the environmental laboratory, 3): the Chain of Custody (COC) was completed and kept with the sample sets.

The groundwater samples were submitted for analysis of VOCs by EPA Method 8260 and TPH-DRO and TPH-ORO by EPA Method 8015C. The analytical data for the representative groundwater samples are provided in **Appendix C**. A discussion of the groundwater analytical result is provided in **Section 6.0** of this report.

After completion of the gauging/sampling activities, each temporary monitoring well was abandoned by removing the PVC screen and casing from the ground surface and filling the resulting void to grade with bentonite chips.

#### **4.0 PID SCREENING RESULTS**

Photoionization Detector (PID) results for the screened direct push soil cores and surficial composite soil sample are presented on the following page in **Table 1**. Measurement units are in parts per million (ppm).

**Table 1 - PID Soil Screening Data: Route 1  
A&M Mechanical Tire/Edgardo Ayala**

	PID (ppm)	PID (ppm)	PID (ppm)	PID (ppm)
Depth (ft BGS)	0-5	5-10	10-15	15-20
B1	0.0	0.0	0.0	NA
B2	0.0	0.1	0.0	0.0
B3	0.0	0.0	0.0	NA
B4	0.0	0.0	0.0	NA
B5	0.0	NA	NA	NA

ppm = Parts per Million  
BGS – Below Ground Surface  
Depth Unit – foot BGS

A review of **Table 1** indicates that the PID readings in the screened soil cores and surface composite soil sample were less than (<) 0.1-parts-per-million (ppm). Please note that the soil samples submitted from B4 (0-5-ft) and B5 Comp contained detectable TPH-DRO and TPH-ORO concentrations. However; these concentration detections did not register elevated PID readings or produce odors that were noticeable to olfactory senses, which is consistent for relatively low concentration detections in the semi-volatile, hydrocarbon chain ranges (i.e. hydrocarbon chains from C10 – C38).

## 5.0 SOIL SAMPLE ANALYTICAL RESULTS

The analytical results obtained from the soil samples are summarized in **Table 2** on the following page. All results are listed in units of milligrams-per-kilogram (mg/kg). A detailed laboratory analytical report is provided in **Appendix C**.

**Table 2: Soil Sample Analytical Data**  
**A&M Mechanic Tire/Edgardo Ayala Property**  
**Route 1 Widening, Dumfries VA**  
**Units = Milligrams per Kilogram (mg/kg)**

Location	<b>B1 0-5</b>		<b>B1 5-10</b>		<b>B2 5-10</b>		<b>B2 10-15</b>	
Laboratory I.D.	18L0372-01		18L0372-02		18L0372-03		18L0372-04	
Depth Below Grade	0-5 feet		5-10-feet		5-10 feet		10-15 feet	
Sample Time	14:25		14:35		15:10		15:20	
	Result	RL	Result	RL	Result	RL	Result	RL
<b>TPH-DRO</b>	ND	10.0	ND	10.0	ND	10.0	ND	10.0
<b>TPH-ORO</b>	ND	10.0	ND	10.0	ND	10.0	ND	10.0
Location	<b>B3 5-10</b>		<b>B3 10-15</b>		<b>B4 0-5</b>		<b>B4 7-12</b>	
Laboratory I.D.	18L0372-05		18L0372-06		18L0372-07		18L0372-08	
Depth Below Grade	5-10 feet		10-15 feet		0-5 feet		7-12 feet	
Sample Time	15:40		15:45		16:00		16:20	
	Result	RL	Result	RL	Result	RL	Result	RL
<b>TPH-DRO</b>	ND	10.0	ND	10.0	<b><u>12.5</u></b>	10.0	ND	10.0
<b>TPH-ORO</b>	ND	10.0	ND	10.0	<b><u>30.5</u></b>	10.0	ND	10.0
Location	<b>B5 Comp</b>							
Laboratory I.D.	18L0372-09							
Depth Below Grade	Composite							
Sample Time	16:45							
	Result	RL						
<b>TPH-DRO</b>	<b><u>160</u></b>	10.0						
<b>TPH-ORO</b>	<b><u>183</u></b>	10.0						
<b>Silver</b>	ND	0.500						
<b>Arsenic</b>	<b><u>1.28</u></b>	1.00						
<b>Barium</b>	<b><u>45.2</u></b>	0.500						
<b>Cadmium</b>	<b><u>0.897</u></b>	0.200						
<b>Chromium</b>	<b><u>24.1</u></b>	0.500						
<b>Mercury</b>	<b><u>0.008</u></b>	0.008						
<b>Lead</b>	<b><u>21.5</u></b>	0.500						
<b>Selenium</b>	ND	2.50						

**Notes:**

**Bold / Underlined** text = Concentration reported above RL

RL = Reporting Limit

ND -Below Laboratory Reporting Limit

\*RCRA 8 Metals were not analyzed in B1-B4

A review of **Table 2** indicates the following:

- ❖ The residual-phase TPH-DRO and TPH-ORO concentrations detected in the sample collected from B5 Comp **exceed** the Virginia Department of Environmental Quality (DEQ) TPH reporting limit of 100-mg/kg for a petroleum release to the environment. The detected concentrations also **exceed** the Virginia Solid Waste Management Regulation (VSWMR) TPH limit of 50-mg/kg for fill material (*9VAC20-81-660D.2.d*).
- ❖ The residual-phase TPH-DRO and TPH-ORO concentrations detected in B4 at 0-5 BGS **did not exceed** the Virginia Solid Waste Management Regulation (VSWMR) TPH limit of 50-mg/kg for fill material.
- ❖ The total arsenic, barium, cadmium, chromium, mercury, and lead concentrations detected in B5 Comp **did not exceed** the EPA Toxicity Limits (*40 CRF 261.24*) for characteristics of a hazardous waste by applying the Rule of 20.
- ❖ The detected arsenic, barium, chromium, mercury, and lead concentrations in B5 Comp **are below** the applicable United States Geological Survey (USGS) mean background concentrations established for the Eastern United States and Prince William County, VA.
- ❖ The total lead concentration detected in B5 Comp also **did not exceed** the upper threshold average of 50-mg/kg for the natural occurrence of lead in soil as established by the EPA in the *Review of the National Ambient Air Quality Standards (NAAQS) for Lead; Exposure Analysis Methodology and Validation (EPA, June 1989)*.
- ❖ The total cadmium concentration detected in B5 Comp **does not exceed** the 100th percentile of 1.0-mg/kg for background cadmium concentrations in Eastern U.S. soil as established by the *U.S. EPA in the Ecological Soil Screening Levels for Cadmium (EPA, 2005)*.
- ❖ Based on this information, the total RCRA 8 metal concentrations detected in B5 Comp are considered representative of concentrations occurring naturally in soil for this geographic region.

## 6.0 DISSOLVED PHASE ANALYTICAL RESULTS

The dissolved-phase analytical results obtained from the groundwater sample collected at B2, B3 and B4 are summarized on the following page in **Table 3**. All results are listed in milligrams per liter (mg/L). A detailed laboratory analytical report is provided in **Appendix C**.

**Table 3: Groundwater Sample Analytical Data**  
**Route 1 Widening: A&M Mechanic Tire/Edgardo Ayala Property**  
**Units = Milligrams per Liter (mg/l)**

Location Laboratory I.D. Sample Time	<b>B2</b> 18L0645-02 10:50		<b>B3</b> 18L0645-01 15:00		<b>B4</b> 18L0645-03 10:00		<b>Trip Blank</b> 18L0645-04 14:05	
	Result	<i>RL</i>	Result	<i>RL</i>	Result	<i>RL</i>	Result	<i>RL</i>
<b>Acetone (VOCs*)</b>	<b>0.013</b>	<i>0.010</i>	<b>0.011</b>	<i>0.010</i>	<b>0.012</b>	<i>0.010</i>	ND	<i>0.010</i>
<b>TPH-DRO</b>	ND	<i>0.575</i>	ND	<i>0.562</i>	ND	<i>0.581</i>	NA	<i>NA</i>
<b>TPH-ORO</b>	ND	<i>1.1</i>	ND	<i>1.1</i>	ND	<i>1.2</i>	NA	<i>NA</i>

**Notes:**

**Bold / Underlined** text = Concentration reported above RL

RL = Reporting Limit

ND -Below Laboratory Reporting Limit

\*Remaining VOC analyte list were all below the RL (Appendix C).

A review of **Table 3** indicates dissolved-phase petroleum constituents were not detected above the applicable laboratory RLs in the representative groundwater samples. Acetone was detected above the laboratory RL in B2, B3 and B4; however, it was not detected in the laboratory provided Trip Blank. In the absence of other detectable VOC constituent concentrations, the detected acetone concentrations at the laboratory RL are likely false positives associated with laboratory interference or the low flow sampling equipment that was utilized to collect the samples. Acetone is a common cleaning agent in a laboratory setting that is used to sterilize testing equipment, work stations, glassware, etc. It is also utilized to sterilize environmental sampling equipment, such as low flow sampling pumps and associated appurtenances.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

Representative soil and groundwater samples were collected under this investigation to determine if the RECs identified at Parcel 069 resulted in adverse impacts to media that will likely be disturbed in response to the proposed drainage improvements. The results of this investigation indicate the following:

- ❖ Residual-phase TPH concentrations detected in B4 at 0-5-ft BGS **did not exceed** the VSWMR TPH limit of 50-mg/kg for fill material. The subject boring was installed in the proposed R/W acquisition limits; however, it is located outside of the disturbance limits proposed as of the date of this report.
- ❖ The total RCRA 8 metal concentrations detected in B5 Comp are within the ranges of published background concentrations. Thus, they are **not likely** associated with an anthropogenic source(s) associated with the RECs documented at Parcel 069.
- ❖ The residual-phase TPH concentrations detected in B5 Comp **exceed** both the TPH release report limit for petroleum impact to soil and VSWMR TPH limit for fill material. This

composite sample was collected proximate to the northeast corner of the proposed storm water management basin (i.e. BMP 5).

- ❖ The acetone concentrations detected in the groundwater samples at the laboratory RL are likely associated with false positives from laboratory and/or sampling equipment interferences. Thus, they are **not likely** associated with an anthropogenic source(s) associated with the RECs documented at Parcel 069.

Parcel 069 will likely be acquired as R/W to facilitate the installation of the storm water basin and associated improvements proposed as of the date of this report. **Prior to R/W acquisition, it is recommended that the current property owner report a documented petroleum release to the environment to the DEQ-NRO.** This recommendation is based on the detection of TPH concentrations in B5 Comp that exceed 100-mg/kg.

The estimated volume of petroleum impacted soil that will likely be excavated in the response to the installation of BMP 5 at Parcel 069, and the corresponding soil management options that apply are detailed in the following sections of this report.

### 7.1. Petroleum Impacted Soil Volume Estimates

A review of Plan Sheet No. 13 and the data collected under this investigation indicates that the northeastern corner of BMP 5 is impacted by residual-phase petroleum concentrations that will require Special Management Provisions to the construction contract. The impacted soil is estimated to trend to depths of approximately two (2)-ft BGS in a 25-ft x 25-ft area (i.e. 625-ft<sup>2</sup>) that is centered on the current location of the 1,000-gallon used oil AST (see **Figure 4**). Specific construction information and associated slope/elevation data were not available for BMP 5; however, a notation on Plan Sheet No. 13 indicates excavation to approximately 13.5-ft BGS. Based on this preliminary information, **Table 4** below presents the estimated volume of impacted soil that will likely require Special Management Provisions to the construction contract.

**Table 4: A&M Mechanic Tire/Edgardo Ayala  
Petroleum-Impacted Soil Volume Estimates  
Select Drainage Improvements & Pipe Connections**

Boring ID	Impacted Soil Depths	Drainage Structure ID	Impacted Excavation Footprint Location	Impacted Soil Excavation Dimensions	Volume Estimate**	Volume Estimate**	Volume Estimate**	Notes
Unit	BGS		STA No.	LxWxH	Cubic Feet (ft <sup>3</sup> )	Cubic Yards (yd <sup>3</sup> )	Tons*	
B5 Comp	0-1-ft	BMP #5	STA No. 323+80; 150-ft RT of CL	25-ft x 25-ft x 2-ft	1250	47	69	NA

Notes:

\*Tons calculated with conversion of 1yd<sup>3</sup> = 1.5 tons

\*\*Soil volume estimates are approximate and based on preliminary information available as of the date of this report.

A full-sized copy of **Table 4** is also included as **Appendix D**.

## 7.2. Petroleum Impacted Soil Management Options

The TPH concentrations detected in B5 Comp indicates that surficial soil (i.e. 0-2-ft BGS) proximate to the 1,000-gallon used oil AST meets the VSWMR definition of a solid waste. VDOT also has the option to place the petroleum-impacted soil back into the excavation from which it came and/or excavations containing similar contaminants at Parcel 069. However, BMP 5 has a large excavation component and options for reuse of the petroleum-impacted soil on-site in accordance with the applicable requirements of the VSWMR may be limited. Based on this information, **Table 5** below provides rates to transport and dispose of the petroleum-impacted soil at the Prince William County landfill.

**Table 5 - Cost Estimates for Transport and Disposal of Petroleum-Impacted Soil**

Proposed Construction Area	Corresponding Samples Exhibiting Petroleum Impact (BGS)	Estimated Volume of Soil Requiring Special Handling (Cubic Yards)	Estimated Volume of Soil Requiring Special Handling (Tons)*	Estimated Cost for Staging, Transport, and Disposal**
NE Corner of BMP 5	B5 Comp 0-1-ft BGS	47	69	\$3,494

\*Tons were calculated by assuming conversion factor for unexcavated soil of 1 yd<sup>3</sup> = 1.5 tons.

\*\*Costs estimated with the following line items from the VDOT Statewide Hazardous Materials Services Contract:

1. The TPH concentrations detected in the samples collected from B5 were below 500-mg/kg. In accordance with the applicable disposal requirement of the VSWMR (*9VAC 20-81-660D.2.c*), the petroleum-impacted soil can be disposed of at a permitted Subtitle D Landfill.
2. Recovery & Landfill Disposal of Petroleum Impacted Soil (minimum total tonnage of 8 tons) - \$45/ton.
3. Preparation & Transportation of Regulated Non-Hazardous Waste - \$6.18/per loaded mile; 9 miles one-way trip to the Prince William County Landfill; 20 tons per truckload (B5 = 4 trips).
4. Soil staging on and covered by polyethylene plastic sheeting, staging area bermed to prevent run-on/runoff – 5% of the total cost for soil transportation and disposal.

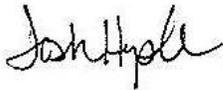
## 8.0 LIMITATIONS

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 VDOT, 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.

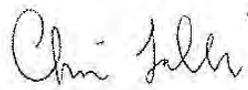
## 9.0 ACKNOWLEDGEMENT

3e appreciates the opportunity to provide environmental services to VDOT regarding the A&M Mechanical and Tire/Edgardo Ayala property - Route 1 roadway improvement project located in Dumfries, VA under the Professional Services HAZMAT Contract. If we may be of further assistance, or you have any questions or comments regarding the project, please contact our office at (540) 953-0170.

## 10.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS



Joshua P. Hepler, PG  
Project Environmental Scientist  
Preparer



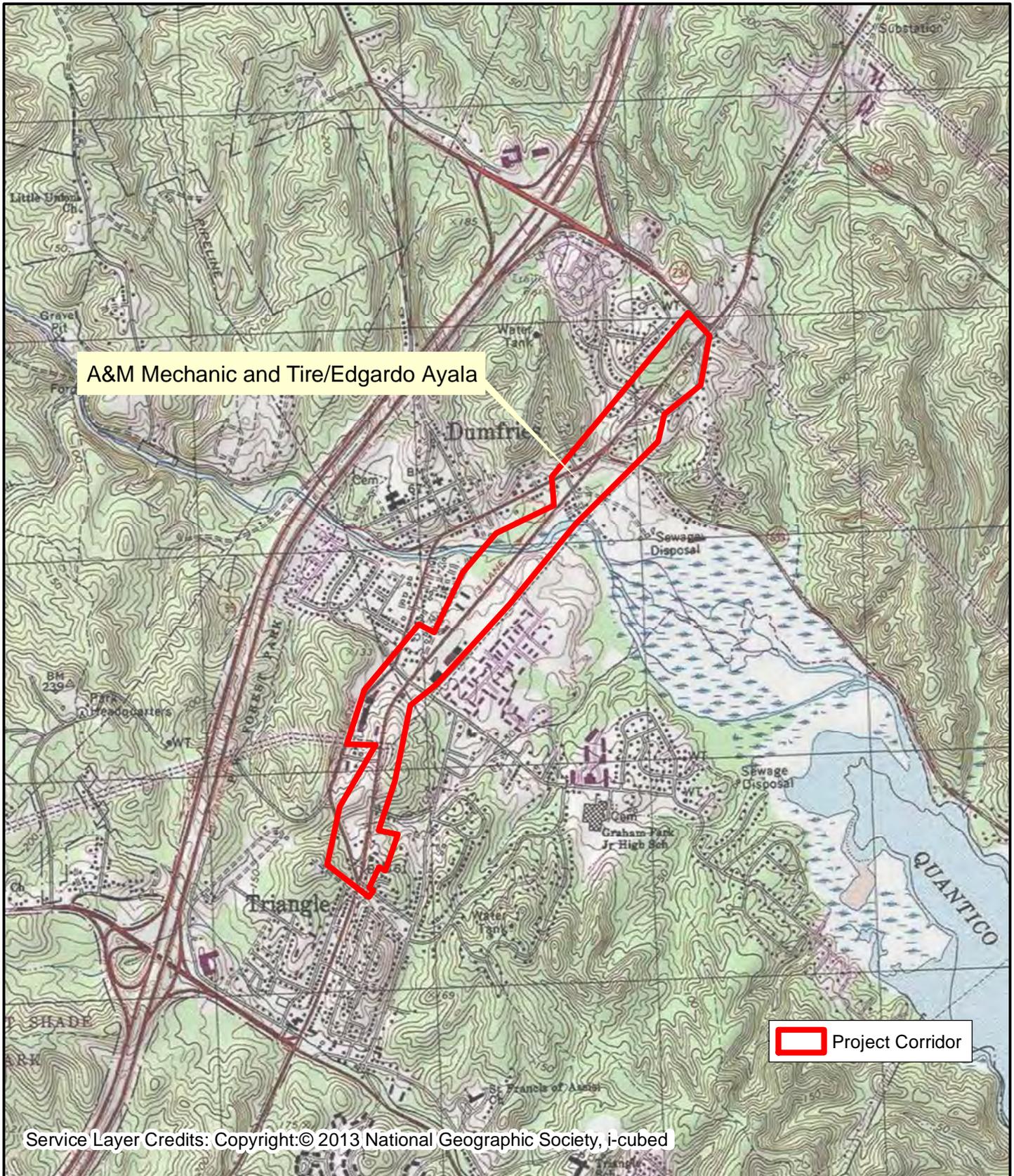
Chris Lalli  
Vice President  
Reviewer

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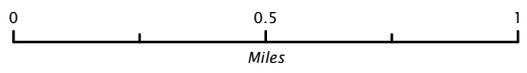
## Figures

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**FIGURE 2**  
**PROJECT CORRIDOR TOPOGRAPHIC**  
A AND M MECHANIC AND TIRE/EDGARDO AYALA



Dumfries, VA

1:24,000



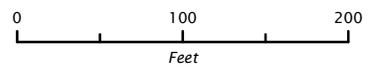
 A&M Mechanic and Tire/Edgardo Ayala Property Boundary



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



**FIGURE 3**  
**AERIAL WITH PROPERTY BOUNDARIES**  
A AND M MECHANIC AND TIRE/EDGARDO AYALA

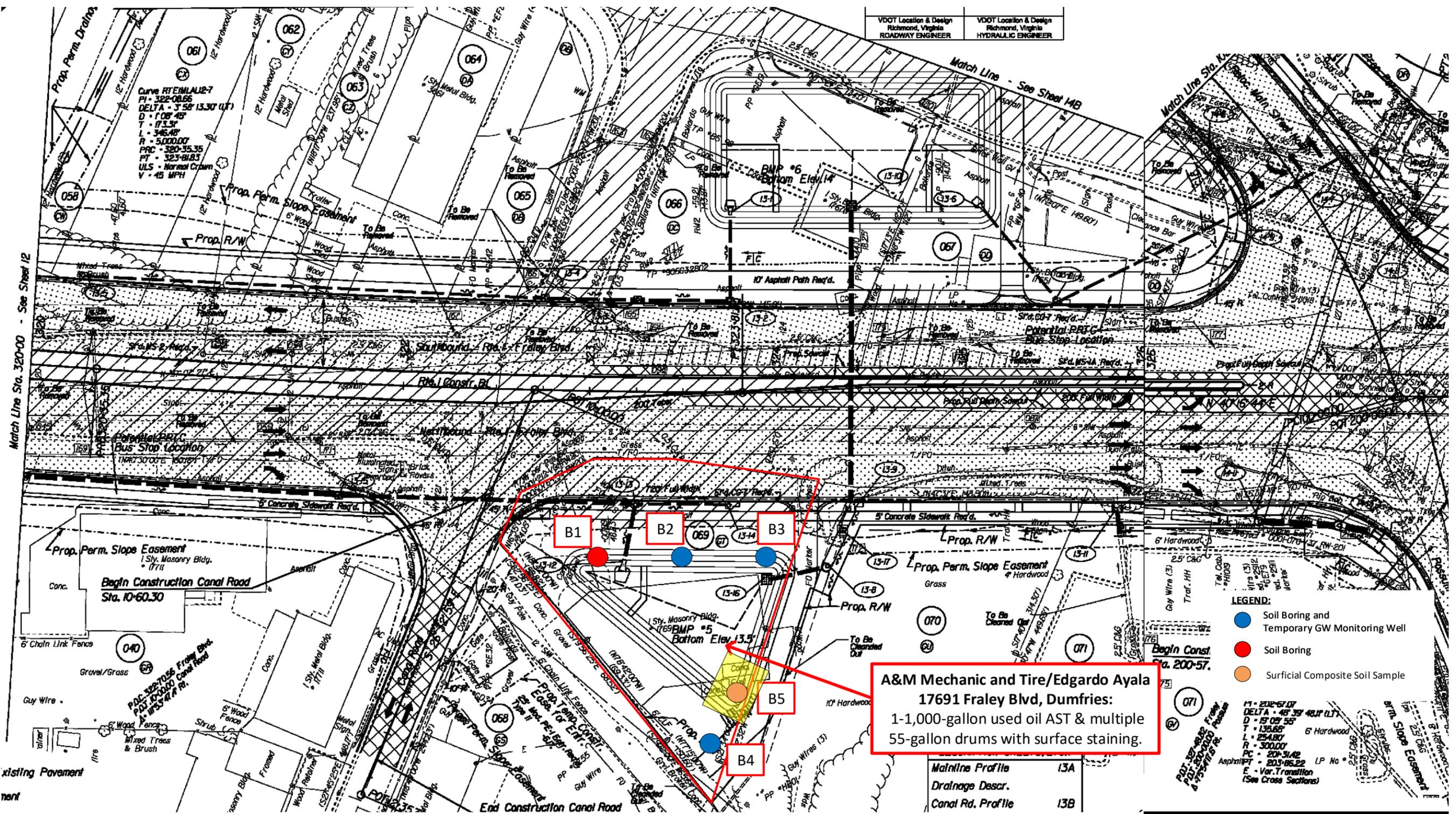


Dumfries, VA

Prepared by Leah Potts, 01/24/2019  
Sources: VGIN 2017  
Projection: NAD 1983 2011 StatePlane Virginia North FIPS 4501 Ft US



VDOT Location & Design Richmond, Virginia ROADWAY ENGINEER	VDOT Location & Design Richmond, Virginia HYDRAULIC ENGINEER
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**Appendix A: Miss Utility and VDOT Ticket**

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**From:** [tickets@missutilityofvirginia.com](mailto:tickets@missutilityofvirginia.com)  
**To:** [Josh Hepler](#)  
**Subject:** VUPS EMLCFM 2018/11/29 #03493 A833101279-00A NORM RESP LREQ  
**Date:** Thursday, November 29, 2018 12:21:29 PM

---

EMLCFM 03493 VUPSa 11/29/18 12:21:24 A833101279-00A RESPONSE

Thank you for contacting VA811! This is an automatically generated response from the utilities who received your notice of excavation. If you have questions about the response, call the "field contact" for that utility. For your safety, please respect and protect the marks, excavate carefully around the marked utility lines and contact VA811 if you see clear evidence of unmarked utilities.

**Remember, you can now reach VA811 by dialing 811.**

Ticket : A833101279 Rev: 00A Taken: 11/27/18 10:11 AM

State: VA Cnty: PRINCE WILLIAM Place: DUMFRIES  
Address : 17691 FRALEY BLVD  
Responses due by: 11/30/18 07:00 AM Expires: 12/19/18 07:00 AM

When the member Marking Code is blue, click for additional information that may be provided by the Operator/Locator.

Marking Code	Description	Response
<a href="#">CGV</a>	COLUMBIA GAS (CGV930) No Conflict; utility is outside of stated work area. Field Contact: UTILIQUEST (703)754-2116	11/29/18 12:20 PM 30
CMC	In the event of damage to a facility call: (800)543-8911 COMCAST (CMC502) No Conflict; utility is outside of stated work area. Field Contact: CABLE PROTECTION SERVICES (804)562-3861	11/27/18 10:17 AM 30
<a href="#">DOM</a>	In the event of damage to a facility call: (800)441-6917 ext opt 1 DOMINION ENERGY ELEC DIST (DOM400) No Conflict; utility is outside of stated work area. Field Contact: UTILIQUEST (703)754-2116	11/29/18 12:20 PM 30
PWS	In the event of damage to a facility call: (888)667-3000 PRINCE WILLIAM - WATER (PWS902) Marked up to privately owned utility; contact private utility owner	11/29/18 11:53 AM 12
PWS	for locate Field Contact: BUTCH ROGERS (703)609-8097 In the event of damage to a facility call: (703)335-7982 PRINCE WILLIAM - SEWER (PWS903) Marked up to privately owned utility; contact private utility owner	11/29/18 11:53 AM 12
<a href="#">VZN</a>	for locate Field Contact: BUTCH ROGERS (703)609-8097 In the event of damage to a facility call: (703)335-7982 VERIZON (VZN703) No Conflict; utility is outside of stated work area. Field Contact: UTILIQUEST (703)754-2116	11/29/18 12:21 PM 30
	In the event of damage to a facility call: (888)483-1233	

**From:** [tickets@missutilityofvirginia.com](mailto:tickets@missutilityofvirginia.com)  
**To:** [Josh Hepler](#)  
**Subject:** VUPS EMLCFM 2018/12/04 #05207 A833101287-01A RUSH RESP LREQ  
**Date:** Tuesday, December 4, 2018 2:31:54 PM  
**Importance:** High

---

EMLCFM 05207 VUPSa 12/04/18 14:31:48 A833101287-01A RESPONSE

Thank you for contacting VA811! This is an automatically generated response from the utilities who received your notice of excavation. If you have questions about the response, call the "field contact" for that utility. For your safety, please respect and protect the marks, excavate carefully around the marked utility lines and contact VA811 if you see clear evidence of unmarked utilities.

**Remember, you can now reach VA811 by dialing 811.**

Ticket : A833101287 Rev: 01A Taken: 12/03/18 11:52 AM

State: VA Cnty: PRINCE WILLIAM Place: DUMFRIES  
Address : 17675 FRALEY BLVD  
Responses due by: 12/03/18 02:53 PM Expires: 12/19/18 07:00 AM

When the member Marking Code is blue, click for additional information that may be provided by the Operator/Locator.

Marking Code	Description	Response
<a href="#">CGV</a>	COLUMBIA GAS (CGV930) No Conflict; utility is outside of stated work area. Field Contact: UTILIQUEST (703)754-2116 In the event of damage to a facility call: (800)543-8911	12/04/18 02:30 PM 30
CMC	COMCAST (CMC502) No Conflict; utility is outside of stated work area. Field Contact: CABLE PROTECTION SERVICES (804)562-3861 In the event of damage to a facility call: (800)441-6917 ext opt 1	12/03/18 02:40 PM 30
<a href="#">DOM</a>	DOMINION ENERGY ELEC DIST (DOM400) No Conflict; utility is outside of stated work area. Field Contact: UTILIQUEST (703)754-2116 In the event of damage to a facility call: (888)667-3000	11/29/18 01:00 PM 30
PWS	PRINCE WILLIAM - WATER (PWS902) No Conflict; utility is outside of stated work area. Field Contact: BUTCH ROGERS (703)609-8097 In the event of damage to a facility call: (703)335-7982	11/29/18 09:20 AM 30
PWS	PRINCE WILLIAM - SEWER (PWS903) No Conflict; utility is outside of stated work area. Field Contact: BUTCH ROGERS (703)609-8097 In the event of damage to a facility call: (703)335-7982	11/29/18 09:20 AM 30
<a href="#">VZN</a>	VERIZON (VZN703) Marked Field Contact: UTILIQUEST (703)754-2116 In the event of damage to a facility call: (888)483-1233	12/04/18 02:31 PM 10



Locate Work Order Number: \_\_\_\_\_

Project Location: \_\_\_\_\_

# Utility Location Results Form

## Utility Location Results *(completed by utility location service provider)*

Photos attached Yes No

Was the location that was requested completed? Yes No

Detection cable and/or location tape available Yes No

Accurate As-Built Documents available Yes No

*If no, please check all applicable boxes:*

Accurate As-Built Documents:

Requested? Yes No Provided? Yes No

VDOT on-site assistance:

Requested? Yes No Provided? Yes No

Does the in-field survey area extend 3 feet beyond the border of the intended excavation area? (Required) Yes No

Utility Location Method(s) used: \_\_\_\_\_

### Comments:

Serco/Elite has provided utility markings within the scope of this request for all VDOT owned fiber optic communications cable, and all power cabling from the ITS Device to the ITS Cabinet that was accurately shown on drawings if provided by VDOT, or actual location contained detection cable or tape, and/or VDOT provided on-site assistance.

Where no detection cable/tape and or accurate as-built documents, and/or VDOT assistance was not provided, **we have provided approximate markings or no markings have occurred and the 3rd Party Requestor is advised that hand digging with extreme caution is advised.** Photos have been attached.

Please be advised that in no case will Serco/Elite be held liable or responsible for any power or communication cabling that falls outside our scope and could not be located due to the lack of accurate documentation, detection cable or tape, and/or VDOT assistance

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Certification:** The most appropriate equipment and technology to identify all VDOT underground utilities within the requested zone were used.

Utility Locator: (Print) \_\_\_\_\_  
(signature) \_\_\_\_\_  
Company: \_\_\_\_\_

Start time: \_\_\_\_\_  
End time: \_\_\_\_\_  
Date: \_\_\_\_\_

*This information is valid for 15 days from signed date of marking. Any work performed after 15 days is not covered under this request and will need re-marked.*

---

## **Appendix B: Boring Logs**

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Project Location: **RT 1 Widening**  
 Site: **A&M**  
 Location: **STA 323+.05.00; 90-ft RT of CL**  
 Boring Location: **B1**



Date(s) Drilled: <b>12/5/18</b>	Logged By: <b>Josh Hepler/Carroll Ellis</b>	Well Information: <b>N/A</b>
Drill Rig Type: <b>Geo Probe</b>	Total Depth Drilled: <b>14'</b>	Screened Interval:
DTW Within Soil Boring: <b>N/A</b>		Cased Interval:
Static GW Level: <b>N/A</b>	Date GW Measured: <b>N/A</b>	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0		2:25	0-1' asphalt/gravel, grey, dry. 1-4' sandy clay, grey/brown, very moist. 4-5' clay, grey, moist. No odors. 60% recovery.
2				
3				
4				
5				
6	0.0		2:25	5-6' grey clay, moist. 6-7' sandy clay, grey with streaks of brown and gravel, dry. 7-9' sandy clay back fill, orange/green, dry. 9-10' silty clay to silt, grey with orange, dry. 75% recovery.
7				
8				
9				
10	0.0			10-13' grey silt rock, moist to dry. 13-14' gravel fill, gray to black. No GW. No odors. 90% recovery. Boring terminated upon refusal at 14-ft BGS.
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

BGS - Below Ground Surface

Project Location: **RT 1 Widening**  
 Site: **A&M**  
 Location: **STA 323+.05.00; 90-ft RT of CL**  
 Boring Location: **B2**



Date(s) Drilled: <b>12/5/18</b>	Logged By: <b>Josh Hepler/Carroll Ellis</b>	Well Information:
Drill Rig Type: <b>Geo Probe</b>	Total Depth Drilled: <b>18'</b>	Screened Interval: <b>5-18'</b>
DTW Within Soil Boring: <b>6'</b>		Cased Interval: <b>0-5'</b>
Static GW Level: <b>6.5'</b>	Date GW Measured: <b>N/A</b>	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1 2 3 4 5	0.0			0-0.5' asphalt/gravel, black/grey. 0.5-3' sand, tan, dry. 3-4' sandy clay, tan/grey to red, slightly moist. 4-5' clay, grey/brown with red, moist, organic odor. 60% recovery.
6 7 8 9 10	0.1		3:10	5-8' grey clay, wet. 8-10' sandy clay, grey to brown, wet. No odors. 50% recovery.
11 12 13 14 15	0.0		3:30	10-13' grey sand, large grains, slightly moist. 13-15' grey sandy clay, dry. No odors. 55% recovery.
16 17 18 19 20	0.0			15-16' grey sand, large grains, dry. 16-17' black wood, dry. 17-18' grey sandy clay, dry. No odors. 55% recovery. Boring terminated upon refusal at 18-ft BGS.

BGS - Below Ground Surface

Project Location: **RT 1 Widening**  
 Site: **A&M**  
 Location: **STA 323+.05.00; 90-ft RT of CL**  
 Boring Location: **B3**



Date(s) Drilled: <b>12/5/18</b>	Logged By: <b>Josh Hepler/Carroll Ellis</b>	Well Information:
Drill Rig Type: <b>Geo Probe</b>	Total Depth Drilled: <b>15'</b>	Screened Interval: <b>15'</b>
DTW Within Soil Boring: <b>8.5'</b>	Cased Interval:	
Static GW Level: <b>6.5'</b>	Date GW Measured: <b>N/A</b>	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0			0-0.5' asphalt/gravel, grey, dry. 0.5-3' sandy clay, tan, dry. 3-5' silty clay, grey to brown, very moist. No odors. 80% recovery.
2				
3				
4				
5				
6	0.0		3:40	5-7' sandy clay, grey/brown. 7-8' sand, brown to orange, moist. 8-9' gravel, orange, wet. 9-10' fine sandy clay, grey, wet. No odors.
7				
8				
9				
10				
11	0.0		3:45	10-13' fine sandy clay, grey wit pebbles, moist. 13-15' coarse sand, dark grey to light grey, moist. No odors. 55% recovery. Boring terminated 15-ft BGS.
12				
13				
14				
15				
16				
17				
18				
19				
20				

BGS - Below Ground Surface

Project Location: **RT 1 Widening**  
 Site: **A&M**  
 Location: **STA 323+.05.00; 90-ft RT of CL**  
 Boring Location: **B4**



Date(s) Drilled: <b>12/5/18</b>	Logged By: <b>Josh Hepler/Carroll Ellis</b>	Well Information:
Drill Rig Type: <b>Geo Probe</b>	Total Depth Drilled: <b>14'</b>	Screened Interval: <b>14'</b>
DTW Within Soil Boring: <b>6'</b>	Cased Interval:	
Static GW Level: <b>9.8'</b>	Date GW Measured: <b>N/A</b>	

Depth (feet)	Sample Info			Material Description
	PID (ppm)	Sample Interval (ft)	Time	
1	0.0	X	4:00	0-1' gravel, topsoil, black. 1-3' clay, brown, native. 3-5' sandy clay, brown. Dry. No odors. 85% recovery.
2				
3				
4				
5				
6	0.0		4:20	5-7' medium grain sand, brown, moist. 7-8' fine sandy clay, brown, moist. 8-9' siltstone, dry. 9-10' quartz to sandy clay with pebble mix, dry. No odors. 60% recovery.
7				
8				
9				
10				
11	0.0			10-11' quartz, white, dry. 11-12' sandy clay, grey/green, moist. 12-4' siltstone, grey, dry. No odors. 75% recovery. Boring terminated upon refusal at 14-ft BGS.
12				
13				
14				
15				
16				
17				
18				
19				
20				

BGS - Below Ground Surface

---

**Appendix C: Laboratory Reports 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 18L0372

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

Date Received: December 7, 2018 15:15  
Date Issued: December 20, 2018 15:01

Project Number: 18-796.05

Submitted To: Josh Hepler

Purchase Order: 18-796.05

Client Site I.D.: A&M Mechanical Tire/Edgardo Ayala Property

Enclosed are the results of analyses for samples received by the laboratory on 12/07/2018 15:15. 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.





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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 15:01
Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

#### ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18L0372

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1 0'-5'	18L0372-01	Soil	12/05/2018 14:25	12/07/2018 15:15
B1 5'-10'	18L0372-02	Soil	12/05/2018 14:35	12/07/2018 15:15
B2 5'-10'	18L0372-03	Soil	12/05/2018 15:10	12/07/2018 15:15
B2 10'-15'	18L0372-04	Soil	12/05/2018 15:20	12/07/2018 15:15
B3 5'-10'	18L0372-05	Soil	12/05/2018 15:40	12/07/2018 15:15
B3 10'-15'	18L0372-06	Soil	12/05/2018 15:45	12/07/2018 15:15
B4 0'-5'	18L0372-07	Soil	12/05/2018 16:00	12/07/2018 15:15
B4 7'-12'	18L0372-08	Soil	12/05/2018 16:20	12/07/2018 15:15
B5 Comp	18L0372-09	Soil	12/05/2018 16:45	12/07/2018 15:15



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 15:01
Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

**Laboratory Order ID: 18L0372**

**Analytical Results**

<b>Sample I.D.</b> B1 0'-5'	<b>Laboratory Sample ID:</b> 18L0372-01
<b>Grab Date/Time:</b> 12/05/2018 14:25	<b>Field pH:</b>
<b>Field Residual Cl:</b>	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	01	SW8015C	<10.0 mg/kg		10.0	1	12/18/18 15:00	12/19/18 17:45	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>01</i>	<i>SW8015C</i>	<i>103 %</i>		<i>40-160</i>		<i>12/18/18 15:00</i>	<i>12/19/18 17:45</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	01	SW8015C	<10.0 mg/kg		10.0	1	12/19/18 09:10	12/19/18 19:01	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 15:01
Submitted To: Josh Hepler	Project Number: 18-796.05
Client Site I.D.: A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order: 18-796.05

**Laboratory Order ID: 18L0372**

**Analytical Results**

<b>Sample I.D.</b> B1 5'-10'	<b>Laboratory Sample ID:</b> 18L0372-02
<b>Grab Date/Time:</b> 12/05/2018 14:35	<b>Field pH:</b>
<b>Field Residual Cl:</b>	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<10.0 mg/kg		10.0	1	12/18/18 15:00	12/19/18 18:11	HLM
<i>Surr: Pentacosane (Surr)</i>	02	SW8015C	109 %		40-160		12/18/18 15:00	12/19/18 18:11	HLM
TPH-Semi-Volatiles (ORO)	02	SW8015C	<10.0 mg/kg		10.0	1	12/19/18 09:10	12/19/18 19:25	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 15:01
Submitted To: Josh Hepler	Project Number: 18-796.05
Client Site I.D.: A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order: 18-796.05

**Laboratory Order ID: 18L0372**

**Analytical Results**

<b>Sample I.D.</b> B2 5'-10'	<b>Laboratory Sample ID:</b> 18L0372-03
<b>Grab Date/Time:</b> 12/05/2018 15:10	<b>Field pH:</b>
<b>Field Residual Cl:</b>	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	03	SW8015C	<10.0 mg/kg		10.0	1	12/18/18 15:00	12/19/18 18:38	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>03</i>	<i>SW8015C</i>	<i>105 %</i>		<i>40-160</i>		<i>12/18/18 15:00</i>	<i>12/19/18 18:38</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	03	SW8015C	<10.0 mg/kg		10.0	1	12/19/18 09:10	12/19/18 19:50	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 15:01
Submitted To: Josh Hepler	Project Number: 18-796.05
Client Site I.D.: A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order: 18-796.05

**Laboratory Order ID: 18L0372**

**Analytical Results**

Sample I.D. B2 10'-15'	Laboratory Sample ID: 18L0372-04
Grab Date/Time: 12/05/2018 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
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	04	SW8015C	<10.0 mg/kg		10.0	1	12/18/18 15:00	12/19/18 19:04	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>04</i>	<i>SW8015C</i>	<i>103 %</i>		<i>40-160</i>		<i>12/18/18 15:00</i>	<i>12/19/18 19:04</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	04	SW8015C	<10.0 mg/kg		10.0	1	12/19/18 09:10	12/19/18 20:15	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 15:01
Submitted To: Josh Hepler	Project Number: 18-796.05
Client Site I.D.: A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order: 18-796.05

**Laboratory Order ID: 18L0372**

**Analytical Results**

**Sample I.D.** B3 5'-10' **Laboratory Sample ID:** 18L0372-05

**Grab Date/Time:** 12/05/2018 15:40

**Field Residual Cl:** **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	05	SW8015C	<10.0 mg/kg		10.0	1	12/18/18 15:00	12/19/18 19:31	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>05</i>	<i>SW8015C</i>	<i>114 %</i>		<i>40-160</i>		<i>12/18/18 15:00</i>	<i>12/19/18 19:31</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	05	SW8015C	<10.0 mg/kg		10.0	1	12/19/18 09:10	12/19/18 20:39	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 15:01
Submitted To: Josh Hepler	Project Number: 18-796.05
Client Site I.D.: A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order: 18-796.05

**Laboratory Order ID: 18L0372**

**Analytical Results**

Sample I.D. B3 10'-15'	Laboratory Sample ID: 18L0372-06
Grab Date/Time: 12/05/2018 15:45	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	06	SW8015C	<10.0 mg/kg		10.0	1	12/18/18 15:00	12/19/18 19:57	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>06</i>	<i>SW8015C</i>	<i>106 %</i>		<i>40-160</i>		<i>12/18/18 15:00</i>	<i>12/19/18 19:57</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	06	SW8015C	<10.0 mg/kg		10.0	1	12/19/18 09:10	12/19/18 21:04	HLM



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 15:01
Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

**Laboratory Order ID: 18L0372**

**Analytical Results**

<b>Sample I.D.</b> B4 0'-5'	<b>Laboratory Sample ID:</b> 18L0372-07
<b>Grab Date/Time:</b> 12/05/2018 16:00	<b>Field pH:</b>
<b>Field Residual Cl:</b>	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
<b>TPH-Semi-Volatiles (DRO)</b>	07	SW8015C	<b>12.5 mg/kg</b>		10.0	1	12/18/18 15:00	12/19/18 20:24	HLM
<i>Surr: Pentacosane (Surr)</i>	07	SW8015C	111 %		40-160		12/18/18 15:00	12/19/18 20:24	HLM
<b>TPH-Semi-Volatiles (ORO)</b>	07	SW8015C	<b>30.5 mg/kg</b>		10.0	1	12/19/18 09:10	12/19/18 21:29	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 15:01
Submitted To: Josh Hepler	Project Number: 18-796.05
Client Site I.D.: A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order: 18-796.05

**Laboratory Order ID: 18L0372**

**Analytical Results**

Sample I.D. B4 7'-12'	Laboratory Sample ID: 18L0372-08
Grab Date/Time: 12/05/2018 16:20	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	08	SW8015C	<10.0 mg/kg		10.0	1	12/18/18 15:00	12/19/18 20:50	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>08</i>	<i>SW8015C</i>	<i>99.7 %</i>		<i>40-160</i>		<i>12/18/18 15:00</i>	<i>12/19/18 20:50</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	08	SW8015C	<10.0 mg/kg		10.0	1	12/19/18 09:10	12/19/18 21:53	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/20/2018 15:01
Submitted To: Josh Hepler	Project Number: 18-796.05
Client Site I.D.: A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order: 18-796.05

**Laboratory Order ID: 18L0372**

**Analytical Results**

Sample I.D. B5 Comp	Laboratory Sample ID: 18L0372-09
Composite Start-End Date/Time: 12/05/2018 16:45 - 12/05/2018 16:45	Field pH:

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Metals (Total) by EPA 6000/7000 Series Methods</b>									
Silver	09	SW6010C	<0.500 mg/kg		0.500	1	12/12/18 16:00	12/13/18 15:22	SNL
Arsenic	09	SW6010C	<b>1.28 mg/kg</b>		1.00	1	12/12/18 16:00	12/13/18 15:22	SNL
Barium	09	SW6010C	<b>45.2 mg/kg</b>		0.500	1	12/12/18 16:00	12/13/18 15:22	SNL
Cadmium	09	SW6010C	<b>0.897 mg/kg</b>		0.200	1	12/12/18 16:00	12/13/18 15:22	SNL
Chromium	09	SW6010C	<b>24.1 mg/kg</b>		0.500	1	12/12/18 16:00	12/13/18 15:22	SNL
Mercury	09	SW7471B	<b>0.008 mg/kg</b>		0.008	1	12/19/18 10:16	12/20/18 10:59	AOC
Lead	09	SW6010C	<b>21.5 mg/kg</b>		0.500	1	12/12/18 16:00	12/13/18 15:22	SNL
Selenium	09	SW6010C	<2.50 mg/kg		2.50	1	12/12/18 16:00	12/13/18 15:22	SNL
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	09	SW8015C	<b>160 mg/kg</b>		96.2	1	12/18/18 15:00	12/19/18 21:17	HLM
Surr: Pentacosane (Surr)	09	SW8015C	96.8 %		40-160		12/18/18 15:00	12/19/18 21:17	HLM
TPH-Semi-Volatiles (ORO)	09	SW8015C	<b>183 mg/kg</b>		98.8	1	12/19/18 09:10	12/19/18 22:18	HLM



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Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

### Analytical Summary

**Preparation Method:**

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
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**Metals (Total) by EPA 6000/7000 Series Methods**

**Preparation Method: SW3050B**

18L0372-09	1.10 g / 50.0 mL	SW6010C	BBL0344	SBL0376	AL80067
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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
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**Semivolatile Hydrocarbons by GC**

**Preparation Method: SW3550C**

18L0372-01	53.3 g / 1.00 mL	SW8015C	BBL0544	SBL0559	AK80056
18L0372-02	50.6 g / 1.00 mL	SW8015C	BBL0544	SBL0559	AK80056
18L0372-03	52.1 g / 1.00 mL	SW8015C	BBL0544	SBL0559	AK80056
18L0372-04	50.1 g / 1.00 mL	SW8015C	BBL0544	SBL0559	AK80056
18L0372-05	51.4 g / 1.00 mL	SW8015C	BBL0544	SBL0559	AK80056
18L0372-06	52.1 g / 1.00 mL	SW8015C	BBL0544	SBL0559	AK80056
18L0372-07	50.5 g / 1.00 mL	SW8015C	BBL0544	SBL0559	AK80056
18L0372-08	50.5 g / 1.00 mL	SW8015C	BBL0544	SBL0559	AK80056
18L0372-09	52.0 g / 10.0 mL	SW8015C	BBL0544	SBL0559	AK80056

**Semivolatile Hydrocarbons by GC**

**Preparation Method: SW3550C**

18L0372-01	50.1 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136
18L0372-02	50.1 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136
18L0372-03	54.3 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136
18L0372-04	50.6 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136
18L0372-05	51.9 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136
18L0372-06	51.3 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136
18L0372-07	50.6 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136
18L0372-08	50.5 g / 1.00 mL	SW8015C	BBL0554	SBL0561	AH80136
18L0372-09	50.6 g / 10.0 mL	SW8015C	BBL0554	SBL0561	AH80136

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
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**Metals (Total) by EPA 6000/7000 Series Methods**

**Preparation Method: SW7471B**

18L0372-09	0.502 g / 20.0 mL	SW7471B	BBL0551	SBL0568	AL80098
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## Certificate of Analysis

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Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

### 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
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#### Batch BBL0344 - SW3050B

##### Blank (BBL0344-BLK1)

Prepared: 12/12/2018 Analyzed: 12/13/2018

Cadmium	<0.200 mg/kg	0.200	mg/kg						
Selenium	<2.50 mg/kg	2.50	mg/kg						
Lead	<0.500 mg/kg	0.500	mg/kg						
Chromium	<0.500 mg/kg	0.500	mg/kg						
Silver	<0.500 mg/kg	0.500	mg/kg						
Barium	<0.500 mg/kg	0.500	mg/kg						
Arsenic	<1.00 mg/kg	1.00	mg/kg						

##### LCS (BBL0344-BS1)

Prepared: 12/12/2018 Analyzed: 12/13/2018

Selenium	84.5 mg/kg	2.50	mg/kg	94.4	mg/kg	89.5	80-120		
Lead	91.3 mg/kg	0.500	mg/kg	94.4	mg/kg	96.7	80-120		
Chromium	92.3 mg/kg	0.500	mg/kg	94.4	mg/kg	97.8	80-120		
Cadmium	90.0 mg/kg	0.200	mg/kg	94.4	mg/kg	95.3	80-120		
Barium	95.2 mg/kg	0.500	mg/kg	94.4	mg/kg	101	80-120		
Silver	4.74 mg/kg	0.500	mg/kg	4.72	mg/kg	100	80-120		
Arsenic	89.9 mg/kg	1.00	mg/kg	94.4	mg/kg	95.2	80-120		

##### LCS Dup (BBL0344-BSD1)

Prepared: 12/12/2018 Analyzed: 12/13/2018

Chromium	93.5 mg/kg	0.500	mg/kg	94.2	mg/kg	99.3	80-120	1.26	20
Arsenic	90.6 mg/kg	1.00	mg/kg	94.2	mg/kg	96.2	80-120	0.761	20
Selenium	86.4 mg/kg	2.50	mg/kg	94.2	mg/kg	91.7	80-120	2.14	20
Silver	4.76 mg/kg	0.500	mg/kg	4.71	mg/kg	101	80-120	0.426	20
Barium	95.7 mg/kg	0.500	mg/kg	94.2	mg/kg	102	80-120	0.465	20
Cadmium	91.0 mg/kg	0.200	mg/kg	94.2	mg/kg	96.7	80-120	1.10	20
Lead	92.7 mg/kg	0.500	mg/kg	94.2	mg/kg	98.5	80-120	1.49	20

##### Matrix Spike (BBL0344-MS1)

Source: 18L0372-09

Prepared: 12/12/2018 Analyzed: 12/13/2018

Silver	5.08 mg/kg	0.500	mg/kg	4.87	<0.500 mg/kg	104	75-125		
Arsenic	95.9 mg/kg	1.00	mg/kg	97.4	1.28 mg/kg	97.2	75-125		
Barium	144 mg/kg	0.500	mg/kg	97.4	45.2 mg/kg	102	75-125		
Cadmium	92.6 mg/kg	0.200	mg/kg	97.4	0.897 mg/kg	94.2	75-125		
Chromium	123 mg/kg	0.500	mg/kg	97.4	24.1 mg/kg	102	75-125		
Lead	108 mg/kg	0.500	mg/kg	97.4	21.5 mg/kg	88.3	75-125		





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## Certificate of Analysis

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Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

### 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	RPD Limit	Qual
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#### Batch BBL0544 - SW3550C

##### Blank (BBL0544-BLK1)

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
TPH-Semi-Volatiles (DRO)	<10.0 mg/kg	10.0	mg/kg						
<hr style="border-top: 1px dashed #000;"/>									
Surr: Pentacosane (Surr)	4.86		mg/kg	4.86		100	40-160		
Surr: Pentacosane (Surr)	4.86		mg/kg	4.86		100	40-160		
Surr: Pentacosane (Surr)	4.86		mg/kg	4.86		100	40-160		
Surr: Pentacosane (Surr)	4.86		mg/kg	4.86		100	40-160		
Surr: Pentacosane (Surr)	4.86		mg/kg	4.86		100	40-160		
Surr: Pentacosane (Surr)	4.86		mg/kg	4.86		100	40-160		
Surr: Pentacosane (Surr)	4.86		mg/kg	4.86		100	40-160		
Surr: Pentacosane (Surr)	4.86		mg/kg	4.86		100	40-160		

##### LCS (BBL0544-BS1)

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
TPH-Semi-Volatiles (DRO)	85.8 mg/kg	10.0	mg/kg	99.0	mg/kg	86.6	40-160		
<hr style="border-top: 1px dashed #000;"/>									
Surr: Pentacosane (Surr)	5.31		mg/kg	4.99	mg/kg	106	40-160		
Surr: Pentacosane (Surr)	5.31		mg/kg	4.99	mg/kg	106	40-160		



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## Certificate of Analysis

### Final Report

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Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

### 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
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#### Batch BBL0544 - SW3550C

##### LCS (BBL0544-BS1)

Prepared: 12/18/2018 Analyzed: 12/19/2018

<i>Surr: Pentacosane (Surr)</i>	5.31		mg/kg	4.99	mg/kg	106	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.31		mg/kg	4.99	mg/kg	106	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.31		mg/kg	4.99	mg/kg	106	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.31		mg/kg	4.99	mg/kg	106	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.31		mg/kg	4.99	mg/kg	106	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.31		mg/kg	4.99	mg/kg	106	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.31		mg/kg	4.99	mg/kg	106	40-160			

##### Matrix Spike (BBL0544-MS1)

Source: 18L0372-09

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
TPH-Semi-Volatiles (DRO)	267 mg/kg	99.0	mg/kg	99.0	160 mg/kg	108	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.49		mg/kg	4.99	mg/kg	110	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.49		mg/kg	4.99	mg/kg	110	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.49		mg/kg	4.99	mg/kg	110	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.49		mg/kg	4.99	mg/kg	110	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.49		mg/kg	4.99	mg/kg	110	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.49		mg/kg	4.99	mg/kg	110	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.49		mg/kg	4.99	mg/kg	110	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.49		mg/kg	4.99	mg/kg	110	40-160			
<i>Surr: Pentacosane (Surr)</i>	5.49		mg/kg	4.99	mg/kg	110	40-160			



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Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

### 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
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#### Batch BBL0544 - SW3550C

##### Matrix Spike Dup (BBL0544-MSD1)

Source: 18L0372-09

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	155 mg/kg	97.8	mg/kg	97.8	160 mg/kg	-5.40	40-160	53.2	20	M, P
TPH-Semi-Volatiles (DRO)	155 mg/kg	97.8	mg/kg	97.8	160 mg/kg	-5.40	40-160	53.2	20	M, P
TPH-Semi-Volatiles (DRO)	155 mg/kg	97.8	mg/kg	97.8	160 mg/kg	-5.40	40-160	53.2	20	M, P
TPH-Semi-Volatiles (DRO)	155 mg/kg	97.8	mg/kg	97.8	160 mg/kg	-5.40	40-160	53.2	20	M, P
TPH-Semi-Volatiles (DRO)	155 mg/kg	97.8	mg/kg	97.8	160 mg/kg	-5.40	40-160	53.2	20	M, P
TPH-Semi-Volatiles (DRO)	155 mg/kg	97.8	mg/kg	97.8	160 mg/kg	-5.40	40-160	53.2	20	M, P
TPH-Semi-Volatiles (DRO)	155 mg/kg	97.8	mg/kg	97.8	160 mg/kg	-5.40	40-160	53.2	20	M, P
TPH-Semi-Volatiles (DRO)	155 mg/kg	97.8	mg/kg	97.8	160 mg/kg	-5.40	40-160	53.2	20	M, P
TPH-Semi-Volatiles (DRO)	155 mg/kg	97.8	mg/kg	97.8	160 mg/kg	-5.40	40-160	53.2	20	M, P
Surr: Pentacosane (Surr)	4.66		mg/kg	4.93	mg/kg	94.6	40-160			
Surr: Pentacosane (Surr)	4.66		mg/kg	4.93	mg/kg	94.6	40-160			
Surr: Pentacosane (Surr)	4.66		mg/kg	4.93	mg/kg	94.6	40-160			
Surr: Pentacosane (Surr)	4.66		mg/kg	4.93	mg/kg	94.6	40-160			
Surr: Pentacosane (Surr)	4.66		mg/kg	4.93	mg/kg	94.6	40-160			
Surr: Pentacosane (Surr)	4.66		mg/kg	4.93	mg/kg	94.6	40-160			
Surr: Pentacosane (Surr)	4.66		mg/kg	4.93	mg/kg	94.6	40-160			
Surr: Pentacosane (Surr)	4.66		mg/kg	4.93	mg/kg	94.6	40-160			
Surr: Pentacosane (Surr)	4.66		mg/kg	4.93	mg/kg	94.6	40-160			

#### Batch BBL0554 - SW3550C

##### Blank (BBL0554-BLK1)

Prepared & Analyzed: 12/19/2018

TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg							
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg							
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg							
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg							
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg							
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg							
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg							
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg							
TPH-Semi-Volatiles (ORO)	<10.0 mg/kg	10.0	mg/kg							



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 15:01
Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

### 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
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#### Batch BBL0554 - SW3550C

##### LCS (BBL0554-BS1)

Prepared & Analyzed: 12/19/2018

TPH-Semi-Volatiles (ORO)	55.2 mg/kg	10.0	mg/kg	100	mg/kg	55.2	40-160			
TPH-Semi-Volatiles (ORO)	55.2 mg/kg	10.0	mg/kg	100	mg/kg	55.2	40-160			
TPH-Semi-Volatiles (ORO)	55.2 mg/kg	10.0	mg/kg	100	mg/kg	55.2	40-160			
TPH-Semi-Volatiles (ORO)	55.2 mg/kg	10.0	mg/kg	100	mg/kg	55.2	40-160			
TPH-Semi-Volatiles (ORO)	55.2 mg/kg	10.0	mg/kg	100	mg/kg	55.2	40-160			
TPH-Semi-Volatiles (ORO)	55.2 mg/kg	10.0	mg/kg	100	mg/kg	55.2	40-160			
TPH-Semi-Volatiles (ORO)	55.2 mg/kg	10.0	mg/kg	100	mg/kg	55.2	40-160			
TPH-Semi-Volatiles (ORO)	55.2 mg/kg	10.0	mg/kg	100	mg/kg	55.2	40-160			
TPH-Semi-Volatiles (ORO)	55.2 mg/kg	10.0	mg/kg	100	mg/kg	55.2	40-160			

##### Matrix Spike (BBL0554-MS1)

Source: 18L0372-09

Prepared & Analyzed: 12/19/2018

TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.2	40-160			

##### Matrix Spike Dup (BBL0554-MSD1)

Source: 18L0372-09

Prepared: 12/19/2018 Analyzed: 12/20/2018

TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	
TPH-Semi-Volatiles (ORO)	255 mg/kg	100	mg/kg	100	183 mg/kg	72.3	40-160	0.0306	20	



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 15:01
Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

### Certified Analyses included in this Report

Analyte	Certifications
<b>SW6010C in Solids</b>	
Arsenic	VELAP
Barium	VELAP,WVDEP
Cadmium	VELAP,WVDEP
Chromium	VELAP
Lead	VELAP,WVDEP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
<b>SW7471B in Solids</b>	
Mercury	VELAP,WVDEP
<b>SW8015C in Solids</b>	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2019
NC	North Carolina DENR	495	12/31/2018
VELAP	NELAC-Virginia Certificate #10074	460021	06/14/2019



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 15:01
Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

### Summary of Data Qualifiers

M Matrix spike recovery is outside established acceptance limits

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 \_\_\_\_\_ OF \_\_\_\_\_

COMPANY NAME: <u>EEE Consulting, Inc.</u>	INVOICE TO: <u>Same</u>	PROJECT NAME/Quote #: <u>Rt. 1 Widening #</u>
CONTACT: <u>Josh Hepler</u>	INVOICE CONTACT: <u>[down arrow]</u>	SITE NAME: <u>A+M Mechanical + Tire / Edgardo Ayala Property</u>
ADDRESS: <u>201 Church Street Blacksburg, VA</u>	INVOICE ADDRESS: <u>[down arrow]</u>	PROJECT NUMBER: <u>18-796.05</u>
PHONE #: <u>540-230-3685</u>	INVOICE PHONE #: <u>[down arrow]</u>	P.O. #: <u>18-796.05</u>
FAX #:	EMAIL: <u>Jhepler@eee-consulting.com</u>	Pretreatment Program: <u>N/A</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>N/A</u>
SAMPLER NAME (PRINT): <u>Carroll Ellis III</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
											TPH-DRO	TPH-ORO	Total BCRP 8 Metals	
1) <u>B1 0'-5'</u>	↓					<u>12/5/18</u>	<u>2:25</u>	<u>Some</u>	<u>5</u>	<u>2</u>	<u>1</u>	<u>1</u>		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>B1 5'-10'</u>	↓						<u>2:35</u>	<u>Some</u>		<u>2</u>	<u>1</u>	<u>1</u>		
3) <u>B2 5'-10'</u>	↓						<u>3:10</u>	<u>Some</u>		<u>2</u>	<u>1</u>	<u>1</u>		
4) <u>B2 10'-15'</u>	↓						<u>3:20</u>	<u>" "</u>		<u>2</u>	<u>1</u>	<u>1</u>		
5) <u>B3 5'-10'</u>	↓						<u>3:30</u>	<u>" "</u>		<u>2</u>	<u>1</u>	<u>1</u>		
6) <u>B3 10'-15'</u>	↓						<u>3:45</u>	<u>" "</u>		<u>2</u>	<u>1</u>	<u>1</u>		
7) <u>B4 0'-5'</u>	↓						<u>4:00</u>	<u>" "</u>		<u>2</u>	<u>1</u>	<u>1</u>		
8) <u>B4 7'-12'</u>	↓						<u>4:20</u>	<u>" "</u>		<u>2</u>	<u>1</u>	<u>1</u>		
9) <u>B5 Comp</u>	↓			<u>12/5/18</u>	<u>4:45</u>		<u>4:45</u>	<u>" "</u>		<u>3</u>	<u>1</u>	<u>1</u>	<u>1</u>	
10)														

RELINQUISHED: <u>[Signature]</u>	DATE / TIME: <u>12/7/18 12:15</u>	RECEIVED: <u>[Signature]</u>	DATE / TIME: <u>7 DEC 2018 15:15</u>	QC Data Package	LAB USE ONLY	COOLER TEMP
RELINQUISHED:	DATE / TIME: <u>3:15</u>	RECEIVED:	DATE / TIME:	Level III <input type="checkbox"/>	Custody Seals used and intact? (Y/N) <input checked="" type="checkbox"/>	Received on ice? (Y/N) <input checked="" type="checkbox"/> <u>3.7°C</u>
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level IV <input type="checkbox"/>	<b>EEE-Blacksburg 18L0372</b> <b>A&amp;M Mechanical Tire Edgardo Pr</b> <b>Recd: 12/07/2018 Due: 12/21/2018</b>	



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/20/2018 15:01
Submitted To:	Josh Hepler	Project Number:	18-796.05
Client Site I.D.:	A&M Mechanical Tire/Edgardo Ayala Property	Purchase Order:	18-796.05

## Sample Conditions Checklist

Samples Received at:	3.70°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?	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



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## Certificate of Analysis

*Final Report*

Laboratory Order ID 18L0645

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

Date Received: December 14, 2018 14:00

Date Issued: December 21, 2018 10:34

Project Number: 18-796

Submitted To: Josh Hepler

Purchase Order:

Client Site I.D.: A&M Mechanical Tire Edgardo Property

Enclosed are the results of analyses for samples received by the laboratory on 12/14/2018 14:00. 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.





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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) Date Issued: 12/21/2018 10:34  
201 Church Street  
Blacksburg VA, 24060  
Submitted To: Josh Hepler Project Number: 18-796  
Client Site I.D.: A&M Mechanical Tire Edgardo Property Purchase Order:

#### ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 18L0645

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-3	18L0645-01	Ground Water	12/11/2018 15:00	12/14/2018 14:00
B-2	18L0645-02	Ground Water	12/12/2018 10:50	12/14/2018 14:00
B-4	18L0645-03	Ground Water	12/12/2018 10:00	12/14/2018 14:00
Trip Blank	18L0645-04	Ground Water	11/27/2018 14:05	12/14/2018 14:00



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

**Sample I.D.** B-3 **Laboratory Sample ID:** 18L0645-01

**Grab Date/Time:** 12/11/2018 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
<b>Volatile Organic Compounds by GCMS</b>									
1,1,1,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	12/17/18 14:44	12/17/18 14:44	KCS
1,1,1-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,1,2,2-Tetrachloroethane	01	SW8260B	<0.40 ug/L		0.40	1	12/17/18 14:44	12/17/18 14:44	KCS
1,1,2-Trichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,1-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,1-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,1-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,2,3-Trichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,2,3-Trichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,2,4-Trichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,2,4-Trimethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,2-Dibromo-3-chloropropane (DBCP)	01	SW8260B	<4.00 ug/L		4.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,2-Dibromoethane (EDB)	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,2-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,2-Dichloroethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,2-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,3,5-Trimethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,3-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,3-Dichloropropane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
1,4-Dichlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
2,2-Dichloropropane	01	SW8260B	<2.00 ug/L		2.00	1	12/17/18 14:44	12/17/18 14:44	KCS
2-Butanone (MEK)	01	SW8260B	<10.0 ug/L		10.0	1	12/17/18 14:44	12/17/18 14:44	KCS
2-Chlorotoluene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
2-Hexanone (MBK)	01	SW8260B	<5.00 ug/L		5.00	1	12/17/18 14:44	12/17/18 14:44	KCS
4-Chlorotoluene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

**Sample I.D.** B-3 **Laboratory Sample ID:** 18L0645-01

**Grab Date/Time:** 12/11/2018 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
<b>Volatile Organic Compounds by GCMS</b>									
4-Isopropyltoluene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
4-Methyl-2-pentanone (MIBK)	01	SW8260B	<5.00 ug/L		5.00	1	12/17/18 14:44	12/17/18 14:44	KCS
<b>Acetone</b>	01	SW8260B	<b>11.0 ug/L</b>		10.0	1	12/17/18 14:44	12/17/18 14:44	KCS
Benzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Bromobenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Bromochloromethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Bromodichloromethane	01	SW8260B	<0.50 ug/L		0.50	1	12/17/18 14:44	12/17/18 14:44	KCS
Bromoform	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Bromomethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Carbon disulfide	01	SW8260B	<10.0 ug/L		10.0	1	12/17/18 14:44	12/17/18 14:44	KCS
Carbon tetrachloride	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Chlorobenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Chloroethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Chloroform	01	SW8260B	<0.50 ug/L		0.50	1	12/17/18 14:44	12/17/18 14:44	KCS
Chloromethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
cis-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
cis-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Dibromochloromethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Dibromomethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Dichlorodifluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Di-isopropyl ether (DIPE)	01	SW8260B	<5.00 ug/L		5.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Ethylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Hexachlorobutadiene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Iodomethane	01	SW8260B	<10.0 ug/L		10.0	1	12/17/18 14:44	12/17/18 14:44	KCS
Isopropylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

Sample I.D. B-3	Laboratory Sample ID: 18L0645-01
Grab Date/Time: 12/11/2018 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
<b>Volatile Organic Compounds by GCMS</b>									
m+p-Xylenes	01	SW8260B	<2.00 ug/L		2.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Methylene chloride	01	SW8260B	<4.00 ug/L		4.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Methyl-t-butyl ether (MTBE)	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Naphthalene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
n-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
n-Propylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
o-Xylene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
sec-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Styrene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
tert-Butylbenzene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Tetrachloroethylene (PCE)	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Toluene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
trans-1,2-Dichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
trans-1,3-Dichloropropene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Trichloroethylene	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Trichlorofluoromethane	01	SW8260B	<1.00 ug/L		1.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Vinyl acetate	01	SW8260B	<10.0 ug/L		10.0	1	12/17/18 14:44	12/17/18 14:44	KCS
Vinyl chloride	01	SW8260B	<0.50 ug/L		0.50	1	12/17/18 14:44	12/17/18 14:44	KCS
Xylenes, Total	01	SW8260B	<3.00 ug/L		3.00	1	12/17/18 14:44	12/17/18 14:44	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	01	SW8260B	107 %		70-120		12/17/18 14:44	12/17/18 14:44	KCS
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260B	99.7 %		75-120		12/17/18 14:44	12/17/18 14:44	KCS
Surr: Dibromofluoromethane (Surr)	01	SW8260B	106 %		70-130		12/17/18 14:44	12/17/18 14:44	KCS
Surr: Toluene-d8 (Surr)	01	SW8260B	104 %		70-130		12/17/18 14:44	12/17/18 14:44	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

<b>Sample I.D.</b> B-3	<b>Laboratory Sample ID:</b> 18L0645-01
<b>Grab Date/Time:</b> 12/11/2018 15:00	
<b>Field Residual Cl:</b>	<b>Field pH:</b>

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	01	SW8015C	<0.562 mg/L		0.562	1	12/18/18 14:45	12/19/18 18:59	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>01</i>	<i>SW8015C</i>	<i>104 %</i>		<i>65-125</i>		<i>12/18/18 14:45</i>	<i>12/19/18 18:59</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	01	SW8015C	<1.1 mg/L		1.1	1	12/18/18 14:45	12/19/18 11:24	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

Sample I.D. B-2	Laboratory Sample ID: 18L0645-02
Grab Date/Time: 12/12/2018 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
<b>Volatile Organic Compounds by GCMS</b>									
1,1,1,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	12/17/18 15:08	12/17/18 15:08	KCS
1,1,1-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,1,2,2-Tetrachloroethane	02	SW8260B	<0.40 ug/L		0.40	1	12/17/18 15:08	12/17/18 15:08	KCS
1,1,2-Trichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,1-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,1-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,1-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,2,3-Trichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,2,3-Trichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,2,4-Trichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,2,4-Trimethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,2-Dibromo-3-chloropropane (DBCP)	02	SW8260B	<4.00 ug/L		4.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,2-Dibromoethane (EDB)	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,2-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,2-Dichloroethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,2-Dichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,3,5-Trimethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,3-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,3-Dichloropropane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
1,4-Dichlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
2,2-Dichloropropane	02	SW8260B	<2.00 ug/L		2.00	1	12/17/18 15:08	12/17/18 15:08	KCS
2-Butanone (MEK)	02	SW8260B	<10.0 ug/L		10.0	1	12/17/18 15:08	12/17/18 15:08	KCS
2-Chlorotoluene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
2-Hexanone (MBK)	02	SW8260B	<5.00 ug/L		5.00	1	12/17/18 15:08	12/17/18 15:08	KCS
4-Chlorotoluene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

Sample I.D. B-2	Laboratory Sample ID: 18L0645-02
Grab Date/Time: 12/12/2018 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
<b>Volatile Organic Compounds by GCMS</b>									
4-Isopropyltoluene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
4-Methyl-2-pentanone (MIBK)	02	SW8260B	<5.00 ug/L		5.00	1	12/17/18 15:08	12/17/18 15:08	KCS
<b>Acetone</b>	02	SW8260B	<b>13.1 ug/L</b>		10.0	1	12/17/18 15:08	12/17/18 15:08	KCS
Benzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Bromobenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Bromochloromethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Bromodichloromethane	02	SW8260B	<0.50 ug/L		0.50	1	12/17/18 15:08	12/17/18 15:08	KCS
Bromoform	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Bromomethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Carbon disulfide	02	SW8260B	<10.0 ug/L		10.0	1	12/17/18 15:08	12/17/18 15:08	KCS
Carbon tetrachloride	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Chlorobenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Chloroethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Chloroform	02	SW8260B	<0.50 ug/L		0.50	1	12/17/18 15:08	12/17/18 15:08	KCS
Chloromethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
cis-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
cis-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Dibromochloromethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Dibromomethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Dichlorodifluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Di-isopropyl ether (DIPE)	02	SW8260B	<5.00 ug/L		5.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Ethylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Hexachlorobutadiene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Iodomethane	02	SW8260B	<10.0 ug/L		10.0	1	12/17/18 15:08	12/17/18 15:08	KCS
Isopropylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

Sample I.D. B-2	Laboratory Sample ID: 18L0645-02
Grab Date/Time: 12/12/2018 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
<b>Volatile Organic Compounds by GCMS</b>									
m+p-Xylenes	02	SW8260B	<2.00 ug/L		2.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Methylene chloride	02	SW8260B	<4.00 ug/L		4.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Methyl-t-butyl ether (MTBE)	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Naphthalene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
n-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
n-Propylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
o-Xylene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
sec-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Styrene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
tert-Butylbenzene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Tetrachloroethylene (PCE)	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Toluene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
trans-1,2-Dichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
trans-1,3-Dichloropropene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Trichloroethylene	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Trichlorofluoromethane	02	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Vinyl acetate	02	SW8260B	<10.0 ug/L		10.0	1	12/17/18 15:08	12/17/18 15:08	KCS
Vinyl chloride	02	SW8260B	<0.50 ug/L		0.50	1	12/17/18 15:08	12/17/18 15:08	KCS
Xylenes, Total	02	SW8260B	<3.00 ug/L		3.00	1	12/17/18 15:08	12/17/18 15:08	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	02	SW8260B	108 %		70-120		12/17/18 15:08	12/17/18 15:08	KCS
Surr: 4-Bromofluorobenzene (Surr)	02	SW8260B	99.4 %		75-120		12/17/18 15:08	12/17/18 15:08	KCS
Surr: Dibromofluoromethane (Surr)	02	SW8260B	106 %		70-130		12/17/18 15:08	12/17/18 15:08	KCS
Surr: Toluene-d8 (Surr)	02	SW8260B	103 %		70-130		12/17/18 15:08	12/17/18 15:08	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

<b>Sample I.D.</b> B-2	<b>Laboratory Sample ID:</b> 18L0645-02
<b>Grab Date/Time:</b> 12/12/2018 10:50	<b>Field pH:</b>
<b>Field Residual Cl:</b>	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	02	SW8015C	<0.575 mg/L		0.575	1	12/19/18 13:55	12/20/18 17:51	HLM
<i>Surr: Pentacosane (Surr)</i>	02	SW8015C	112 %		65-125		12/19/18 13:55	12/20/18 17:51	HLM
TPH-Semi-Volatiles (ORO)	02	SW8015C	<1.1 mg/L		1.1	1	12/19/18 09:30	12/19/18 14:07	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

Sample I.D. B-4	Laboratory Sample ID: 18L0645-03
Grab Date/Time: 12/12/2018 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
<b>Volatile Organic Compounds by GCMS</b>									
1,1,1,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	12/17/18 15:32	12/17/18 15:32	KCS
1,1,1-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,1,2,2-Tetrachloroethane	03	SW8260B	<0.40 ug/L		0.40	1	12/17/18 15:32	12/17/18 15:32	KCS
1,1,2-Trichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,1-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,1-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,1-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,2,3-Trichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,2,3-Trichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,2,4-Trichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,2,4-Trimethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,2-Dibromo-3-chloropropane (DBCP)	03	SW8260B	<4.00 ug/L		4.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,2-Dibromoethane (EDB)	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,2-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,2-Dichloroethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,2-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,3,5-Trimethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,3-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,3-Dichloropropane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
1,4-Dichlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
2,2-Dichloropropane	03	SW8260B	<2.00 ug/L		2.00	1	12/17/18 15:32	12/17/18 15:32	KCS
2-Butanone (MEK)	03	SW8260B	<10.0 ug/L		10.0	1	12/17/18 15:32	12/17/18 15:32	KCS
2-Chlorotoluene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
2-Hexanone (MBK)	03	SW8260B	<5.00 ug/L		5.00	1	12/17/18 15:32	12/17/18 15:32	KCS
4-Chlorotoluene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

Sample I.D. B-4	Laboratory Sample ID: 18L0645-03
Grab Date/Time: 12/12/2018 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
<b>Volatile Organic Compounds by GCMS</b>									
4-Isopropyltoluene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
4-Methyl-2-pentanone (MIBK)	03	SW8260B	<5.00 ug/L		5.00	1	12/17/18 15:32	12/17/18 15:32	KCS
<b>Acetone</b>	03	SW8260B	<b>12.3 ug/L</b>		10.0	1	12/17/18 15:32	12/17/18 15:32	KCS
Benzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Bromobenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Bromochloromethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Bromodichloromethane	03	SW8260B	<0.50 ug/L		0.50	1	12/17/18 15:32	12/17/18 15:32	KCS
Bromoform	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Bromomethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Carbon disulfide	03	SW8260B	<10.0 ug/L		10.0	1	12/17/18 15:32	12/17/18 15:32	KCS
Carbon tetrachloride	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Chlorobenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Chloroethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Chloroform	03	SW8260B	<0.50 ug/L		0.50	1	12/17/18 15:32	12/17/18 15:32	KCS
Chloromethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
cis-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
cis-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Dibromochloromethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Dibromomethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Dichlorodifluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Di-isopropyl ether (DIPE)	03	SW8260B	<5.00 ug/L		5.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Ethylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Hexachlorobutadiene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Iodomethane	03	SW8260B	<10.0 ug/L		10.0	1	12/17/18 15:32	12/17/18 15:32	KCS
Isopropylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

Sample I.D. B-4	Laboratory Sample ID: 18L0645-03
Grab Date/Time: 12/12/2018 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
<b>Volatile Organic Compounds by GCMS</b>									
m+p-Xylenes	03	SW8260B	<2.00 ug/L		2.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Methylene chloride	03	SW8260B	<4.00 ug/L		4.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Methyl-t-butyl ether (MTBE)	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Naphthalene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
n-Butylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
n-Propylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
o-Xylene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
sec-Butylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Styrene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
tert-Butylbenzene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Tetrachloroethylene (PCE)	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Toluene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
trans-1,2-Dichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
trans-1,3-Dichloropropene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Trichloroethylene	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Trichlorofluoromethane	03	SW8260B	<1.00 ug/L		1.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Vinyl acetate	03	SW8260B	<10.0 ug/L		10.0	1	12/17/18 15:32	12/17/18 15:32	KCS
Vinyl chloride	03	SW8260B	<0.50 ug/L		0.50	1	12/17/18 15:32	12/17/18 15:32	KCS
Xylenes, Total	03	SW8260B	<3.00 ug/L		3.00	1	12/17/18 15:32	12/17/18 15:32	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	03	SW8260B	106 %		70-120		12/17/18 15:32	12/17/18 15:32	KCS
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260B	100 %		75-120		12/17/18 15:32	12/17/18 15:32	KCS
Surr: Dibromofluoromethane (Surr)	03	SW8260B	107 %		70-130		12/17/18 15:32	12/17/18 15:32	KCS
Surr: Toluene-d8 (Surr)	03	SW8260B	101 %		70-130		12/17/18 15:32	12/17/18 15:32	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

<b>Sample I.D.</b> B-4	<b>Laboratory Sample ID:</b> 18L0645-03
<b>Grab Date/Time:</b> 12/12/2018 10:00	<b>Field pH:</b>
<b>Field Residual Cl:</b>	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Semivolatile Hydrocarbons by GC</b>									
TPH-Semi-Volatiles (DRO)	03	SW8015C	<0.581 mg/L		0.581	1	12/19/18 13:55	12/20/18 05:15	HLM
<i>Surr: Pentacosane (Surr)</i>	<i>03</i>	<i>SW8015C</i>	<i>109 %</i>		<i>65-125</i>		<i>12/19/18 13:55</i>	<i>12/20/18 05:15</i>	<i>HLM</i>
TPH-Semi-Volatiles (ORO)	03	SW8015C	<1.2 mg/L		1.2	1	12/19/18 09:30	12/19/18 14:31	HLM



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

**Sample I.D.** Trip Blank **Laboratory Sample ID:** 18L0645-04

**Grab Date/Time:** 11/27/2018 14:05

**Field Residual Cl:** **Field pH:**

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
1,1,1,2-Tetrachloroethane	04	SW8260B	<0.40 ug/L		0.40	1	12/17/18 11:59	12/17/18 11:59	KCS
1,1,1-Trichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,1,2,2-Tetrachloroethane	04	SW8260B	<0.40 ug/L		0.40	1	12/17/18 11:59	12/17/18 11:59	KCS
1,1,2-Trichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,1-Dichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,1-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,1-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,2,3-Trichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,2,3-Trichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,2,4-Trichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,2,4-Trimethylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,2-Dibromo-3-chloropropane (DBCP)	04	SW8260B	<4.00 ug/L		4.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,2-Dibromoethane (EDB)	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,2-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,2-Dichloroethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,2-Dichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,3,5-Trimethylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,3-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,3-Dichloropropane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
1,4-Dichlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
2,2-Dichloropropane	04	SW8260B	<2.00 ug/L		2.00	1	12/17/18 11:59	12/17/18 11:59	KCS
2-Butanone (MEK)	04	SW8260B	<10.0 ug/L		10.0	1	12/17/18 11:59	12/17/18 11:59	KCS
2-Chlorotoluene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
2-Hexanone (MBK)	04	SW8260B	<5.00 ug/L		5.00	1	12/17/18 11:59	12/17/18 11:59	KCS
4-Chlorotoluene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

Sample I.D. Trip Blank	Laboratory Sample ID: 18L0645-04
Grab Date/Time: 11/27/2018 14:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
4-Isopropyltoluene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
4-Methyl-2-pentanone (MIBK)	04	SW8260B	<5.00 ug/L		5.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Acetone	04	SW8260B	<10.0 ug/L		10.0	1	12/17/18 11:59	12/17/18 11:59	KCS
Benzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Bromobenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Bromochloromethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Bromodichloromethane	04	SW8260B	<0.50 ug/L		0.50	1	12/17/18 11:59	12/17/18 11:59	KCS
Bromoform	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Bromomethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Carbon disulfide	04	SW8260B	<10.0 ug/L		10.0	1	12/17/18 11:59	12/17/18 11:59	KCS
Carbon tetrachloride	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Chlorobenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Chloroethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Chloroform	04	SW8260B	<0.50 ug/L		0.50	1	12/17/18 11:59	12/17/18 11:59	KCS
Chloromethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
cis-1,2-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
cis-1,3-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Dibromochloromethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Dibromomethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Dichlorodifluoromethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Di-isopropyl ether (DIPE)	04	SW8260B	<5.00 ug/L		5.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Ethylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Hexachlorobutadiene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Iodomethane	04	SW8260B	<10.0 ug/L		10.0	1	12/17/18 11:59	12/17/18 11:59	KCS
Isopropylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

**Analytical Results**

Sample I.D. Trip Blank	Laboratory Sample ID: 18L0645-04
Grab Date/Time: 11/27/2018 14:05	Field pH:
Field Residual Cl:	

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>Volatile Organic Compounds by GCMS</b>									
m+p-Xylenes	04	SW8260B	<2.00 ug/L		2.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Methylene chloride	04	SW8260B	<4.00 ug/L		4.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Methyl-t-butyl ether (MTBE)	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Naphthalene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
n-Butylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
n-Propylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
o-Xylene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
sec-Butylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Styrene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
tert-Butylbenzene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Tetrachloroethylene (PCE)	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Toluene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
trans-1,2-Dichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
trans-1,3-Dichloropropene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Trichloroethylene	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Trichlorofluoromethane	04	SW8260B	<1.00 ug/L		1.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Vinyl acetate	04	SW8260B	<10.0 ug/L		10.0	1	12/17/18 11:59	12/17/18 11:59	KCS
Vinyl chloride	04	SW8260B	<0.50 ug/L		0.50	1	12/17/18 11:59	12/17/18 11:59	KCS
Xylenes, Total	04	SW8260B	<3.00 ug/L		3.00	1	12/17/18 11:59	12/17/18 11:59	KCS
Surr: 1,2-Dichloroethane-d4 (Surr)	04	SW8260B	103 %		70-120		12/17/18 11:59	12/17/18 11:59	KCS
Surr: 4-Bromofluorobenzene (Surr)	04	SW8260B	101 %		75-120		12/17/18 11:59	12/17/18 11:59	KCS
Surr: Dibromofluoromethane (Surr)	04	SW8260B	107 %		70-130		12/17/18 11:59	12/17/18 11:59	KCS
Surr: Toluene-d8 (Surr)	04	SW8260B	103 %		70-130		12/17/18 11:59	12/17/18 11:59	KCS



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

**Laboratory Order ID: 18L0645**

### Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
<b>Semivolatile Hydrocarbons by GC</b>		<b>Preparation Method: SW3510C</b>			
18L0645-01	890 mL / 1.00 mL	SW8015C	BBL0540	SBL0564	AK80055
<b>Semivolatile Hydrocarbons by GC</b>		<b>Preparation Method: SW3510C</b>			
18L0645-01	870 mL / 1.00 mL	SW8015C	BBL0541	SBL0545	AH80136
18L0645-02	870 mL / 1.00 mL	SW8015C	BBL0541	SBL0545	AH80136
18L0645-03	860 mL / 1.00 mL	SW8015C	BBL0541	SBL0545	AH80136
<b>Semivolatile Hydrocarbons by GC</b>		<b>Preparation Method: SW3510C</b>			
18L0645-03	860 mL / 1.00 mL	SW8015C	BBL0585	SBL0564	AK80055
<b>Semivolatile Hydrocarbons by GC</b>		<b>Preparation Method: SW3510C</b>			
18L0645-02	870 mL / 1.00 mL	SW8015C	BBL0601	SBL0596	AK80055
Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
<b>Volatile Organic Compounds by GCMS</b>		<b>Preparation Method: SW5030B</b>			
18L0645-01	5.00 mL / 5.00 mL	SW8260B	BBL0489	SBL0448	AL80011
18L0645-02	5.00 mL / 5.00 mL	SW8260B	BBL0489	SBL0448	AL80011
18L0645-03	5.00 mL / 5.00 mL	SW8260B	BBL0489	SBL0448	AL80011
18L0645-04	5.00 mL / 5.00 mL	SW8260B	BBL0489	SBL0448	AL80011



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## Certificate of Analysis

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Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

### 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
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#### Batch BBL0489 - SW5030B

#### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

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							
1,1,1,2-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							
1,1,1-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							
1,1,2,2-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							
1,1,2-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-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-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							
1,1-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-Trichlorobenzene	<1.00 ug/L	1.00	ug/L							
1,2,3-Trichlorobenzene	<1.00 ug/L	1.00	ug/L							



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## Certificate of Analysis

### Final Report

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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

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							
1,2,3-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-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							
1,2,4-Trimethylbenzene	<1.00 ug/L	1.00	ug/L							
1,2,4-Trimethylbenzene	<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-Dibromo-3-chloropropane (DBCP)	<4.00 ug/L	4.00	ug/L							
1,2-Dibromo-3-chloropropane (DBCP)	<4.00 ug/L	4.00	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-Dibromoethane (EDB)	<1.00 ug/L	1.00	ug/L							
1,2-Dibromoethane (EDB)	<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	<1.00 ug/L	1.00	ug/L							
1,2-Dichlorobenzene	<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-Dichloroethane	<1.00 ug/L	1.00	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	<1.00 ug/L	1.00	ug/L							
1,2-Dichloropropane	<1.00 ug/L	1.00	ug/L							



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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

1,2-Dichloropropane	<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							
1,3,5-Trimethylbenzene	<1.00 ug/L	1.00	ug/L							
1,3,5-Trimethylbenzene	<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							
1,3-Dichlorobenzene	<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							
1,3-Dichloropropane	<1.00 ug/L	1.00	ug/L							
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							
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	<2.00 ug/L	2.00	ug/L							
2,2-Dichloropropane	<2.00 ug/L	2.00	ug/L							
2,2-Dichloropropane	<2.00 ug/L	2.00	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)	<10.0 ug/L	10.0	ug/L							
2-Butanone (MEK)	<10.0 ug/L	10.0	ug/L							
2-Butanone (MEK)	<10.0 ug/L	10.0	ug/L							
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
2-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
2-Hexanone (MBK)	<5.00 ug/L	5.00	ug/L							



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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

2-Hexanone (MBK)	<5.00 ug/L	5.00	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-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
4-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
4-Chlorotoluene	<1.00 ug/L	1.00	ug/L							
4-Isopropyltoluene	<1.00 ug/L	1.00	ug/L							
4-Isopropyltoluene	<1.00 ug/L	1.00	ug/L							
4-Isopropyltoluene	<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							
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							
Acetone	<10.0 ug/L	10.0	ug/L							
Acetone	<10.0 ug/L	10.0	ug/L							
Benzene	<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							
Benzene	<1.00 ug/L	1.00	ug/L							
Bromobenzene	<1.00 ug/L	1.00	ug/L							
Bromobenzene	<1.00 ug/L	1.00	ug/L							
Bromobenzene	<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							
Bromochloromethane	<1.00 ug/L	1.00	ug/L							
Bromochloromethane	<1.00 ug/L	1.00	ug/L							



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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

Bromodichloromethane	<0.50 ug/L	0.50	ug/L							
Bromodichloromethane	<0.50 ug/L	0.50	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							
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							
Bromomethane	<1.00 ug/L	1.00	ug/L							
Bromomethane	<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 disulfide	<10.0 ug/L	10.0	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							
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							
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							
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							
Chloroform	<0.50 ug/L	0.50	ug/L							



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

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							
Chloromethane	<1.00 ug/L	1.00	ug/L							
Chloromethane	<1.00 ug/L	1.00	ug/L							
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
cis-1,2-Dichloroethylene	<1.00 ug/L	1.00	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							
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	<1.00 ug/L	1.00	ug/L							
Dibromochloromethane	<1.00 ug/L	1.00	ug/L							
Dibromochloromethane	<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							
Dibromomethane	<1.00 ug/L	1.00	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							
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							
Di-isopropyl ether (DIPE)	<5.00 ug/L	5.00	ug/L							
Di-isopropyl ether (DIPE)	<5.00 ug/L	5.00	ug/L							
Di-isopropyl ether (DIPE)	<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							



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

Ethylbenzene	<1.00 ug/L	1.00	ug/L							
Ethylbenzene	<1.00 ug/L	1.00	ug/L							
Hexachlorobutadiene	<1.00 ug/L	1.00	ug/L							
Hexachlorobutadiene	<1.00 ug/L	1.00	ug/L							
Hexachlorobutadiene	<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							
Iodomethane	<10.0 ug/L	10.0	ug/L							
Iodomethane	<10.0 ug/L	10.0	ug/L							
Iodomethane	<10.0 ug/L	10.0	ug/L							
Isopropylbenzene	<1.00 ug/L	1.00	ug/L							
Isopropylbenzene	<1.00 ug/L	1.00	ug/L							
Isopropylbenzene	<1.00 ug/L	1.00	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							
m+p-Xylenes	<2.00 ug/L	2.00	ug/L							
m+p-Xylenes	<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							
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							
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L							
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L							
Methyl-t-butyl ether (MTBE)	<1.00 ug/L	1.00	ug/L							
Naphthalene	<1.00 ug/L	1.00	ug/L							
Naphthalene	<1.00 ug/L	1.00	ug/L							
Naphthalene	<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							



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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

n-Butylbenzene	<1.00 ug/L	1.00	ug/L							
n-Butylbenzene	<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							
n-Propylbenzene	<1.00 ug/L	1.00	ug/L							
n-Propylbenzene	<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							
o-Xylene	<1.00 ug/L	1.00	ug/L							
o-Xylene	<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							
sec-Butylbenzene	<1.00 ug/L	1.00	ug/L							
sec-Butylbenzene	<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							
Styrene	<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							
tert-Butylbenzene	<1.00 ug/L	1.00	ug/L							
tert-Butylbenzene	<1.00 ug/L	1.00	ug/L							
tert-Butylbenzene	<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							
Tetrachloroethylene (PCE)	<1.00 ug/L	1.00	ug/L							
Tetrachloroethylene (PCE)	<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							
Toluene	<1.00 ug/L	1.00	ug/L							
Toluene	<1.00 ug/L	1.00	ug/L							
Toluene	<1.00 ug/L	1.00	ug/L							



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## Certificate of Analysis

### Final Report

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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
trans-1,2-Dichloroethylene	<1.00 ug/L	1.00	ug/L							
trans-1,2-Dichloroethylene	<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-1,3-Dichloropropene	<1.00 ug/L	1.00	ug/L							
trans-1,3-Dichloropropene	<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							
Trichloroethylene	<1.00 ug/L	1.00	ug/L							
Trichloroethylene	<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							
Trichlorofluoromethane	<1.00 ug/L	1.00	ug/L							
Trichlorofluoromethane	<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 acetate	<10.0 ug/L	10.0	ug/L							
Vinyl acetate	<10.0 ug/L	10.0	ug/L							
Vinyl acetate	<10.0 ug/L	10.0	ug/L							
Vinyl chloride	<0.50 ug/L	0.50	ug/L							
Vinyl chloride	<0.50 ug/L	0.50	ug/L							
Vinyl chloride	<0.50 ug/L	0.50	ug/L							
Vinyl chloride	<0.50 ug/L	0.50	ug/L							
Xylenes, Total	<3.00 ug/L	3.00	ug/L							
Xylenes, Total	<3.00 ug/L	3.00	ug/L							
Xylenes, Total	<3.00 ug/L	3.00	ug/L							
Xylenes, Total	<3.00 ug/L	3.00	ug/L							
Surr: 1,2-Dichloroethane-d4 (Surr)	51.6		ug/L	50.0		103	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	51.6		ug/L	50.0		103	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	51.6		ug/L	50.0		103	70-120			



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

### 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
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#### Batch BBL0489 - SW5030B

##### Blank (BBL0489-BLK1)

Prepared & Analyzed: 12/17/2018

Surr: 1,2-Dichloroethane-d4 (Surr)	51.6		ug/L	50.0		103	70-120			
Surr: 4-Bromofluorobenzene (Surr)	51.2		ug/L	50.0		102	75-120			
Surr: 4-Bromofluorobenzene (Surr)	51.2		ug/L	50.0		102	75-120			
Surr: 4-Bromofluorobenzene (Surr)	51.2		ug/L	50.0		102	75-120			
Surr: 4-Bromofluorobenzene (Surr)	51.2		ug/L	50.0		102	75-120			
Surr: Dibromofluoromethane (Surr)	53.5		ug/L	50.0		107	70-130			
Surr: Dibromofluoromethane (Surr)	53.5		ug/L	50.0		107	70-130			
Surr: Dibromofluoromethane (Surr)	53.5		ug/L	50.0		107	70-130			
Surr: Dibromofluoromethane (Surr)	53.5		ug/L	50.0		107	70-130			
Surr: Toluene-d8 (Surr)	50.8		ug/L	50.0		102	70-130			
Surr: Toluene-d8 (Surr)	50.8		ug/L	50.0		102	70-130			
Surr: Toluene-d8 (Surr)	50.8		ug/L	50.0		102	70-130			
Surr: Toluene-d8 (Surr)	50.8		ug/L	50.0		102	70-130			

##### LCS (BBL0489-BS1)

Prepared & Analyzed: 12/17/2018

1,1,1,2-Tetrachloroethane	51.8 ug/L	0.4	ug/L	50.0	ug/L	104	80-130			
1,1,1,2-Tetrachloroethane	51.8 ug/L	0.4	ug/L	50.0	ug/L	104	80-130			
1,1,1,2-Tetrachloroethane	51.8 ug/L	0.4	ug/L	50.0	ug/L	104	80-130			
1,1,1,2-Tetrachloroethane	51.8 ug/L	0.4	ug/L	50.0	ug/L	104	80-130			
1,1,1-Trichloroethane	55.3 ug/L	1	ug/L	50.0	ug/L	111	65-130			
1,1,1-Trichloroethane	55.3 ug/L	1	ug/L	50.0	ug/L	111	65-130			
1,1,1-Trichloroethane	55.3 ug/L	1	ug/L	50.0	ug/L	111	65-130			
1,1,1-Trichloroethane	55.3 ug/L	1	ug/L	50.0	ug/L	111	65-130			
1,1,2,2-Tetrachloroethane	53.8 ug/L	0.4	ug/L	50.0	ug/L	108	65-130			
1,1,2,2-Tetrachloroethane	53.8 ug/L	0.4	ug/L	50.0	ug/L	108	65-130			
1,1,2,2-Tetrachloroethane	53.8 ug/L	0.4	ug/L	50.0	ug/L	108	65-130			
1,1,2,2-Tetrachloroethane	53.8 ug/L	0.4	ug/L	50.0	ug/L	108	65-130			
1,1,2-Trichloroethane	56.1 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,1,2-Trichloroethane	56.1 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,1,2-Trichloroethane	56.1 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,1,2-Trichloroethane	56.1 ug/L	1	ug/L	50.0	ug/L	112	75-125			



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## Certificate of Analysis

### Final Report

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Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

### 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
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#### Batch BBL0489 - SW5030B

#### LCS (BBL0489-BS1)

Prepared & Analyzed: 12/17/2018

1,1-Dichloroethane	62.8 ug/L	1	ug/L	50.0	ug/L	126	70-135			
1,1-Dichloroethane	62.8 ug/L	1	ug/L	50.0	ug/L	126	70-135			
1,1-Dichloroethane	62.8 ug/L	1	ug/L	50.0	ug/L	126	70-135			
1,1-Dichloroethane	62.8 ug/L	1	ug/L	50.0	ug/L	126	70-135			
1,1-Dichloroethylene	59.6 ug/L	1	ug/L	50.0	ug/L	119	70-130			
1,1-Dichloroethylene	59.6 ug/L	1	ug/L	50.0	ug/L	119	70-130			
1,1-Dichloroethylene	59.6 ug/L	1	ug/L	50.0	ug/L	119	70-130			
1,1-Dichloroethylene	59.6 ug/L	1	ug/L	50.0	ug/L	119	70-130			
1,1-Dichloropropene	57.9 ug/L	1	ug/L	50.0	ug/L	116	75-135			
1,1-Dichloropropene	57.9 ug/L	1	ug/L	50.0	ug/L	116	75-135			
1,1-Dichloropropene	57.9 ug/L	1	ug/L	50.0	ug/L	116	75-135			
1,1-Dichloropropene	57.9 ug/L	1	ug/L	50.0	ug/L	116	75-135			
1,2,3-Trichlorobenzene	48.5 ug/L	1	ug/L	50.0	ug/L	97.1	55-140			
1,2,3-Trichlorobenzene	48.5 ug/L	1	ug/L	50.0	ug/L	97.1	55-140			
1,2,3-Trichlorobenzene	48.5 ug/L	1	ug/L	50.0	ug/L	97.1	55-140			
1,2,3-Trichlorobenzene	48.5 ug/L	1	ug/L	50.0	ug/L	97.1	55-140			
1,2,3-Trichloropropane	52.6 ug/L	1	ug/L	50.0	ug/L	105	75-125			
1,2,3-Trichloropropane	52.6 ug/L	1	ug/L	50.0	ug/L	105	75-125			
1,2,3-Trichloropropane	52.6 ug/L	1	ug/L	50.0	ug/L	105	75-125			
1,2,3-Trichloropropane	52.6 ug/L	1	ug/L	50.0	ug/L	105	75-125			
1,2,4-Trichlorobenzene	49.3 ug/L	1	ug/L	50.0	ug/L	98.5	65-135			
1,2,4-Trichlorobenzene	49.3 ug/L	1	ug/L	50.0	ug/L	98.5	65-135			
1,2,4-Trichlorobenzene	49.3 ug/L	1	ug/L	50.0	ug/L	98.5	65-135			
1,2,4-Trichlorobenzene	49.3 ug/L	1	ug/L	50.0	ug/L	98.5	65-135			
1,2,4-Trimethylbenzene	54.4 ug/L	1	ug/L	50.0	ug/L	109	75-130			
1,2,4-Trimethylbenzene	54.4 ug/L	1	ug/L	50.0	ug/L	109	75-130			
1,2,4-Trimethylbenzene	54.4 ug/L	1	ug/L	50.0	ug/L	109	75-130			
1,2,4-Trimethylbenzene	54.4 ug/L	1	ug/L	50.0	ug/L	109	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	45.1 ug/L	4	ug/L	50.0	ug/L	90.2	50-130			
1,2-Dibromo-3-chloropropane (DBCP)	45.1 ug/L	4	ug/L	50.0	ug/L	90.2	50-130			
1,2-Dibromo-3-chloropropane (DBCP)	45.1 ug/L	4	ug/L	50.0	ug/L	90.2	50-130			



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## Certificate of Analysis

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### 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
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#### Batch BBL0489 - SW5030B

#### LCS (BBL0489-BS1)

Prepared & Analyzed: 12/17/2018

1,2-Dibromo-3-chloropropane (DBCP)	45.1 ug/L	4	ug/L	50.0	ug/L	90.2	50-130			
1,2-Dibromoethane (EDB)	54.0 ug/L	1	ug/L	50.0	ug/L	108	80-120			
1,2-Dibromoethane (EDB)	54.0 ug/L	1	ug/L	50.0	ug/L	108	80-120			
1,2-Dibromoethane (EDB)	54.0 ug/L	1	ug/L	50.0	ug/L	108	80-120			
1,2-Dibromoethane (EDB)	54.0 ug/L	1	ug/L	50.0	ug/L	108	80-120			
1,2-Dichlorobenzene	50.8 ug/L	1	ug/L	50.0	ug/L	102	70-120			
1,2-Dichlorobenzene	50.8 ug/L	1	ug/L	50.0	ug/L	102	70-120			
1,2-Dichlorobenzene	50.8 ug/L	1	ug/L	50.0	ug/L	102	70-120			
1,2-Dichlorobenzene	50.8 ug/L	1	ug/L	50.0	ug/L	102	70-120			
1,2-Dichloroethane	54.6 ug/L	1	ug/L	50.0	ug/L	109	70-130			
1,2-Dichloroethane	54.6 ug/L	1	ug/L	50.0	ug/L	109	70-130			
1,2-Dichloroethane	54.6 ug/L	1	ug/L	50.0	ug/L	109	70-130			
1,2-Dichloroethane	54.6 ug/L	1	ug/L	50.0	ug/L	109	70-130			
1,2-Dichloropropane	56.1 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,2-Dichloropropane	56.1 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,2-Dichloropropane	56.1 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,2-Dichloropropane	56.1 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,3,5-Trimethylbenzene	55.2 ug/L	1	ug/L	50.0	ug/L	110	75-125			
1,3,5-Trimethylbenzene	55.2 ug/L	1	ug/L	50.0	ug/L	110	75-125			
1,3,5-Trimethylbenzene	55.2 ug/L	1	ug/L	50.0	ug/L	110	75-125			
1,3,5-Trimethylbenzene	55.2 ug/L	1	ug/L	50.0	ug/L	110	75-125			
1,3-Dichlorobenzene	53.1 ug/L	1	ug/L	50.0	ug/L	106	75-125			
1,3-Dichlorobenzene	53.1 ug/L	1	ug/L	50.0	ug/L	106	75-125			
1,3-Dichlorobenzene	53.1 ug/L	1	ug/L	50.0	ug/L	106	75-125			
1,3-Dichlorobenzene	53.1 ug/L	1	ug/L	50.0	ug/L	106	75-125			
1,3-Dichloropropane	56.0 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,3-Dichloropropane	56.0 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,3-Dichloropropane	56.0 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,3-Dichloropropane	56.0 ug/L	1	ug/L	50.0	ug/L	112	75-125			
1,4-Dichlorobenzene	50.0 ug/L	1	ug/L	50.0	ug/L	100	75-125			
1,4-Dichlorobenzene	50.0 ug/L	1	ug/L	50.0	ug/L	100	75-125			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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**Batch BBL0489 - SW5030B**

**LCS (BBL0489-BS1)**

Prepared & Analyzed: 12/17/2018

1,4-Dichlorobenzene	50.0 ug/L	1	ug/L	50.0	ug/L	100	75-125			
1,4-Dichlorobenzene	50.0 ug/L	1	ug/L	50.0	ug/L	100	75-125			
2,2-Dichloropropane	60.7 ug/L	2	ug/L	50.0	ug/L	121	70-135			
2,2-Dichloropropane	60.7 ug/L	2	ug/L	50.0	ug/L	121	70-135			
2,2-Dichloropropane	60.7 ug/L	2	ug/L	50.0	ug/L	121	70-135			
2,2-Dichloropropane	60.7 ug/L	2	ug/L	50.0	ug/L	121	70-135			
2-Butanone (MEK)	68.1 ug/L	10	ug/L	50.0	ug/L	136	30-150			
2-Butanone (MEK)	68.1 ug/L	10	ug/L	50.0	ug/L	136	30-150			
2-Butanone (MEK)	68.1 ug/L	10	ug/L	50.0	ug/L	136	30-150			
2-Butanone (MEK)	68.1 ug/L	10	ug/L	50.0	ug/L	136	30-150			
2-Chlorotoluene	53.2 ug/L	1	ug/L	50.0	ug/L	106	75-125			
2-Chlorotoluene	53.2 ug/L	1	ug/L	50.0	ug/L	106	75-125			
2-Chlorotoluene	53.2 ug/L	1	ug/L	50.0	ug/L	106	75-125			
2-Chlorotoluene	53.2 ug/L	1	ug/L	50.0	ug/L	106	75-125			
2-Hexanone (MBK)	61.2 ug/L	5	ug/L	50.0	ug/L	122	55-130			
2-Hexanone (MBK)	61.2 ug/L	5	ug/L	50.0	ug/L	122	55-130			
2-Hexanone (MBK)	61.2 ug/L	5	ug/L	50.0	ug/L	122	55-130			
2-Hexanone (MBK)	61.2 ug/L	5	ug/L	50.0	ug/L	122	55-130			
4-Chlorotoluene	50.0 ug/L	1	ug/L	50.0	ug/L	99.9	75-130			
4-Chlorotoluene	50.0 ug/L	1	ug/L	50.0	ug/L	99.9	75-130			
4-Chlorotoluene	50.0 ug/L	1	ug/L	50.0	ug/L	99.9	75-130			
4-Chlorotoluene	50.0 ug/L	1	ug/L	50.0	ug/L	99.9	75-130			
4-Isopropyltoluene	52.3 ug/L	1	ug/L	50.0	ug/L	105	75-130			
4-Isopropyltoluene	52.3 ug/L	1	ug/L	50.0	ug/L	105	75-130			
4-Isopropyltoluene	52.3 ug/L	1	ug/L	50.0	ug/L	105	75-130			
4-Isopropyltoluene	52.3 ug/L	1	ug/L	50.0	ug/L	105	75-130			
4-Methyl-2-pentanone (MIBK)	59.4 ug/L	5	ug/L	50.0	ug/L	119	60-135			
4-Methyl-2-pentanone (MIBK)	59.4 ug/L	5	ug/L	50.0	ug/L	119	60-135			
4-Methyl-2-pentanone (MIBK)	59.4 ug/L	5	ug/L	50.0	ug/L	119	60-135			
4-Methyl-2-pentanone (MIBK)	59.4 ug/L	5	ug/L	50.0	ug/L	119	60-135			
Acetone	69.4 ug/L	10	ug/L	50.0	ug/L	139	40-140			



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

### 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
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#### Batch BBL0489 - SW5030B

#### LCS (BBL0489-BS1)

Prepared & Analyzed: 12/17/2018

Acetone	69.4 ug/L	10	ug/L	50.0	ug/L	139	40-140			
Acetone	69.4 ug/L	10	ug/L	50.0	ug/L	139	40-140			
Acetone	69.4 ug/L	10	ug/L	50.0	ug/L	139	40-140			
Benzene	57.5 ug/L	1	ug/L	50.0	ug/L	115	80-120			
Benzene	57.5 ug/L	1	ug/L	50.0	ug/L	115	80-120			
Benzene	57.5 ug/L	1	ug/L	50.0	ug/L	115	80-120			
Benzene	57.5 ug/L	1	ug/L	50.0	ug/L	115	80-120			
Bromobenzene	52.2 ug/L	1	ug/L	50.0	ug/L	104	75-125			
Bromobenzene	52.2 ug/L	1	ug/L	50.0	ug/L	104	75-125			
Bromobenzene	52.2 ug/L	1	ug/L	50.0	ug/L	104	75-125			
Bromobenzene	52.2 ug/L	1	ug/L	50.0	ug/L	104	75-125			
Bromochloromethane	56.1 ug/L	1	ug/L	50.0	ug/L	112	65-130			
Bromochloromethane	56.1 ug/L	1	ug/L	50.0	ug/L	112	65-130			
Bromochloromethane	56.1 ug/L	1	ug/L	50.0	ug/L	112	65-130			
Bromochloromethane	56.1 ug/L	1	ug/L	50.0	ug/L	112	65-130			
Bromodichloromethane	57.7 ug/L	0.5	ug/L	50.0	ug/L	115	75-120			
Bromodichloromethane	57.7 ug/L	0.5	ug/L	50.0	ug/L	115	75-120			
Bromodichloromethane	57.7 ug/L	0.5	ug/L	50.0	ug/L	115	75-120			
Bromodichloromethane	57.7 ug/L	0.5	ug/L	50.0	ug/L	115	75-120			
Bromoform	49.9 ug/L	1	ug/L	50.0	ug/L	99.7	70-130			
Bromoform	49.9 ug/L	1	ug/L	50.0	ug/L	99.7	70-130			
Bromoform	49.9 ug/L	1	ug/L	50.0	ug/L	99.7	70-130			
Bromoform	49.9 ug/L	1	ug/L	50.0	ug/L	99.7	70-130			
Bromomethane	48.9 ug/L	1	ug/L	50.0	ug/L	97.8	30-145			
Bromomethane	48.9 ug/L	1	ug/L	50.0	ug/L	97.8	30-145			
Bromomethane	48.9 ug/L	1	ug/L	50.0	ug/L	97.8	30-145			
Bromomethane	48.9 ug/L	1	ug/L	50.0	ug/L	97.8	30-145			
Carbon disulfide	54.5 ug/L	10	ug/L	50.0	ug/L	109	35-160			
Carbon disulfide	54.5 ug/L	10	ug/L	50.0	ug/L	109	35-160			
Carbon disulfide	54.5 ug/L	10	ug/L	50.0	ug/L	109	35-160			
Carbon disulfide	54.5 ug/L	10	ug/L	50.0	ug/L	109	35-160			



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## Certificate of Analysis

### Final Report

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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### LCS (BBL0489-BS1)

Prepared & Analyzed: 12/17/2018

Carbon tetrachloride	53.9 ug/L	1	ug/L	50.0	ug/L	108	65-140			
Carbon tetrachloride	53.9 ug/L	1	ug/L	50.0	ug/L	108	65-140			
Carbon tetrachloride	53.9 ug/L	1	ug/L	50.0	ug/L	108	65-140			
Carbon tetrachloride	53.9 ug/L	1	ug/L	50.0	ug/L	108	65-140			
Chlorobenzene	52.8 ug/L	1	ug/L	50.0	ug/L	106	80-120			
Chlorobenzene	52.8 ug/L	1	ug/L	50.0	ug/L	106	80-120			
Chlorobenzene	52.8 ug/L	1	ug/L	50.0	ug/L	106	80-120			
Chlorobenzene	52.8 ug/L	1	ug/L	50.0	ug/L	106	80-120			
Chloroethane	56.4 ug/L	1	ug/L	50.0	ug/L	113	60-135			
Chloroethane	56.4 ug/L	1	ug/L	50.0	ug/L	113	60-135			
Chloroethane	56.4 ug/L	1	ug/L	50.0	ug/L	113	60-135			
Chloroethane	56.4 ug/L	1	ug/L	50.0	ug/L	113	60-135			
Chloroform	57.8 ug/L	0.5	ug/L	50.0	ug/L	116	65-135			
Chloroform	57.8 ug/L	0.5	ug/L	50.0	ug/L	116	65-135			
Chloroform	57.8 ug/L	0.5	ug/L	50.0	ug/L	116	65-135			
Chloroform	57.8 ug/L	0.5	ug/L	50.0	ug/L	116	65-135			
Chloromethane	56.6 ug/L	1	ug/L	50.0	ug/L	113	40-125			
Chloromethane	56.6 ug/L	1	ug/L	50.0	ug/L	113	40-125			
Chloromethane	56.6 ug/L	1	ug/L	50.0	ug/L	113	40-125			
Chloromethane	56.6 ug/L	1	ug/L	50.0	ug/L	113	40-125			
cis-1,2-Dichloroethylene	59.1 ug/L	1	ug/L	50.0	ug/L	118	70-125			
cis-1,2-Dichloroethylene	59.1 ug/L	1	ug/L	50.0	ug/L	118	70-125			
cis-1,2-Dichloroethylene	59.1 ug/L	1	ug/L	50.0	ug/L	118	70-125			
cis-1,2-Dichloroethylene	59.1 ug/L	1	ug/L	50.0	ug/L	118	70-125			
cis-1,3-Dichloropropene	54.4 ug/L	1	ug/L	50.0	ug/L	109	70-130			
cis-1,3-Dichloropropene	54.4 ug/L	1	ug/L	50.0	ug/L	109	70-130			
cis-1,3-Dichloropropene	54.4 ug/L	1	ug/L	50.0	ug/L	109	70-130			
cis-1,3-Dichloropropene	54.4 ug/L	1	ug/L	50.0	ug/L	109	70-130			
Dibromochloromethane	54.9 ug/L	1	ug/L	50.0	ug/L	110	60-135			
Dibromochloromethane	54.9 ug/L	1	ug/L	50.0	ug/L	110	60-135			
Dibromochloromethane	54.9 ug/L	1	ug/L	50.0	ug/L	110	60-135			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### LCS (BBL0489-BS1)

Prepared & Analyzed: 12/17/2018

Dibromochloromethane	54.9 ug/L	1	ug/L	50.0	ug/L	110	60-135			
Dibromomethane	53.5 ug/L	1	ug/L	50.0	ug/L	107	75-125			
Dibromomethane	53.5 ug/L	1	ug/L	50.0	ug/L	107	75-125			
Dibromomethane	53.5 ug/L	1	ug/L	50.0	ug/L	107	75-125			
Dibromomethane	53.5 ug/L	1	ug/L	50.0	ug/L	107	75-125			
Dichlorodifluoromethane	50.2 ug/L	1	ug/L	50.0	ug/L	100	30-155			
Dichlorodifluoromethane	50.2 ug/L	1	ug/L	50.0	ug/L	100	30-155			
Dichlorodifluoromethane	50.2 ug/L	1	ug/L	50.0	ug/L	100	30-155			
Dichlorodifluoromethane	50.2 ug/L	1	ug/L	50.0	ug/L	100	30-155			
Ethylbenzene	54.2 ug/L	1	ug/L	50.0	ug/L	108	75-125			
Ethylbenzene	54.2 ug/L	1	ug/L	50.0	ug/L	108	75-125			
Ethylbenzene	54.2 ug/L	1	ug/L	50.0	ug/L	108	75-125			
Ethylbenzene	54.2 ug/L	1	ug/L	50.0	ug/L	108	75-125			
Hexachlorobutadiene	48.6 ug/L	1	ug/L	50.0	ug/L	97.3	50-140			
Hexachlorobutadiene	48.6 ug/L	1	ug/L	50.0	ug/L	97.3	50-140			
Hexachlorobutadiene	48.6 ug/L	1	ug/L	50.0	ug/L	97.3	50-140			
Hexachlorobutadiene	48.6 ug/L	1	ug/L	50.0	ug/L	97.3	50-140			
Isopropylbenzene	58.3 ug/L	1	ug/L	50.0	ug/L	117	75-125			
Isopropylbenzene	58.3 ug/L	1	ug/L	50.0	ug/L	117	75-125			
Isopropylbenzene	58.3 ug/L	1	ug/L	50.0	ug/L	117	75-125			
Isopropylbenzene	58.3 ug/L	1	ug/L	50.0	ug/L	117	75-125			
m+p-Xylenes	112 ug/L	2	ug/L	100	ug/L	112	75-130			
m+p-Xylenes	112 ug/L	2	ug/L	100	ug/L	112	75-130			
m+p-Xylenes	112 ug/L	2	ug/L	100	ug/L	112	75-130			
m+p-Xylenes	112 ug/L	2	ug/L	100	ug/L	112	75-130			
Methylene chloride	60.4 ug/L	4	ug/L	50.0	ug/L	121	55-140			
Methylene chloride	60.4 ug/L	4	ug/L	50.0	ug/L	121	55-140			
Methylene chloride	60.4 ug/L	4	ug/L	50.0	ug/L	121	55-140			
Methylene chloride	60.4 ug/L	4	ug/L	50.0	ug/L	121	55-140			
Methyl-t-butyl ether (MTBE)	58.5 ug/L	1	ug/L	50.0	ug/L	117	65-125			
Methyl-t-butyl ether (MTBE)	58.5 ug/L	1	ug/L	50.0	ug/L	117	65-125			



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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### LCS (BBL0489-BS1)

Prepared & Analyzed: 12/17/2018

Methyl-t-butyl ether (MTBE)	58.5 ug/L	1	ug/L	50.0	ug/L	117	65-125			
Methyl-t-butyl ether (MTBE)	58.5 ug/L	1	ug/L	50.0	ug/L	117	65-125			
Naphthalene	50.1 ug/L	1	ug/L	50.0	ug/L	100	55-140			
Naphthalene	50.1 ug/L	1	ug/L	50.0	ug/L	100	55-140			
Naphthalene	50.1 ug/L	1	ug/L	50.0	ug/L	100	55-140			
Naphthalene	50.1 ug/L	1	ug/L	50.0	ug/L	100	55-140			
n-Butylbenzene	55.9 ug/L	1	ug/L	50.0	ug/L	112	70-135			
n-Butylbenzene	55.9 ug/L	1	ug/L	50.0	ug/L	112	70-135			
n-Butylbenzene	55.9 ug/L	1	ug/L	50.0	ug/L	112	70-135			
n-Butylbenzene	55.9 ug/L	1	ug/L	50.0	ug/L	112	70-135			
n-Propylbenzene	51.4 ug/L	1	ug/L	50.0	ug/L	103	70-130			
n-Propylbenzene	51.4 ug/L	1	ug/L	50.0	ug/L	103	70-130			
n-Propylbenzene	51.4 ug/L	1	ug/L	50.0	ug/L	103	70-130			
n-Propylbenzene	51.4 ug/L	1	ug/L	50.0	ug/L	103	70-130			
o-Xylene	54.8 ug/L	1	ug/L	50.0	ug/L	110	80-120			
o-Xylene	54.8 ug/L	1	ug/L	50.0	ug/L	110	80-120			
o-Xylene	54.8 ug/L	1	ug/L	50.0	ug/L	110	80-120			
o-Xylene	54.8 ug/L	1	ug/L	50.0	ug/L	110	80-120			
sec-Butylbenzene	55.4 ug/L	1	ug/L	50.0	ug/L	111	70-125			
sec-Butylbenzene	55.4 ug/L	1	ug/L	50.0	ug/L	111	70-125			
sec-Butylbenzene	55.4 ug/L	1	ug/L	50.0	ug/L	111	70-125			
sec-Butylbenzene	55.4 ug/L	1	ug/L	50.0	ug/L	111	70-125			
Styrene	55.8 ug/L	1	ug/L	50.0	ug/L	112	65-135			
Styrene	55.8 ug/L	1	ug/L	50.0	ug/L	112	65-135			
Styrene	55.8 ug/L	1	ug/L	50.0	ug/L	112	65-135			
Styrene	55.8 ug/L	1	ug/L	50.0	ug/L	112	65-135			
tert-Butylbenzene	53.7 ug/L	1	ug/L	50.0	ug/L	107	70-130			
tert-Butylbenzene	53.7 ug/L	1	ug/L	50.0	ug/L	107	70-130			
tert-Butylbenzene	53.7 ug/L	1	ug/L	50.0	ug/L	107	70-130			
tert-Butylbenzene	53.7 ug/L	1	ug/L	50.0	ug/L	107	70-130			
Tetrachloroethylene (PCE)	75.3 ug/L	1	ug/L	50.0	ug/L	151	45-150			L



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## Certificate of Analysis

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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### LCS (BBL0489-BS1)

Prepared & Analyzed: 12/17/2018

Tetrachloroethylene (PCE)	75.3 ug/L	1	ug/L	50.0	ug/L	151	45-150			L
Tetrachloroethylene (PCE)	75.3 ug/L	1	ug/L	50.0	ug/L	151	45-150			L
Tetrachloroethylene (PCE)	75.3 ug/L	1	ug/L	50.0	ug/L	151	45-150			L
Toluene	55.8 ug/L	1	ug/L	50.0	ug/L	112	75-120			
Toluene	55.8 ug/L	1	ug/L	50.0	ug/L	112	75-120			
Toluene	55.8 ug/L	1	ug/L	50.0	ug/L	112	75-120			
Toluene	55.8 ug/L	1	ug/L	50.0	ug/L	112	75-120			
trans-1,2-Dichloroethylene	58.2 ug/L	1	ug/L	50.0	ug/L	116	60-140			
trans-1,2-Dichloroethylene	58.2 ug/L	1	ug/L	50.0	ug/L	116	60-140			
trans-1,2-Dichloroethylene	58.2 ug/L	1	ug/L	50.0	ug/L	116	60-140			
trans-1,2-Dichloroethylene	58.2 ug/L	1	ug/L	50.0	ug/L	116	60-140			
trans-1,3-Dichloropropene	54.4 ug/L	1	ug/L	50.0	ug/L	109	55-140			
trans-1,3-Dichloropropene	54.4 ug/L	1	ug/L	50.0	ug/L	109	55-140			
trans-1,3-Dichloropropene	54.4 ug/L	1	ug/L	50.0	ug/L	109	55-140			
trans-1,3-Dichloropropene	54.4 ug/L	1	ug/L	50.0	ug/L	109	55-140			
Trichloroethylene	54.7 ug/L	1	ug/L	50.0	ug/L	109	70-125			
Trichloroethylene	54.7 ug/L	1	ug/L	50.0	ug/L	109	70-125			
Trichloroethylene	54.7 ug/L	1	ug/L	50.0	ug/L	109	70-125			
Trichloroethylene	54.7 ug/L	1	ug/L	50.0	ug/L	109	70-125			
Trichlorofluoromethane	51.5 ug/L	1	ug/L	50.0	ug/L	103	60-145			
Trichlorofluoromethane	51.5 ug/L	1	ug/L	50.0	ug/L	103	60-145			
Trichlorofluoromethane	51.5 ug/L	1	ug/L	50.0	ug/L	103	60-145			
Trichlorofluoromethane	51.5 ug/L	1	ug/L	50.0	ug/L	103	60-145			
Vinyl chloride	33.5 ug/L	0.5	ug/L	50.0	ug/L	67.0	50-145			
Vinyl chloride	33.5 ug/L	0.5	ug/L	50.0	ug/L	67.0	50-145			
Vinyl chloride	33.5 ug/L	0.5	ug/L	50.0	ug/L	67.0	50-145			
Vinyl chloride	33.5 ug/L	0.5	ug/L	50.0	ug/L	67.0	50-145			
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	50.0		ug/L	50.0	ug/L	100	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	50.0		ug/L	50.0	ug/L	100	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	50.0		ug/L	50.0	ug/L	100	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	50.0		ug/L	50.0	ug/L	100	70-120			



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

### 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
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#### Batch BBL0489 - SW5030B

##### LCS (BBL0489-BS1)

Prepared & Analyzed: 12/17/2018

Surr: 4-Bromofluorobenzene (Surr)	52.4		ug/L	50.0	ug/L	105	75-120			
Surr: 4-Bromofluorobenzene (Surr)	52.4		ug/L	50.0	ug/L	105	75-120			
Surr: 4-Bromofluorobenzene (Surr)	52.4		ug/L	50.0	ug/L	105	75-120			
Surr: 4-Bromofluorobenzene (Surr)	52.4		ug/L	50.0	ug/L	105	75-120			
Surr: Dibromofluoromethane (Surr)	51.5		ug/L	50.0	ug/L	103	70-130			
Surr: Dibromofluoromethane (Surr)	51.5		ug/L	50.0	ug/L	103	70-130			
Surr: Dibromofluoromethane (Surr)	51.5		ug/L	50.0	ug/L	103	70-130			
Surr: Dibromofluoromethane (Surr)	51.5		ug/L	50.0	ug/L	103	70-130			
Surr: Toluene-d8 (Surr)	49.7		ug/L	50.0	ug/L	99.4	70-130			
Surr: Toluene-d8 (Surr)	49.7		ug/L	50.0	ug/L	99.4	70-130			
Surr: Toluene-d8 (Surr)	49.7		ug/L	50.0	ug/L	99.4	70-130			
Surr: Toluene-d8 (Surr)	49.7		ug/L	50.0	ug/L	99.4	70-130			

##### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

1,1,1,2-Tetrachloroethane	49.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	99.3	80-130			
1,1,1,2-Tetrachloroethane	49.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	99.3	80-130			
1,1,1,2-Tetrachloroethane	49.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	99.3	80-130			
1,1,1,2-Tetrachloroethane	49.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	99.3	80-130			
1,1,1-Trichloroethane	54.4 ug/L	1	ug/L	50.0	<1 ug/L	109	65-130			
1,1,1-Trichloroethane	54.4 ug/L	1	ug/L	50.0	<1 ug/L	109	65-130			
1,1,1-Trichloroethane	54.4 ug/L	1	ug/L	50.0	<1 ug/L	109	65-130			
1,1,1-Trichloroethane	54.4 ug/L	1	ug/L	50.0	<1 ug/L	109	65-130			
1,1,2,2-Tetrachloroethane	53.7 ug/L	0.4	ug/L	50.0	<0.4 ug/L	107	65-130			
1,1,2,2-Tetrachloroethane	53.7 ug/L	0.4	ug/L	50.0	<0.4 ug/L	107	65-130			
1,1,2,2-Tetrachloroethane	53.7 ug/L	0.4	ug/L	50.0	<0.4 ug/L	107	65-130			
1,1,2,2-Tetrachloroethane	53.7 ug/L	0.4	ug/L	50.0	<0.4 ug/L	107	65-130			
1,1,2-Trichloroethane	56.0 ug/L	1	ug/L	50.0	<1 ug/L	112	75-125			
1,1,2-Trichloroethane	56.0 ug/L	1	ug/L	50.0	<1 ug/L	112	75-125			
1,1,2-Trichloroethane	56.0 ug/L	1	ug/L	50.0	<1 ug/L	112	75-125			
1,1,2-Trichloroethane	56.0 ug/L	1	ug/L	50.0	<1 ug/L	112	75-125			
1,1-Dichloroethane	62.7 ug/L	1	ug/L	50.0	<1 ug/L	125	70-135			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

1,1-Dichloroethane	62.7 ug/L	1	ug/L	50.0	<1 ug/L	125	70-135			
1,1-Dichloroethane	62.7 ug/L	1	ug/L	50.0	<1 ug/L	125	70-135			
1,1-Dichloroethane	62.7 ug/L	1	ug/L	50.0	<1 ug/L	125	70-135			
1,1-Dichloroethylene	57.9 ug/L	1	ug/L	50.0	<1 ug/L	116	70-130			
1,1-Dichloroethylene	57.9 ug/L	1	ug/L	50.0	<1 ug/L	116	70-130			
1,1-Dichloroethylene	57.9 ug/L	1	ug/L	50.0	<1 ug/L	116	70-130			
1,1-Dichloroethylene	57.9 ug/L	1	ug/L	50.0	<1 ug/L	116	70-130			
1,1-Dichloropropene	54.8 ug/L	1	ug/L	50.0	<1 ug/L	110	75-135			
1,1-Dichloropropene	54.8 ug/L	1	ug/L	50.0	<1 ug/L	110	75-135			
1,1-Dichloropropene	54.8 ug/L	1	ug/L	50.0	<1 ug/L	110	75-135			
1,1-Dichloropropene	54.8 ug/L	1	ug/L	50.0	<1 ug/L	110	75-135			
1,2,3-Trichlorobenzene	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.3	55-140			
1,2,3-Trichlorobenzene	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.3	55-140			
1,2,3-Trichlorobenzene	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.3	55-140			
1,2,3-Trichlorobenzene	46.6 ug/L	1	ug/L	50.0	<1 ug/L	93.3	55-140			
1,2,3-Trichloropropane	54.2 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125			
1,2,3-Trichloropropane	54.2 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125			
1,2,3-Trichloropropane	54.2 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125			
1,2,3-Trichloropropane	54.2 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125			
1,2,4-Trichlorobenzene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.3	65-135			
1,2,4-Trichlorobenzene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.3	65-135			
1,2,4-Trichlorobenzene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.3	65-135			
1,2,4-Trichlorobenzene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.3	65-135			
1,2,4-Trimethylbenzene	51.2 ug/L	1	ug/L	50.0	<1 ug/L	102	75-130			
1,2,4-Trimethylbenzene	51.2 ug/L	1	ug/L	50.0	<1 ug/L	102	75-130			
1,2,4-Trimethylbenzene	51.2 ug/L	1	ug/L	50.0	<1 ug/L	102	75-130			
1,2,4-Trimethylbenzene	51.2 ug/L	1	ug/L	50.0	<1 ug/L	102	75-130			
1,2-Dibromo-3-chloropropane (DBCP)	48.0 ug/L	4	ug/L	50.0	<4 ug/L	95.9	50-130			
1,2-Dibromo-3-chloropropane (DBCP)	48.0 ug/L	4	ug/L	50.0	<4 ug/L	95.9	50-130			
1,2-Dibromo-3-chloropropane (DBCP)	48.0 ug/L	4	ug/L	50.0	<4 ug/L	95.9	50-130			
1,2-Dibromo-3-chloropropane (DBCP)	48.0 ug/L	4	ug/L	50.0	<4 ug/L	95.9	50-130			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

1,2-Dibromoethane (EDB)	52.3 ug/L	1	ug/L	50.0	<1 ug/L	105	80-120			
1,2-Dibromoethane (EDB)	52.3 ug/L	1	ug/L	50.0	<1 ug/L	105	80-120			
1,2-Dibromoethane (EDB)	52.3 ug/L	1	ug/L	50.0	<1 ug/L	105	80-120			
1,2-Dibromoethane (EDB)	52.3 ug/L	1	ug/L	50.0	<1 ug/L	105	80-120			
1,2-Dichlorobenzene	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.6	70-120			
1,2-Dichlorobenzene	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.6	70-120			
1,2-Dichlorobenzene	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.6	70-120			
1,2-Dichlorobenzene	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.6	70-120			
1,2-Dichloroethane	56.6 ug/L	1	ug/L	50.0	<1 ug/L	113	70-130			
1,2-Dichloroethane	56.6 ug/L	1	ug/L	50.0	<1 ug/L	113	70-130			
1,2-Dichloroethane	56.6 ug/L	1	ug/L	50.0	<1 ug/L	113	70-130			
1,2-Dichloroethane	56.6 ug/L	1	ug/L	50.0	<1 ug/L	113	70-130			
1,2-Dichloropropane	56.5 ug/L	1	ug/L	50.0	<1 ug/L	113	75-125			
1,2-Dichloropropane	56.5 ug/L	1	ug/L	50.0	<1 ug/L	113	75-125			
1,2-Dichloropropane	56.5 ug/L	1	ug/L	50.0	<1 ug/L	113	75-125			
1,2-Dichloropropane	56.5 ug/L	1	ug/L	50.0	<1 ug/L	113	75-125			
1,3,5-Trimethylbenzene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125			
1,3,5-Trimethylbenzene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125			
1,3,5-Trimethylbenzene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125			
1,3,5-Trimethylbenzene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125			
1,3-Dichlorobenzene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	75-125			
1,3-Dichlorobenzene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	75-125			
1,3-Dichlorobenzene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	75-125			
1,3-Dichlorobenzene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	75-125			
1,3-Dichloropropane	55.5 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125			
1,3-Dichloropropane	55.5 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125			
1,3-Dichloropropane	55.5 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125			
1,3-Dichloropropane	55.5 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125			
1,4-Dichlorobenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	75-125			
1,4-Dichlorobenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	75-125			
1,4-Dichlorobenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	75-125			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

1,4-Dichlorobenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	75-125			
2,2-Dichloropropane	55.7 ug/L	2	ug/L	50.0	<2 ug/L	111	70-135			
2,2-Dichloropropane	55.7 ug/L	2	ug/L	50.0	<2 ug/L	111	70-135			
2,2-Dichloropropane	55.7 ug/L	2	ug/L	50.0	<2 ug/L	111	70-135			
2,2-Dichloropropane	55.7 ug/L	2	ug/L	50.0	<2 ug/L	111	70-135			
2-Butanone (MEK)	58.1 ug/L	10	ug/L	50.0	<10 ug/L	116	30-150			
2-Butanone (MEK)	58.1 ug/L	10	ug/L	50.0	<10 ug/L	116	30-150			
2-Butanone (MEK)	58.1 ug/L	10	ug/L	50.0	<10 ug/L	116	30-150			
2-Butanone (MEK)	58.1 ug/L	10	ug/L	50.0	<10 ug/L	116	30-150			
2-Chlorotoluene	51.1 ug/L	1	ug/L	50.0	<1 ug/L	102	75-125			
2-Chlorotoluene	51.1 ug/L	1	ug/L	50.0	<1 ug/L	102	75-125			
2-Chlorotoluene	51.1 ug/L	1	ug/L	50.0	<1 ug/L	102	75-125			
2-Chlorotoluene	51.1 ug/L	1	ug/L	50.0	<1 ug/L	102	75-125			
2-Hexanone (MBK)	55.2 ug/L	5	ug/L	50.0	<5 ug/L	110	55-130			
2-Hexanone (MBK)	55.2 ug/L	5	ug/L	50.0	<5 ug/L	110	55-130			
2-Hexanone (MBK)	55.2 ug/L	5	ug/L	50.0	<5 ug/L	110	55-130			
2-Hexanone (MBK)	55.2 ug/L	5	ug/L	50.0	<5 ug/L	110	55-130			
4-Chlorotoluene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.1	75-130			
4-Chlorotoluene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.1	75-130			
4-Chlorotoluene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.1	75-130			
4-Chlorotoluene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.1	75-130			
4-Isopropyltoluene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.2	75-130			
4-Isopropyltoluene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.2	75-130			
4-Isopropyltoluene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.2	75-130			
4-Isopropyltoluene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.2	75-130			
4-Methyl-2-pentanone (MIBK)	56.4 ug/L	5	ug/L	50.0	<5 ug/L	113	60-135			
4-Methyl-2-pentanone (MIBK)	56.4 ug/L	5	ug/L	50.0	<5 ug/L	113	60-135			
4-Methyl-2-pentanone (MIBK)	56.4 ug/L	5	ug/L	50.0	<5 ug/L	113	60-135			
4-Methyl-2-pentanone (MIBK)	56.4 ug/L	5	ug/L	50.0	<5 ug/L	113	60-135			
Acetone	79.2 ug/L	10	ug/L	50.0	10.6 ug/L	137	40-140			
Acetone	79.2 ug/L	10	ug/L	50.0	10.6 ug/L	137	40-140			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

Acetone	79.2 ug/L	10	ug/L	50.0	10.6 ug/L	137	40-140			
Acetone	79.2 ug/L	10	ug/L	50.0	10.6 ug/L	137	40-140			
Benzene	55.3 ug/L	1	ug/L	50.0	<1 ug/L	111	80-120			
Benzene	55.3 ug/L	1	ug/L	50.0	<1 ug/L	111	80-120			
Benzene	55.3 ug/L	1	ug/L	50.0	<1 ug/L	111	80-120			
Benzene	55.3 ug/L	1	ug/L	50.0	<1 ug/L	111	80-120			
Bromobenzene	49.4 ug/L	1	ug/L	50.0	<1 ug/L	98.8	75-125			
Bromobenzene	49.4 ug/L	1	ug/L	50.0	<1 ug/L	98.8	75-125			
Bromobenzene	49.4 ug/L	1	ug/L	50.0	<1 ug/L	98.8	75-125			
Bromobenzene	49.4 ug/L	1	ug/L	50.0	<1 ug/L	98.8	75-125			
Bromochloromethane	57.7 ug/L	1	ug/L	50.0	<1 ug/L	115	65-130			
Bromochloromethane	57.7 ug/L	1	ug/L	50.0	<1 ug/L	115	65-130			
Bromochloromethane	57.7 ug/L	1	ug/L	50.0	<1 ug/L	115	65-130			
Bromochloromethane	57.7 ug/L	1	ug/L	50.0	<1 ug/L	115	65-130			
Bromodichloromethane	57.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	114	75-120			
Bromodichloromethane	57.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	114	75-120			
Bromodichloromethane	57.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	114	75-120			
Bromodichloromethane	57.2 ug/L	0.5	ug/L	50.0	<0.5 ug/L	114	75-120			
Bromoform	48.6 ug/L	1	ug/L	50.0	<1 ug/L	97.2	70-130			
Bromoform	48.6 ug/L	1	ug/L	50.0	<1 ug/L	97.2	70-130			
Bromoform	48.6 ug/L	1	ug/L	50.0	<1 ug/L	97.2	70-130			
Bromoform	48.6 ug/L	1	ug/L	50.0	<1 ug/L	97.2	70-130			
Bromomethane	41.0 ug/L	1	ug/L	50.0	<1 ug/L	81.9	30-145			
Bromomethane	41.0 ug/L	1	ug/L	50.0	<1 ug/L	81.9	30-145			
Bromomethane	41.0 ug/L	1	ug/L	50.0	<1 ug/L	81.9	30-145			
Bromomethane	41.0 ug/L	1	ug/L	50.0	<1 ug/L	81.9	30-145			
Carbon disulfide	40.3 ug/L	10	ug/L	50.0	<10 ug/L	80.6	35-160			
Carbon disulfide	40.3 ug/L	10	ug/L	50.0	<10 ug/L	80.6	35-160			
Carbon disulfide	40.3 ug/L	10	ug/L	50.0	<10 ug/L	80.6	35-160			
Carbon disulfide	40.3 ug/L	10	ug/L	50.0	<10 ug/L	80.6	35-160			
Carbon tetrachloride	50.7 ug/L	1	ug/L	50.0	<1 ug/L	101	65-140			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

Carbon tetrachloride	50.7 ug/L	1	ug/L	50.0	<1 ug/L	101	65-140			
Carbon tetrachloride	50.7 ug/L	1	ug/L	50.0	<1 ug/L	101	65-140			
Carbon tetrachloride	50.7 ug/L	1	ug/L	50.0	<1 ug/L	101	65-140			
Chlorobenzene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.3	80-120			
Chlorobenzene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.3	80-120			
Chlorobenzene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.3	80-120			
Chlorobenzene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.3	80-120			
Chloroethane	56.8 ug/L	1	ug/L	50.0	<1 ug/L	114	60-135			
Chloroethane	56.8 ug/L	1	ug/L	50.0	<1 ug/L	114	60-135			
Chloroethane	56.8 ug/L	1	ug/L	50.0	<1 ug/L	114	60-135			
Chloroethane	56.8 ug/L	1	ug/L	50.0	<1 ug/L	114	60-135			
Chloroform	57.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	115	65-135			
Chloroform	57.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	115	65-135			
Chloroform	57.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	115	65-135			
Chloroform	57.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	115	65-135			
Chloromethane	54.6 ug/L	1	ug/L	50.0	<1 ug/L	109	40-125			
Chloromethane	54.6 ug/L	1	ug/L	50.0	<1 ug/L	109	40-125			
Chloromethane	54.6 ug/L	1	ug/L	50.0	<1 ug/L	109	40-125			
Chloromethane	54.6 ug/L	1	ug/L	50.0	<1 ug/L	109	40-125			
cis-1,2-Dichloroethylene	58.8 ug/L	1	ug/L	50.0	<1 ug/L	118	70-125			
cis-1,2-Dichloroethylene	58.8 ug/L	1	ug/L	50.0	<1 ug/L	118	70-125			
cis-1,2-Dichloroethylene	58.8 ug/L	1	ug/L	50.0	<1 ug/L	118	70-125			
cis-1,2-Dichloroethylene	58.8 ug/L	1	ug/L	50.0	<1 ug/L	118	70-125			
cis-1,3-Dichloropropene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	70-130			
cis-1,3-Dichloropropene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	70-130			
cis-1,3-Dichloropropene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	70-130			
cis-1,3-Dichloropropene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	70-130			
Dibromochloromethane	54.1 ug/L	1	ug/L	50.0	<1 ug/L	108	60-135			
Dibromochloromethane	54.1 ug/L	1	ug/L	50.0	<1 ug/L	108	60-135			
Dibromochloromethane	54.1 ug/L	1	ug/L	50.0	<1 ug/L	108	60-135			
Dibromochloromethane	54.1 ug/L	1	ug/L	50.0	<1 ug/L	108	60-135			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

Dibromomethane	53.6 ug/L	1	ug/L	50.0	<1 ug/L	107	75-125			
Dibromomethane	53.6 ug/L	1	ug/L	50.0	<1 ug/L	107	75-125			
Dibromomethane	53.6 ug/L	1	ug/L	50.0	<1 ug/L	107	75-125			
Dibromomethane	53.6 ug/L	1	ug/L	50.0	<1 ug/L	107	75-125			
Dichlorodifluoromethane	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.3	30-155			
Dichlorodifluoromethane	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.3	30-155			
Dichlorodifluoromethane	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.3	30-155			
Dichlorodifluoromethane	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.3	30-155			
Ethylbenzene	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	75-125			
Ethylbenzene	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	75-125			
Ethylbenzene	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	75-125			
Ethylbenzene	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	75-125			
Hexachlorobutadiene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.5	50-140			
Hexachlorobutadiene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.5	50-140			
Hexachlorobutadiene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.5	50-140			
Hexachlorobutadiene	45.2 ug/L	1	ug/L	50.0	<1 ug/L	90.5	50-140			
Isopropylbenzene	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125			
Isopropylbenzene	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125			
Isopropylbenzene	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125			
Isopropylbenzene	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125			
m+p-Xylenes	103 ug/L	2	ug/L	100	<2 ug/L	103	75-130			
m+p-Xylenes	103 ug/L	2	ug/L	100	<2 ug/L	103	75-130			
m+p-Xylenes	103 ug/L	2	ug/L	100	<2 ug/L	103	75-130			
m+p-Xylenes	103 ug/L	2	ug/L	100	<2 ug/L	103	75-130			
Methylene chloride	51.5 ug/L	4	ug/L	50.0	<4 ug/L	103	55-140			
Methylene chloride	51.5 ug/L	4	ug/L	50.0	<4 ug/L	103	55-140			
Methylene chloride	51.5 ug/L	4	ug/L	50.0	<4 ug/L	103	55-140			
Methylene chloride	51.5 ug/L	4	ug/L	50.0	<4 ug/L	103	55-140			
Methyl-t-butyl ether (MTBE)	61.3 ug/L	1	ug/L	50.0	<1 ug/L	123	65-125			
Methyl-t-butyl ether (MTBE)	61.3 ug/L	1	ug/L	50.0	<1 ug/L	123	65-125			
Methyl-t-butyl ether (MTBE)	61.3 ug/L	1	ug/L	50.0	<1 ug/L	123	65-125			



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### Final Report

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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

Methyl-t-butyl ether (MTBE)	61.3 ug/L	1	ug/L	50.0	<1 ug/L	123	65-125			
Naphthalene	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140			
Naphthalene	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140			
Naphthalene	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140			
Naphthalene	50.4 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140			
n-Butylbenzene	52.2 ug/L	1	ug/L	50.0	<1 ug/L	104	70-135			
n-Butylbenzene	52.2 ug/L	1	ug/L	50.0	<1 ug/L	104	70-135			
n-Butylbenzene	52.2 ug/L	1	ug/L	50.0	<1 ug/L	104	70-135			
n-Butylbenzene	52.2 ug/L	1	ug/L	50.0	<1 ug/L	104	70-135			
n-Propylbenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.7	70-130			
n-Propylbenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.7	70-130			
n-Propylbenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.7	70-130			
n-Propylbenzene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.7	70-130			
o-Xylene	51.6 ug/L	1	ug/L	50.0	<1 ug/L	103	80-120			
o-Xylene	51.6 ug/L	1	ug/L	50.0	<1 ug/L	103	80-120			
o-Xylene	51.6 ug/L	1	ug/L	50.0	<1 ug/L	103	80-120			
o-Xylene	51.6 ug/L	1	ug/L	50.0	<1 ug/L	103	80-120			
sec-Butylbenzene	52.9 ug/L	1	ug/L	50.0	<1 ug/L	106	70-125			
sec-Butylbenzene	52.9 ug/L	1	ug/L	50.0	<1 ug/L	106	70-125			
sec-Butylbenzene	52.9 ug/L	1	ug/L	50.0	<1 ug/L	106	70-125			
sec-Butylbenzene	52.9 ug/L	1	ug/L	50.0	<1 ug/L	106	70-125			
Styrene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	65-135			
Styrene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	65-135			
Styrene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	65-135			
Styrene	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	65-135			
tert-Butylbenzene	51.2 ug/L	1	ug/L	50.0	<1 ug/L	102	70-130			
tert-Butylbenzene	51.2 ug/L	1	ug/L	50.0	<1 ug/L	102	70-130			
tert-Butylbenzene	51.2 ug/L	1	ug/L	50.0	<1 ug/L	102	70-130			
tert-Butylbenzene	51.2 ug/L	1	ug/L	50.0	<1 ug/L	102	70-130			
Tetrachloroethylene (PCE)	69.7 ug/L	1	ug/L	50.0	1.30 ug/L	137	45-150			
Tetrachloroethylene (PCE)	69.7 ug/L	1	ug/L	50.0	1.30 ug/L	137	45-150			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

Tetrachloroethylene (PCE)	69.7 ug/L	1	ug/L	50.0	1.30 ug/L	137	45-150			
Tetrachloroethylene (PCE)	69.7 ug/L	1	ug/L	50.0	1.30 ug/L	137	45-150			
Toluene	53.7 ug/L	1	ug/L	50.0	<1 ug/L	107	75-120			
Toluene	53.7 ug/L	1	ug/L	50.0	<1 ug/L	107	75-120			
Toluene	53.7 ug/L	1	ug/L	50.0	<1 ug/L	107	75-120			
Toluene	53.7 ug/L	1	ug/L	50.0	<1 ug/L	107	75-120			
trans-1,2-Dichloroethylene	56.6 ug/L	1	ug/L	50.0	<1 ug/L	113	60-140			
trans-1,2-Dichloroethylene	56.6 ug/L	1	ug/L	50.0	<1 ug/L	113	60-140			
trans-1,2-Dichloroethylene	56.6 ug/L	1	ug/L	50.0	<1 ug/L	113	60-140			
trans-1,2-Dichloroethylene	56.6 ug/L	1	ug/L	50.0	<1 ug/L	113	60-140			
trans-1,3-Dichloropropene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	55-140			
trans-1,3-Dichloropropene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	55-140			
trans-1,3-Dichloropropene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	55-140			
trans-1,3-Dichloropropene	52.5 ug/L	1	ug/L	50.0	<1 ug/L	105	55-140			
Trichloroethylene	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	70-125			
Trichloroethylene	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	70-125			
Trichloroethylene	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	70-125			
Trichloroethylene	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	70-125			
Trichlorofluoromethane	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	60-145			
Trichlorofluoromethane	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	60-145			
Trichlorofluoromethane	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	60-145			
Trichlorofluoromethane	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.5	60-145			
Vinyl chloride	29.1 ug/L	0.5	ug/L	50.0	<0.5 ug/L	58.2	50-145			
Vinyl chloride	29.1 ug/L	0.5	ug/L	50.0	<0.5 ug/L	58.2	50-145			
Vinyl chloride	29.1 ug/L	0.5	ug/L	50.0	<0.5 ug/L	58.2	50-145			
Vinyl chloride	29.1 ug/L	0.5	ug/L	50.0	<0.5 ug/L	58.2	50-145			
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	51.5		ug/L	50.0	ug/L	103	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	51.5		ug/L	50.0	ug/L	103	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	51.5		ug/L	50.0	ug/L	103	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	51.5		ug/L	50.0	ug/L	103	70-120			
Surr: 4-Bromofluorobenzene (Surr)	52.4		ug/L	50.0	ug/L	105	75-120			



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## Certificate of Analysis

### Final Report

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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

##### Matrix Spike (BBL0489-MS1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

Surr: 4-Bromofluorobenzene (Surr)	52.4		ug/L	50.0	ug/L	105	75-120			
Surr: 4-Bromofluorobenzene (Surr)	52.4		ug/L	50.0	ug/L	105	75-120			
Surr: 4-Bromofluorobenzene (Surr)	52.4		ug/L	50.0	ug/L	105	75-120			
Surr: Dibromofluoromethane (Surr)	54.1		ug/L	50.0	ug/L	108	70-130			
Surr: Dibromofluoromethane (Surr)	54.1		ug/L	50.0	ug/L	108	70-130			
Surr: Dibromofluoromethane (Surr)	54.1		ug/L	50.0	ug/L	108	70-130			
Surr: Dibromofluoromethane (Surr)	54.1		ug/L	50.0	ug/L	108	70-130			
Surr: Toluene-d8 (Surr)	51.0		ug/L	50.0	ug/L	102	70-130			
Surr: Toluene-d8 (Surr)	51.0		ug/L	50.0	ug/L	102	70-130			
Surr: Toluene-d8 (Surr)	51.0		ug/L	50.0	ug/L	102	70-130			
Surr: Toluene-d8 (Surr)	51.0		ug/L	50.0	ug/L	102	70-130			

##### Matrix Spike Dup (BBL0489-MSD1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

1,1,1,2-Tetrachloroethane	48.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	97.3	80-130	2.06	30	
1,1,1,2-Tetrachloroethane	48.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	97.3	80-130	2.06	30	
1,1,1,2-Tetrachloroethane	48.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	97.3	80-130	2.06	30	
1,1,1,2-Tetrachloroethane	48.6 ug/L	0.4	ug/L	50.0	<0.4 ug/L	97.3	80-130	2.06	30	
1,1,1-Trichloroethane	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	65-130	6.45	30	
1,1,1-Trichloroethane	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	65-130	6.45	30	
1,1,1-Trichloroethane	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	65-130	6.45	30	
1,1,1-Trichloroethane	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	65-130	6.45	30	
1,1,2,2-Tetrachloroethane	53.4 ug/L	0.4	ug/L	50.0	<0.4 ug/L	107	65-130	0.691	30	
1,1,2,2-Tetrachloroethane	53.4 ug/L	0.4	ug/L	50.0	<0.4 ug/L	107	65-130	0.691	30	
1,1,2,2-Tetrachloroethane	53.4 ug/L	0.4	ug/L	50.0	<0.4 ug/L	107	65-130	0.691	30	
1,1,2,2-Tetrachloroethane	53.4 ug/L	0.4	ug/L	50.0	<0.4 ug/L	107	65-130	0.691	30	
1,1,2-Trichloroethane	55.7 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125	0.591	30	
1,1,2-Trichloroethane	55.7 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125	0.591	30	
1,1,2-Trichloroethane	55.7 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125	0.591	30	
1,1,2-Trichloroethane	55.7 ug/L	1	ug/L	50.0	<1 ug/L	111	75-125	0.591	30	
1,1-Dichloroethane	60.4 ug/L	1	ug/L	50.0	<1 ug/L	121	70-135	3.66	30	
1,1-Dichloroethane	60.4 ug/L	1	ug/L	50.0	<1 ug/L	121	70-135	3.66	30	



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## Certificate of Analysis

### Final Report

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Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike Dup (BBL0489-MSD1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

1,1-Dichloroethane	60.4 ug/L	1	ug/L	50.0	<1 ug/L	121	70-135	3.66	30	
1,1-Dichloroethane	60.4 ug/L	1	ug/L	50.0	<1 ug/L	121	70-135	3.66	30	
1,1-Dichloroethylene	54.8 ug/L	1	ug/L	50.0	<1 ug/L	110	70-130	5.43	30	
1,1-Dichloroethylene	54.8 ug/L	1	ug/L	50.0	<1 ug/L	110	70-130	5.43	30	
1,1-Dichloroethylene	54.8 ug/L	1	ug/L	50.0	<1 ug/L	110	70-130	5.43	30	
1,1-Dichloroethylene	54.8 ug/L	1	ug/L	50.0	<1 ug/L	110	70-130	5.43	30	
1,1-Dichloropropene	53.4 ug/L	1	ug/L	50.0	<1 ug/L	107	75-135	2.61	30	
1,1-Dichloropropene	53.4 ug/L	1	ug/L	50.0	<1 ug/L	107	75-135	2.61	30	
1,1-Dichloropropene	53.4 ug/L	1	ug/L	50.0	<1 ug/L	107	75-135	2.61	30	
1,1-Dichloropropene	53.4 ug/L	1	ug/L	50.0	<1 ug/L	107	75-135	2.61	30	
1,2,3-Trichlorobenzene	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.9	55-140	2.61	30	
1,2,3-Trichlorobenzene	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.9	55-140	2.61	30	
1,2,3-Trichlorobenzene	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.9	55-140	2.61	30	
1,2,3-Trichlorobenzene	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.9	55-140	2.61	30	
1,2,3-Trichloropropane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125	0.759	30	
1,2,3-Trichloropropane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125	0.759	30	
1,2,3-Trichloropropane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125	0.759	30	
1,2,3-Trichloropropane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125	0.759	30	
1,2,4-Trichlorobenzene	43.3 ug/L	1	ug/L	50.0	<1 ug/L	86.6	65-135	4.23	30	
1,2,4-Trichlorobenzene	43.3 ug/L	1	ug/L	50.0	<1 ug/L	86.6	65-135	4.23	30	
1,2,4-Trichlorobenzene	43.3 ug/L	1	ug/L	50.0	<1 ug/L	86.6	65-135	4.23	30	
1,2,4-Trichlorobenzene	43.3 ug/L	1	ug/L	50.0	<1 ug/L	86.6	65-135	4.23	30	
1,2,4-Trimethylbenzene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.2	75-130	3.27	30	
1,2,4-Trimethylbenzene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.2	75-130	3.27	30	
1,2,4-Trimethylbenzene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.2	75-130	3.27	30	
1,2,4-Trimethylbenzene	49.6 ug/L	1	ug/L	50.0	<1 ug/L	99.2	75-130	3.27	30	
1,2-Dibromo-3-chloropropane (DBCP)	47.4 ug/L	4	ug/L	50.0	<4 ug/L	94.8	50-130	1.20	30	
1,2-Dibromo-3-chloropropane (DBCP)	47.4 ug/L	4	ug/L	50.0	<4 ug/L	94.8	50-130	1.20	30	
1,2-Dibromo-3-chloropropane (DBCP)	47.4 ug/L	4	ug/L	50.0	<4 ug/L	94.8	50-130	1.20	30	
1,2-Dibromo-3-chloropropane (DBCP)	47.4 ug/L	4	ug/L	50.0	<4 ug/L	94.8	50-130	1.20	30	
1,2-Dibromoethane (EDB)	52.1 ug/L	1	ug/L	50.0	<1 ug/L	104	80-120	0.403	30	



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

Matrix Spike Dup (BBL0489-MSD1)	Source: 18L0642-01			Prepared & Analyzed: 12/17/2018						
1,2-Dibromoethane (EDB)	52.1 ug/L	1	ug/L	50.0	<1 ug/L	104	80-120	0.403	30	
1,2-Dibromoethane (EDB)	52.1 ug/L	1	ug/L	50.0	<1 ug/L	104	80-120	0.403	30	
1,2-Dibromoethane (EDB)	52.1 ug/L	1	ug/L	50.0	<1 ug/L	104	80-120	0.403	30	
1,2-Dichlorobenzene	47.2 ug/L	1	ug/L	50.0	<1 ug/L	94.5	70-120	3.27	30	
1,2-Dichlorobenzene	47.2 ug/L	1	ug/L	50.0	<1 ug/L	94.5	70-120	3.27	30	
1,2-Dichlorobenzene	47.2 ug/L	1	ug/L	50.0	<1 ug/L	94.5	70-120	3.27	30	
1,2-Dichlorobenzene	47.2 ug/L	1	ug/L	50.0	<1 ug/L	94.5	70-120	3.27	30	
1,2-Dichloroethane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	70-130	5.09	30	
1,2-Dichloroethane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	70-130	5.09	30	
1,2-Dichloroethane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	70-130	5.09	30	
1,2-Dichloroethane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	70-130	5.09	30	
1,2-Dichloropropane	53.2 ug/L	1	ug/L	50.0	<1 ug/L	106	75-125	6.15	30	
1,2-Dichloropropane	53.2 ug/L	1	ug/L	50.0	<1 ug/L	106	75-125	6.15	30	
1,2-Dichloropropane	53.2 ug/L	1	ug/L	50.0	<1 ug/L	106	75-125	6.15	30	
1,2-Dichloropropane	53.2 ug/L	1	ug/L	50.0	<1 ug/L	106	75-125	6.15	30	
1,3,5-Trimethylbenzene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	75-125	3.33	30	
1,3,5-Trimethylbenzene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	75-125	3.33	30	
1,3,5-Trimethylbenzene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	75-125	3.33	30	
1,3,5-Trimethylbenzene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	75-125	3.33	30	
1,3-Dichlorobenzene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.0	75-125	4.44	30	
1,3-Dichlorobenzene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.0	75-125	4.44	30	
1,3-Dichlorobenzene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.0	75-125	4.44	30	
1,3-Dichlorobenzene	48.0 ug/L	1	ug/L	50.0	<1 ug/L	96.0	75-125	4.44	30	
1,3-Dichloropropane	54.5 ug/L	1	ug/L	50.0	<1 ug/L	109	75-125	1.87	30	
1,3-Dichloropropane	54.5 ug/L	1	ug/L	50.0	<1 ug/L	109	75-125	1.87	30	
1,3-Dichloropropane	54.5 ug/L	1	ug/L	50.0	<1 ug/L	109	75-125	1.87	30	
1,3-Dichloropropane	54.5 ug/L	1	ug/L	50.0	<1 ug/L	109	75-125	1.87	30	
1,4-Dichlorobenzene	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.8	75-125	2.91	30	
1,4-Dichlorobenzene	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.8	75-125	2.91	30	
1,4-Dichlorobenzene	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.8	75-125	2.91	30	
1,4-Dichlorobenzene	46.4 ug/L	1	ug/L	50.0	<1 ug/L	92.8	75-125	2.91	30	



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike Dup (BBL0489-MSD1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

2,2-Dichloropropane	53.0 ug/L	2	ug/L	50.0	<2 ug/L	106	70-135	4.87	30	
2,2-Dichloropropane	53.0 ug/L	2	ug/L	50.0	<2 ug/L	106	70-135	4.87	30	
2,2-Dichloropropane	53.0 ug/L	2	ug/L	50.0	<2 ug/L	106	70-135	4.87	30	
2,2-Dichloropropane	53.0 ug/L	2	ug/L	50.0	<2 ug/L	106	70-135	4.87	30	
2-Butanone (MEK)	60.5 ug/L	10	ug/L	50.0	<10 ug/L	121	30-150	4.07	30	
2-Butanone (MEK)	60.5 ug/L	10	ug/L	50.0	<10 ug/L	121	30-150	4.07	30	
2-Butanone (MEK)	60.5 ug/L	10	ug/L	50.0	<10 ug/L	121	30-150	4.07	30	
2-Butanone (MEK)	60.5 ug/L	10	ug/L	50.0	<10 ug/L	121	30-150	4.07	30	
2-Chlorotoluene	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.7	75-125	4.54	30	
2-Chlorotoluene	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.7	75-125	4.54	30	
2-Chlorotoluene	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.7	75-125	4.54	30	
2-Chlorotoluene	48.8 ug/L	1	ug/L	50.0	<1 ug/L	97.7	75-125	4.54	30	
2-Hexanone (MBK)	59.9 ug/L	5	ug/L	50.0	<5 ug/L	120	55-130	8.31	30	
2-Hexanone (MBK)	59.9 ug/L	5	ug/L	50.0	<5 ug/L	120	55-130	8.31	30	
2-Hexanone (MBK)	59.9 ug/L	5	ug/L	50.0	<5 ug/L	120	55-130	8.31	30	
2-Hexanone (MBK)	59.9 ug/L	5	ug/L	50.0	<5 ug/L	120	55-130	8.31	30	
4-Chlorotoluene	45.8 ug/L	1	ug/L	50.0	<1 ug/L	91.7	75-130	4.64	30	
4-Chlorotoluene	45.8 ug/L	1	ug/L	50.0	<1 ug/L	91.7	75-130	4.64	30	
4-Chlorotoluene	45.8 ug/L	1	ug/L	50.0	<1 ug/L	91.7	75-130	4.64	30	
4-Chlorotoluene	45.8 ug/L	1	ug/L	50.0	<1 ug/L	91.7	75-130	4.64	30	
4-Isopropyltoluene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.7	75-130	3.63	30	
4-Isopropyltoluene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.7	75-130	3.63	30	
4-Isopropyltoluene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.7	75-130	3.63	30	
4-Isopropyltoluene	47.8 ug/L	1	ug/L	50.0	<1 ug/L	95.7	75-130	3.63	30	
4-Methyl-2-pentanone (MIBK)	59.4 ug/L	5	ug/L	50.0	<5 ug/L	119	60-135	5.34	30	
4-Methyl-2-pentanone (MIBK)	59.4 ug/L	5	ug/L	50.0	<5 ug/L	119	60-135	5.34	30	
4-Methyl-2-pentanone (MIBK)	59.4 ug/L	5	ug/L	50.0	<5 ug/L	119	60-135	5.34	30	
4-Methyl-2-pentanone (MIBK)	59.4 ug/L	5	ug/L	50.0	<5 ug/L	119	60-135	5.34	30	
Acetone	80.4 ug/L	10	ug/L	50.0	10.6 ug/L	140	40-140	1.47	30	
Acetone	80.4 ug/L	10	ug/L	50.0	10.6 ug/L	140	40-140	1.47	30	
Acetone	80.4 ug/L	10	ug/L	50.0	10.6 ug/L	140	40-140	1.47	30	



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike Dup (BBL0489-MSD1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

Acetone	80.4 ug/L	10	ug/L	50.0	10.6 ug/L	140	40-140	1.47	30	
Benzene	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	80-120	2.75	30	
Benzene	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	80-120	2.75	30	
Benzene	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	80-120	2.75	30	
Benzene	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	80-120	2.75	30	
Bromobenzene	47.7 ug/L	1	ug/L	50.0	<1 ug/L	95.4	75-125	3.52	30	
Bromobenzene	47.7 ug/L	1	ug/L	50.0	<1 ug/L	95.4	75-125	3.52	30	
Bromobenzene	47.7 ug/L	1	ug/L	50.0	<1 ug/L	95.4	75-125	3.52	30	
Bromobenzene	47.7 ug/L	1	ug/L	50.0	<1 ug/L	95.4	75-125	3.52	30	
Bromochloromethane	56.2 ug/L	1	ug/L	50.0	<1 ug/L	112	65-130	2.67	30	
Bromochloromethane	56.2 ug/L	1	ug/L	50.0	<1 ug/L	112	65-130	2.67	30	
Bromochloromethane	56.2 ug/L	1	ug/L	50.0	<1 ug/L	112	65-130	2.67	30	
Bromochloromethane	56.2 ug/L	1	ug/L	50.0	<1 ug/L	112	65-130	2.67	30	
Bromodichloromethane	55.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	112	75-120	2.48	30	
Bromodichloromethane	55.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	112	75-120	2.48	30	
Bromodichloromethane	55.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	112	75-120	2.48	30	
Bromodichloromethane	55.8 ug/L	0.5	ug/L	50.0	<0.5 ug/L	112	75-120	2.48	30	
Bromoform	49.2 ug/L	1	ug/L	50.0	<1 ug/L	98.3	70-130	1.17	30	
Bromoform	49.2 ug/L	1	ug/L	50.0	<1 ug/L	98.3	70-130	1.17	30	
Bromoform	49.2 ug/L	1	ug/L	50.0	<1 ug/L	98.3	70-130	1.17	30	
Bromoform	49.2 ug/L	1	ug/L	50.0	<1 ug/L	98.3	70-130	1.17	30	
Bromomethane	38.6 ug/L	1	ug/L	50.0	<1 ug/L	77.3	30-145	5.83	30	
Bromomethane	38.6 ug/L	1	ug/L	50.0	<1 ug/L	77.3	30-145	5.83	30	
Bromomethane	38.6 ug/L	1	ug/L	50.0	<1 ug/L	77.3	30-145	5.83	30	
Bromomethane	38.6 ug/L	1	ug/L	50.0	<1 ug/L	77.3	30-145	5.83	30	
Carbon disulfide	44.5 ug/L	10	ug/L	50.0	<10 ug/L	88.9	35-160	9.89	30	
Carbon disulfide	44.5 ug/L	10	ug/L	50.0	<10 ug/L	88.9	35-160	9.89	30	
Carbon disulfide	44.5 ug/L	10	ug/L	50.0	<10 ug/L	88.9	35-160	9.89	30	
Carbon disulfide	44.5 ug/L	10	ug/L	50.0	<10 ug/L	88.9	35-160	9.89	30	
Carbon tetrachloride	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.8	65-140	4.54	30	
Carbon tetrachloride	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.8	65-140	4.54	30	



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike Dup (BBL0489-MSD1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

Carbon tetrachloride	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.8	65-140	4.54	30	
Carbon tetrachloride	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.8	65-140	4.54	30	
Chlorobenzene	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.8	80-120	2.55	30	
Chlorobenzene	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.8	80-120	2.55	30	
Chlorobenzene	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.8	80-120	2.55	30	
Chlorobenzene	48.4 ug/L	1	ug/L	50.0	<1 ug/L	96.8	80-120	2.55	30	
Chloroethane	52.4 ug/L	1	ug/L	50.0	<1 ug/L	105	60-135	8.04	30	
Chloroethane	52.4 ug/L	1	ug/L	50.0	<1 ug/L	105	60-135	8.04	30	
Chloroethane	52.4 ug/L	1	ug/L	50.0	<1 ug/L	105	60-135	8.04	30	
Chloroethane	52.4 ug/L	1	ug/L	50.0	<1 ug/L	105	60-135	8.04	30	
Chloroform	55.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	111	65-135	3.57	30	
Chloroform	55.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	111	65-135	3.57	30	
Chloroform	55.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	111	65-135	3.57	30	
Chloroform	55.4 ug/L	0.5	ug/L	50.0	<0.5 ug/L	111	65-135	3.57	30	
Chloromethane	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	40-125	5.14	30	
Chloromethane	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	40-125	5.14	30	
Chloromethane	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	40-125	5.14	30	
Chloromethane	51.9 ug/L	1	ug/L	50.0	<1 ug/L	104	40-125	5.14	30	
cis-1,2-Dichloroethylene	56.1 ug/L	1	ug/L	50.0	<1 ug/L	112	70-125	4.60	30	
cis-1,2-Dichloroethylene	56.1 ug/L	1	ug/L	50.0	<1 ug/L	112	70-125	4.60	30	
cis-1,2-Dichloroethylene	56.1 ug/L	1	ug/L	50.0	<1 ug/L	112	70-125	4.60	30	
cis-1,2-Dichloroethylene	56.1 ug/L	1	ug/L	50.0	<1 ug/L	112	70-125	4.60	30	
cis-1,3-Dichloropropene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	70-130	3.57	30	
cis-1,3-Dichloropropene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	70-130	3.57	30	
cis-1,3-Dichloropropene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	70-130	3.57	30	
cis-1,3-Dichloropropene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	70-130	3.57	30	
Dibromochloromethane	52.7 ug/L	1	ug/L	50.0	<1 ug/L	105	60-135	2.68	30	
Dibromochloromethane	52.7 ug/L	1	ug/L	50.0	<1 ug/L	105	60-135	2.68	30	
Dibromochloromethane	52.7 ug/L	1	ug/L	50.0	<1 ug/L	105	60-135	2.68	30	
Dibromochloromethane	52.7 ug/L	1	ug/L	50.0	<1 ug/L	105	60-135	2.68	30	
Dibromomethane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125	0.428	30	



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

Matrix Spike Dup (BBL0489-MSD1)	Source: 18L0642-01			Prepared & Analyzed: 12/17/2018							
Dibromomethane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125	0.428	30		
Dibromomethane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125	0.428	30		
Dibromomethane	53.8 ug/L	1	ug/L	50.0	<1 ug/L	108	75-125	0.428	30		
Dichlorodifluoromethane	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.7	30-155	7.02	30		
Dichlorodifluoromethane	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.7	30-155	7.02	30		
Dichlorodifluoromethane	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.7	30-155	7.02	30		
Dichlorodifluoromethane	45.4 ug/L	1	ug/L	50.0	<1 ug/L	90.7	30-155	7.02	30		
Ethylbenzene	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.4	75-125	3.39	30		
Ethylbenzene	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.4	75-125	3.39	30		
Ethylbenzene	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.4	75-125	3.39	30		
Ethylbenzene	48.7 ug/L	1	ug/L	50.0	<1 ug/L	97.4	75-125	3.39	30		
Hexachlorobutadiene	43.6 ug/L	1	ug/L	50.0	<1 ug/L	87.3	50-140	3.60	30		
Hexachlorobutadiene	43.6 ug/L	1	ug/L	50.0	<1 ug/L	87.3	50-140	3.60	30		
Hexachlorobutadiene	43.6 ug/L	1	ug/L	50.0	<1 ug/L	87.3	50-140	3.60	30		
Hexachlorobutadiene	43.6 ug/L	1	ug/L	50.0	<1 ug/L	87.3	50-140	3.60	30		
Isopropylbenzene	52.0 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125	3.40	30		
Isopropylbenzene	52.0 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125	3.40	30		
Isopropylbenzene	52.0 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125	3.40	30		
Isopropylbenzene	52.0 ug/L	1	ug/L	50.0	<1 ug/L	104	75-125	3.40	30		
m+p-Xylenes	99.2 ug/L	2	ug/L	100	<2 ug/L	99.2	75-130	3.53	30		
m+p-Xylenes	99.2 ug/L	2	ug/L	100	<2 ug/L	99.2	75-130	3.53	30		
m+p-Xylenes	99.2 ug/L	2	ug/L	100	<2 ug/L	99.2	75-130	3.53	30		
m+p-Xylenes	99.2 ug/L	2	ug/L	100	<2 ug/L	99.2	75-130	3.53	30		
Methylene chloride	57.4 ug/L	4	ug/L	50.0	<4 ug/L	115	55-140	10.9	30		
Methylene chloride	57.4 ug/L	4	ug/L	50.0	<4 ug/L	115	55-140	10.9	30		
Methylene chloride	57.4 ug/L	4	ug/L	50.0	<4 ug/L	115	55-140	10.9	30		
Methylene chloride	57.4 ug/L	4	ug/L	50.0	<4 ug/L	115	55-140	10.9	30		
Methyl-t-butyl ether (MTBE)	59.2 ug/L	1	ug/L	50.0	<1 ug/L	118	65-125	3.48	30		
Methyl-t-butyl ether (MTBE)	59.2 ug/L	1	ug/L	50.0	<1 ug/L	118	65-125	3.48	30		
Methyl-t-butyl ether (MTBE)	59.2 ug/L	1	ug/L	50.0	<1 ug/L	118	65-125	3.48	30		
Methyl-t-butyl ether (MTBE)	59.2 ug/L	1	ug/L	50.0	<1 ug/L	118	65-125	3.48	30		



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

Matrix Spike Dup (BBL0489-MSD1)	Source: 18L0642-01			Prepared & Analyzed: 12/17/2018						
Naphthalene	50.5 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140	0.159	30	
Naphthalene	50.5 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140	0.159	30	
Naphthalene	50.5 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140	0.159	30	
Naphthalene	50.5 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140	0.159	30	
n-Butylbenzene	50.0 ug/L	1	ug/L	50.0	<1 ug/L	100	70-135	4.34	30	
n-Butylbenzene	50.0 ug/L	1	ug/L	50.0	<1 ug/L	100	70-135	4.34	30	
n-Butylbenzene	50.0 ug/L	1	ug/L	50.0	<1 ug/L	100	70-135	4.34	30	
n-Butylbenzene	50.0 ug/L	1	ug/L	50.0	<1 ug/L	100	70-135	4.34	30	
n-Propylbenzene	46.3 ug/L	1	ug/L	50.0	<1 ug/L	92.6	70-130	3.31	30	
n-Propylbenzene	46.3 ug/L	1	ug/L	50.0	<1 ug/L	92.6	70-130	3.31	30	
n-Propylbenzene	46.3 ug/L	1	ug/L	50.0	<1 ug/L	92.6	70-130	3.31	30	
n-Propylbenzene	46.3 ug/L	1	ug/L	50.0	<1 ug/L	92.6	70-130	3.31	30	
o-Xylene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	80-120	2.69	30	
o-Xylene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	80-120	2.69	30	
o-Xylene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	80-120	2.69	30	
o-Xylene	50.2 ug/L	1	ug/L	50.0	<1 ug/L	100	80-120	2.69	30	
sec-Butylbenzene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	70-125	4.47	30	
sec-Butylbenzene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	70-125	4.47	30	
sec-Butylbenzene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	70-125	4.47	30	
sec-Butylbenzene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	70-125	4.47	30	
Styrene	50.7 ug/L	1	ug/L	50.0	<1 ug/L	101	65-135	2.42	30	
Styrene	50.7 ug/L	1	ug/L	50.0	<1 ug/L	101	65-135	2.42	30	
Styrene	50.7 ug/L	1	ug/L	50.0	<1 ug/L	101	65-135	2.42	30	
Styrene	50.7 ug/L	1	ug/L	50.0	<1 ug/L	101	65-135	2.42	30	
tert-Butylbenzene	49.5 ug/L	1	ug/L	50.0	<1 ug/L	99.1	70-130	3.30	30	
tert-Butylbenzene	49.5 ug/L	1	ug/L	50.0	<1 ug/L	99.1	70-130	3.30	30	
tert-Butylbenzene	49.5 ug/L	1	ug/L	50.0	<1 ug/L	99.1	70-130	3.30	30	
tert-Butylbenzene	49.5 ug/L	1	ug/L	50.0	<1 ug/L	99.1	70-130	3.30	30	
Tetrachloroethylene (PCE)	68.1 ug/L	1	ug/L	50.0	1.30 ug/L	134	45-150	2.32	30	
Tetrachloroethylene (PCE)	68.1 ug/L	1	ug/L	50.0	1.30 ug/L	134	45-150	2.32	30	
Tetrachloroethylene (PCE)	68.1 ug/L	1	ug/L	50.0	1.30 ug/L	134	45-150	2.32	30	



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0489 - SW5030B

#### Matrix Spike Dup (BBL0489-MSD1)

Source: 18L0642-01

Prepared & Analyzed: 12/17/2018

Tetrachloroethylene (PCE)	68.1 ug/L	1	ug/L	50.0	1.30 ug/L	134	45-150	2.32	30	
Toluene	52.0 ug/L	1	ug/L	50.0	<1 ug/L	104	75-120	3.35	30	
Toluene	52.0 ug/L	1	ug/L	50.0	<1 ug/L	104	75-120	3.35	30	
Toluene	52.0 ug/L	1	ug/L	50.0	<1 ug/L	104	75-120	3.35	30	
Toluene	52.0 ug/L	1	ug/L	50.0	<1 ug/L	104	75-120	3.35	30	
trans-1,2-Dichloroethylene	54.5 ug/L	1	ug/L	50.0	<1 ug/L	109	60-140	3.78	30	
trans-1,2-Dichloroethylene	54.5 ug/L	1	ug/L	50.0	<1 ug/L	109	60-140	3.78	30	
trans-1,2-Dichloroethylene	54.5 ug/L	1	ug/L	50.0	<1 ug/L	109	60-140	3.78	30	
trans-1,2-Dichloroethylene	54.5 ug/L	1	ug/L	50.0	<1 ug/L	109	60-140	3.78	30	
trans-1,3-Dichloropropene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140	3.57	30	
trans-1,3-Dichloropropene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140	3.57	30	
trans-1,3-Dichloropropene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140	3.57	30	
trans-1,3-Dichloropropene	50.6 ug/L	1	ug/L	50.0	<1 ug/L	101	55-140	3.57	30	
Trichloroethylene	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	70-125	0.0196	30	
Trichloroethylene	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	70-125	0.0196	30	
Trichloroethylene	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	70-125	0.0196	30	
Trichloroethylene	51.0 ug/L	1	ug/L	50.0	<1 ug/L	102	70-125	0.0196	30	
Trichlorofluoromethane	44.4 ug/L	1	ug/L	50.0	<1 ug/L	88.9	60-145	7.18	30	
Trichlorofluoromethane	44.4 ug/L	1	ug/L	50.0	<1 ug/L	88.9	60-145	7.18	30	
Trichlorofluoromethane	44.4 ug/L	1	ug/L	50.0	<1 ug/L	88.9	60-145	7.18	30	
Trichlorofluoromethane	44.4 ug/L	1	ug/L	50.0	<1 ug/L	88.9	60-145	7.18	30	
Vinyl chloride	26.5 ug/L	0.5	ug/L	50.0	<0.5 ug/L	53.0	50-145	9.25	30	
Vinyl chloride	26.5 ug/L	0.5	ug/L	50.0	<0.5 ug/L	53.0	50-145	9.25	30	
Vinyl chloride	26.5 ug/L	0.5	ug/L	50.0	<0.5 ug/L	53.0	50-145	9.25	30	
Vinyl chloride	26.5 ug/L	0.5	ug/L	50.0	<0.5 ug/L	53.0	50-145	9.25	30	
<hr style="border-top: 1px dashed black;"/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	51.3		ug/L	50.0	ug/L	103	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	51.3		ug/L	50.0	ug/L	103	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	51.3		ug/L	50.0	ug/L	103	70-120			
Surr: 1,2-Dichloroethane-d4 (Surr)	51.3		ug/L	50.0	ug/L	103	70-120			
Surr: 4-Bromofluorobenzene (Surr)	53.0		ug/L	50.0	ug/L	106	75-120			
Surr: 4-Bromofluorobenzene (Surr)	53.0		ug/L	50.0	ug/L	106	75-120			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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**Batch BBL0489 - SW5030B**

<b>Matrix Spike Dup (BBL0489-MSD1)</b>	<b>Source: 18L0642-01</b>	<b>Prepared &amp; Analyzed: 12/17/2018</b>								
Surr: 4-Bromofluorobenzene (Surr)	53.0	ug/L	50.0	ug/L	106	75-120				
Surr: 4-Bromofluorobenzene (Surr)	53.0	ug/L	50.0	ug/L	106	75-120				
Surr: Dibromofluoromethane (Surr)	53.2	ug/L	50.0	ug/L	106	70-130				
Surr: Dibromofluoromethane (Surr)	53.2	ug/L	50.0	ug/L	106	70-130				
Surr: Dibromofluoromethane (Surr)	53.2	ug/L	50.0	ug/L	106	70-130				
Surr: Dibromofluoromethane (Surr)	53.2	ug/L	50.0	ug/L	106	70-130				
Surr: Toluene-d8 (Surr)	50.9	ug/L	50.0	ug/L	102	70-130				
Surr: Toluene-d8 (Surr)	50.9	ug/L	50.0	ug/L	102	70-130				
Surr: Toluene-d8 (Surr)	50.9	ug/L	50.0	ug/L	102	70-130				
Surr: Toluene-d8 (Surr)	50.9	ug/L	50.0	ug/L	102	70-130				



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

### 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
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#### Batch BBL0540 - SW3510C

##### Blank (BBL0540-BLK1)

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	<0.500 mg/L	0.500	mg/L							
Surr: Pentacosane (Surr)	0.213		mg/L	0.252		84.6	65-125			

##### LCS (BBL0540-BS1)

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	4.6 mg/L	0.500	mg/L	5.00	mg/L	92.2	65-110			
Surr: Pentacosane (Surr)	0.262		mg/L	0.252	mg/L	104	65-125			

##### Matrix Spike (BBL0540-MS1)

Source: 18L0619-02

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	4.9 mg/L	0.521	mg/L	5.21	<0.521 mg/L	94.6	40-110			
Surr: Pentacosane (Surr)	0.298		mg/L	0.262	mg/L	113	65-125			

##### Matrix Spike Dup (BBL0540-MSD1)

Source: 18L0619-02

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	4.9 mg/L	0.515	mg/L	5.15	<0.515 mg/L	94.8	40-110	0.784	20	
Surr: Pentacosane (Surr)	0.294		mg/L	0.260	mg/L	113	65-125			

#### Batch BBL0541 - SW3510C

##### Blank (BBL0541-BLK1)

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (ORO)	<1.0 mg/L	1.0	mg/L							
TPH-Semi-Volatiles (ORO)	<1.0 mg/L	1.0	mg/L							
TPH-Semi-Volatiles (ORO)	<1.0 mg/L	1.0	mg/L							

##### LCS (BBL0541-BS1)

Prepared: 12/18/2018 Analyzed: 12/19/2018

TPH-Semi-Volatiles (ORO)	2.1 mg/L	1.0	mg/L	5.00	mg/L	41.2	40-160			
TPH-Semi-Volatiles (ORO)	2.1 mg/L	1.0	mg/L	5.00	mg/L	41.2	40-160			
TPH-Semi-Volatiles (ORO)	2.1 mg/L	1.0	mg/L	5.00	mg/L	41.2	40-160			



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## Certificate of Analysis

### Final Report

Client Name:	EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued:	12/21/2018 10:34
Submitted To:	Josh Hepler	Project Number:	18-796
Client Site I.D.:	A&M Mechanical Tire Edgardo Property	Purchase Order:	

### 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
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#### Batch BBL0585 - SW3510C

##### Blank (BBL0585-BLK2)

Prepared & Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	<0.500 mg/L	0.500	mg/L							
<i>Surr: Pentacosane (Surr)</i>	0.231		mg/L	0.252		91.7	65-125			

##### LCS (BBL0585-BS2)

Prepared & Analyzed: 12/19/2018

TPH-Semi-Volatiles (DRO)	5.1 mg/L	0.500	mg/L	5.00 mg/L		101	65-110			
<i>Surr: Pentacosane (Surr)</i>	0.299		mg/L	0.252 mg/L		119	65-125			

#### Batch BBL0601 - SW3510C

##### Blank (BBL0601-BLK1)

Prepared & Analyzed: 12/20/2018

TPH-Semi-Volatiles (DRO)	<0.500 mg/L	0.500	mg/L							
<i>Surr: Pentacosane (Surr)</i>	0.249		mg/L	0.252		98.8	65-125			

##### LCS (BBL0601-BS1)

Prepared & Analyzed: 12/20/2018

TPH-Semi-Volatiles (DRO)	3.3 mg/L	0.500	mg/L	5.00 mg/L		65.4	65-110			
<i>Surr: Pentacosane (Surr)</i>	0.208		mg/L	0.252 mg/L		82.5	65-125			

##### Matrix Spike (BBL0601-MS1)

Source: 18L0662-02

Prepared & Analyzed: 12/20/2018

TPH-Semi-Volatiles (DRO)	4.7 mg/L	0.556	mg/L	5.56	<0.556 mg/L	85.0	40-110			
<i>Surr: Pentacosane (Surr)</i>	0.300		mg/L	0.280 mg/L		107	65-125			

##### Matrix Spike Dup (BBL0601-MSD1)

Source: 18L0662-02

Prepared & Analyzed: 12/20/2018

TPH-Semi-Volatiles (DRO)	4.3 mg/L	0.521	mg/L	5.21	<0.521 mg/L	82.0	40-110	10.1	20	
<i>Surr: Pentacosane (Surr)</i>	0.275		mg/L	0.262 mg/L		105	65-125			



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

### Certified Analyses included in this Report

Analyte	Certifications
<b>SW8015C in Non-Potable Water</b>	
TPH-Semi-Volatiles (DRO)	VELAP,NC,WVDEP
TPH-Semi-Volatiles (ORO)	VELAP
<b>SW8260B in Non-Potable Water</b>	
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
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



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## Certificate of Analysis

### Final Report

Client Name: EEE Consulting (Blacksburg, VA) 201 Church Street Blacksburg VA, 24060	Date Issued: 12/21/2018 10:34
Submitted To: Josh Hepler	Project Number: 18-796
Client Site I.D.: A&M Mechanical Tire Edgardo Property	Purchase Order:

### Certified Analyses included in this Report

Analyte	Certifications
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
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





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### Summary of Data Qualifiers

L LCS recovery is outside of established acceptance limits

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  
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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>Josh Hepler</i>	PROJECT NAME/Quote #: <i>A&amp;M Mechanical Tire</i>
CONTACT: <i>Josh Hepler</i>	INVOICE CONTACT: <i>same</i>	SITE NAME: <i>Edgardo Property</i>
ADDRESS: <i>8525 Bell Creek Rd</i>	INVOICE ADDRESS: <i>same</i>	PROJECT NUMBER: <i>18-296</i>
PHONE #: <i>804-442-3330</i>	INVOICE PHONE #: <i>same</i>	P.O. #:
FAX #:	EMAIL: <i>jhepler@eee-consulting.com</i>	Pretreatment Program:
Is sample for compliance reporting? YES <input checked="" type="checkbox"/> <i>NG</i>	Is sample from a chlorinated supply? YES <input checked="" type="checkbox"/> <i>NO</i>	PWS I.D. #:
SAMPLER NAME (PRINT): <i>Zach Kracoff</i>	SAMPLER SIGNATURE: <i>Zach Kracoff</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
											VOCs	TPH- DRG	TPH- ORG	
1) <i>B-3</i>	<input checked="" type="checkbox"/>					<i>12-11</i>	<i>3:00</i>		<i>GW</i>	<i>5</i>	<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>B-2</i>	<input checked="" type="checkbox"/>					<i>12-12</i>	<i>10:50</i>		<i>GW</i>	<i>5</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3) <i>B-4</i>	<input checked="" type="checkbox"/>					<i>12-12</i>	<i>10:06</i>		<i>GW</i>	<i>5</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4)														
5)														
6)														
7)														
8)														
9)														
10)														

RELINQUISHED: <i>Carol Ellis II</i>	DATE / TIME: <i>12/13/18</i>	RECEIVED: <i>Zach Kracoff</i>	DATE / TIME: <i>12/14/18 2:00</i>	QC Data Package Level III <input type="checkbox"/>	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"/>
RELINQUISHED: <i>Zach Kracoff</i>	DATE / TIME: <i>12/14/18 2:00</i>	RECEIVED: <i>Ben [Signature]</i>	DATE / TIME: <i>12/14/18 1400</i>	QC Data Package Level IV <input type="checkbox"/>	<b>EEE-Blacksburg 18L0645</b> <b>A&amp;M Mechanical Tire Edgardo Pr</b> <b>Recd: 12/14/2018 Due: 01/02/2019</b>	





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## Sample Conditions Checklist

Samples Received at:	1.70°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.	Yes
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	No

Received Trip Blank (27 Nov 2018/14.05) added to work order, Zach Kiracofe notified at drop off. THM 14 Dec 2018/17.22

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**Appendix D: Table 4 Petroleum-Impacted Soil Volume Estimates**

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**Table 4: A&M Mechanic Tire/Edgardo Ayala  
 Petroleum-Impacted Soil Volume Estimates  
 Select Drainage Improvements & Pipe Connections**

Boring ID	Impacted Soil Depths	Drainage Structure ID	Impacted Excavation Footprint	Excavation Dimensions	Volume Estimate**	Volume Estimate**	Volume Estimate**	Notes
Unit	BGS		STA No.	LxWxH	Cubic Feet (ft <sup>3</sup> )	Cubic Yards (yd <sup>3</sup> )	Tons*	
B5 Comp	0-1-ft	BMP #5	STA No. 323+80; 150-ft RT of CL	25-ft x 25-ft x 2-ft	1250	47	69	NA

**Notes:**

\*Tons calculated with conversion of 1yd<sup>3</sup> = 1.5 tons

\*\*Soil volume estimates are approximate and based on preliminary information available as of the date of this report.