January 9, 2020

North Carolina Department of Transportation
Geotechnical Unit
Mail Service Center 1592
Raleigh, North Carolina 27699-1592

Attention: Mr. Craig Haden email: cehaden@ncdot.gov

Reference: **Preliminary Site Assessment Report**
NCDOT Project I-5878, WBS Element 53078.1.1
Parcel 93 – Exxon Short Stop
1008 Cumberland Street
Dunn, Harnett County, North Carolina
S&ME Project 4305-19-161

Dear Mr. Haden:

S&ME, Inc. (S&ME) is submitting this Preliminary Site Assessment (PSA) Report to the North Carolina Department of Transportation (NCDOT). This report presents the background/project information, field activities, findings, conclusions, and recommendations. These services were performed in general accordance with S&ME Proposal No. 43-1900576 REV-01 dated August 9, 2019, and Contract Number 7000018853 dated April 12, 2018 between NCDOT and S&ME, Inc., authorized by NCDOT in its September 5,2019 Notice to Proceed Letter.

♦ Background/Project Information

Based on NCDOT's July 24, 2019, Request for Technical and Cost Proposal, the PSA was conducted within the NCDOT right-of-way (ROW) and/or easement as indicated on the preliminary plan sheets provided by NCDOT at the following property:

NCDOT Parcel No.	Property Owner	Site Address
93	Circle Enterprises	(Exxon Short Stop) 1008 E. Cumberland Street, Dunn, NC

The property is developed with an active gasoline/convenience store identified as Exxon Short Stop, which utilizes several petroleum underground storage tanks (USTs). The USTs are located on the northwestern portion of the site, away from the ROW. Information regarding the UST systems listed for this site is provided in the following table:

UST Facility ID No. 0-00-000035486

Number of Tanks	Contents	Capacity (gallons)	Date Installed	Date Removed
1	Gasoline	12,000	5/5/1997	Active USTs
2	Gasoline	10,000	5/5/1997	Active USTs
3	Gasoline	10,000	5/5/1997	Active USTs
4	Diesel	6,000	5/5/1997	Active USTs

The Exxon Short Stop property is not listed with a North Carolina Department of Environmental Quality (NCDEQ) Incident associated with petroleum releases from USTs or aboveground storage tanks. However, the site is located across E. Cumberland Street from Parcel 90 (Shell Food and Tobacco Mart), which is listed with one NCDEQ Incident (Incident #29133-Smokers Friendly Texaco), which includes petroleum impacts to the groundwater above the 15A NCAC 2L Groundwater Quality Standards (2L Standards).

The PSA included a geophysical survey, subsequent limited soil sampling (eight soil borings up to 10 feet below ground surface (ft.-bgs)) and limited groundwater sampling (one groundwater sample), within accessible areas of the proposed ROW/easement in preparation for construction activities. **Figure 1** shows the vicinity and site location, and **Figure 2** shows the site and boring locations. Soil and groundwater sampling results are shown on **Figure 3.**

♦ Field Services

Prior to field activities, a site specific Health and Safety Plan was prepared as required by the Occupational Health and Safety Act (OSHA). Underground utilities were located and marked by the North Carolina One-Call Service. A private utility locator (East Coast Underground, LLC) was also used to locate and mark underground utilities.

♦ Geophysical Survey

On July 25, 2019, S&ME completed Time Domain Electromagnetic (TDEM) and Ground Penetrating Radar (GPR) surveys within accessible areas of the proposed ROW/easement at Parcel 93. Brief descriptions of these complementary geophysical techniques are presented in the following paragraphs.

Time Domain Electromagnetics (TDEM)

TDEM measures the electrical conductivity of subsurface materials and discriminates between moderately conductive earth materials and very conductive metallic targets within the shallow subsurface. The conductivity is determined by transmitting a time-varying magnetic pulse into the subsurface and measuring the amplitude and phase shift of the secondary magnetic field. The secondary magnetic field is created when the conductive materials become an inductor as the primary magnetic field is passed through them. TDEM data are acquired

continuously at a walking pace typically along a series of parallel or perpendicular lines. The system generates audible and visual indications when metallic targets are encountered. These measurements can also be supported with a global positioning system (GPS) which is output directly into the TDEM data file.

We used a Geonics Limited EM-61 MK2 TDEM system in general accordance with ASTM D6820 "*Standard Guide for Use of the Time Domain Electromagnetic Method for Subsurface Investigation.*" Data was collected along lines spaced at approximately five feet using a Juniper® Systems Geode™ sub-meter GPS as positioning support. The presence of vehicles within the requested survey area, however, prevented TDEM data collection in the northwestern corner of the site. The approximate TDEM data collection paths are presented in **Figure 4.** Golden Software's Surfer® program was used to grid and plot the data **(Figures 5 and 6).** The TDEM data has been presented as Plots A and B in order to provide both opaque and semi-transparent views, respectively.

Ground Penetrating Radar (GPR)

GPR transmits electromagnetic waves into the subsurface from an antenna at a specific frequency and measures the time for wave reflections to be received by interfaces between materials with differing material properties (e.g. soil/metal, etc.). The intensity of the reflected GPR wave is a function of the contrast in the material properties (i.e. dielectric permittivity) at the interface, the conductivity of the material that the wave is traveling through, and the frequency of the signal.

We used a Geophysical Survey Systems, Inc. (GSSI) SIR® 4000 GPR system equipped with a 350 MHz antenna in general accordance with ASTM D6432 "*Standard Guide for Using the Surface Ground Penetrating Radar Method for Subsurface Investigation*" to further characterize anomalies/features identified during the TDEM survey.

A total of three GPR profiles (Lines 1 through 3) were collected for documentation (**Figure 7**). The data was post-processed using the GSSI Radan® 7 GPR software program for additional analysis.

Geophysical Findings

Responses indicative of a potential UST were not identified in the geophysical data sets collected at the site. One anomalous area unrelated to known surficial targets was identified in the geophysical data sets (Anomaly A; **Figures 6 and 7).** Anomaly A is characterized by two high amplitude GPR responses spaced approximately eight feet apart and located about 1.5 ft-bgs. These anomalous features may be related to relatively small isolated buried metallic objects. The anomalous features were marked in the field using white spray paint. Example GPR profiles are presented in **Figure 8.**

♦ Soil Sampling

On October 30, 2019, Troxler Geologic, Inc. (Troxler's) drill crew utilized a track mounted Geoprobe® rig to advance eight soil borings (B-1 through B-8) and to collect soil samples within accessible areas of the proposed ROW/easement at Parcel 93. The approximate location of the soil borings are shown in **Figure 2**. A photographic log is included in **Appendix I.** Troxler's drill crew advanced the Geoprobe® borings up to a depth of approximately 10 ft.-bgs. During the advancement of the soil borings, groundwater was encountered at a depth ranging from approximately five to six ft.-bgs. Soil samples were continuously collected in four-foot long disposable acetate-plastic sleeves that line the hollow stainless-steel sample probes. Soil recovered from the

sleeves was classified on-site by S&ME personnel and screened with a Photoionization Detector (PID) at approximately two foot depth intervals to measure relative headspace concentrations of volatile organic compounds (VOCs).

VOC headspace readings were obtained from an aliquot of each soil sample that was placed in a re-sealable bag. Another portion of the sample was placed in a separate re-sealable bag and stored in an insulated container with ice for possible laboratory analyses. After waiting approximately 15 minutes to allow the sample to reach ambient temperature and headspace equilibrium, the PID probe was inserted into the bag to obtain a headspace reading. A summary of the PID readings and logs of the soil borings are included in **Appendix II.**

Petroleum odors and elevated PID readings were not noted in the collected soil samples. Therefore, a soil sample was selected from each boring at varying depth intervals. The soil samples were placed into laboratory supplied containers and transported to RED Lab, LLC (Red Lab) in an insulated cooler with ice for analysis. A total of eight soil samples (one soil sample per boring) were analyzed by RED Lab for TPH-GRO and TPH-DRO using ultra-violet fluorescence (UVF) spectroscopy with product (fuel) identification.

Soil Analytical Results

Based upon analytical results of soil samples analyzed by RED Lab using UVP spectroscopy, TPH-GRO and TPH-DRO were not reported at concentrations exceeding their respective North Carolina TPH Action Levels. TPH-GRO was reported in boring B-4 at the two to four foot depth interval at a concentration of two milligrams per kilograms (mg/kg) which is well below its North Carolina TPH Action Level of 50 mg/kg. TPH-DRO was reported in borings B-1, B-4, B-5, B-6 and B-8 at the two to four foot depth interval at concentrations ranging from 0.82mg/kg to 16.6 mg/kg, which is well below its North Carolina TPH Action Level of 100 mg/kg. TPH-GRO and TPH-DRO were not reported at concentrations exceeding the laboratory method reporting limits at the remaining soil samples. A summary of the soil analytical results is presented in **Table 1** and shown on **Figure 3.** A copy of the laboratory analytical report provided by RED Lab is presented in **Appendix III.**

♦ Groundwater Sampling

During the advancement of the soil borings, groundwater was encountered at a depth ranging from approximately five to six ft.-bgs. Therefore, the Geoprobe® was used to advance one of the soil borings into the groundwater table for the collection of a groundwater sample. Due to the lack of petroleum odors or elevated PID readings, boring B-3 was selected at random for collection of a groundwater sample. A temporary monitor well (TW-1) was installed at boring B-3 to a depth of approximately 6.5 ft.-bgs using a five foot section of one-inch diameter, Schedule 40 PVC well riser attached to a five foot section of 0.01-inch slotted screen that intersected the groundwater table. Groundwater within the temporary monitor well at boring B-3 was measured at 5.2 ft.-bgs. Groundwater was purged from the temporary well until relatively clear using disposable tubing attached to a peristaltic pump. The flow rate was reduced and laboratory supplied containers were filled directly from the tubing, labeled as TW-1 and placed in an insulated cooler with ice for transport to Con-Test Laboratories (Con-Test) for analysis of VOCs by EPA Method 8260 and polycyclic aromatic compounds (PAHs) by EPA Method 8270.

Upon completion of the soil and groundwater sampling, the well materials were removed and the soil borings backfilled with bentonite pellets and soil cuttings. Investigative derived wastes (IDW), such as soil cuttings generated during the soil boring advancement and decontamination water, were spread on the ground in

accordance with the procedures specified by NCDEQ. Used gloves and tubing were bagged and disposed off-site.

Groundwater Analytical Results

Based upon analytical results of the groundwater sample analyzed by Con-Test, several petroleum related target constituents were reported at concentrations exceeding their 2L Standards. Benzene was the highest constituent reported above its 2L Standard at a concentration of 62 micrograms per liter (µg/L), which exceeds its 2L Standard of 1 µg/L. A summary of the groundwater analytical results is presented in **Table 2** and shown on **Figure 3.** A copy of the laboratory analytical report provided by Con-Test is presented in **Appendix III.**

♦ Conclusion and Recommendations

The geophysical survey identified one anomalous area (Anomaly A) which may be related to relatively small isolated buried metallic objects. Responses indicative of a potential UST were not identified in the geophysical data sets collected at the site.

S&ME advanced eight soil borings (B-1 through B-8) to a depth of up to approximately 10 ft.-bgs at the site. Petroleum odors and elevated PID readings were not noted in soil samples collected at the borings. Selected soil samples from the soil borings were analyzed for TPH-GRO and TPH-DRO using UVF spectroscopy.

TPH-GRO and TPH-DRO were not reported at concentrations exceeding their respective North Carolina TPH Action Levels. TPH-GRO was reported in borings B-2 and B-3 at the four to six foot depth interval at concentrations slightly above the laboratory method reporting limits but well below its North Carolina TPH Action Level. TPH-GRO and TPH-DRO were not reported at concentrations exceeding the laboratory method reporting limits at the remaining soil samples.

TPH-GRO was reported in boring B-4 and TPH-DRO was reported in borings B-1, B-4, B-5, B-6 and B-8 at the two to four foot depth interval at concentrations above the laboratory method reporting limit but well below the TPH Action Levels.

During the soil boring advancement, groundwater was encountered at a depth ranging from approximately five to six ft.-bgs. One temporary well (TW-1) was installed at soil boring B-3. Groundwater at TW-1 was measured at 5.2 ft.-bgs and analyzed by Con-Test for VOCs by EPA Method 8260 and PAHs by EPA Method 8270. Several petroleum related target constituents were reported at concentrations exceeding their 2L Standards.

Based on the findings of the geophysical survey and analytical results of soil and groundwater samples, it is likely that during construction, NCDOT may encounter marginally impacted soil (below TPH Action Levels) and groundwater impacted with petroleum at the site.

It should also be assumed that saturated petroleum impacted soil will be encountered if construction excavations extend deeper than five ft.-bgs on the site. If construction dewatering is required, petroleum impacted groundwater must be properly disposed or treated at a licensed facility. If petroleum stained or odorous soils are encountered during construction, these soils should be properly handled and disposed at a licensed facility.

S&ME recommends maintaining an awareness level for the presence of marginally impacted petroleum in the soil (below TPH Action Levels) and impacted groundwater at the site for the safety of workers and the public.

♦ Limitations

The results of this preliminary investigation are limited to the boring locations presented herein. The results of this Preliminary Site Assessment are not all inclusive and may not represent existing conditions across the entire property. These results only reflect the current conditions at the locations sampled on the date this Preliminary Site Assessment was performed. This report has been prepared in accordance with generally accepted environmental engineering and geophysical practice for specific application to this project. The conclusions and recommendations contained in this report are based upon applicable standards of our practice in this geographic area at the time this report was prepared. No other warranty, expressed or implied, is made.

The geophysical methods used for this survey have inherent limitations. Site metallic features (e.g., reinforced concrete, utilities, etc.) and overhead transmission lines can produce a false electromagnetic response and may mask subsurface features. The depth of exploration of the GPR signal is highly site specific and is greatly limited by signal attenuation (absorption) of the subsurface materials. Signal attenuation is dependent upon the electrical conductivity of the subsurface materials. Signal attenuation is greatest in materials with relatively high electrical conductivities such as clay soils, and lowest in relatively low conductivity materials such as unsaturated sand. For this project location, the GPR data sets appear to have a maximum depth of penetration of about seven ft.-bgs.

Regardless of the thoroughness of a geophysical study, there is always a possibility that actual conditions may not match the interpretations. The results should be considered accurate only to the degree implied by the methods used and the method's limitations and data coverage. Accordingly, the possibility exists that not all features at a project site will be located due to either subsurface soil conditions or the occurrence of features outside the lateral limits and below the depth of penetration of the methods used. As with most surface geophysical methods, resolution of the subsurface will also decrease with depth. As such, the size and/or contrast of features compared to the imaged subsurface media must be significant enough to produce the anticipated response. The location and/or determination (or the lack thereof) of potential buried features is based on our review of the provided information and of the geophysical survey. Under no circumstances does S&ME assume any responsibility for damages resulting from the presence of subsurface features that may exist but were not identified by our survey.

This Preliminary Site Assessment was performed solely for NCDOT regarding the above-referenced site and assessment area. This report is provided for the sole use of NCDOT. Use of this report by any other parties will be at such party's sole risk. S&ME disclaims liability for any such use or reliance by third parties. The observations presented in this report are indicative of conditions during the time of the assessment and of the specific areas referenced.

Closing

S&ME appreciates the opportunity to provide these services to you. If you have any questions or comments regarding this report, please contact us at your convenience.

Sincerely,
S&ME, Inc.

DocuSigned by:
Jamie Honeycutt
4C890EAEC25F488...

Jamie T Honeycutt
Environmental Professional
jhoneycutt@smeinc.com

DocuSigned by:
Michael Pfeifer
861E52DDEFAF4C7...

Michael W. Pfeifer
Senior Project Manager
mpfeifer@smeinc.com

DocuSigned by:
Tom Raymond
D4B9FB5F636F4BB...

1/27/2020

Thomas P. Raymond, P.E., P.M.P.
Senior Consultant
traymond@smeinc.com

Attachments:

Table 1: Summary of Soil Sampling Results
Table 2: Summary of Groundwater Sampling Results

Figure 1: Vicinity Map
Figure 2: Site Map
Figure 3: Soil and Groundwater Constituent Map
Figure 4: TDEM Path Location Plan
Figure 5: TDEM Data Plot A
Figure 6: TDEM Data Plot B
Figure 7: Geophysical Anomaly Location Plan
Figure 8: Example GPR Data – Line 3

Appendix I: Photographs
Appendix II: Boring Logs
Appendix III: Laboratory Analytical Reports and Chain of Custody

Tables

TABLE 1
SUMMARY OF SOIL SAMPLING RESULTS
NCDOT Project I-5878
Parcel 93 - (Exxon Short Stop)
1008 Cumberland Street
Dunn, Harnett County, North Carolina
S&ME Project No. 4305-19-161

Analytical Method→			Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) and Diesel Range Organics (DRO) by Ultraviolet Fluorescence (UVF) Spectrometry	
Sample ID	Date	Contaminant of Concern→ / Sample Depth (ft.-bgs)	TPH-GRO	TPH-DRO
B-1	10/30/2019	2 to 4	<0.61	**0.82**
B-2	10/30/2019	2 to 4	<0.35	<0.35
B-3	10/30/2019	2 to 4	<0.34	<0.34
B-4	10/30/2019	2 to 4	**2**	**4.1**
B-5	10/30/2019	2 to 4	<0.37	**9.1**
B-6	10/30/2019	2 to 4	<0.36	**0.97**
B-7	10/30/2019	2 to 4	<0.36	<0.36
B-8	10/30/2019	2 to 4	<0.38	**16.6**
North Carolina TPH Action Levels			**50**	**100**

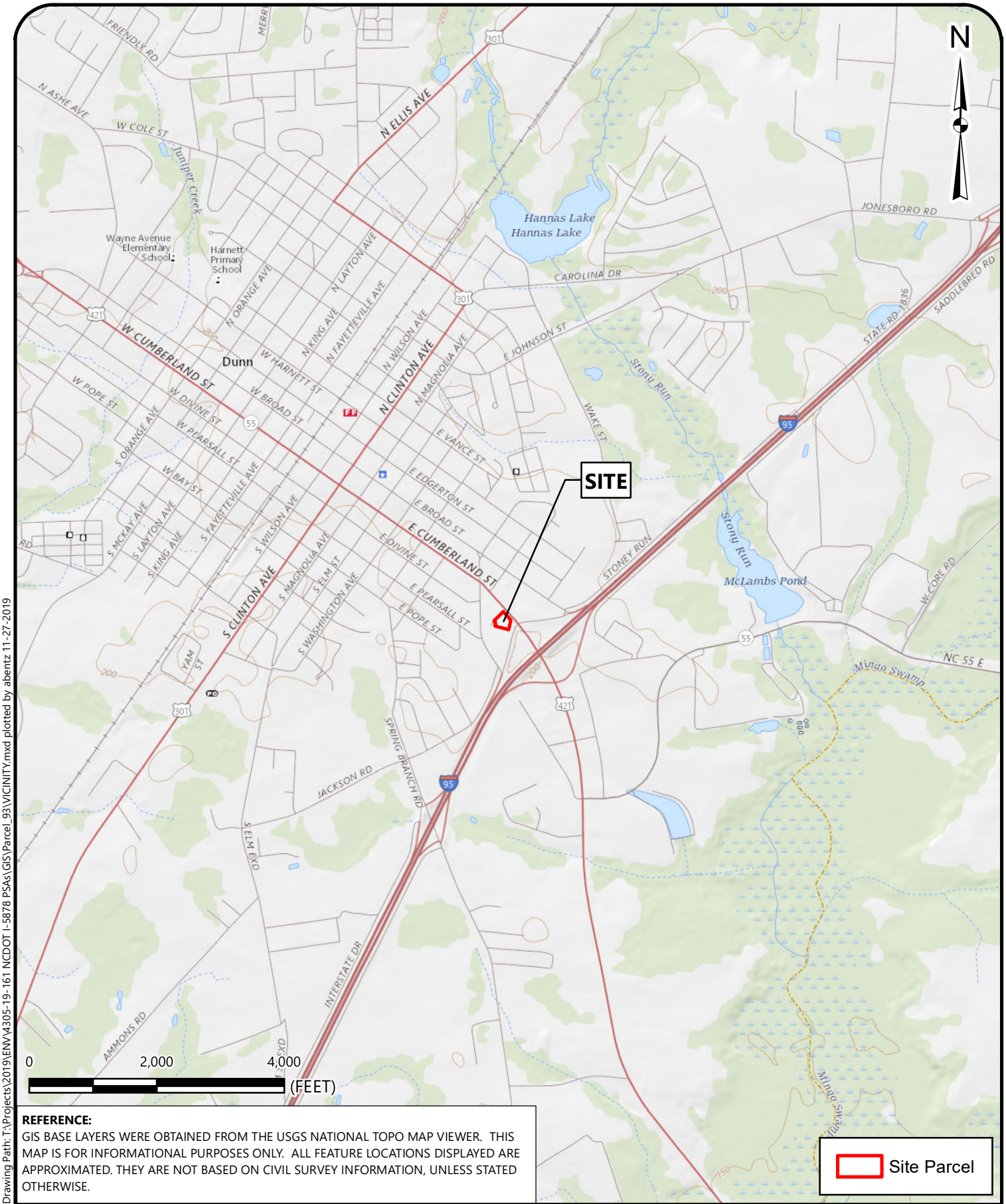
Notes:
1. UVF analysis performed by RED Lab, LLC
2. Concentrations are reported in milligrams per kilogram (mg/Kg).
3. ft.-bgs:- feet below ground surface.
4. Concentrations exceeding the laboratory's reporting limits are shown in **BOLD** fields.
5. Concentrations exceeding the North Carolina TPH Action Levels are shown in Shaded and **BOLD** fields.

TABLE 2
SUMMARY OF GROUNDWATER SAMPLING RESULTS
NCDOT Project I-5878
Parcel 93 - (Exxon Short Stop)
1008 Cumberland Street
Dunn, Harnett County, North Carolina
S&ME Project No. 4305-19-161

Analytical Method→		Volatile Organic Compounds by EPA Method 8260															Polycyclic Aromatic Compounds (PAHs) by EPA Method 8270			
Sample ID	Contaminant of Concern→ / Date	Benzene	Diisopropyl Ether	Ethylbenzene	Isopropylbenzene	MTBE	Naphthalene	n-Butylbenzene	sec-Butylbenzene	tert-Amyl Methyl Ether	tert-Butyl Alcohol	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Total Xylenes	Fluoranthene	Naphthalene	Phenanthrene	2-Methylnaphthalene
B-3/TW-1	10/30/2019	**62**	**0.64 J**	**4.7**	**3.2**	**190**	**28**	**0.44 J**	**0.38 J**	**3.1**	**130**	**0.42 J**	**1.3 J**	**15**	**4.0**	**17.4**	**0.029 J**	**20**	**0.036 J**	**0.41 J**
2L Standard (µg/L)		**1**	**70**	**600**	**70**	**20**	**6**	**70**	**70**	**128**	**10**	**70**	**600**	**400**	**400**	**500**	**300**	**6**	**200**	**30**
GCL (µg/L)		**5,000**	**70,000**	**84,500**	**25,000**	**20,000**	**6,000**	**6,900**	**8,500**	**128,000**	**10,000**	**30,000**	**260,000**	**28,500**	**25,000**	**85,500**	**300**	**6,000**	**410**	**12,500**

Notes:
1. Analytes that are not shown for the method were not detected.
2. Concentrations are reported in micrograms per liter (µg/L).
3. 2L Standard: North Carolina Groundwater Quality Standards: 15A NCAC 2L.0202
4. Concentrations exceeding the laboratory's reporting limits are shown in **BOLD** fields.
5. Concentrations exceeding the 2L Standards are shown in Shaded and **BOLD** fields.
6. GCL: Gross Contamination Level.
7. J: Estimated concentration detected below the reporting limit.

Figures



REFERENCE:
GIS BASE LAYERS WERE OBTAINED FROM THE USGS NATIONAL TOPO MAP VIEWER. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

Drawing Path: T:\Projects\2019\ENV\4305-19-161 NCDOT I-5878 PSAs\GIS\Parcel_93\VICINITY.mxd plotted by abentz 11-27-2019

VICINITY MAP

NCDOT PROJECT I-5878
PARCEL NO. 93 (EXXON SHORT STOP)
1008 CUMBERLAND ST, DUNN, HARNETT COUNTY, NORTH CAROLINA

SCALE:	FIGURE NO.
1 " = 2,000 '	1
DATE: 11-27-19	
PROJECT NUMBER 4305-19-161	

LEGEND

Geoenvironmental Boring:

Underground Storage Tank (UST): UST

Known Soil Contamination:

Possible Soil Contamination: — S —

Existing Contamination Known - Water: — W —

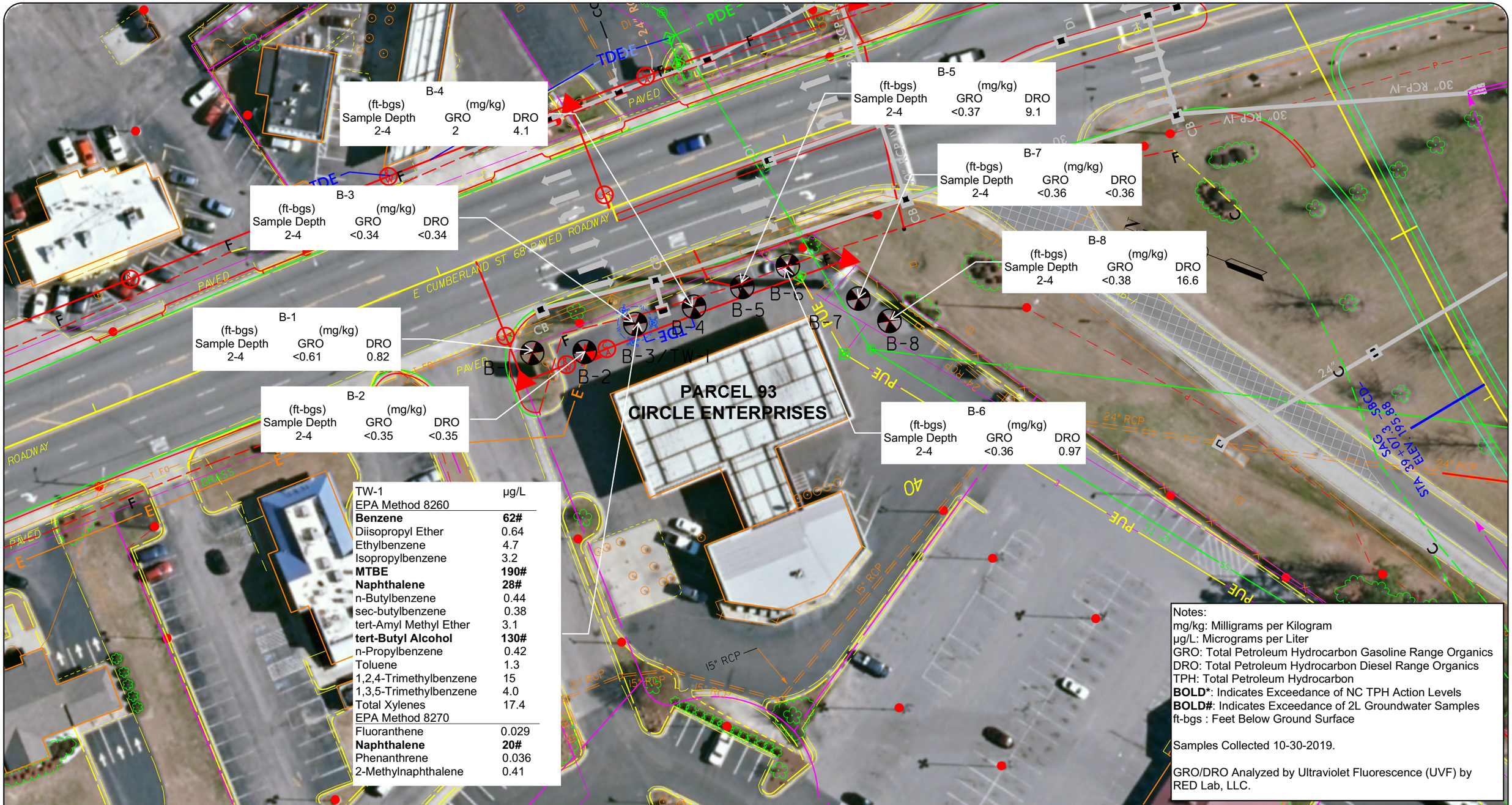
Map Source: NCDOT Project I-5986B
Image Source: NC ONEMAP, Dated 2016

0 50 100
GRAPHIC SCALE (IN FEET)

SITE MAP

NCDOT Project: I-5878
PARCEL 93 - EXXON SHORT STOP
1008 Cumberland St., Dunn, Harnett County, North Carolina

SCALE:	FIGURE NO.
1" = 50'	2
DATE:	
JAN. 2020	
PROJECT NUMBER	
4305-19-161	



LEGEND

Geoenvironmental Boring:
Underground Storage Tank (UST): UST

Known Soil Contamination:
Possible Soil Contamination: — S —
Existing Contamination Known - Water: — W —

Map Source: NCDOT Project I-5986B
Image Source: NC ONEMAP, Dated 2016

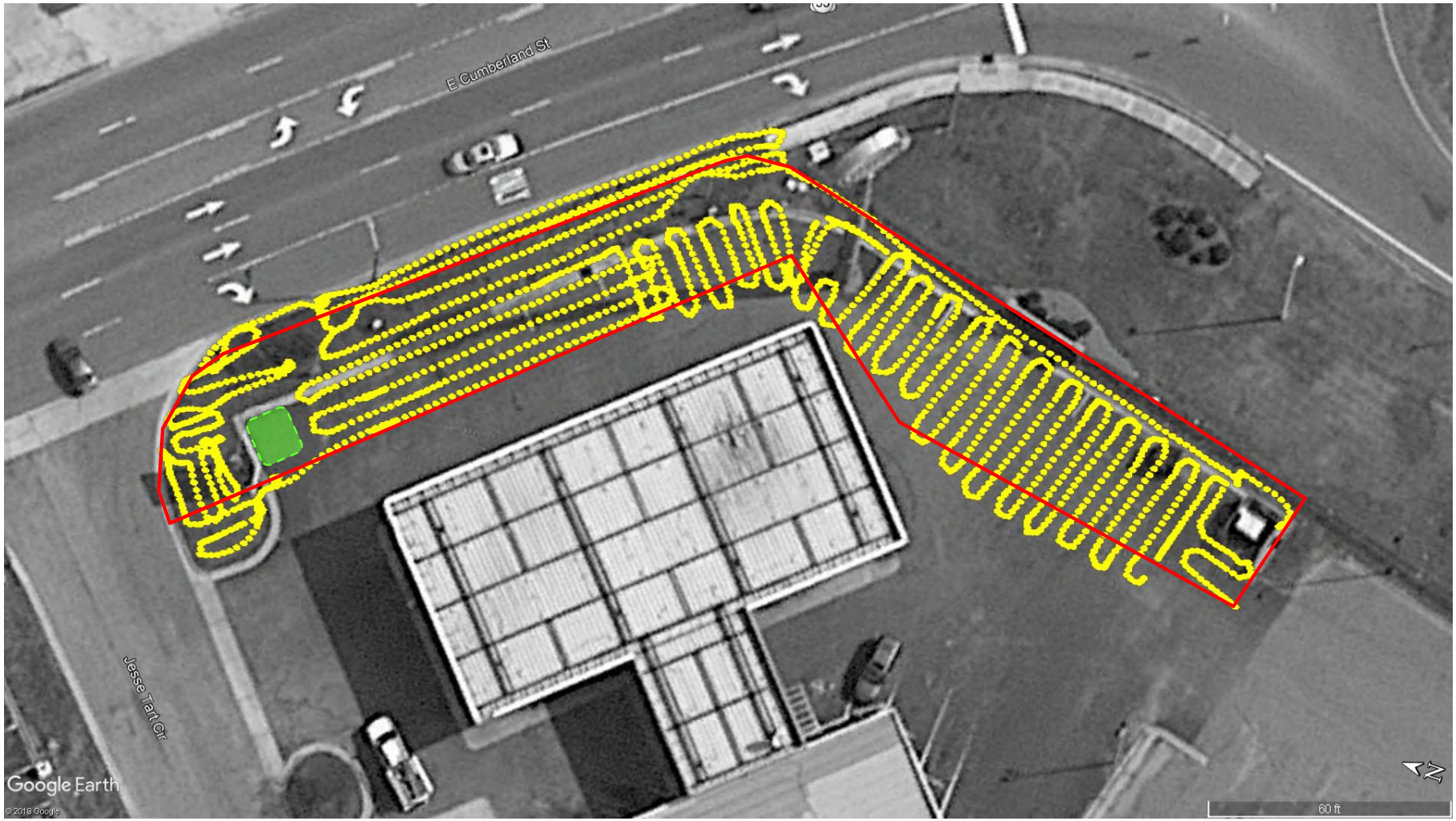
0 50 100
GRAPHIC SCALE (IN FEET)

SOIL AND GROUNDWATER CONSTITUENT MAP

NCDOT Project: I-5878
PARCEL 93 - EXXON SHORT STOP
1008 Cumberland St., Dunn, Harnett County, North Carolina

SCALE:	FIGURE NO.
1" = 50'	3
DATE:	
NOV. 2019	
PROJECT NUMBER	
4305-19-161	

REFERENCE:
GOOGLE EARTH PRO AERIAL PHOTOGRAPH
(DATED MARCH 4, 2018)



LEGEND

Approximate TDEM Path

Approximate Requested Survey Area

Location of Vehicles

TDEM PATH LOCATION PLAN

NCDOT PROJECT: I-5878
PARCEL #93 – (EXXON SHORT STOP)
1008 CUMBERLAND STREET, DUNN, HARNETT COUNTY, NORTH CAROLINA

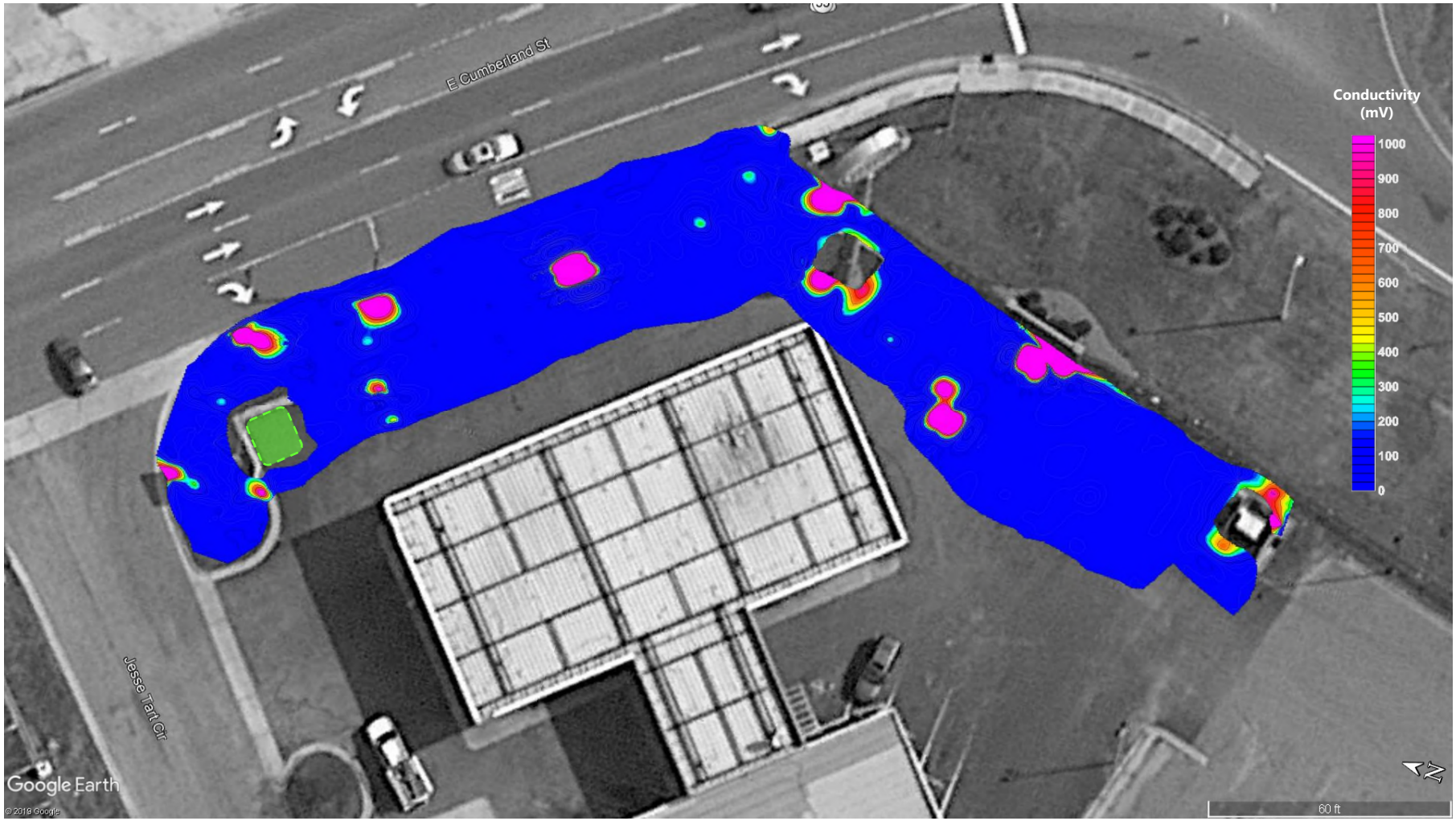
SCALE:
AS SHOWN

DATE:
1/7/2020

PROJECT NUMBER
4305-19-161

FIGURE NO.
4

REFERENCE:
GOOGLE EARTH PRO AERIAL PHOTOGRAPH
(DATED MARCH 4, 2018)



LEGEND

Location of Vehicles

TDEM DATA PLOT A

NCDOT PROJECT: I-5878
PARCEL #93 – (EXXON SHORT STOP)
1008 CUMBERLAND STREET, DUNN, HARNETT COUNTY, NORTH CAROLINA

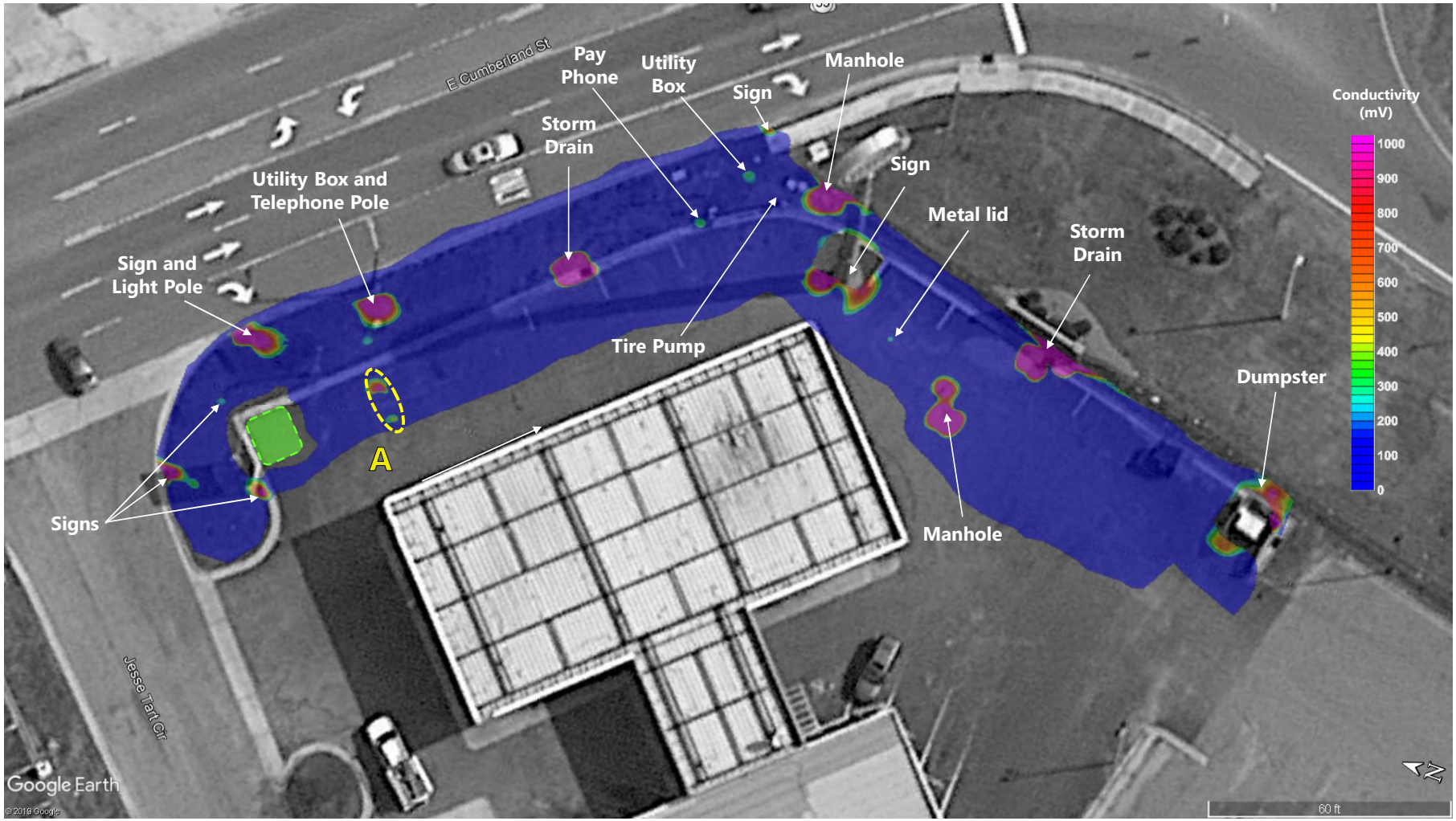
SCALE: AS SHOWN

DATE: 1/7/2020

PROJECT NUMBER 4305-19-161

FIGURE NO. **5**

REFERENCE:
GOOGLE EARTH PRO AERIAL PHOTOGRAPH
(DATED MARCH 4, 2018)



LEGEND

Approximate Location of Geophysical Anomaly

Location of Vehicles

TDEM DATA PLOT B

NCDOT PROJECT: I-5878
PARCEL #93 – (EXXON SHORT STOP)
1008 CUMBERLAND STREET, DUNN, HARNETT COUNTY, NORTH CAROLINA

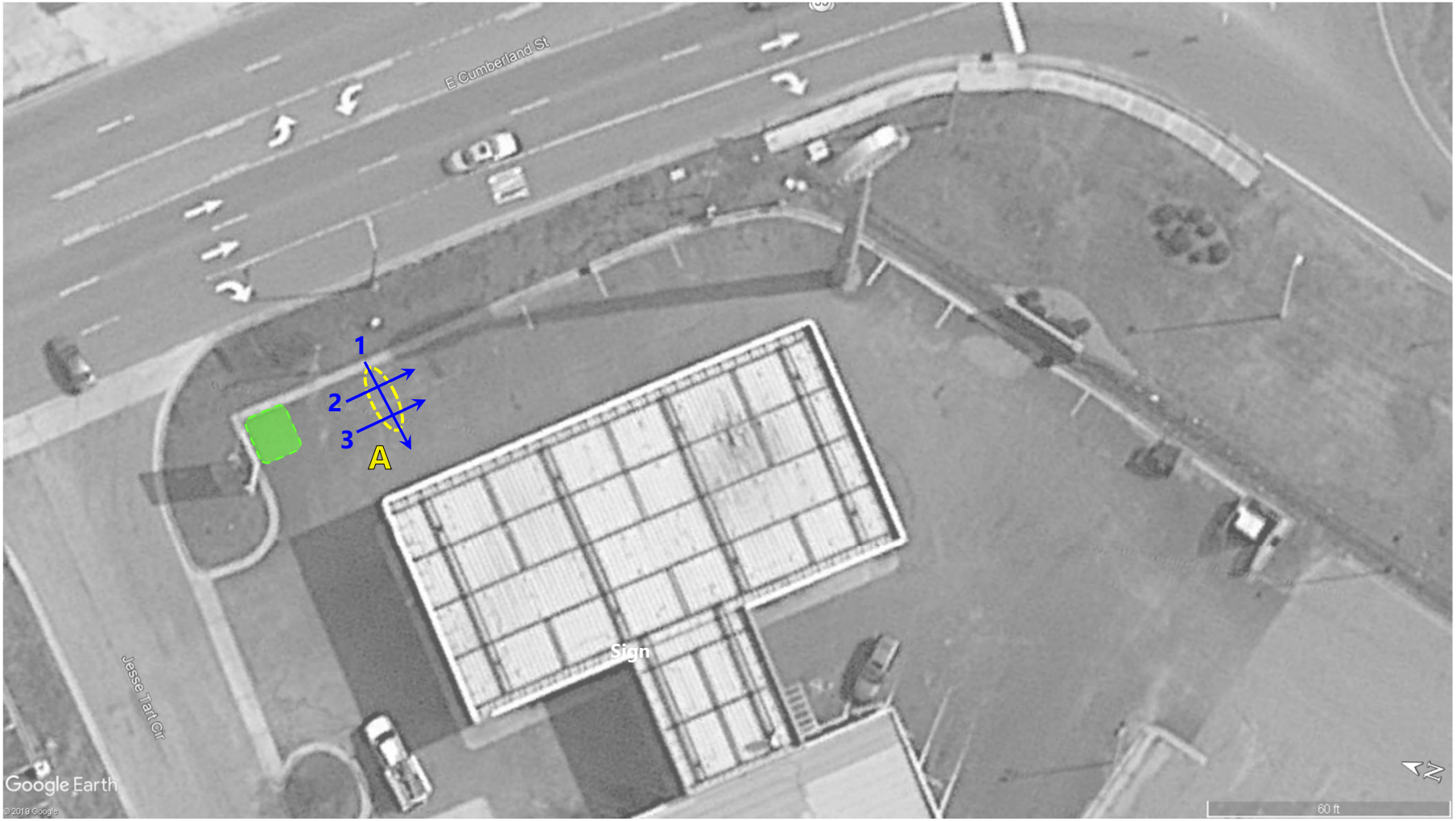
SCALE: AS SHOWN

DATE: 1/7/2020

PROJECT NUMBER 4305-19-161

FIGURE NO. 6

REFERENCE:
GOOGLE EARTH PRO AERIAL PHOTOGRAPH
(DATED MARCH 4, 2018)



LEGEND

Approximate Location of Geophysical Anomaly

Approximate Location of GPR Profile

Location of Vehicles

GEOPHYSICAL ANOMALY LOCATION PLAN

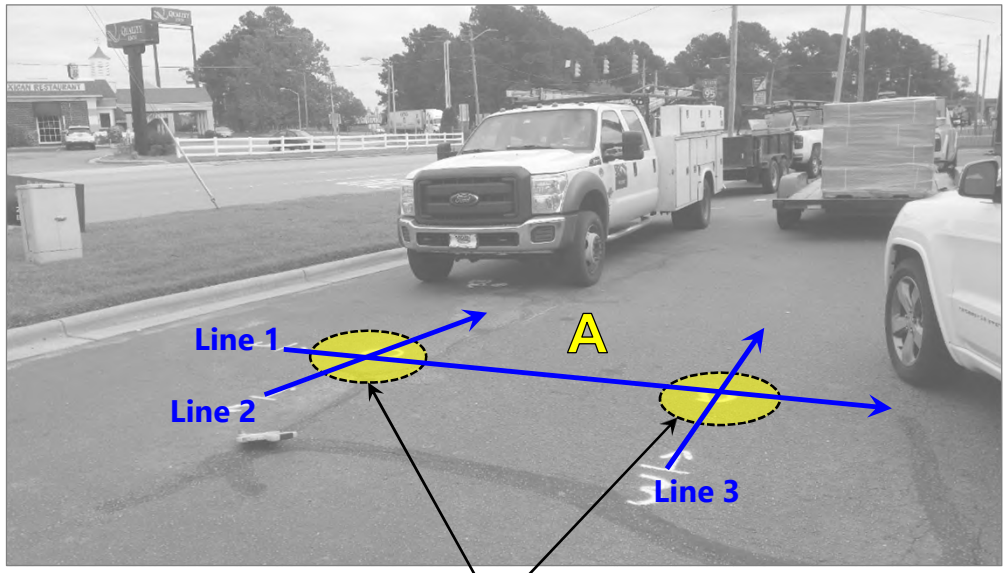
NCDOT PROJECT: I-5878
PARCEL #93 – (EXXON SHORT STOP)
1008 CUMBERLAND STREET, DUNN, HARNETT COUNTY, NORTH CAROLINA

SCALE:
AS SHOWN

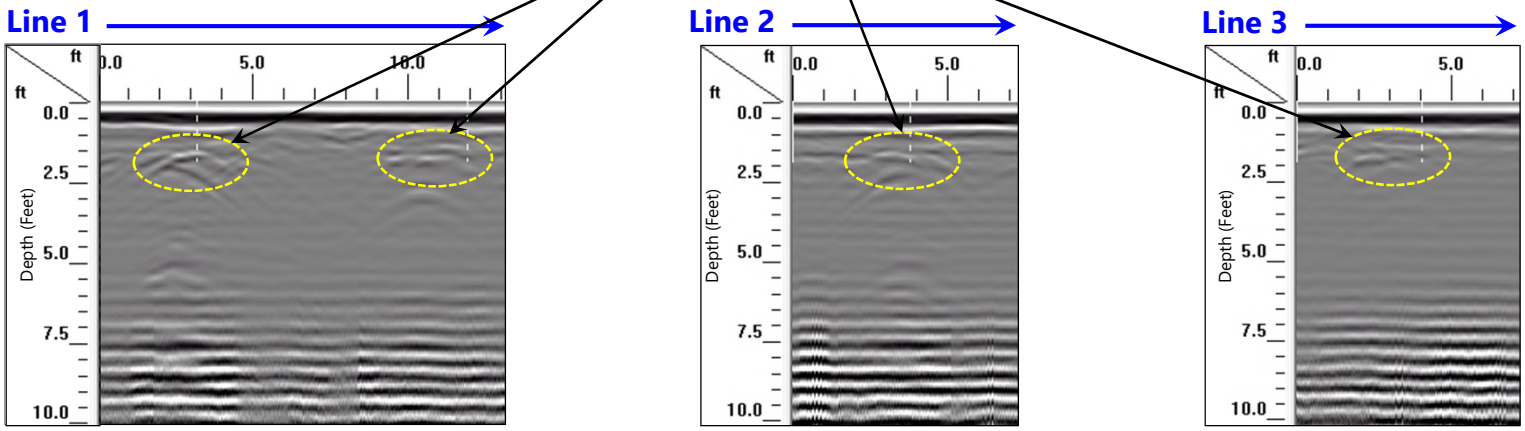
DATE:
1/7/2020

PROJECT NUMBER
4305-19-161

FIGURE NO.
7



Anomaly A



Note: Presented GPR profile depths are based on an assumed average dielectric and should be considered approximate

EXAMPLE GPR DATA – LINES 1, 2, AND 3

NCDOT PROJECT: I-5878
PARCEL #93 – (EXXON SHORT STOP)
1008 CUMBERLAND STREET, DUNN, HARNETT COUNTY, NORTH CAROLINA

SCALE: AS SHOWN

DATE: 1/7/2020

PROJECT NUMBER 4305-19-161

FIGURE NO. **8**

Appendix I – Photographs

Date: 10/31/2019

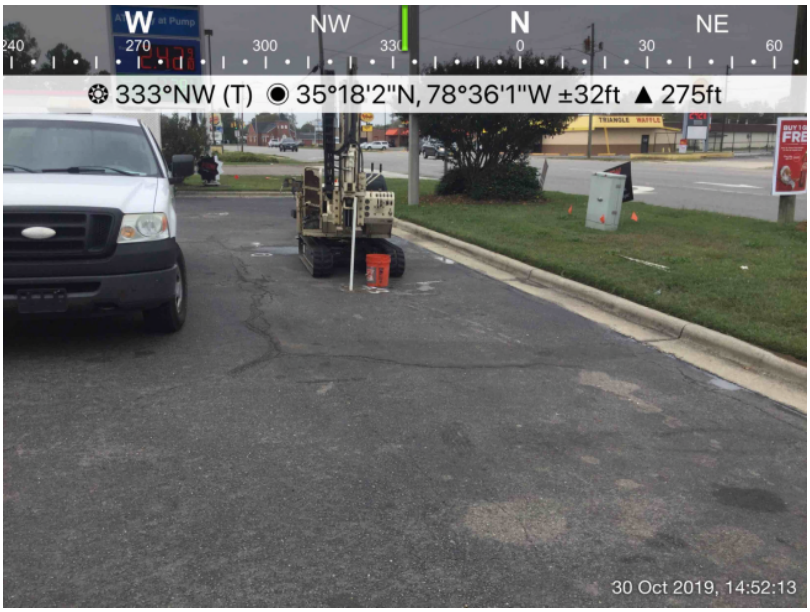
Photographer: JTH

1	**Location / Orientation**	Front view of site looking south from across E. Cumberland St.
	Remarks	None

Date: 10/31/2019

Photographer: JTH

2	**Location / Orientation**	View looking east across front of site.
	Remarks	None.



Date: 10/31/2019

Photographer: JTH

3	**Location / Orientation**	View looking northwest.
	Remarks	Note sampling of TW-1 at boring B-3.

Date: 10/31/2019

Photographer: JTH

4	**Location / Orientation**	View looking south.
	Remarks	None.

Appendix II – Boring Logs

PROJECT:	**NCDOT I-5878** Parcel 93-1008 Cumberland St. (Exxon Short Stop), Dunn, NC S&ME Project No. 4305-19-161		**BORING LOG: B-1**
DATE DRILLED:	Wednesday, October 30, 2019	BORING DEPTH (FT):	10
DRILL RIG:	Geoprobe 54DT	WATER LEVEL:	6.2
DRILLER:	Troxler Geologic, Inc.	CAVE-IN DEPTH:	Not Applicable
HAMMER TYPE:	Not Applicable	LOGGED BY:	J. Honeycutt
SAMPLING METHOD:	Macro-Core Sampler	NORTHING:	
DRILLING METHOD:	Macro-Core Sampler (3-in. OD)	EASTING:	

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	SAMPLE	PID READING (PPM)	LABORATORY ANALYSES	Sample Time / 1st 6in	2nd 6in	3rd 6in	N VALUE
		Topsoil,								
		Silty Sand, Brown,			0.6	No				
		Clay, Gray, Red,			1.0	Yes	1030			
5		Silty Sand, Gray,	▼		0.9	No				
		Clay, Black,								
10		Boring Terminated at 10 Ft-BGS								
15										
20										
25										
30										

PROJECT:	**NCDOT I-5878** Parcel 93-1008 Cumberland St. (Exxon Short Stop), Dunn, NC S&ME Project No. 4305-19-161	**BORING LOG: B-2**

DATE DRILLED:	Wednesday, October 30, 2019	BORING DEPTH (FT):	8
DRILL RIG:	Geoprobe 54DT	WATER LEVEL:	
DRILLER:	Troxler Geologic, Inc.	CAVE-IN DEPTH:	5
HAMMER TYPE:	Not Applicable	LOGGED BY:	J. Honeycutt
SAMPLING METHOD:	Macro-Core Sampler	NORTHING:	
DRILLING METHOD:	Macro-Core Sampler (3-in. OD)	EASTING:	

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	SAMPLE	PID READING (PPM)	LABORATORY ANALYSES	Sample Time / 1st 6in	2nd 6in	3rd 6in	N VALUE
		Asphalt, Gravel,								
		Sand, Tan, Orange,								
		Sandy Clay, Tan, Orange,			1.5	No				
		Sandy Clay, Gray,			2.3	Yes	1045			
5										
		Silty Sand, Gray, Moist,			2.4	No				
		Clay, Gray, Moist,								
		Boring Terminated at 8 Ft-BGS								
10										
15										
20										
25										
30										

PROJECT:	**NCDOT I-5878** Parcel 93-1008 Cumberland St. (Exxon Short Stop), Dunn, NC S&ME Project No. 4305-19-161		**BORING LOG: B-3/TW-1**
DATE DRILLED:	Wednesday, October 30, 2019	BORING DEPTH (FT):	12
DRILL RIG:	Geoprobe 54DT	WATER LEVEL:	5.2
DRILLER:	Troxler Geologic, Inc.	CAVE-IN DEPTH:	Not Applicable
HAMMER TYPE:	Not Applicable	LOGGED BY:	J. Honeycutt
SAMPLING METHOD:	Macro-Core Sampler	NORTHING:	
DRILLING METHOD:	Macro-Core Sampler (3-in. OD)	EASTING:	

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	SAMPLE	PID READING (PPM)	LABORATORY ANALYSES	Sample Time / 1st 6in	2nd 6in	3rd 6in	N VALUE
		Asphalt, Gravel,								
		Sand, Tan, Orange,								
		Sandy Clay, Tan, Orange,			11.1	No				
		Sandy Clay, Gray,			10.2	Yes	1100			
5			▼							
		Silty Sand, Gray, Moist,			6.5	No				
		Clay, Gray, Moist,								
		Silty Sand, Gray, Moist,								
10										
		Boring Terminated at 12 Ft-BGS								
15										
20										
25										
30										

PROJECT:	**NCDOT I-5878** Parcel 93-1008 Cumberland St. (Exxon Short Stop), Dunn, NC S&ME Project No. 4305-19-161		**BORING LOG: B-4**
DATE DRILLED:	Wednesday, October 30, 2019	BORING DEPTH (FT):	8
DRILL RIG:	Geoprobe 54DT	WATER LEVEL:	
DRILLER:	Troxler Geologic, Inc.	CAVE-IN DEPTH:	Not Applicable
HAMMER TYPE:	Not Applicable	LOGGED BY:	J. Honeycutt
SAMPLING METHOD:	Macro-Core Sampler	NORTHING:	
DRILLING METHOD:	Macro-Core Sampler (3-in. OD)	EASTING:	

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	SAMPLE	PID READING (PPM)	LABORATORY ANALYSES	Sample Time / 1st 6in	2nd 6in	3rd 6in	N VALUE
		Asphalt, Gravel,								
		Sand, Tan, Orange,								
		Sandy Clay, Tan, Orange,			0.2	No				
					6.5	Yes	1130			
5					2.4	No				
		Boring Terminated at 8 Ft-BGS								
10										
15										
20										
25										
30										

PROJECT:	**NCDOT I-5878** Parcel 93-1008 Cumberland St. (Exxon Short Stop), Dunn, NC S&ME Project No. 4305-19-161		**BORING LOG: B-5**
DATE DRILLED:	Wednesday, October 30, 2019	BORING DEPTH (FT):	8
DRILL RIG:	Geoprobe 54DT	WATER LEVEL:	
DRILLER:	Troxler Geologic, Inc.	CAVE-IN DEPTH:	Not Applicable
HAMMER TYPE:	Not Applicable	LOGGED BY:	J. Honeycutt
SAMPLING METHOD:	Macro-Core Sampler	NORTHING:	
DRILLING METHOD:	Macro-Core Sampler (3-in. OD)	EASTING:	

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	SAMPLE	PID READING (PPM)	LABORATORY ANALYSES	Sample Time / 1st 6in	2nd 6in	3rd 6in	N VALUE
		Asphalt, Gravel,								
		Clayey Sand, Black, Gray,			0.6	No				
					1.0	Yes	1145			
5		Clay, Gray,			2.2	No				
		Boring Terminated at 8 Ft-BGS								
10										
15										
20										
25										
30										

PROJECT:	**NCDOT I-5878** Parcel 93-1008 Cumberland St. (Exxon Short Stop), Dunn, NC S&ME Project No. 4305-19-161		**BORING LOG: B-6**
DATE DRILLED:	Wednesday, October 30, 2019	BORING DEPTH (FT):	8
DRILL RIG:	Geoprobe 54DT	WATER LEVEL:	
DRILLER:	Troxler Geologic, Inc.	CAVE-IN DEPTH:	Not Applicable
HAMMER TYPE:	Not Applicable	LOGGED BY:	J. Honeycutt
SAMPLING METHOD:	Macro-Core Sampler	NORTHING:	
DRILLING METHOD:	Macro-Core Sampler (3-in. OD)	EASTING:	

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	SAMPLE	PID READING (PPM)	LABORATORY ANALYSES	Sample Time / 1st 6in	2nd 6in	3rd 6in	N VALUE
		Asphalt, Gravel,								
		Sandy Clay, Tan, Gray,			0.7	No				
					0.5	Yes	1200			
5		Clay, Gray,			1.2	No				
		Boring Terminated at 8 Ft-BGS								
10										
15										
20										
25										
30										

PROJECT:	**NCDOT I-5878** Parcel 93-1008 Cumberland St. (Exxon Short Stop), Dunn, NC S&ME Project No. 4305-19-161		**BORING LOG: B-7**
DATE DRILLED:	Wednesday, October 30, 2019	BORING DEPTH (FT):	8
DRILL RIG:	Geoprobe 54DT	WATER LEVEL:	
DRILLER:	Troxler Geologic, Inc.	CAVE-IN DEPTH:	Not Applicable
HAMMER TYPE:	Not Applicable	LOGGED BY:	J. Honeycutt
SAMPLING METHOD:	Macro-Core Sampler	NORTHING:	
DRILLING METHOD:	Macro-Core Sampler (3-in. OD)	EASTING:	

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	SAMPLE	PID READING (PPM)	LABORATORY ANALYSES	Sample Time / 1st 6in	2nd 6in	3rd 6in	N VALUE
		Asphalt, Gravel,								
		Sandy Clay, Tan, Orange, Gray,			0.1	No				
					1.0	Yes	1300			
5					2.1	No				
		Boring Terminated at 8 Ft-BGS								
10										
15										
20										
25										
30										

PROJECT:	**NCDOT I-5878** Parcel 93-1008 Cumberland St. (Exxon Short Stop), Dunn, NC S&ME Project No. 4305-19-161		**BORING LOG: B-8**
DATE DRILLED:	Wednesday, October 30, 2019	BORING DEPTH (FT):	8
DRILL RIG:	Geoprobe 54DT	WATER LEVEL:	
DRILLER:	Troxler Geologic, Inc.	CAVE-IN DEPTH:	Not Applicable
HAMMER TYPE:	Not Applicable	LOGGED BY:	J. Honeycutt
SAMPLING METHOD:	Macro-Core Sampler	NORTHING:	
DRILLING METHOD:	Macro-Core Sampler (3-in. OD)	EASTING:	

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	SAMPLE	PID READING (PPM)	LABORATORY ANALYSES	Sample Time / 1st 6in	2nd 6in	3rd 6in	N VALUE
0		Asphalt, Gravel,								
		Clayey Sand, Tan, Orange, Gray,			1.5	No				
					5.4	Yes	1315			
5					5.2	No				
		Boring Terminated at 8 Ft-BGS								
10										
15										
20										
25										
30										

Appendix III – Laboratory Analytical Reports and Chain of Custody

QED REDLAB RAPID ENVIRONMENTAL DIAGNOSTICS QROS

Hydrocarbon Analysis Results

Client: S&ME
Address: 3201 Spring Forest Rd
Raleigh, NC

Samples taken Wednesday, October 30, 2019
Samples extracted Wednesday, October 30, 2019
Samples analysed Friday, November 1, 2019

Contact: Jamie T Honeycutt

Operator Harry Wooten

Project: NCDOT I-5878 Parcel 93

F03640

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	B-1 2-4'	24.2	<0.61	<0.61	0.82	0.82	0.36	<0.19	<0.024	62.7	27.9	9.4	Deg.PHC 96.8%,(FCM)
s	B-2 2-4'	14.0	<0.35	<0.35	<0.35	<0.35	<0.07	<0.11	<0.014	0	75.3	24.7	Residual HC
s	B-3 2-4'	13.5	<0.34	<0.34	<0.34	0.24	0.24	<0.11	<0.013	0	69.5	30.5	Residual HC
s	B-4 2-4'	14.3	<0.36	2	4.1	6.1	3.6	0.18	<0.014	46.6	43.7	9.7	Deg Fuel 76.6%,(FCM)
s	B-5 2-4'	14.9	<0.37	<0.37	9.1	9.1	2.8	<0.12	<0.015	7.4	82.2	10.4	Deg.FuelDeg.Hydr.Oil 84.5%,(FCM)
s	B-6 2-4'	14.4	<0.36	<0.36	0.97	0.97	0.79	<0.12	<0.014	31.7	60.3	8	Deg Fuel 82.1%,(FCM)
s	B-7 2-4'	14.5	<0.36	<0.36	<0.36	<0.36	<0.07	<0.12	<0.015	0	0	0	,(FCM)
s	B-8 2-4'	15.0	<0.38	<0.38	16.6	16.6	8.9	0.42	<0.015	0	73.3	26.7	V.Deg.PHC 94%,(FCM),(BO),(P)

Initial Calibrator QC check OK

Final FCM QC Check OK 107.9 %

Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content

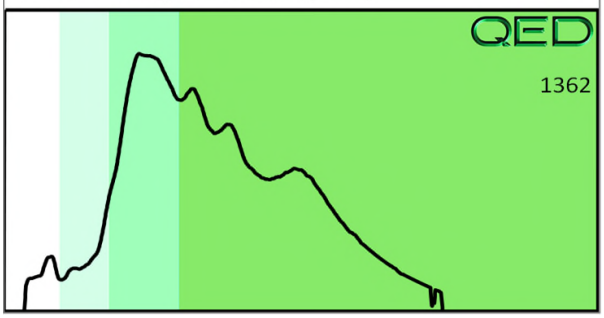
Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library

(SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present

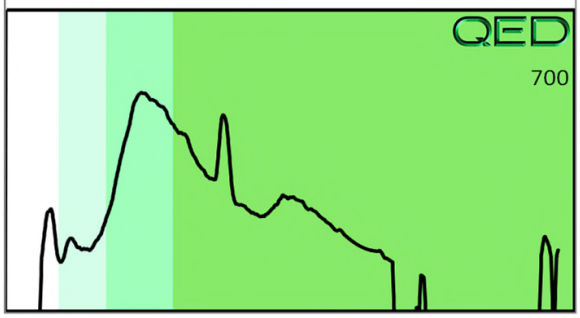
QED Hydrocarbon Fingerprints

Project: NCDOT I-5878 Parcel 93 ##################

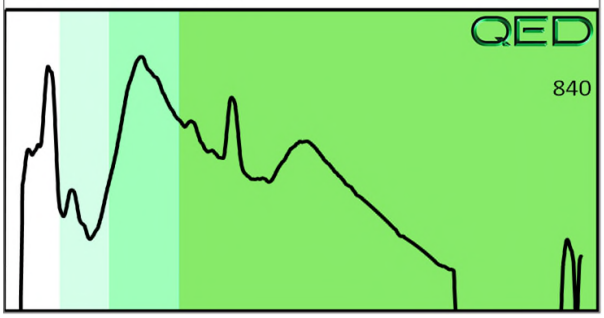
B-1 2-4' : Deg.PHC 96.8%,(FCM)



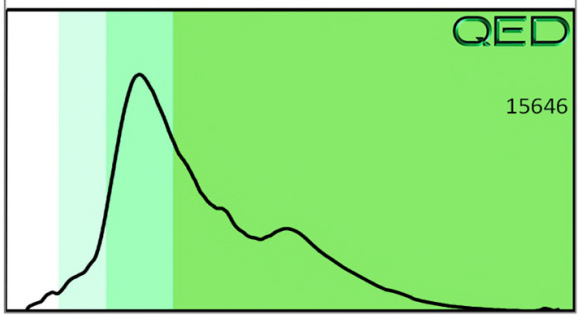
B-2 2-4' : Residual HC



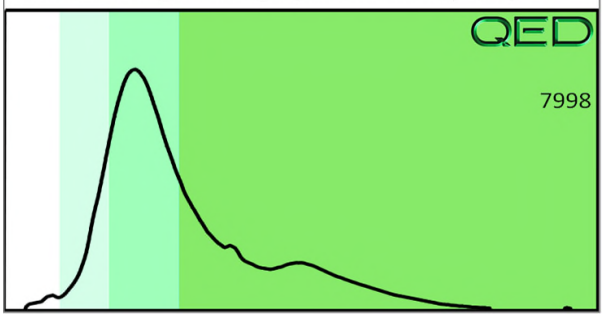
B-3 2-4' : Residual HC



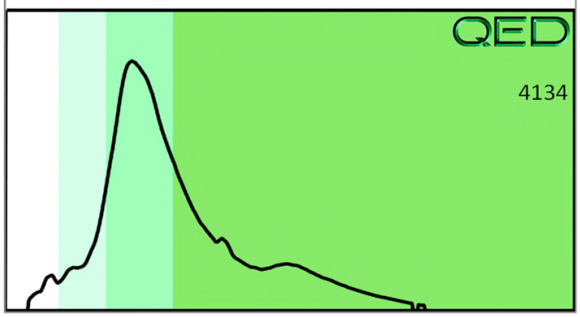
B-4 2-4' : Deg Fuel 76.6%,(FCM)



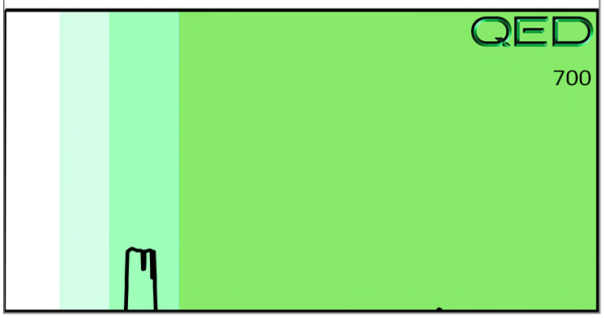
B-5 2-4' : Deg.FuelDeg.Hydr.Oil 84.5%,(FCM)



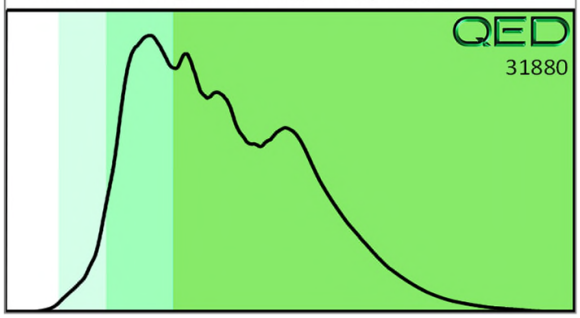
B-6 2-4' : Deg Fuel 82.1%,(FCM)



B-7 2-4' : ,(FCM)



B-8 2-4' : V.Deg.PHC 94%,(FCM),(BO),(P)



B143

NCDOT I-5878 Parcel 93

Client Name:	SEMI
Address:	3201 Spring Forest Rd Raleigh NC
Contact:	Jamie T Honeycutt
Project Ref.:	NCDOT I-5878 Parcel 93
Email:	jhoneycutt@semiinc.com
Phone #:	910 977-7614
Collected by:	Jamie T Honeycutt

REDLAB™
RAPID ENVIRONMENTAL DIAGNOSTICS

CHAIN OF CUSTODY AND ANALYTICAL REQUEST FORM

RED Lab, LLC
5598 Marvin K Moss Lane
MARBIONC Bldg, Suite 2003
Wilmington, NC 28409

Each sample will be analyzed for BTEX, GRO, DRO, TPH, PAH total aromatics and BaP

Sample Collection Date/Time	TAT Requested 24 Hour	TAT Requested 48 Hour	Initials	Sample ID	Total Wt.	Tare Wt.	Sample Wt.
10-30-19/ 1030		/	JTH	B-1 2-4'	57.1	43.9	13.2
1045				B-2 2-4'	56.6	44.5	12.1
1100				B-3 2-4'	57.1	44.5	12.6
1130				B-4 2-4'	56.8	44.9	11.9
1145				B-5 2-4'	56.3	44.9	11.4
1200				B-6 2-4'	56.5	44.7	11.8
1300				B-7 2-4'	56.5	44.8	11.7
1315				B-8 2-4'	55.8	44.5	11.3

Comments:

Relinquished by	Date/Time	Accepted by	Date/Time
Jamie Honeycutt 10-31-19/ 1500		MM 11/1/19	1150
Relinquished by	Date/Time	Accepted by	Date/Time

RED Lab USE ONLY

8

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 7, 2019

Jamie Honeycutt
S&ME, Inc - Raleigh, NC
3201 Spring Forest Rd.
Raleigh, NC 27616

Project Location: Dunn, NC
Client Job Number:
Project Number: 4305-19-161
Laboratory Work Order Number: 19K0025

Enclosed are results of analyses for samples received by the laboratory on October 31, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee
Project Manager

Table of Contents

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

S&ME, Inc - Raleigh, NC
3201 Spring Forest Rd.
Raleigh, NC 27616
ATTN: Jamie Honeycutt

REPORT DATE: 11/7/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 4305-19-161

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19K0025

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Dunn, NC

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TW-1	19K0025-01	Ground Water		SW-846 8260D SW-846 8270E	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

EXECUTIVE SUMMARY

Client ID: **TW-1** Lab ID: **19K0025-01**

Analyte	Results/Qual		DL	RL	Units	Method
1,2,4-Trimethylbenzene	15		0.36	2.0	µg/L	SW-846 8260D
1,3,5-Trimethylbenzene	4.0		0.28	2.0	µg/L	SW-846 8260D
Benzene	62		0.36	2.0	µg/L	SW-846 8260D
Diisopropyl Ether (DIPE)	0.64	J	0.34	1.0	µg/L	SW-846 8260D
Ethylbenzene	4.7		0.26	2.0	µg/L	SW-846 8260D
Isopropylbenzene (Cumene)	3.2		0.34	2.0	µg/L	SW-846 8260D
m+p Xylene	1.4	J	0.60	4.0	µg/L	SW-846 8260D
Methyl tert-Butyl Ether (MTBE)	190		0.50	2.0	µg/L	SW-846 8260D
Naphthalene	28		0.62	4.0	µg/L	SW-846 8260D
n-Butylbenzene	0.44	J	0.42	2.0	µg/L	SW-846 8260D
n-Propylbenzene	0.42	J	0.26	2.0	µg/L	SW-846 8260D
o-Xylene	16		0.34	2.0	µg/L	SW-846 8260D
sec-Butylbenzene	0.38	J	0.32	2.0	µg/L	SW-846 8260D
tert-Amyl Methyl Ether (TAME)	3.1		0.28	1.0	µg/L	SW-846 8260D
tert-Butyl Alcohol (TBA)	130		8.3	40	µg/L	SW-846 8260D
Toluene	1.3	J	0.28	2.0	µg/L	SW-846 8260D
2-Methylnaphthalene (SIM)	0.41	J	0.062	1.0	µg/L	SW-846 8270E
Fluoranthene (SIM)	0.029	J	0.025	0.50	µg/L	SW-846 8270E
Naphthalene (SIM)	20		1.3	5.0	µg/L	SW-846 8270E
Phenanthrene (SIM)	0.036	J	0.030	0.050	µg/L	SW-846 8270E

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8260D elevated reporting limits for sample 19K0025-01 due to high concentrations of target compounds.
For method 8270, only PAHs were requested and reported.

SW-846 8260D

Qualifications:

RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

19K0025-01[TW-1]

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromomethane
B245122-BS1, B245122-BSD1, S042311-CCV1

Chloromethane
B245122-BS1, B245122-BSD1, S042311-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Dunn, NC | Sample Description: | Work Order: 19K0025

Date Received: 10/31/2019

Field Sample #: TW-1 | Sampled: 10/30/2019 14:45

Sample ID: 19K0025-01

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	100	7.6	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Acrylonitrile	ND	10	1.0	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
tert-Amyl Methyl Ether (TAME)	3.1	1.0	0.28	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Benzene	62	2.0	0.36	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Bromobenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Bromochloromethane	ND	2.0	0.64	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Bromodichloromethane	ND	1.0	0.32	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Bromoform	ND	2.0	0.92	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Bromomethane	ND	4.0	1.6	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
2-Butanone (MEK)	ND	40	3.9	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
tert-Butyl Alcohol (TBA)	130	40	8.3	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
n-Butylbenzene	0.44	2.0	0.42	µg/L	2	J	SW-846 8260D	11/5/19	11/6/19 12:31	EEH
sec-Butylbenzene	0.38	2.0	0.32	µg/L	2	J	SW-846 8260D	11/5/19	11/6/19 12:31	EEH
tert-Butylbenzene	ND	2.0	0.34	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	0.32	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Carbon Disulfide	ND	10	8.9	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Carbon Tetrachloride	ND	2.0	0.22	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Chlorobenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Chlorodibromomethane	ND	1.0	0.42	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Chloroethane	ND	4.0	0.70	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Chloroform	ND	4.0	0.34	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Chloromethane	ND	4.0	0.90	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
2-Chlorotoluene	ND	2.0	0.24	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
4-Chlorotoluene	ND	2.0	0.28	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	1.1	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,2-Dibromoethane (EDB)	ND	1.0	0.38	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Dibromomethane	ND	2.0	0.74	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,2-Dichlorobenzene	ND	2.0	0.32	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,3-Dichlorobenzene	ND	2.0	0.24	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,4-Dichlorobenzene	ND	2.0	0.26	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
trans-1,4-Dichloro-2-butene	ND	4.0	0.62	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	0.52	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,1-Dichloroethane	ND	2.0	0.32	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,2-Dichloroethane	ND	2.0	0.82	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,1-Dichloroethylene	ND	2.0	0.64	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
cis-1,2-Dichloroethylene	ND	2.0	0.26	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
trans-1,2-Dichloroethylene	ND	2.0	0.62	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,2-Dichloropropane	ND	2.0	0.40	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,3-Dichloropropane	ND	1.0	0.22	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
2,2-Dichloropropane	ND	2.0	0.40	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,1-Dichloropropene	ND	4.0	0.32	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
cis-1,3-Dichloropropene	ND	1.0	0.26	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
trans-1,3-Dichloropropene	ND	1.0	0.46	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Diethyl Ether	ND	4.0	0.68	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Dunn, NC | Sample Description: | Work Order: 19K0025

Date Received: 10/31/2019

Field Sample #: TW-1 | Sampled: 10/30/2019 14:45

Sample ID: 19K0025-01

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	0.64	1.0	0.34	µg/L	2	J	SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,4-Dioxane	ND	100	45	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Ethylbenzene	4.7	2.0	0.26	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Hexachlorobutadiene	ND	1.2	0.94	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
2-Hexanone (MBK)	ND	20	3.0	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Isopropylbenzene (Cumene)	3.2	2.0	0.34	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
p-Isopropyltoluene (p-Cymene)	ND	2.0	0.40	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Methyl tert-Butyl Ether (MTBE)	190	2.0	0.50	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Methylene Chloride	ND	10	0.68	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	3.3	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Naphthalene	28	4.0	0.62	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
n-Propylbenzene	0.42	2.0	0.26	µg/L	2	J	SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Styrene	ND	2.0	0.22	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,1,1,2-Tetrachloroethane	ND	2.0	0.54	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	0.44	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Tetrachloroethylene	ND	2.0	0.36	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Tetrahydrofuran	ND	20	1.0	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Toluene	1.3	2.0	0.28	µg/L	2	J	SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,2,3-Trichlorobenzene	ND	10	1.1	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,2,4-Trichlorobenzene	ND	2.0	0.80	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,3,5-Trichlorobenzene	ND	2.0	0.60	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,1,1-Trichloroethane	ND	2.0	0.40	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,1,2-Trichloroethane	ND	2.0	0.32	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Trichloroethylene	ND	2.0	0.48	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	0.66	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,2,3-Trichloropropane	ND	4.0	0.50	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	2.0	0.64	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,2,4-Trimethylbenzene	15	2.0	0.36	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
1,3,5-Trimethylbenzene	4.0	2.0	0.28	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
Vinyl Chloride	ND	4.0	0.90	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH
m+p Xylene	1.4	4.0	0.60	µg/L	2	J	SW-846 8260D	11/5/19	11/6/19 12:31	EEH
o-Xylene	16	2.0	0.34	µg/L	2		SW-846 8260D	11/5/19	11/6/19 12:31	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.2	70-130		11/6/19 12:31
Toluene-d8	98.4	70-130		11/6/19 12:31
4-Bromofluorobenzene	97.1	70-130		11/6/19 12:31

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Dunn, NC | Sample Description: | Work Order: 19K0025

Date Received: 10/31/2019

Field Sample #: TW-1 | Sampled: 10/30/2019 14:45

Sample ID: 19K0025-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene (SIM)	ND	0.30	0.033	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Acenaphthylene (SIM)	ND	0.20	0.035	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Anthracene (SIM)	ND	0.20	0.032	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Benzo(a)anthracene (SIM)	ND	0.050	0.016	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Benzo(a)pyrene (SIM)	ND	0.10	0.012	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Benzo(b)fluoranthene (SIM)	ND	0.050	0.015	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Benzo(g,h,i)perylene (SIM)	ND	0.50	0.018	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Benzo(k)fluoranthene (SIM)	ND	0.20	0.012	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Chrysene (SIM)	ND	0.20	0.015	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Dibenz(a,h)anthracene (SIM)	ND	0.10	0.017	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Fluoranthene (SIM)	0.029	0.50	0.025	µg/L	1	J	SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Fluorene (SIM)	ND	1.0	0.034	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.10	0.018	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA
2-Methylnaphthalene (SIM)	0.41	1.0	0.062	µg/L	1	J	SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Naphthalene (SIM)	20	5.0	1.3	µg/L	5		SW-846 8270E	11/5/19	11/7/19 8:59	CLA
Phenanthrene (SIM)	0.036	0.050	0.030	µg/L	1	J	SW-846 8270E	11/5/19	11/6/19 19:44	CLA
Pyrene (SIM)	ND	1.0	0.023	µg/L	1		SW-846 8270E	11/5/19	11/6/19 19:44	CLA

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Nitrobenzene-d5	79.3	30-130		11/6/19 19:44
Nitrobenzene-d5	85.9	30-130		11/7/19 8:59
2-Fluorobiphenyl	52.9	30-130		11/6/19 19:44
2-Fluorobiphenyl	60.7	30-130		11/7/19 8:59
p-Terphenyl-d14	58.9	30-130		11/6/19 19:44
p-Terphenyl-d14	63.3	30-130		11/7/19 8:59

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 5030B-SW-846 8260D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19K0025-01 [TW-1]	B245122	2.5	5.00	11/05/19

Prep Method: SW-846 3510C-SW-846 8270E

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19K0025-01 [TW-1]	B245268	1000	1.00	11/05/19
19K0025-01RE1 [TW-1]	B245268	1000	1.00	11/05/19

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B245122 - SW-846 5030B										
Blank (B245122-BLK1)				Prepared: 11/05/19 Analyzed: 11/06/19						
Acetone	ND	50	µg/L							
Acrylonitrile	ND	5.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	20	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B245122 - SW-846 5030B											
Blank (B245122-BLK1)				Prepared: 11/05/19 Analyzed: 11/06/19							
Methylene Chloride	ND	5.0	µg/L								
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L								
Naphthalene	ND	2.0	µg/L								
n-Propylbenzene	ND	1.0	µg/L								
Styrene	ND	1.0	µg/L								
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L								
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L								
Tetrachloroethylene	ND	1.0	µg/L								
Tetrahydrofuran	ND	10	µg/L								
Toluene	ND	1.0	µg/L								
1,2,3-Trichlorobenzene	ND	5.0	µg/L								
1,2,4-Trichlorobenzene	ND	1.0	µg/L								
1,3,5-Trichlorobenzene	ND	1.0	µg/L								
1,1,1-Trichloroethane	ND	1.0	µg/L								
1,1,2-Trichloroethane	ND	1.0	µg/L								
Trichloroethylene	ND	1.0	µg/L								
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L								
1,2,3-Trichloropropane	ND	2.0	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L								
1,2,4-Trimethylbenzene	ND	1.0	µg/L								
1,3,5-Trimethylbenzene	ND	1.0	µg/L								
Vinyl Chloride	ND	2.0	µg/L								
m+p Xylene	ND	2.0	µg/L								
o-Xylene	ND	1.0	µg/L								
Surrogate: 1,2-Dichloroethane-d4	*23.6*		µg/L	25.0		94.4	70-130				
Surrogate: Toluene-d8	*24.4*		µg/L	25.0		97.4	70-130				
Surrogate: 4-Bromofluorobenzene	*24.4*		µg/L	25.0		97.4	70-130				
LCS (B245122-BS1)				Prepared: 11/05/19 Analyzed: 11/06/19							
Acetone	88.7	50	µg/L	100		88.7	70-160				†
Acrylonitrile	8.30	5.0	µg/L	10.0		83.0	70-130				
tert-Amyl Methyl Ether (TAME)	9.48	0.50	µg/L	10.0		94.8	70-130				
Benzene	10.7	1.0	µg/L	10.0		107	70-130				
Bromobenzene	10.4	1.0	µg/L	10.0		104	70-130				
Bromochloromethane	10.4	1.0	µg/L	10.0		104	70-130				
Bromodichloromethane	10.5	0.50	µg/L	10.0		105	70-130				
Bromoform	9.77	1.0	µg/L	10.0		97.7	70-130				
Bromomethane	9.88	2.0	µg/L	10.0		98.8	40-160			V-20	†
2-Butanone (MEK)	87.5	20	µg/L	100		87.5	40-160				†
tert-Butyl Alcohol (TBA)	80.3	20	µg/L	100		80.3	40-160				†
n-Butylbenzene	9.81	1.0	µg/L	10.0		98.1	70-130				
sec-Butylbenzene	11.1	1.0	µg/L	10.0		111	70-130				
tert-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130				
tert-Butyl Ethyl Ether (TBEE)	9.24	0.50	µg/L	10.0		92.4	70-130				
Carbon Disulfide	11.8	5.0	µg/L	10.0		118	70-130				
Carbon Tetrachloride	10.3	1.0	µg/L	10.0		103	70-130				
Chlorobenzene	11.4	1.0	µg/L	10.0		114	70-130				
Chlorodibromomethane	10.0	0.50	µg/L	10.0		100	70-130				
Chloroethane	11.6	2.0	µg/L	10.0		116	70-130				
Chloroform	10.4	2.0	µg/L	10.0		104	70-130				
Chloromethane	9.02	2.0	µg/L	10.0		90.2	40-160			V-20	†
2-Chlorotoluene	10.6	1.0	µg/L	10.0		106	70-130				

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B245122 - SW-846 5030B										
LCS (B245122-BS1)				Prepared: 11/05/19 Analyzed: 11/06/19						
4-Chlorotoluene	10.5	1.0	µg/L	10.0		105	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	9.08	5.0	µg/L	10.0		90.8	70-130			
1,2-Dibromoethane (EDB)	10.8	0.50	µg/L	10.0		108	70-130			
Dibromomethane	10.4	1.0	µg/L	10.0		104	70-130			
1,2-Dichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130			
1,3-Dichlorobenzene	11.5	1.0	µg/L	10.0		115	70-130			
1,4-Dichlorobenzene	11.2	1.0	µg/L	10.0		112	70-130			
trans-1,4-Dichloro-2-butene	7.67	2.0	µg/L	10.0		76.7	70-130			
Dichlorodifluoromethane (Freon 12)	8.34	2.0	µg/L	10.0		83.4	40-160			†
1,1-Dichloroethane	10.7	1.0	µg/L	10.0		107	70-130			
1,2-Dichloroethane	9.98	1.0	µg/L	10.0		99.8	70-130			
1,1-Dichloroethylene	11.0	1.0	µg/L	10.0		110	70-130			
cis-1,2-Dichloroethylene	10.6	1.0	µg/L	10.0		106	70-130			
trans-1,2-Dichloroethylene	10.5	1.0	µg/L	10.0		105	70-130			
1,2-Dichloropropane	10.8	1.0	µg/L	10.0		108	70-130			
1,3-Dichloropropane	10.3	0.50	µg/L	10.0		103	70-130			
2,2-Dichloropropane	8.49	1.0	µg/L	10.0		84.9	40-130			†
1,1-Dichloropropene	10.5	2.0	µg/L	10.0		105	70-130			
cis-1,3-Dichloropropene	10.0	0.50	µg/L	10.0		100	70-130			
trans-1,3-Dichloropropene	9.41	0.50	µg/L	10.0		94.1	70-130			
Diethyl Ether	10.8	2.0	µg/L	10.0		108	70-130			
Diisopropyl Ether (DIPE)	10.1	0.50	µg/L	10.0		101	70-130			
1,4-Dioxane	86.6	50	µg/L	100		86.6	40-130			†
Ethylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
Hexachlorobutadiene	9.83	0.60	µg/L	10.0		98.3	70-130			
2-Hexanone (MBK)	84.3	10	µg/L	100		84.3	70-160			†
Isopropylbenzene (Cumene)	11.1	1.0	µg/L	10.0		111	70-130			
p-Isopropyltoluene (p-Cymene)	10.7	1.0	µg/L	10.0		107	70-130			
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103	70-130			
Methylene Chloride	11.0	5.0	µg/L	10.0		110	70-130			
4-Methyl-2-pentanone (MIBK)	86.6	10	µg/L	100		86.6	70-160			†
Naphthalene	7.64	2.0	µg/L	10.0		76.4	40-130			†
n-Propylbenzene	10.6	1.0	µg/L	10.0		106	70-130			
Styrene	10.9	1.0	µg/L	10.0		109	70-130			
1,1,1,2-Tetrachloroethane	11.3	1.0	µg/L	10.0		113	70-130			
1,1,2,2-Tetrachloroethane	10.8	0.50	µg/L	10.0		108	70-130			
Tetrachloroethylene	11.5	1.0	µg/L	10.0		115	70-130			
Tetrahydrofuran	9.60	10	µg/L	10.0		96.0	70-130			J
Toluene	10.9	1.0	µg/L	10.0		109	70-130			
1,2,3-Trichlorobenzene	8.06	5.0	µg/L	10.0		80.6	70-130			
1,2,4-Trichlorobenzene	8.70	1.0	µg/L	10.0		87.0	70-130			
1,3,5-Trichlorobenzene	9.18	1.0	µg/L	10.0		91.8	70-130			
1,1,1-Trichloroethane	10.4	1.0	µg/L	10.0		104	70-130			
1,1,2-Trichloroethane	11.0	1.0	µg/L	10.0		110	70-130			
Trichloroethylene	11.1	1.0	µg/L	10.0		111	70-130			
Trichlorofluoromethane (Freon 11)	9.61	2.0	µg/L	10.0		96.1	70-130			
1,2,3-Trichloropropane	10.3	2.0	µg/L	10.0		103	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.5	1.0	µg/L	10.0		115	70-130			
1,2,4-Trimethylbenzene	10.8	1.0	µg/L	10.0		108	70-130			
1,3,5-Trimethylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
Vinyl Chloride	9.58	2.0	µg/L	10.0		95.8	40-160			†

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B245122 - SW-846 5030B											
LCS (B245122-BS1)				Prepared: 11/05/19 Analyzed: 11/06/19							
m+p Xylene	21.3	2.0	µg/L	20.0		106	70-130				
o-Xylene	11.1	1.0	µg/L	10.0		111	70-130				
Surrogate: 1,2-Dichloroethane-d4	*23.4*		µg/L	25.0		93.6	70-130				
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		99.9	70-130				
Surrogate: 4-Bromofluorobenzene	*24.6*		µg/L	25.0		98.4	70-130				
LCS Dup (B245122-BSD1)				Prepared: 11/05/19 Analyzed: 11/06/19							
Acetone	91.2	50	µg/L	100		91.2	70-160	2.72	25		†
Acrylonitrile	9.01	5.0	µg/L	10.0		90.1	70-130	8.20	25		
tert-Amyl Methyl Ether (TAME)	9.41	0.50	µg/L	10.0		94.1	70-130	0.741	25		
Benzene	10.4	1.0	µg/L	10.0		104	70-130	3.23	25		
Bromobenzene	10.0	1.0	µg/L	10.0		100	70-130	4.00	25		
Bromochloromethane	10.4	1.0	µg/L	10.0		104	70-130	0.865	25		
Bromodichloromethane	10.2	0.50	µg/L	10.0		102	70-130	3.68	25		
Bromoform	10.2	1.0	µg/L	10.0		102	70-130	3.91	25		
Bromomethane	9.76	2.0	µg/L	10.0		97.6	40-160	1.22	25	V-20	†
2-Butanone (MEK)	89.8	20	µg/L	100		89.8	40-160	2.63	25		†
tert-Butyl Alcohol (TBA)	83.6	20	µg/L	100		83.6	40-160	4.00	25		†
n-Butylbenzene	9.65	1.0	µg/L	10.0		96.5	70-130	1.64	25		
sec-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130	1.18	25		
tert-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130	1.11	25		
tert-Butyl Ethyl Ether (TBEE)	9.17	0.50	µg/L	10.0		91.7	70-130	0.760	25		
Carbon Disulfide	10.8	5.0	µg/L	10.0		108	70-130	8.59	25		
Carbon Tetrachloride	10.2	1.0	µg/L	10.0		102	70-130	1.46	25		
Chlorobenzene	11.5	1.0	µg/L	10.0		115	70-130	0.610	25		
Chlorodibromomethane	9.73	0.50	µg/L	10.0		97.3	70-130	2.84	25		
Chloroethane	10.8	2.0	µg/L	10.0		108	70-130	7.24	25		
Chloroform	10.1	2.0	µg/L	10.0		101	70-130	2.53	25		
Chloromethane	8.77	2.0	µg/L	10.0		87.7	40-160	2.81	25	V-20	†
2-Chlorotoluene	10.7	1.0	µg/L	10.0		107	70-130	0.845	25		
4-Chlorotoluene	10.4	1.0	µg/L	10.0		104	70-130	1.34	25		
1,2-Dibromo-3-chloropropane (DBCP)	8.90	5.0	µg/L	10.0		89.0	70-130	2.00	25		
1,2-Dibromoethane (EDB)	10.7	0.50	µg/L	10.0		107	70-130	1.58	25		
Dibromomethane	10.2	1.0	µg/L	10.0		102	70-130	2.33	25		
1,2-Dichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130	0.181	25		
1,3-Dichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130	0.872	25		
1,4-Dichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130	3.07	25		
trans-1,4-Dichloro-2-butene	8.71	2.0	µg/L	10.0		87.1	70-130	12.7	25		
Dichlorodifluoromethane (Freon 12)	8.23	2.0	µg/L	10.0		82.3	40-160	1.33	25		†
1,1-Dichloroethane	10.2	1.0	µg/L	10.0		102	70-130	4.40	25		
1,2-Dichloroethane	9.91	1.0	µg/L	10.0		99.1	70-130	0.704	25		
1,1-Dichloroethylene	10.6	1.0	µg/L	10.0		106	70-130	3.90	25		
cis-1,2-Dichloroethylene	10.1	1.0	µg/L	10.0		101	70-130	5.01	25		
trans-1,2-Dichloroethylene	10.3	1.0	µg/L	10.0		103	70-130	2.50	25		
1,2-Dichloropropane	10.8	1.0	µg/L	10.0		108	70-130	0.649	25		
1,3-Dichloropropane	10.4	0.50	µg/L	10.0		104	70-130	0.870	25		
2,2-Dichloropropane	8.15	1.0	µg/L	10.0		81.5	40-130	4.09	25		†
1,1-Dichloropropene	10.4	2.0	µg/L	10.0		104	70-130	1.06	25		
cis-1,3-Dichloropropene	9.73	0.50	µg/L	10.0		97.3	70-130	3.14	25		
trans-1,3-Dichloropropene	9.66	0.50	µg/L	10.0		96.6	70-130	2.62	25		
Diethyl Ether	10.3	2.0	µg/L	10.0		103	70-130	4.65	25		
Diisopropyl Ether (DIPE)	9.94	0.50	µg/L	10.0		99.4	70-130	1.99	25		

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B245122 - SW-846 5030B										
LCS Dup (B245122-BSD1)				Prepared: 11/05/19 Analyzed: 11/06/19						
1,4-Dioxane	92.6	50	µg/L	100		92.6	40-130	6.72	50	† ‡
Ethylbenzene	10.7	1.0	µg/L	10.0		107	70-130	2.12	25	
Hexachlorobutadiene	10.1	0.60	µg/L	10.0		101	70-130	2.41	25	
2-Hexanone (MBK)	84.4	10	µg/L	100		84.4	70-160	0.0712	25	†
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106	70-130	3.96	25	
p-Isopropyltoluene (p-Cymene)	10.5	1.0	µg/L	10.0		105	70-130	2.36	25	
Methyl tert-Butyl Ether (MTBE)	10.2	1.0	µg/L	10.0		102	70-130	0.585	25	
Methylene Chloride	10.6	5.0	µg/L	10.0		106	70-130	3.60	25	
4-Methyl-2-pentanone (MIBK)	90.1	10	µg/L	100		90.1	70-160	4.02	25	†
Naphthalene	8.02	2.0	µg/L	10.0		80.2	40-130	4.85	25	†
n-Propylbenzene	10.3	1.0	µg/L	10.0		103	70-130	2.11	25	
Styrene	10.4	1.0	µg/L	10.0		104	70-130	4.90	25	
1,1,1,2-Tetrachloroethane	11.3	1.0	µg/L	10.0		113	70-130	0.265	25	
1,1,2,2-Tetrachloroethane	11.1	0.50	µg/L	10.0		111	70-130	3.01	25	
Tetrachloroethylene	11.5	1.0	µg/L	10.0		115	70-130	0.348	25	
Tetrahydrofuran	10.0	10	µg/L	10.0		100	70-130	4.28	25	
Toluene	10.5	1.0	µg/L	10.0		105	70-130	3.82	25	
1,2,3-Trichlorobenzene	7.86	5.0	µg/L	10.0		78.6	70-130	2.51	25	
1,2,4-Trichlorobenzene	8.34	1.0	µg/L	10.0		83.4	70-130	4.23	25	
1,3,5-Trichlorobenzene	8.42	1.0	µg/L	10.0		84.2	70-130	8.64	25	
1,1,1-Trichloroethane	9.84	1.0	µg/L	10.0		98.4	70-130	5.24	25	
1,1,2-Trichloroethane	11.0	1.0	µg/L	10.0		110	70-130	0.364	25	
Trichloroethylene	11.1	1.0	µg/L	10.0		111	70-130	0.180	25	
Trichlorofluoromethane (Freon 11)	9.30	2.0	µg/L	10.0		93.0	70-130	3.28	25	
1,2,3-Trichloropropane	10.0	2.0	µg/L	10.0		100	70-130	2.85	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.1	1.0	µg/L	10.0		111	70-130	4.07	25	
1,2,4-Trimethylbenzene	10.7	1.0	µg/L	10.0		107	70-130	0.650	25	
1,3,5-Trimethylbenzene	9.97	1.0	µg/L	10.0		99.7	70-130	3.93	25	
Vinyl Chloride	9.25	2.0	µg/L	10.0		92.5	40-160	3.51	25	†
m+p Xylene	21.3	2.0	µg/L	20.0		106	70-130	0.0470	25	
o-Xylene	11.1	1.0	µg/L	10.0		111	70-130	0.541	25	
Surrogate: 1,2-Dichloroethane-d4	*22.9*		µg/L	25.0		91.5	70-130			
Surrogate: Toluene-d8	*25.2*		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	*24.6*		µg/L	25.0		98.5	70-130			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B245268 - SW-846 3510C										
Blank (B245268-BLK1)				Prepared & Analyzed: 11/06/19						
Acenaphthene (SIM)	ND	0.30	µg/L							
Acenaphthylene (SIM)	ND	0.20	µg/L							
Anthracene (SIM)	ND	0.20	µg/L							
Benzo(a)anthracene (SIM)	ND	0.050	µg/L							
Benzo(a)pyrene (SIM)	ND	0.10	µg/L							
Benzo(b)fluoranthene (SIM)	ND	0.050	µg/L							
Benzo(g,h,i)perylene (SIM)	ND	0.50	µg/L							
Benzo(k)fluoranthene (SIM)	ND	0.20	µg/L							
Chrysene (SIM)	ND	0.20	µg/L							
Dibenz(a,h)anthracene (SIM)	ND	0.10	µg/L							
Fluoranthene (SIM)	ND	0.50	µg/L							
Fluorene (SIM)	ND	1.0	µg/L							
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.10	µg/L							
2-Methylnaphthalene (SIM)	ND	1.0	µg/L							
Naphthalene (SIM)	ND	1.0	µg/L							
Phenanthrene (SIM)	ND	0.050	µg/L							
Pyrene (SIM)	ND	1.0	µg/L							
Surrogate: Nitrobenzene-d5	*73.7*		µg/L	100		73.7	30-130			
Surrogate: 2-Fluorobiphenyl	*51.1*		µg/L	100		51.1	30-130			
Surrogate: p-Terphenyl-d14	*65.3*		µg/L	100		65.3	30-130			
LCS (B245268-BS1)				Prepared & Analyzed: 11/06/19						
Acenaphthene (SIM)	35.2	6.0	µg/L	50.0		70.4	40-140			
Acenaphthylene (SIM)	35.7	4.0	µg/L	50.0		71.4	40-140			
Anthracene (SIM)	38.2	4.0	µg/L	50.0		76.3	40-140			
Benzo(a)anthracene (SIM)	37.0	1.0	µg/L	50.0		74.1	40-140			
Benzo(a)pyrene (SIM)	37.4	2.0	µg/L	50.0		74.8	40-140			
Benzo(b)fluoranthene (SIM)	39.6	1.0	µg/L	50.0		79.2	40-140			
Benzo(g,h,i)perylene (SIM)	40.1	10	µg/L	50.0		80.2	40-140			
Benzo(k)fluoranthene (SIM)	39.8	4.0	µg/L	50.0		79.6	40-140			
Chrysene (SIM)	35.8	4.0	µg/L	50.0		71.7	40-140			
Dibenz(a,h)anthracene (SIM)	42.6	2.0	µg/L	50.0		85.2	40-140			
Fluoranthene (SIM)	37.3	10	µg/L	50.0		74.7	40-140			
Fluorene (SIM)	36.3	20	µg/L	50.0		72.6	40-140			
Indeno(1,2,3-cd)pyrene (SIM)	42.8	2.0	µg/L	50.0		85.6	40-140			
2-Methylnaphthalene (SIM)	34.3	20	µg/L	50.0		68.7	40-140			
Naphthalene (SIM)	32.7	20	µg/L	50.0		65.4	40-140			
Phenanthrene (SIM)	35.9	1.0	µg/L	50.0		71.8	40-140			
Pyrene (SIM)	36.4	20	µg/L	50.0		72.7	40-140			
Surrogate: Nitrobenzene-d5	*74.9*		µg/L	100		74.9	30-130			
Surrogate: 2-Fluorobiphenyl	*56.8*		µg/L	100		56.8	30-130			
Surrogate: p-Terphenyl-d14	*59.6*		µg/L	100		59.6	30-130			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B245268 - SW-846 3510C										
LCS Dup (B245268-BSD1)				Prepared & Analyzed: 11/06/19						
Acenaphthene (SIM)	36.1	6.0	µg/L	50.0		72.2	40-140	2.47	20	
Acenaphthylene (SIM)	36.5	4.0	µg/L	50.0		73.0	40-140	2.22	20	
Anthracene (SIM)	39.5	4.0	µg/L	50.0		79.0	40-140	3.40	20	
Benzo(a)anthracene (SIM)	38.1	1.0	µg/L	50.0		76.2	40-140	2.82	20	
Benzo(a)pyrene (SIM)	38.7	2.0	µg/L	50.0		77.4	40-140	3.47	20	
Benzo(b)fluoranthene (SIM)	41.0	1.0	µg/L	50.0		82.0	40-140	3.43	20	
Benzo(g,h,i)perylene (SIM)	41.6	10	µg/L	50.0		83.3	40-140	3.82	20	
Benzo(k)fluoranthene (SIM)	41.8	4.0	µg/L	50.0		83.6	40-140	4.80	20	
Chrysene (SIM)	37.1	4.0	µg/L	50.0		74.1	40-140	3.35	20	
Dibenz(a,h)anthracene (SIM)	44.3	2.0	µg/L	50.0		88.5	40-140	3.78	20	
Fluoranthene (SIM)	38.4	10	µg/L	50.0		76.8	40-140	2.80	20	
Fluorene (SIM)	37.1	20	µg/L	50.0		74.2	40-140	2.23	20	
Indeno(1,2,3-cd)pyrene (SIM)	44.5	2.0	µg/L	50.0		88.9	40-140	3.76	20	‡
2-Methylnaphthalene (SIM)	35.8	20	µg/L	50.0		71.7	40-140	4.27	20	
Naphthalene (SIM)	33.0	20	µg/L	50.0		66.0	40-140	1.04	20	
Phenanthrene (SIM)	37.1	1.0	µg/L	50.0		74.2	40-140	3.18	20	
Pyrene (SIM)	37.4	20	µg/L	50.0		74.7	40-140	2.71	20	
Surrogate: Nitrobenzene-d5	*77.8*		µg/L	100		77.8	30-130			
Surrogate: 2-Fluorobiphenyl	*59.4*		µg/L	100		59.4	30-130			
Surrogate: p-Terphenyl-d14	*60.7*		µg/L	100		60.7	30-130			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
RL-11	Elevated reporting limit due to high concentration of target compounds.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
Acetone	NC
Acrylonitrile	NC
tert-Amyl Methyl Ether (TAME)	NC
Benzene	NC
Bromobenzene	NC
Bromochloromethane	NC
Bromodichloromethane	NC
Bromoform	NC
Bromomethane	NC
2-Butanone (MEK)	NC
tert-Butyl Alcohol (TBA)	NC
n-Butylbenzene	NC
sec-Butylbenzene	NC
tert-Butylbenzene	NC
tert-Butyl Ethyl Ether (TBEE)	NC
Carbon Disulfide	NC
Carbon Tetrachloride	NC
Chlorobenzene	NC
Chlorodibromomethane	NC
Chloroethane	NC
Chloroform	NC
Chloromethane	NC
2-Chlorotoluene	NC
4-Chlorotoluene	NC
1,2-Dibromo-3-chloropropane (DBCP)	NC
1,2-Dibromoethane (EDB)	NC
Dibromomethane	NC
1,2-Dichlorobenzene	NC
1,3-Dichlorobenzene	NC
1,4-Dichlorobenzene	NC
trans-1,4-Dichloro-2-butene	NC
Dichlorodifluoromethane (Freon 12)	NC
1,1-Dichloroethane	NC
1,2-Dichloroethane	NC
1,1-Dichloroethylene	NC
cis-1,2-Dichloroethylene	NC
trans-1,2-Dichloroethylene	NC
1,2-Dichloropropane	NC
1,3-Dichloropropane	NC
2,2-Dichloropropane	NC
1,1-Dichloropropene	NC
cis-1,3-Dichloropropene	NC
trans-1,3-Dichloropropene	NC
Diethyl Ether	NC
Diisopropyl Ether (DIPE)	NC
1,4-Dioxane	NC
Ethylbenzene	NC

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
Hexachlorobutadiene	NC
2-Hexanone (MBK)	NC
Isopropylbenzene (Cumene)	NC
p-Isopropyltoluene (p-Cymene)	NC
Methyl tert-Butyl Ether (MTBE)	NC
Methylene Chloride	NC
4-Methyl-2-pentanone (MIBK)	NC
Naphthalene	NC
n-Propylbenzene	NC
Styrene	NC
1,1,1,2-Tetrachloroethane	NC
1,1,2,2-Tetrachloroethane	NC
Tetrachloroethylene	NC
Tetrahydrofuran	NC
Toluene	NC
1,2,3-Trichlorobenzene	NC
1,2,4-Trichlorobenzene	NC
1,3,5-Trichlorobenzene	NC
1,1,1-Trichloroethane	NC
1,1,2-Trichloroethane	NC
Trichloroethylene	NC
Trichlorofluoromethane (Freon 11)	NC
1,2,3-Trichloropropane	NC
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NC
1,2,4-Trimethylbenzene	NC
1,3,5-Trimethylbenzene	NC
Vinyl Chloride	NC
m+p Xylene	NC
o-Xylene	NC

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

con-test ANALYTICAL LABORATORY

19K0025

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com Doc # 379 Rev 1_03242017

CHAIN OF CUSTODY RECORD (North Carolina)

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

Company Name: S&ME
Address: 3201 Spring Forest Rd Raleigh NC
Phone: 910 977-7614
Project Name: NCDOT I-5878 Parcel 93
Project Location: Dunn, NC
Project Number: 4305-19-1161
Project Manager: Jamie T Honeycutt
Con-Test Quote Name/Number:
Invoice Recipient: Jamie T Honeycutt
Sampled By: Jamie T Honeycutt

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☑
Other:
CLP Like Data Pkg Required: ☐
Email To: jhoneycutt@smeinc.com
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	8260	PAHs 8270	# of Containers	[2] Preservation Code	[3] Container Code
1	TW-1	10-30-19	1445		/	GW	L	/	/			

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 10/31/19 1500	
Received by: (signature)	Date/Time: 11/1/19 902	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

North Carolina Detection Limit Requirements
☐ 2L
☐ GWPC
☐ SWSL
☐ IHSB
☐ MSCC
Other:

Program Information
☐ DSCA ☐ UST/Trust Fund
☐ SWS Landfill ☐ REC
☐ IHSB Orphaned Landfill
☐ State Lead
☐ Other:

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality
☐ Federal ☐ Brownfield
☐ City ☐ School

Other
☐ Chromatogram
☐ *AIHA-LAP, LLC*

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Table of Contents

IMPORTANT!
The wildfires are causing hazardous conditions in California. Learn More

411359783302

Delivered
Friday 11/01/2019 at 9:02 am

DELIVERED

Signed for by: R.PETRIAS

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM	TO
Autryville, NC US	East Longmeadow, MA US

Shipment Facts

TRACKING NUMBER
411359783302

SERVICE
FedEx Priority Overnight

WEIGHT
53.4 lbs / 24.22 kgs

DELIVERED TO
Shipping/Receiving

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
53.4 lbs / 24.22 kgs

RETURN REASON

TERMS
Third Party

PACKAGING
Your Packaging

SPECIAL HANDLING SECTION
Deliver Weekday

STANDARD TRANSIT
11/01/2019 by 10:30 am

SHIP DATE
Thu 10/31/2019

ACTUAL DELIVERY
Fri 11/01/2019 9:02 am

Travel History

Local Scan Time

Friday , 11/01/2019

9:02 am	East Longmeadow, MA	Delivered
7:45 am	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
6:27 am	EAST GRANBY, CT	At destination sort facility

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client STME

Received By MP Date 11/1/19 Time 902

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____ Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 4.1

By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name J

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? NA Acid _____ Base _____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	2	1 Liter Plastic		16 oz Amb.	
HCL-	3	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments: