



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 78 - BP I Mart
501-503 Spring Branch Road
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
78	I – Mart, LLC	(BP I-Mart) 501-503 Spring Branch (aka Pope Road), Dunn, NC



The property is developed with an active gasoline/convenience store identified as BP I-Mart. The petroleum underground storage tanks (USTs) that the BP I-Mart operate are located on the southern end of the property adjoining Parcel 200 (Former T-Mart). The western end of the USTs extend across the ROW. The BP I-Mart and the former T-Mart are both listed with the same UST Facility ID No. of 0-00-000017633. Information regarding the UST system listed for the BP I-Mart is provided in the following table:

UST Facility ID No. 0-00-000017633

Number of Tanks	Contents	Capacity (gallons)	Date Installed	Date Removed
1	Gasoline	10,000	8/15/1999	Active USTs
2	Gasoline	10,000	8/15/1999	Active USTs
3	Gasoline	8,000	8/15/1999	Active USTs

The BP I-Mart 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 location of the existing USTs for the BP I-Mart are located near the former UST area for the adjoining Former T-Mart. In addition, a well identified as RW-2 (previously MW-4) associated with the Former T-Mart release is located on the BP I-Mart property within the ROW. The BP I-Mart site is located downgradient of the Former T-Mart. However, free product has previously been measured in RW-2. In 2017, several petroleum constituents were reported in RW-2 at concentrations exceeding their respective 15A NCAC 2L Groundwater Quality Standards (2L Standards) *AFVR and Groundwater Monitoring Report* prepared by Geologic Resources, Inc dated May 25, 2017).

The PSA included a geophysical survey and subsequent limited soil sampling (11 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 78. 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 landscaping/vegetations within the survey area, however, prevented TDEM data collection in a small area at the northeastern 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

Anomalous features unrelated to known surficial targets were not identified in the geophysical data sets. However, the locations of the current three existing USTs, extending into the survey area, were confirmed by the GPR survey (**Figures 6 and 7**). The identified USTs are characterized by high amplitude GPR responses located about 2.5 ft.-bgs. An example GPR profile is presented in **Figure 8**.

◆ Soil Sampling

On October 28, 2019, Troxler Geologic, Inc. (Troxler's) drill crew utilized a track mounted Geoprobe® rig to advance 11 soil borings (B-1 through B-11) and to collect soil samples within accessible areas of the proposed ROW/easement at Parcel 78. 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 of approximately seven 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 slightly elevated PID readings were noted at borings B-5 through B-10, which were located near the existing USTs and former UST basin areas. Petroleum odors were noted at borings B-5 and B-6 starting at a depth of approximately two ft.-bgs and extending to approximately four ft.-bgs. Petroleum odors were noted at a depth of approximately 0.5 ft.-bgs at borings B-7 and B-8 and extending to approximately four ft.-bgs and eight ft.-bgs, respectively. Petroleum odors were noted at borings B-9 from approximately two ft.-bgs to seven ft.-bgs. Petroleum odors were noted at boring B-10 from approximately 4 ft.-bgs to eight ft.-bgs. Groundwater was encountered at a depth of approximately seven ft.-bgs. Therefore, a soil sample was selected from these borings at the two to four foot depth interval or the four to six foot depth. Various soil samples at varying depth intervals were selected from the remaining borings. 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 11 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 and TPH-DRO were reported in borings B-2 and B-3 at the two to four foot depth interval at concentrations above the laboratory reporting limits but well below their North Carolina TPH Action Levels. TPH-DRO was also reported in borings B-1, B-4, B-5, and B-8 at the two to four foot depth interval and borings B-9 and B-11 at the four to six foot depth interval at concentrations 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. 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 of approximately seven ft.-bgs. The vault for the existing well identified as RW-2 located within the ROW on the property was filled with rain water and was not gauged or sampled. Therefore, the Geoprobe® was used to advance one of the soil borings into the groundwater table for the collection of a groundwater sample. Based on petroleum odors, apparent downgradient location from the existing USTs and location near the former USTs, boring B-7, was selected for



collection of a groundwater sample. A temporary monitor well (TW-1) was installed at boring B-7 to a depth of approximately 11.5 ft.-bgs using a ten 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-7 was measured at 6.78 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, numerous 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 330 micrograms per liter ($\mu\text{g/L}$), which exceeds its 2L Standard of 1 $\mu\text{g/L}$. 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

Existing groundwater monitoring well identified as RW-2 (previously MW-4) is located on the property within the ROW. The well is associated with a UST release from the Former T-Mart (NCDEQ Incident # 18955), which adjoins the property to the south. Free product has previously been measured in RW-2. In 2017, several petroleum constituents were reported in RW-2 at concentrations exceeding their respective 2L Standards.

The geophysical survey confirmed the locations of the current three existing, active, USTs associated with the BP I-Mart. The western ends of the two 10,000-gallon gasoline and one 8,000-gallon gasoline USTs extend across the ROW. The location of the existing USTs for the BP I-Mart are located near the former UST area for the adjoining Former T-Mart.

S&ME advanced 11 soil borings (B-1 through B-11) to a depth of up to approximately 10 ft.-bgs at the site. Petroleum odors and elevated PID readings were noted at borings B-5 through B-10, which were located near the existing USTs and former UST basin areas. Petroleum odors were noted starting at depths ranging from 0.5 ft.-bgs and extending to up to boring termination at eight ft.-bgs. Groundwater was encountered at a depth of approximately seven ft.-bgs. 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 and TPH-DRO were reported in borings B-2 and B-3 at the two to four foot depth interval. TPH-DRO was also reported in borings B-1, B-4, B-5, and B-8 at the two to four foot depth interval.



However, TPH-GRO and TPH-DRO were reported in these borings at concentrations well below their North Carolina TPH Action Levels. TPH-GRO and TPH-DRO were not reported at concentrations exceeding the laboratory method reporting limits at the remaining soil samples.

During the soil boring advancement, groundwater was encountered at a depth of approximately seven ft.-bgs. One temporary well (TW-1) was installed at soil boring B-7 located at an apparent downgradient location from the existing USTs and near the former UST area. Groundwater at TW-1 was measured at 6.78 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, the western end of three existing, active, USTs extend across the ROW. Based on the 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. Petroleum odors were noted in soil samples at depths ranging from 0.5 ft.-bgs to boring termination at eight ft.-bgs, which extends into the groundwater encountered at approximately seven ft.-bgs. However, TPH-GRO and TPH-DRO were not reported at concentration exceeding their TPH Action Levels.

It should also be assumed that saturated petroleum impacted soil will be encountered if construction excavations extend deeper than seven 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 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 six 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.

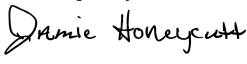
This Preliminary Site Assessment was performed solely for NCDOT regarding the above-referenced site and assessment area. This report is provided for the sole use of NCDOT. Use of this report by any other parties will be at such party's sole risk. S&ME disclaims liability for any such use or reliance 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:

 4C890EAEC25F488...

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1/27/2020

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Preliminary Site Assessment Report
NCDOT Project I-5878, WBS Element 53078.1.1
Parcel 78-BP I-Mart
Dunn, Harnett County, North Carolina
S&ME Project No. 4305-19-161

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 78 - (BP I-Mart)
501 - 503 Spring Branch Road
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→	TPH-GRO	TPH-DRO
		Sample Depth (ft.-bgs)		
B-1	10/28/2019	2 to 4	<0.52	1.2
B-2	10/28/2019	2 to 4	2.6	25
B-3	10/28/2019	2 to 4	3.7	27.6
B-4	10/28/2019	2 to 4	<0.49	1.4
B-5	10/28/2019	2 to 4	<0.53	3.8
B-6	10/28/2019	2 to 4	<0.27	<0.27
B-7	10/28/2019	2 to 4	<0.5	<0.5
B-8	10/28/2019	2 to 4	<0.26	0.26
B-9	10/28/2019	4 to 6	<0.29	11
B-10	10/28/2019	4 to 6	<0.29	<0.29
B-11	10/28/2019	4 to 6	<0.28	5.7
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 78 - (BP I-Mart)
 501 - 503 Spring Branch Road
 Dunn, Harnett County, North Carolina
 S&ME Project No. 4305-19-161

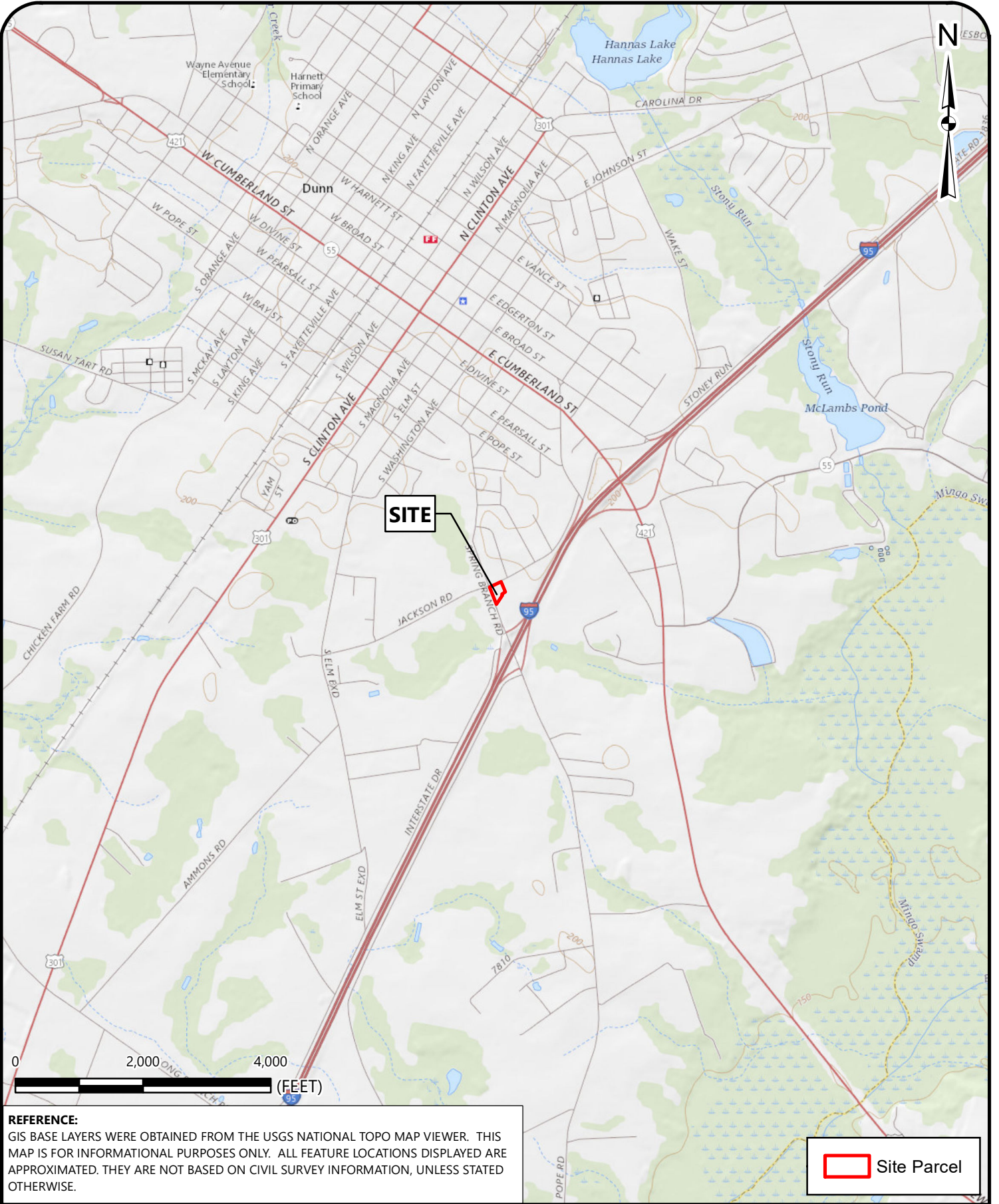
Analytical Method→		Volatile Organic Compounds by EPA Method 8260														Polycyclic Aromatic Compounds (PAHs) by EPA Method 8270							
Sample ID	Contaminant of Concern→	Benzene	Diisopropyl Ether	Ethylbenzene	Isopropylbenzene	MTBE	Naphthalene	n-Butylbenzene	sec-Butylbenzene	tert-Butyl Alcohol	n-Propylbenzene	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Total Xylenes	Acenaphthene	Acenaphthylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	2-Methylnaphthalene
	Date																						
B-7/TW-1	10/28/2019	330	2.0 J	19	3.2 J	11	37	3.8 J	1.2 J	480	3.9 J	12	8.3	1.0 J	43	0.13 J	0.079 J	0.052 J	0.14 J	25	0.13	0.049 J	21
2L Standard (µg/L)		1	70	600	70	20	6	70	70	10	70	600	400	400	500	80	200	300	300	6	200	200	30
GCL (µg/L)		5,000	70,000	84,500	25,000	20,000	6,000	6,900	8,500	10,000	30,000	260,000	28,500	25,000	85,500	2,120	1,965	300	990	6,000	410	200	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

Drawing Path: T:\Projects\2019\ENV\4305-19-161 NCDOT I-5878 PSAs\GIS\Parcel_78\VICINITY.mxd plotted by abentz 11-22-2019



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.

 Site Parcel



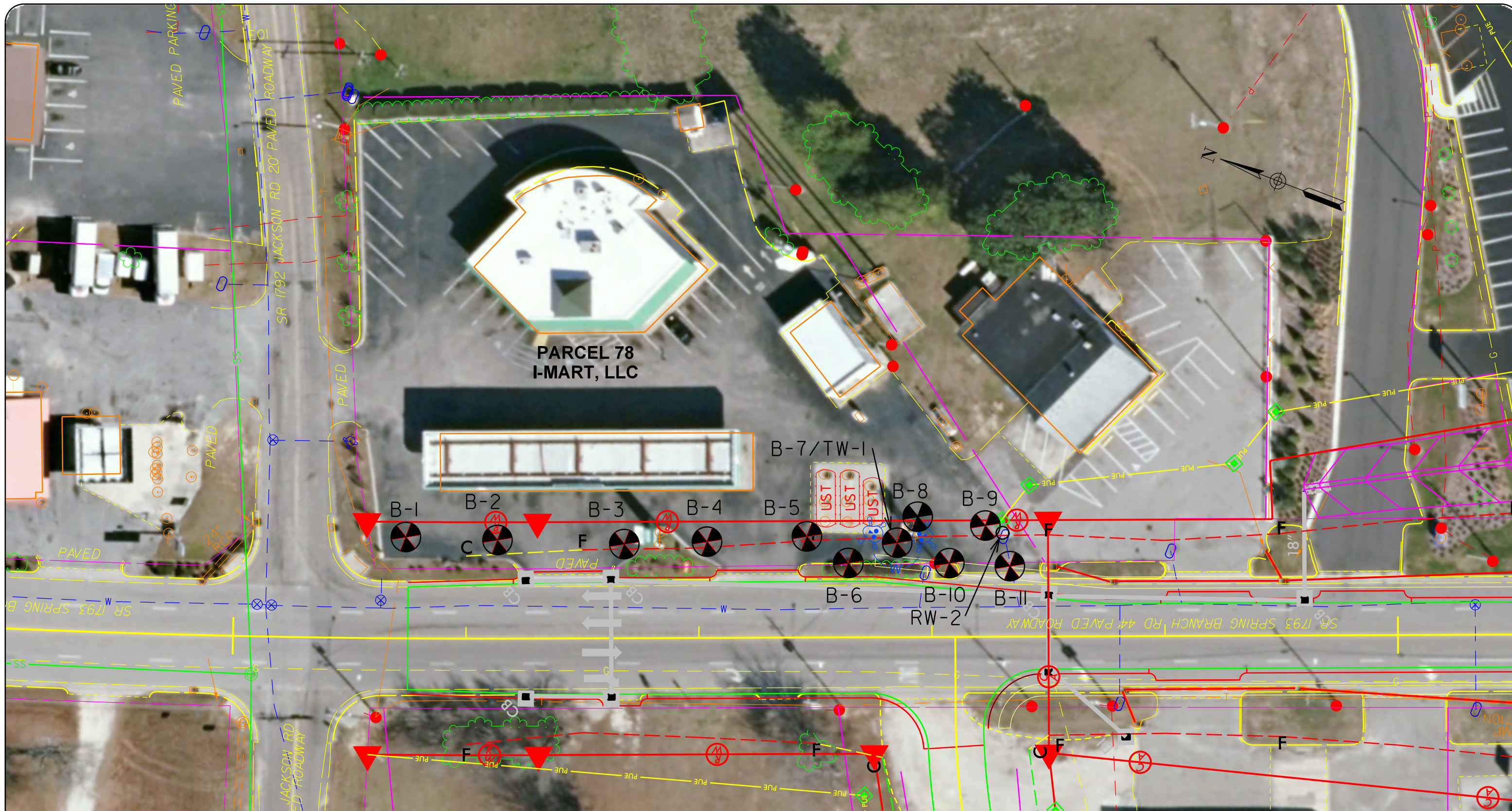
VICINITY MAP

NCDOT PROJECT I-5878
PARCEL NO. 78 (BP I-MART)
501-503 SPRING BRANCH RD
DUNN, HARNETT COUNTY, NORTH CAROLINA

SCALE:
1" = 2,000'
DATE:
11-22-19
PROJECT NUMBER
4305-19-161

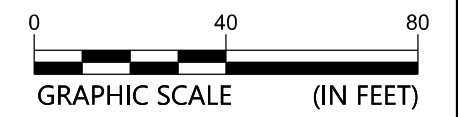
FIGURE NO.

1



LEGEND

Geoenvironmental Boring:	Known Soil Contamination:
Underground Storage Tank (UST):	Possible Soil Contamination:
Map Source: NCDOT Project I-59868	Existing Contamination Known - Water:
Image Source: NC ONEMAP, Dated 2016	Existing Monitoring Well:



	SITE MAP	SCALE:	FIGURE NO.
	NCDOT Project: I-5878 PARCEL 78 - BP I-MART	1" = 40'	DATE:
	501-503 Spring Branch Road, Dunn, Harnett County, North Carolina	JAN. 2020	PROJECT NUMBER
		4305-19-161	2

Notes:
 mg/kg: Milligrams per Kilogram
 µg/L: Micrograms per Liter
 GRO: Total Petroleum Hydrocarbon Gasoline Range Organics
 DRO: Total Petroleum Hydrocarbon Diesel Range Organics
 TPH: Total Petroleum Hydrocarbon
BOLD*: Indicates Exceedance of NC TPH Action Levels
BOLD#: Indicates Exceedance of 2L Groundwater Samples
 ft-bgs : Feet Below Ground Surface

Samples Collected 10-28-2019.

GRO/DRO Analyzed by Ultraviolet Fluorescence (UVF) by RED Lab, LLC.

TW-1		µg/L
EPA Method 8260		
Benzene		330#
Disopropyl Ether		2.0
Ethylbenzene		19
Isopropylbenzene		3.2
MTBE		11
Naphthalene		37#
n-Butylbenzene		3.8
sec-butylbenzene		1.2
tert-Butyl Alcohol		480#
n-Propylbenzene		3.9
Toluene		12
1,2,4-Trimethylbenzene		8.3
1,3,5-Trimethylbenzene		1.0
Total Xylenes		43
EPA Method 8270		
Acenaphthene		0.13
Acenaphthylene		0.079
Fluoranthene		0.052
Fluorene		0.14
Naphthalene		25#
Phenanthrene		0.13
2-Methylnaphthalene		21

B-7		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
2-4	<0.5	<0.5

B-3		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
2-4	3.7	27.6

B-8		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
2-4	<0.26	0.26

B-1		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
2-4	<0.52	1.2

B-9		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
4-6	<0.29	11

B-2		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
2-4	2.6	25

B-11		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
4-6	<0.28	5.7

B-4		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
2-4	<0.49	1.4

B-10		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
4-6	<0.29	<0.29

B-5		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
2-4	<0.53	3.8

B-6		
(ft-bgs)	(mg/kg)	
Sample Depth	GRO	DRO
2-4	<0.27	<0.27

LEGEND

Geoenvironmental Boring:

Underground Storage Tank (UST):

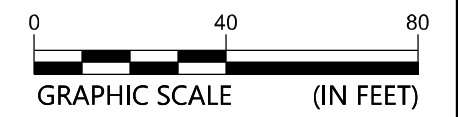
Map Source: NCDOT Project I-58868
 Image Source: NC ONEMAP, Dated 2016

Known Soil Contamination:

Possible Soil Contamination:

Existing Contamination Known - Water:

Existing Monitoring Well:



SOIL AND GROUNDWATER CONSTITUENT MAP

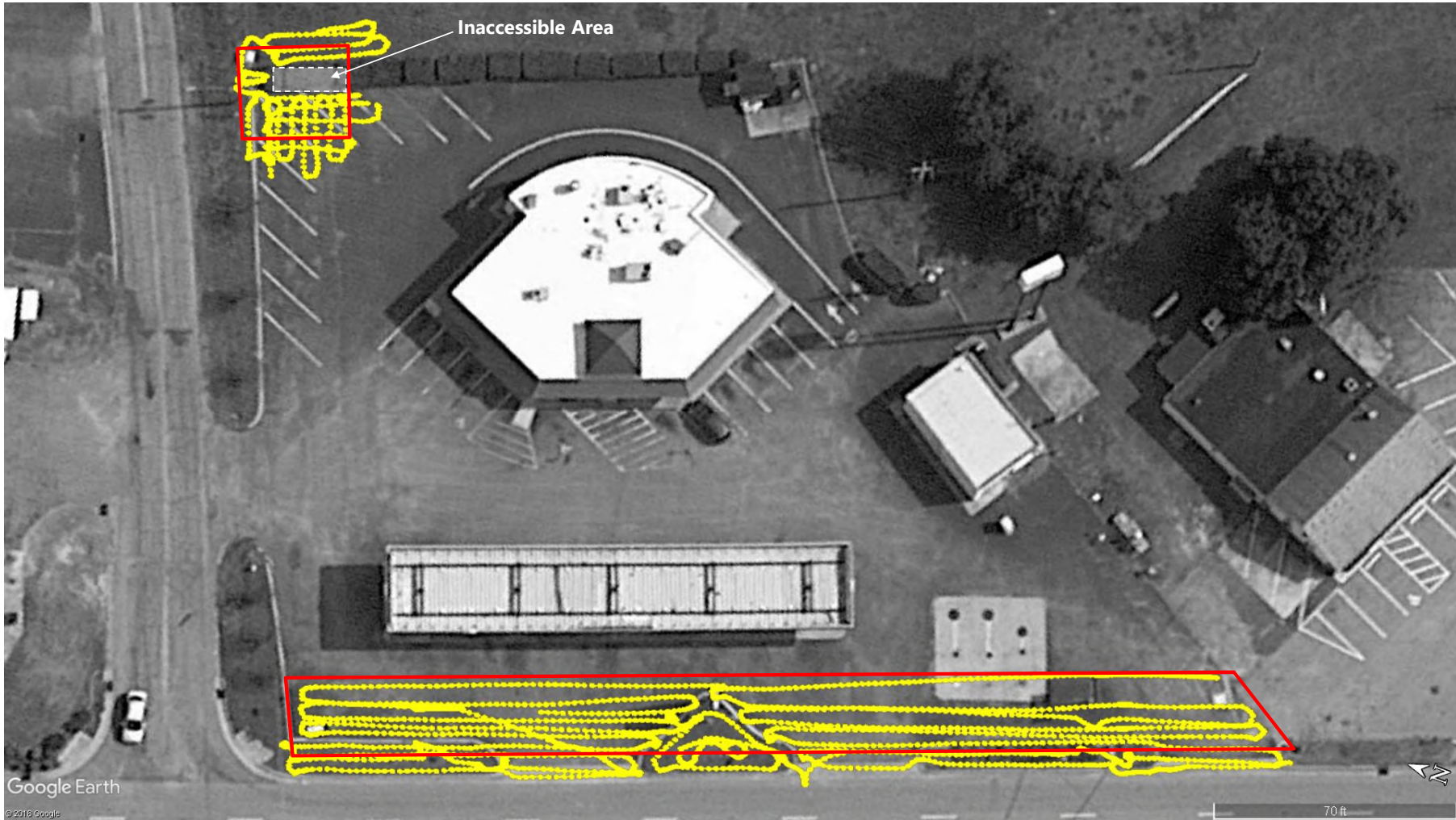
NCDOT Project: I-5878
 PARCEL 78 - BP I-MART
 501-503 Spring Branch Road, Dunn, Harnett County, North Carolina

SCALE:	FIGURE NO.
1" = 40'	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

TDEM PATH LOCATION PLAN

NCDOT PROJECT: I-5878
PARCEL #78 - (BP I-MART)
501-503 SPRING BRANCH ROAD, DUNN, HARNETT COUNTY, NORTH CAROLINA

SCALE:
AS SHOWN

DATE:
11/26/2019

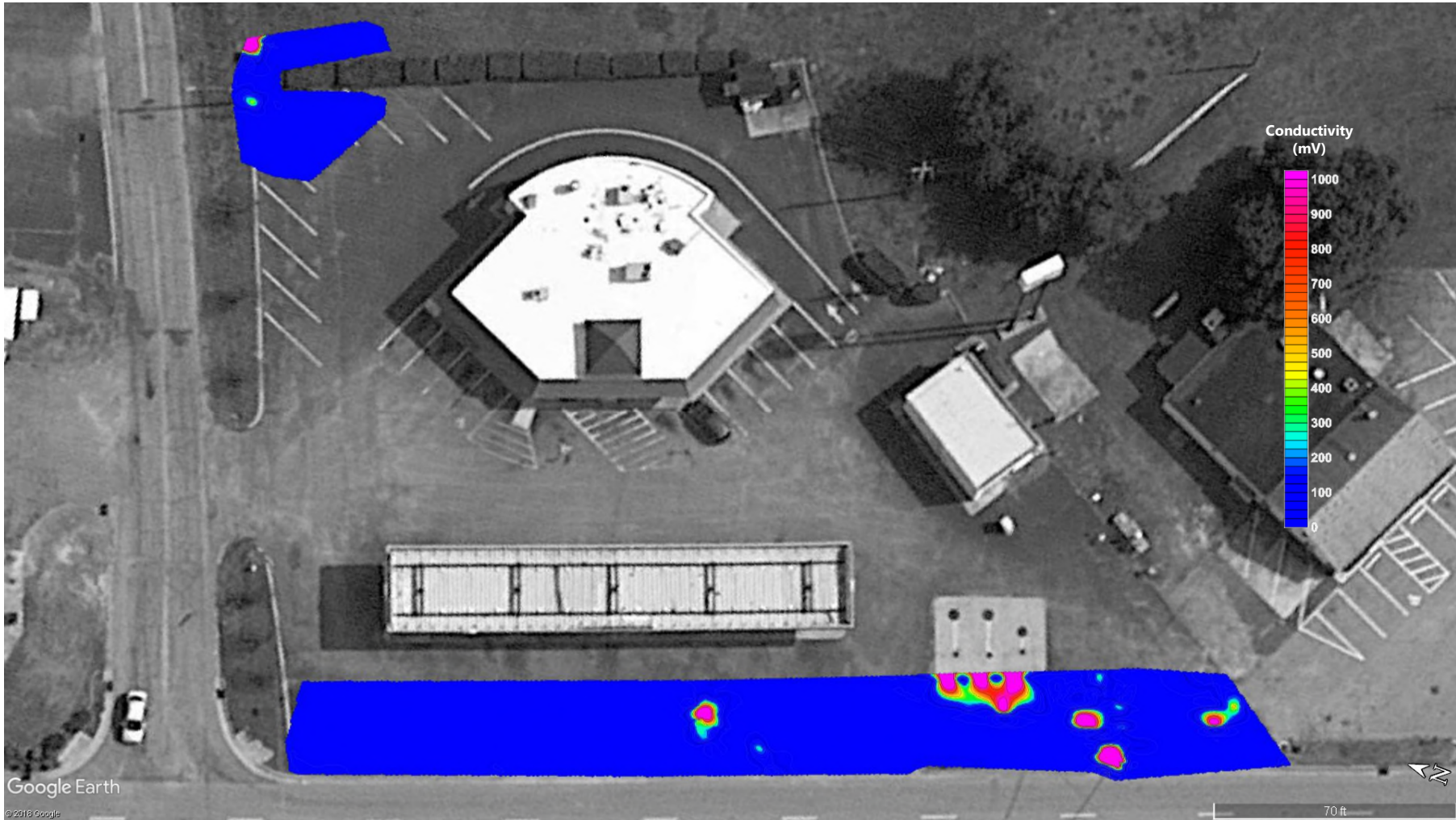
PROJECT NUMBER
4305-19-161

FIGURE NO.

4



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



TDEM DATA PLOT A

NCDOT PROJECT: I-5878
PARCEL #78 - (BP I-MART)
501-503 SPRING BRANCH ROAD, DUNN, HARNETT COUNTY, NORTH CAROLINA

SCALE:
AS SHOWN

DATE:
11/26/2019

PROJECT NUMBER
4305-19-161

FIGURE NO.

5



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



LEGEND

- Approximate Location of Geophysical Anomaly
- Approximate Location of Possible Utility

TDEM DATA PLOT B

NCDOT PROJECT: I-5878
PARCEL #78 - (BP I-MART)
501-503 SPRING BRANCH ROAD, DUNN, HARNETT COUNTY, NORTH CAROLINA

SCALE:
AS SHOWN

DATE:
11/26/2019

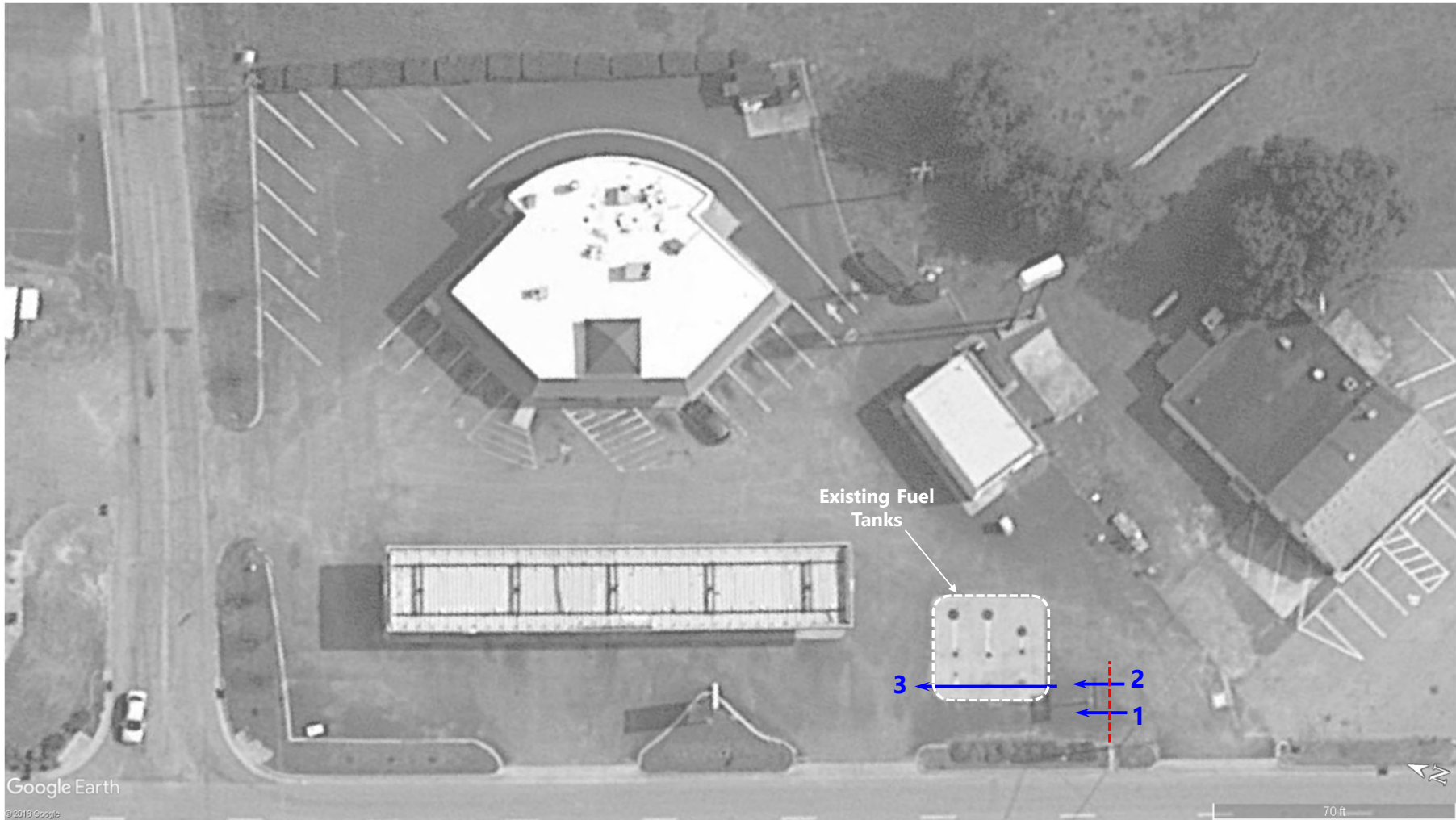
PROJECT NUMBER
4305-19-161

FIGURE NO.

6



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



LEGEND

- - - Approximate Location of Possible Utility
- ← Approximate Location of GPR Profile

GEOPHYSICAL ANOMALY LOCATION PLAN

NCDOT PROJECT: I-5878
 PARCEL #78 - (BP I-MART)
 501-503 SPRING BRANCH ROAD, DUNN, HARNETT COUNTY, NORTH CAROLINA

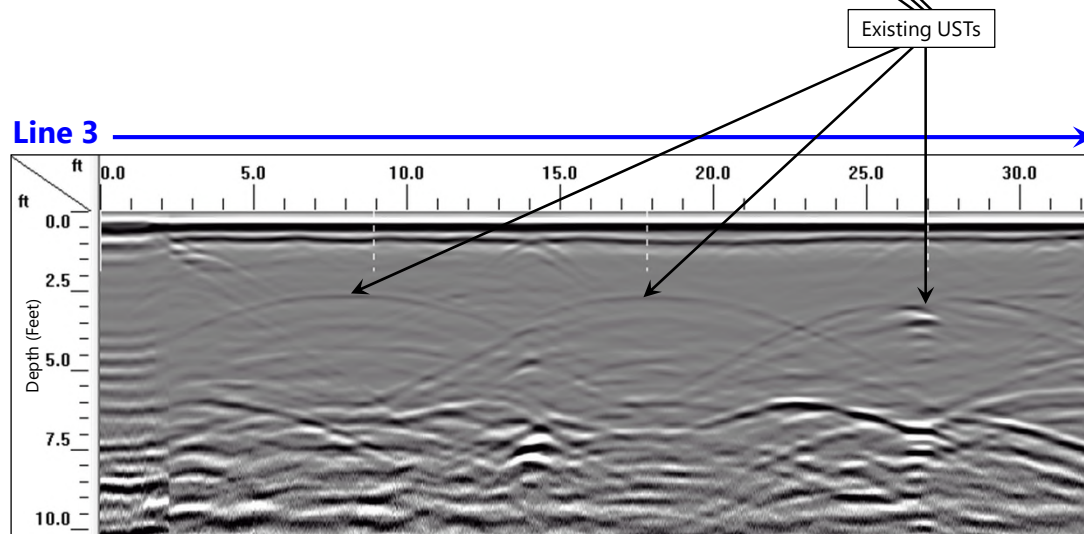
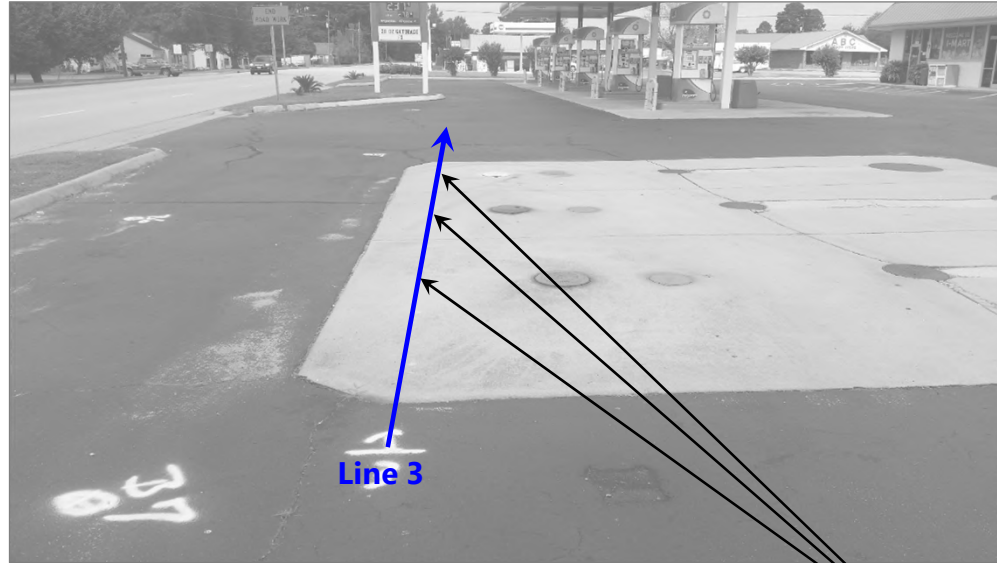
SCALE:
 AS SHOWN

DATE:
 11/26/2019

PROJECT NUMBER
 4305-19-161

FIGURE NO.

7



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



EXAMPLE GPR DATA - LINE 3

NCDOT PROJECT: I-5878
 PARCEL #78 - (BP I-MART)
 501-503 SPRING BRANCH ROAD, DUNN, HARNETT COUNTY, NORTH CAROLINA

SCALE:
 AS SHOWN

DATE:
 11/26/2019

PROJECT NUMBER
 4305-19-161

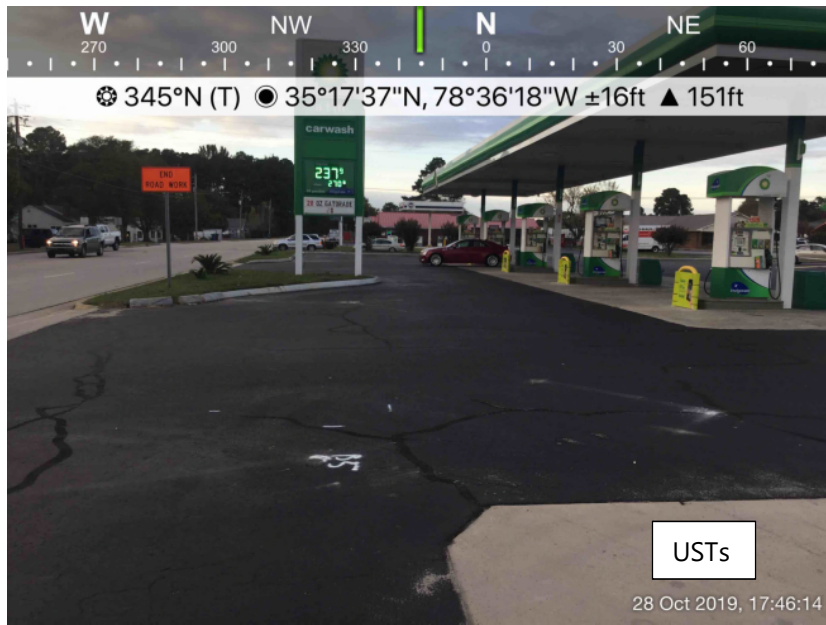
FIGURE NO.

8

Appendix I – Photographs



1	Location / Orientation	View of site looking north.
	Remarks	Note existing active USTs.



Date: 10/28/2019

Photographer: JTH

2	Location / Orientation	View looking south across UST area.
	Remarks	Note Parcel 200 in background.



Date: 10/28/2019

Photographer: JTH



3	Location / Orientation	View looking south. Note RW-2 located on the site.
	Remarks	Note Parcel 200 in background.



Date: 10/28/2019

Photographer: JTH

4	Location / Orientation	Sampling of B-7/TW-1
	Remarks	Note its location near the USTs.



Date: 10/28/2019

Photographer: JTH

Appendix II – Boring Logs

Appendix III – Laboratory Analytical Reports and Chain of Custody



Hydrocarbon Analysis Results

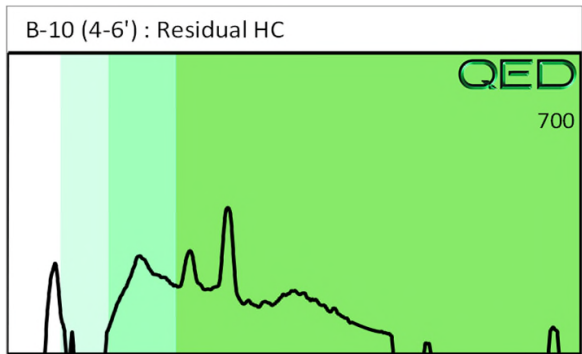
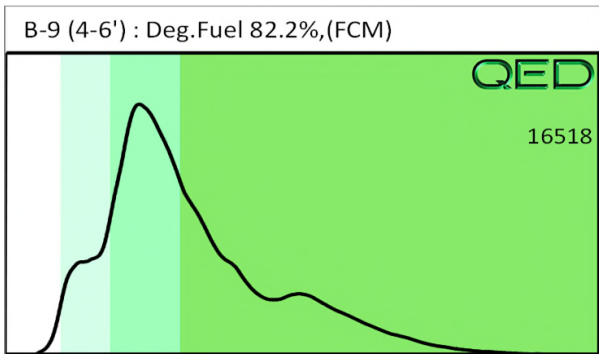
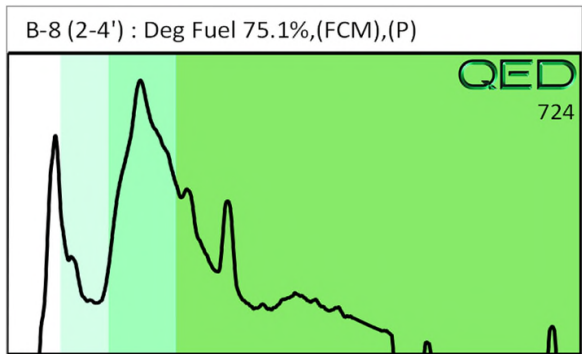
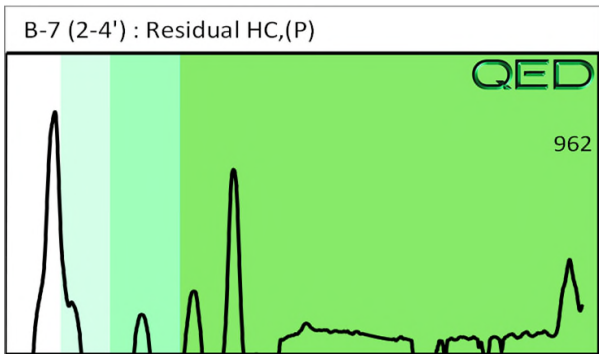
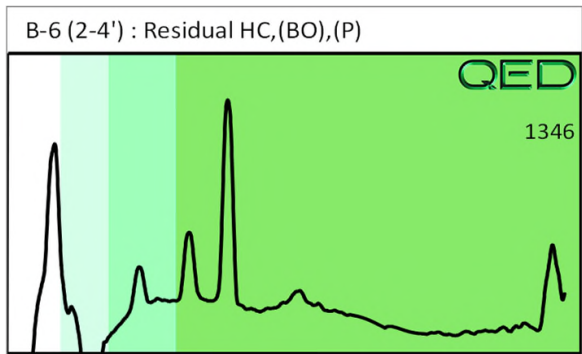
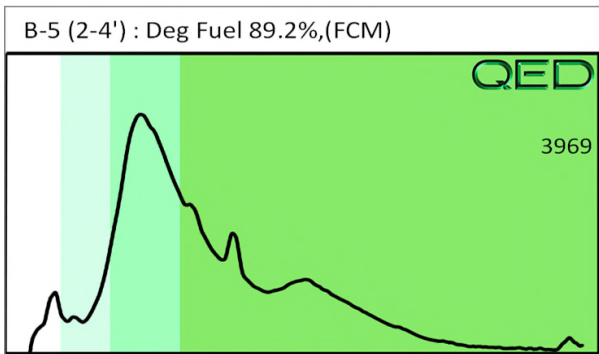
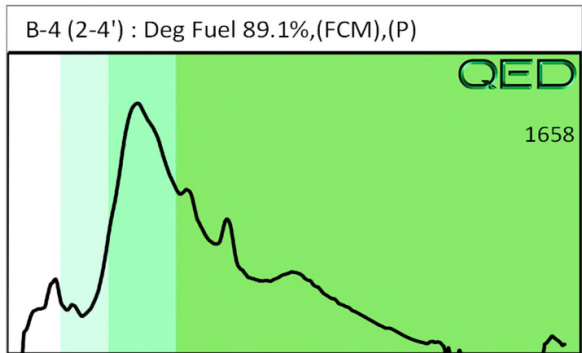
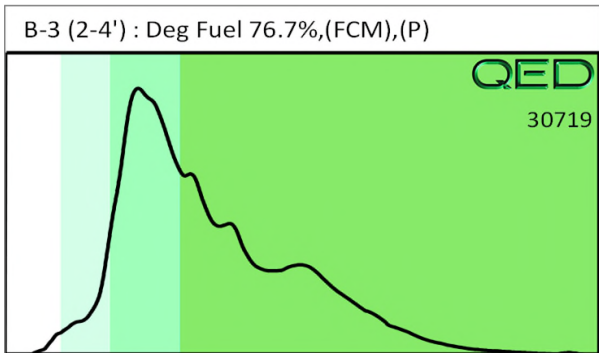
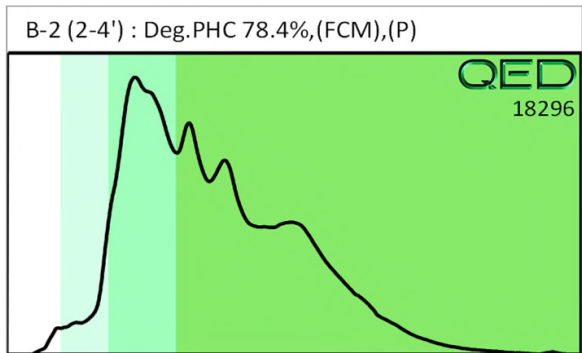
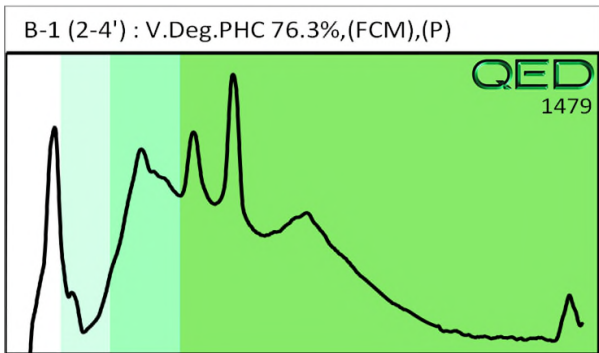
Client: S&ME
Address: 3201 SPRING FOREST RD
 RALEIGH NC
Samples taken Monday, October 28, 2019
Samples extracted Monday, October 28, 2019
Samples analysed Tuesday, October 29, 2019
Contact: JAMIE HONEYCUTT
Operator MAX MOYER
Project: NCDOT I-5878 PARCEL 78

U00902

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
										C5 - C10	C10 - C18	C18	
s	B-1 (2-4')	20.6	<0.52	<0.52	1.2	1.2	0.83	<0.17	<0.021	0	62.8	37.2	V.Deg.PHC 76.3%,(FCM),(P)
s	B-2 (2-4')	22.8	<0.57	2.6	25	27.6	9.5	0.42	<0.023	31.5	45.9	22.7	Deg.PHC 78.4%,(FCM),(P)
s	B-3 (2-4')	19.5	<0.49	3.7	27.6	31.3	22.9	0.77	<0.02	30.1	52.8	17.1	Deg Fuel 76.7%,(FCM),(P)
s	B-4 (2-4')	19.4	<0.49	<0.49	1.4	1.4	0.66	<0.16	<0.019	89	8.3	2.7	Deg Fuel 89.1%,(FCM),(P)
s	B-5 (2-4')	21.1	<0.53	<0.53	3.8	3.8	1.7	<0.17	<0.021	0	73.9	26.1	Deg Fuel 89.2%,(FCM)
s	B-6 (2-4')	10.8	<0.27	<0.27	<0.27	0.2	0.2	<0.09	<0.011	0	67.3	32.7	Residual HC,(BO),(P)
s	B-7 (2-4')	20.0	<0.5	<0.5	<0.5	<0.5	<0.1	<0.16	<0.02	0	0	0	Residual HC,(P)
s	B-8 (2-4')	10.3	<0.26	<0.26	0.26	0.26	0.16	<0.08	<0.01	0	75.4	24.6	Deg Fuel 75.1%,(FCM),(P)
s	B-9 (4-6')	11.8	<0.29	<0.29	11	11	10.5	0.41	<0.012	0	80.9	19.1	Deg.Fuel 82.2%,(FCM)
s	B-10 (4-6')	11.8	<0.29	<0.29	<0.29	0.14	0.14	<0.09	<0.012	0	58.9	41.1	Residual HC

Initial Calibrator QC check **OK** Final FCM QC Check **OK** 100.8 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.
 Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected
 B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modified Result.
 % Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**





Hydrocarbon Analysis Results

Client: S&ME
Address: 3201 SPRING FOREST RD
RALEIGH NC

Samples taken Monday, October 28, 2019
Samples extracted Monday, October 28, 2019
Samples analysed Tuesday, October 29, 2019

Contact: JAMIE HONEYCUTT

Operator MAX MOYER

Project: NCDOT I-5878 PARCEL 78

U00902

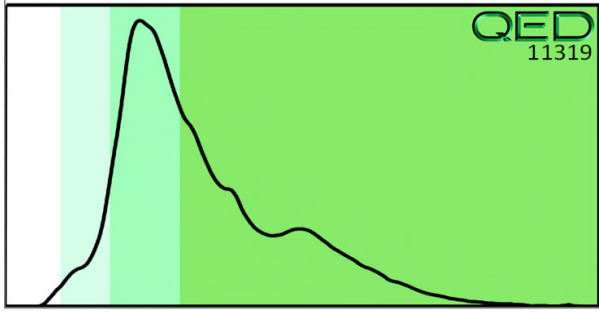
Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	% Ratios			HC Fingerprint Match
										C5 - C10	C10 - C18	C18	
s	B-11 (4-6')	11.0	<0.28	<0.28	5.7	5.7	3.3	0.12	<0.011	0	78.3	21.7	Deg Fuel 92.2%,(FCM)

Initial Calibrator QC check **OK**

Final FCM QC Check **OK** 99.3 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.
Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected
B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modified Result.
% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**

B-11 (4-6') : Deg Fuel 92.2%,(FCM)



NC DOT I-5878 Parcel 78

REDLAB™

Durham, NC

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

Client Name: S+ME
 Address: 3801 Spring Forest Rd
 Raleigh, NC
 Contact: Jamie T Hovington
 Project Ref.: NC DOT - I-5878 Parcel 78
 Email: jhovington@smcinc.com
 Phone #: 910 977-7614
 Collected by: Jamie T Hovington

Sample Collection Date/Time	TAT Requested		Initials	Sample ID	Total Wt.	Tare Wt.	Sample Wt.
	24 Hour	48 Hour					
10-28-19 / 12:10			JTH	B-1 2-4'	57.1	44.5	12.6
12:20				B-2 2-4'	56.2	44.8	11.4
12:30				B-3 2-4'	57.2	43.9	13.3
12:45				B-4 2-4'	57.7	44.3	13.4
14:30				B-5 2-4'	56.7	44.4	12.3
14:45				B-6 2-4'	57.5	44.5	13.0
15:00				B-7 2-4'	57.6	44.6	13.0
15:30				B-8 2-4'	57.4	43.8	13.6
15:45				B-9 4-6'	56.3	44.4	11.9
16:00				B-10 4-6'	56.7	44.8	11.9
16:15				B-11 4-6'	57.5	44.8	12.7

RED Lab USE ONLY

11

Comments:

Relinquished by: *Jamie T Hovington* Date/Time: 10/28/19 17:00
 Accepted by: *MM* Date/Time: 10/29/19 10:00

November 11, 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: 19J1775

Enclosed are results of analyses for samples received by the laboratory on October 28, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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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: 11/11/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 4305-19-161

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19J1775

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	19J1775-01	Ground Water		SW-846 8260D SW-846 8270E	

EXECUTIVE SUMMARY

Client ID: **TW-1**

Lab ID: **19J1775-01**

Analyte	Results/Qual	DL	RL	Units	Method
1,2,4-Trimethylbenzene	8.3	0.90	5.0	µg/L	SW-846 8260D
1,3,5-Trimethylbenzene	1.0 J	0.70	5.0	µg/L	SW-846 8260D
Benzene	330	0.90	5.0	µg/L	SW-846 8260D
Diisopropyl Ether (DIPE)	2.0 J	0.85	2.5	µg/L	SW-846 8260D
Ethylbenzene	19	0.65	5.0	µg/L	SW-846 8260D
Isopropylbenzene (Cumene)	3.2 J	0.85	5.0	µg/L	SW-846 8260D
m+p Xylene	33	1.5	10	µg/L	SW-846 8260D
Methyl tert-Butyl Ether (MTBE)	11	1.2	5.0	µg/L	SW-846 8260D
Naphthalene	37	1.6	25	µg/L	SW-846 8260D
n-Butylbenzene	3.8 J	1.0	5.0	µg/L	SW-846 8260D
n-Propylbenzene	3.9 J	0.65	5.0	µg/L	SW-846 8260D
o-Xylene	10	0.85	5.0	µg/L	SW-846 8260D
sec-Butylbenzene	1.2 J	0.80	5.0	µg/L	SW-846 8260D
tert-Butyl Alcohol (TBA)	480	21	100	µg/L	SW-846 8260D
Toluene	12	0.70	5.0	µg/L	SW-846 8260D
2-Methylnaphthalene (SIM)	21	0.65	10	µg/L	SW-846 8270E
Acenaphthene (SIM)	0.13 J	0.034	0.31	µg/L	SW-846 8270E
Acenaphthylene (SIM)	0.079 J	0.036	0.21	µg/L	SW-846 8270E
Fluoranthene (SIM)	0.052 J	0.026	0.52	µg/L	SW-846 8270E
Fluorene (SIM)	0.14 J	0.035	1.0	µg/L	SW-846 8270E
Naphthalene (SIM)	25	2.7	10	µg/L	SW-846 8270E
Phenanthrene (SIM)	0.13	0.031	0.052	µg/L	SW-846 8270E
Pyrene (SIM)	0.049 J	0.024	1.0	µg/L	SW-846 8270E

Con-Test does not accept liability for the consequences of any actions taken solely on the basis of the information provided in the Executive Summary section of this report. Users must review this report in its entirety to determine data usability and assessment.

CASE NARRATIVE SUMMARY

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

For method 8270, only PAHs were requested and reported.

SW-846 8260D

Qualifications:

L-02

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

trans-1,4-Dichloro-2-butene

B244975-BS1, B244975-BSD1, S042201-CCV1

Vinyl Chloride

B244975-BS1, B244975-BSD1, S042201-CCV1

RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

19J1775-01[TW-1]

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

tert-Amyl Methyl Ether (TAME)

19J1775-01[TW-1], B244975-BLK1, B244975-BS1, B244975-BSD1, S042201-CCV1

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:

2-Hexanone (MBK)

B244975-BS1, B244975-BSD1, S042201-CCV1

4-Methyl-2-pentanone (MIBK)

B244975-BS1, B244975-BSD1, S042201-CCV1

Acetone

B244975-BS1, B244975-BSD1, S042201-CCV1

trans-1,4-Dichloro-2-butene

B244975-BS1, B244975-BSD1, S042201-CCV1

Vinyl Chloride

B244975-BS1, B244975-BSD1, S042201-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.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: Dunn, NC

Sample Description:

Work Order: 19J1775

Date Received: 10/28/2019

Field Sample #: TW-1

Sampled: 10/28/2019 17:00

Sample ID: 19J1775-01

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	250	19	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Acrylonitrile	ND	25	2.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
tert-Amyl Methyl Ether (TAME)	ND	5.0	0.70	µg/L	5	V-05	SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Benzene	330	5.0	0.90	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Bromobenzene	ND	5.0	0.75	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Bromochloromethane	ND	5.0	1.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Bromodichloromethane	ND	2.5	0.80	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Bromoform	ND	5.0	2.3	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Bromomethane	ND	10	3.9	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
2-Butanone (MEK)	ND	100	9.7	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
tert-Butyl Alcohol (TBA)	480	100	21	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
n-Butylbenzene	3.8	5.0	1.0	µg/L	5	J	SW-846 8260D	11/4/19	11/4/19 15:46	EEH
sec-Butylbenzene	1.2	5.0	0.80	µg/L	5	J	SW-846 8260D	11/4/19	11/4/19 15:46	EEH
tert-Butylbenzene	ND	5.0	0.85	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	2.5	0.80	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Carbon Disulfide	ND	25	22	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Carbon Tetrachloride	ND	5.0	0.55	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Chlorobenzene	ND	5.0	0.75	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Chlorodibromomethane	ND	2.5	1.0	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Chloroethane	ND	10	1.8	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Chloroform	ND	10	0.85	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Chloromethane	ND	10	2.2	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
2-Chlorotoluene	ND	5.0	0.60	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
4-Chlorotoluene	ND	5.0	0.70	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	25	2.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,2-Dibromoethane (EDB)	ND	2.5	0.95	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Dibromomethane	ND	5.0	1.8	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,2-Dichlorobenzene	ND	5.0	0.80	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,3-Dichlorobenzene	ND	5.0	0.60	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,4-Dichlorobenzene	ND	5.0	0.65	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
trans-1,4-Dichloro-2-butene	ND	10	1.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Dichlorodifluoromethane (Freon 12)	ND	10	1.3	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,1-Dichloroethane	ND	5.0	0.80	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,2-Dichloroethane	ND	5.0	2.0	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,1-Dichloroethylene	ND	5.0	1.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
cis-1,2-Dichloroethylene	ND	5.0	0.65	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
trans-1,2-Dichloroethylene	ND	5.0	1.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,2-Dichloropropane	ND	5.0	1.0	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,3-Dichloropropane	ND	2.5	0.55	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
2,2-Dichloropropane	ND	5.0	1.0	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,1-Dichloropropene	ND	10	0.80	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
cis-1,3-Dichloropropene	ND	2.5	0.65	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
trans-1,3-Dichloropropene	ND	2.5	1.2	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Diethyl Ether	ND	10	1.7	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH

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

Project Location: Dunn, NC

Sample Description:

Work Order: 19J1775

Date Received: 10/28/2019

Field Sample #: TW-1

Sampled: 10/28/2019 17:00

Sample ID: 19J1775-01

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)	2.0	2.5	0.85	µg/L	5	J	SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,4-Dioxane	ND	250	110	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Ethylbenzene	19	5.0	0.65	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Hexachlorobutadiene	ND	3.0	2.4	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
2-Hexanone (MBK)	ND	50	7.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Isopropylbenzene (Cumene)	3.2	5.0	0.85	µg/L	5	J	SW-846 8260D	11/4/19	11/4/19 15:46	EEH
p-Isopropyltoluene (p-Cymene)	ND	5.0	1.0	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Methyl tert-Butyl Ether (MTBE)	11	5.0	1.2	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Methylene Chloride	ND	25	1.7	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
4-Methyl-2-pentanone (MIBK)	ND	50	8.4	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Naphthalene	37	25	1.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
n-Propylbenzene	3.9	5.0	0.65	µg/L	5	J	SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Styrene	ND	5.0	0.55	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,1,1,2-Tetrachloroethane	ND	5.0	1.4	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,1,2,2-Tetrachloroethane	ND	2.5	1.1	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Tetrachloroethylene	ND	5.0	0.90	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Tetrahydrofuran	ND	50	2.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Toluene	12	5.0	0.70	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,2,3-Trichlorobenzene	ND	25	2.8	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,2,4-Trichlorobenzene	ND	5.0	2.0	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,3,5-Trichlorobenzene	ND	5.0	1.5	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,1,1-Trichloroethane	ND	5.0	1.0	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,1,2-Trichloroethane	ND	5.0	0.80	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Trichloroethylene	ND	5.0	1.2	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Trichlorofluoromethane (Freon 11)	ND	10	1.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,2,3-Trichloropropane	ND	10	1.2	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	5.0	1.6	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,2,4-Trimethylbenzene	8.3	5.0	0.90	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
1,3,5-Trimethylbenzene	1.0	5.0	0.70	µg/L	5	J	SW-846 8260D	11/4/19	11/4/19 15:46	EEH
Vinyl Chloride	ND	10	2.2	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
m+p Xylene	33	10	1.5	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH
o-Xylene	10	5.0	0.85	µg/L	5		SW-846 8260D	11/4/19	11/4/19 15:46	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	104	70-130	11/4/19 15:46
Toluene-d8	100	70-130	11/4/19 15:46
4-Bromofluorobenzene	102	70-130	11/4/19 15:46

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Project Location: Dunn, NC

Sample Description:

Work Order: 19J1775

Date Received: 10/28/2019

Field Sample #: TW-1

Sampled: 10/28/2019 17:00

Sample ID: 19J1775-01

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)	0.13	0.31	0.034	µg/L	1	J	SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Acenaphthylene (SIM)	0.079	0.21	0.036	µg/L	1	J	SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Anthracene (SIM)	ND	0.21	0.033	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Benzo(a)anthracene (SIM)	ND	0.052	0.017	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Benzo(a)pyrene (SIM)	ND	0.10	0.012	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Benzo(b)fluoranthene (SIM)	ND	0.052	0.016	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Benzo(g,h,i)perylene (SIM)	ND	0.52	0.019	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Benzo(k)fluoranthene (SIM)	ND	0.21	0.012	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Chrysene (SIM)	ND	0.21	0.016	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Dibenz(a,h)anthracene (SIM)	ND	0.10	0.018	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Fluoranthene (SIM)	0.052	0.52	0.026	µg/L	1	J	SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Fluorene (SIM)	0.14	1.0	0.035	µg/L	1	J	SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.10	0.019	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
2-Methylnaphthalene (SIM)	21	10	0.65	µg/L	10		SW-846 8270E	10/30/19	11/4/19 10:34	IMR
Naphthalene (SIM)	25	10	2.7	µg/L	10		SW-846 8270E	10/30/19	11/4/19 10:34	IMR
Phenanthrene (SIM)	0.13	0.052	0.031	µg/L	1		SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Pyrene (SIM)	0.049	1.0	0.024	µg/L	1	J	SW-846 8270E	10/30/19	11/1/19 20:51	IMR
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Nitrobenzene-d5	72.6		30-130				11/1/19 20:51			
Nitrobenzene-d5	73.1		30-130				11/4/19 10:34			
2-Fluorobiphenyl	47.7		30-130				11/1/19 20:51			
2-Fluorobiphenyl	53.5		30-130				11/4/19 10:34			
p-Terphenyl-d14	54.6		30-130				11/1/19 20:51			
p-Terphenyl-d14	49.6		30-130				11/4/19 10:34			

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19J1775-01 [TW-1]	B244975	1	5.00	11/04/19

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19J1775-01 [TW-1]	B244837	960	1.00	10/30/19
19J1775-01RE1 [TW-1]	B244837	960	1.00	10/30/19

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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
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Batch B244975 - SW-846 5030B

Blank (B244975-BLK1)

Prepared & Analyzed: 11/04/19

Acetone	ND	50	µg/L							
Acrylonitrile	ND	5.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							V-05
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							

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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
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Batch B244975 - SW-846 5030B

Blank (B244975-BLK1)

Prepared & Analyzed: 11/04/19

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	25.8		µg/L	25.0		103	70-130			
Surrogate: Toluene-d8	25.2		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	24.3		µg/L	25.0		97.4	70-130			

LCS (B244975-BS1)

Prepared & Analyzed: 11/04/19

Acetone	140	50	µg/L	100		140	70-160			V-20 †
Acrylonitrile	12.3	5.0	µg/L	10.0		123	70-130			
tert-Amyl Methyl Ether (TAME)	7.90	0.50	µg/L	10.0		79.0	70-130			V-05
Benzene	9.60	1.0	µg/L	10.0		96.0	70-130			
Bromobenzene	11.0	1.0	µg/L	10.0		110	70-130			
Bromochloromethane	11.3	1.0	µg/L	10.0		113	70-130			
Bromodichloromethane	11.2	0.50	µg/L	10.0		112	70-130			
Bromoform	10.0	1.0	µg/L	10.0		100	70-130			
Bromomethane	5.87	2.0	µg/L	10.0		58.7	40-160			†
2-Butanone (MEK)	114	20	µg/L	100		114	40-160			†
tert-Butyl Alcohol (TBA)	96.7	20	µg/L	100		96.7	40-160			†
n-Butylbenzene	11.6	1.0	µg/L	10.0		116	70-130			
sec-Butylbenzene	11.3	1.0	µg/L	10.0		113	70-130			
tert-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130			
tert-Butyl Ethyl Ether (TBEE)	7.42	0.50	µg/L	10.0		74.2	70-130			
Carbon Disulfide	11.2	5.0	µg/L	10.0		112	70-130			
Carbon Tetrachloride	11.2	1.0	µg/L	10.0		112	70-130			
Chlorobenzene	10.6	1.0	µg/L	10.0		106	70-130			
Chlorodibromomethane	10.8	0.50	µg/L	10.0		108	70-130			
Chloroethane	9.65	2.0	µg/L	10.0		96.5	70-130			
Chloroform	9.93	2.0	µg/L	10.0		99.3	70-130			
Chloromethane	7.98	2.0	µg/L	10.0		79.8	40-160			†
2-Chlorotoluene	10.4	1.0	µg/L	10.0		104	70-130			

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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 B244975 - SW-846 5030B										
LCS (B244975-BS1)										
Prepared & Analyzed: 11/04/19										
4-Chlorotoluene	11.3	1.0	µg/L	10.0		113	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	10.4	5.0	µg/L	10.0		104	70-130			
1,2-Dibromoethane (EDB)	10.7	0.50	µg/L	10.0		107	70-130			
Dibromomethane	10.5	1.0	µg/L	10.0		105	70-130			
1,2-Dichlorobenzene	10.8	1.0	µg/L	10.0		108	70-130			
1,3-Dichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130			
1,4-Dichlorobenzene	10.7	1.0	µg/L	10.0		107	70-130			
trans-1,4-Dichloro-2-butene	13.2	2.0	µg/L	10.0		132 *	70-130			L-02, V-20
Dichlorodifluoromethane (Freon 12)	6.19	2.0	µg/L	10.0		61.9	40-160			†
1,1-Dichloroethane	10.6	1.0	µg/L	10.0		106	70-130			
1,2-Dichloroethane	11.7	1.0	µg/L	10.0		117	70-130			
1,1-Dichloroethylene	11.7	1.0	µg/L	10.0		117	70-130			
cis-1,2-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130			
trans-1,2-Dichloroethylene	11.4	1.0	µg/L	10.0		114	70-130			
1,2-Dichloropropane	10.9	1.0	µg/L	10.0		109	70-130			
1,3-Dichloropropane	10.5	0.50	µg/L	10.0		105	70-130			
2,2-Dichloropropane	11.8	1.0	µg/L	10.0		118	40-130			†
1,1-Dichloropropene	10.5	2.0	µg/L	10.0		105	70-130			
cis-1,3-Dichloropropene	11.3	0.50	µg/L	10.0		113	70-130			
trans-1,3-Dichloropropene	10.9	0.50	µg/L	10.0		109	70-130			
Diethyl Ether	10.8	2.0	µg/L	10.0		108	70-130			
Diisopropyl Ether (DIPE)	12.1	0.50	µg/L	10.0		121	70-130			
1,4-Dioxane	116	50	µg/L	100		116	40-130			†
Ethylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
Hexachlorobutadiene	11.8	0.60	µg/L	10.0		118	70-130			
2-Hexanone (MBK)	132	10	µg/L	100		132	70-160			V-20 †
Isopropylbenzene (Cumene)	11.0	1.0	µg/L	10.0		110	70-130			
p-Isopropyltoluene (p-Cymene)	10.5	1.0	µg/L	10.0		105	70-130			
Methyl tert-Butyl Ether (MTBE)	9.41	1.0	µg/L	10.0		94.1	70-130			
Methylene Chloride	11.6	5.0	µg/L	10.0		116	70-130			
4-Methyl-2-pentanone (MIBK)	137	10	µg/L	100		137	70-160			V-20 †
Naphthalene	9.20	2.0	µg/L	10.0		92.0	40-130			†
n-Propylbenzene	11.3	1.0	µg/L	10.0		113	70-130			
Styrene	9.10	1.0	µg/L	10.0		91.0	70-130			
1,1,1,2-Tetrachloroethane	11.2	1.0	µg/L	10.0		112	70-130			
1,1,2,2-Tetrachloroethane	11.4	0.50	µg/L	10.0		114	70-130			
Tetrachloroethylene	11.4	1.0	µg/L	10.0		114	70-130			
Tetrahydrofuran	10.3	10	µg/L	10.0		103	70-130			
Toluene	10.7	1.0	µg/L	10.0		107	70-130			
1,2,3-Trichlorobenzene	8.52	5.0	µg/L	10.0		85.2	70-130			
1,2,4-Trichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130			
1,3,5-Trichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130			
1,1,1-Trichloroethane	11.1	1.0	µg/L	10.0		111	70-130			
1,1,2-Trichloroethane	10.6	1.0	µg/L	10.0		106	70-130			
Trichloroethylene	10.7	1.0	µg/L	10.0		107	70-130			
Trichlorofluoromethane (Freon 11)	10.0	2.0	µg/L	10.0		100	70-130			
1,2,3-Trichloropropane	11.1	2.0	µg/L	10.0		111	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.9	1.0	µg/L	10.0		109	70-130			
1,2,4-Trimethylbenzene	9.65	1.0	µg/L	10.0		96.5	70-130			
1,3,5-Trimethylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
Vinyl Chloride	26.4	2.0	µg/L	10.0		264 *	40-160			L-02, V-20 †

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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 B244975 - SW-846 5030B										
LCS (B244975-BS1)										
Prepared & Analyzed: 11/04/19										
m+p Xylene	21.6	2.0	µg/L	20.0		108	70-130			
o-Xylene	11.1	1.0	µg/L	10.0		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	26.2		µg/L	25.0		105	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	25.5		µg/L	25.0		102	70-130			
LCS Dup (B244975-BS1)										
Prepared & Analyzed: 11/04/19										
Acetone	145	50	µg/L	100		145	70-160	3.73	25	V-20 †
Acrylonitrile	12.0	5.0	µg/L	10.0		120	70-130	3.21	25	
tert-Amyl Methyl Ether (TAME)	7.77	0.50	µg/L	10.0		77.7	70-130	1.66	25	V-05
Benzene	9.68	1.0	µg/L	10.0		96.8	70-130	0.830	25	
Bromobenzene	10.6	1.0	µg/L	10.0		106	70-130	3.90	25	
Bromochloromethane	11.1	1.0	µg/L	10.0		111	70-130	1.43	25	
Bromodichloromethane	10.6	0.50	µg/L	10.0		106	70-130	4.86	25	
Bromoform	10.3	1.0	µg/L	10.0		103	70-130	2.46	25	
Bromomethane	6.68	2.0	µg/L	10.0		66.8	40-160	12.9	25	†
2-Butanone (MEK)	117	20	µg/L	100		117	40-160	2.32	25	†
tert-Butyl Alcohol (TBA)	90.2	20	µg/L	100		90.2	40-160	7.03	25	†
n-Butylbenzene	11.6	1.0	µg/L	10.0		116	70-130	0.172	25	
sec-Butylbenzene	11.4	1.0	µg/L	10.0		114	70-130	0.440	25	
tert-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130	0.368	25	
tert-Butyl Ethyl Ether (TBEE)	7.38	0.50	µg/L	10.0		73.8	70-130	0.541	25	
Carbon Disulfide	10.4	5.0	µg/L	10.0		104	70-130	6.66	25	
Carbon Tetrachloride	11.1	1.0	µg/L	10.0		111	70-130	0.809	25	
Chlorobenzene	10.1	1.0	µg/L	10.0		101	70-130	5.02	25	
Chlorodibromomethane	10.5	0.50	µg/L	10.0		105	70-130	2.73	25	
Chloroethane	9.87	2.0	µg/L	10.0		98.7	70-130	2.25	25	
Chloroform	9.64	2.0	µg/L	10.0		96.4	70-130	2.96	25	
Chloromethane	7.89	2.0	µg/L	10.0		78.9	40-160	1.13	25	†
2-Chlorotoluene	10.2	1.0	µg/L	10.0		102	70-130	1.17	25	
4-Chlorotoluene	10.8	1.0	µg/L	10.0		108	70-130	4.70	25	
1,2-Dibromo-3-chloropropane (DBCP)	10.5	5.0	µg/L	10.0		105	70-130	0.573	25	
1,2-Dibromoethane (EDB)	10.6	0.50	µg/L	10.0		106	70-130	1.31	25	
Dibromomethane	10.7	1.0	µg/L	10.0		107	70-130	1.60	25	
1,2-Dichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130	2.54	25	
1,3-Dichlorobenzene	11.1	1.0	µg/L	10.0		111	70-130	0.542	25	
1,4-Dichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130	1.60	25	
trans-1,4-Dichloro-2-butene	13.4	2.0	µg/L	10.0		134 *	70-130	1.13	25	L-02, V-20
Dichlorodifluoromethane (Freon 12)	6.16	2.0	µg/L	10.0		61.6	40-160	0.486	25	†
1,1-Dichloroethane	10.6	1.0	µg/L	10.0		106	70-130	0.00	25	
1,2-Dichloroethane	11.7	1.0	µg/L	10.0		117	70-130	0.0856	25	
1,1-Dichloroethylene	11.7	1.0	µg/L	10.0		117	70-130	0.428	25	
cis-1,2-Dichloroethylene	10.6	1.0	µg/L	10.0		106	70-130	1.68	25	
trans-1,2-Dichloroethylene	11.2	1.0	µg/L	10.0		112	70-130	1.95	25	
1,2-Dichloropropane	11.0	1.0	µg/L	10.0		110	70-130	0.183	25	
1,3-Dichloropropane	10.7	0.50	µg/L	10.0		107	70-130	1.70	25	
2,2-Dichloropropane	11.3	1.0	µg/L	10.0		113	40-130	4.17	25	†
1,1-Dichloropropene	10.4	2.0	µg/L	10.0		104	70-130	1.24	25	
cis-1,3-Dichloropropene	10.8	0.50	µg/L	10.0		108	70-130	4.34	25	
trans-1,3-Dichloropropene	11.0	0.50	µg/L	10.0		110	70-130	0.915	25	
Diethyl Ether	10.7	2.0	µg/L	10.0		107	70-130	1.39	25	
Diisopropyl Ether (DIPE)	11.6	0.50	µg/L	10.0		116	70-130	3.96	25	

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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 B244975 - SW-846 5030B										
LCS Dup (B244975-BSD1)										
Prepared & Analyzed: 11/04/19										
1,4-Dioxane	122	50	µg/L	100		122	40-130	4.65	50	† ‡
Ethylbenzene	10.7	1.0	µg/L	10.0		107	70-130	0.561	25	
Hexachlorobutadiene	11.8	0.60	µg/L	10.0		118	70-130	0.508	25	
2-Hexanone (MBK)	132	10	µg/L	100		132	70-160	0.137	25	V-20 †
Isopropylbenzene (Cumene)	10.8	1.0	µg/L	10.0		108	70-130	2.57	25	
p-Isopropyltoluene (p-Cymene)	10.6	1.0	µg/L	10.0		106	70-130	0.190	25	
Methyl tert-Butyl Ether (MTBE)	9.24	1.0	µg/L	10.0		92.4	70-130	1.82	25	
Methylene Chloride	11.1	5.0	µg/L	10.0		111	70-130	4.22	25	
4-Methyl-2-pentanone (MIBK)	140	10	µg/L	100		140	70-160	2.14	25	V-20 †
Naphthalene	9.12	2.0	µg/L	10.0		91.2	40-130	0.873	25	†
n-Propylbenzene	10.8	1.0	µg/L	10.0		108	70-130	4.24	25	
Styrene	9.13	1.0	µg/L	10.0		91.3	70-130	0.329	25	
1,1,1,2-Tetrachloroethane	11.2	1.0	µg/L	10.0		112	70-130	0.0890	25	
1,1,2,2-Tetrachloroethane	11.2	0.50	µg/L	10.0		112	70-130	1.41	25	
Tetrachloroethylene	10.9	1.0	µg/L	10.0		109	70-130	3.94	25	
Tetrahydrofuran	10.7	10	µg/L	10.0		107	70-130	4.28	25	
Toluene	10.5	1.0	µg/L	10.0		105	70-130	2.45	25	
1,2,3-Trichlorobenzene	8.47	5.0	µg/L	10.0		84.7	70-130	0.589	25	
1,2,4-Trichlorobenzene	10.1	1.0	µg/L	10.0		101	70-130	3.42	25	
1,3,5-Trichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130	0.0954	25	
1,1,1-Trichloroethane	11.0	1.0	µg/L	10.0		110	70-130	1.63	25	
1,1,2-Trichloroethane	10.6	1.0	µg/L	10.0		106	70-130	0.661	25	
Trichloroethylene	10.3	1.0	µg/L	10.0		103	70-130	4.29	25	
Trichlorofluoromethane (Freon 11)	10.0	2.0	µg/L	10.0		100	70-130	0.399	25	
1,2,3-Trichloropropane	11.3	2.0	µg/L	10.0		113	70-130	1.16	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.7	1.0	µg/L	10.0		107	70-130	1.86	25	
1,2,4-Trimethylbenzene	9.50	1.0	µg/L	10.0		95.0	70-130	1.57	25	
1,3,5-Trimethylbenzene	10.4	1.0	µg/L	10.0		104	70-130	2.93	25	
Vinyl Chloride	25.0	2.0	µg/L	10.0		250 *	40-160	5.64	25	L-02, V-20 †
m+p Xylene	21.3	2.0	µg/L	20.0		107	70-130	1.44	25	
o-Xylene	10.9	1.0	µg/L	10.0		109	70-130	1.82	25	
Surrogate: 1,2-Dichloroethane-d4	25.2		µg/L	25.0		101	70-130			
Surrogate: Toluene-d8	25.1		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	25.1		µg/L	25.0		100	70-130			

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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 B244837 - SW-846 3510C										
Blank (B244837-BLK1)										
Prepared: 10/30/19 Analyzed: 11/01/19										
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	83.8		µg/L	100		83.8	30-130			
Surrogate: 2-Fluorobiphenyl	54.8		µg/L	100		54.8	30-130			
Surrogate: p-Terphenyl-d14	73.4		µg/L	100		73.4	30-130			
LCS (B244837-BS1)										
Prepared: 10/30/19 Analyzed: 11/01/19										
Acenaphthene (SIM)	37.1	6.0	µg/L	50.0		74.1	40-140			
Acenaphthylene (SIM)	38.1	4.0	µg/L	50.0		76.2	40-140			
Anthracene (SIM)	41.5	4.0	µg/L	50.0		83.1	40-140			
Benzo(a)anthracene (SIM)	42.4	1.0	µg/L	50.0		84.9	40-140			
Benzo(a)pyrene (SIM)	40.2	2.0	µg/L	50.0		80.4	40-140			
Benzo(b)fluoranthene (SIM)	44.2	1.0	µg/L	50.0		88.4	40-140			
Benzo(g,h,i)perylene (SIM)	41.9	10	µg/L	50.0		83.9	40-140			
Benzo(k)fluoranthene (SIM)	43.5	4.0	µg/L	50.0		87.0	40-140			
Chrysene (SIM)	32.8	4.0	µg/L	50.0		65.5	40-140			
Dibenz(a,h)anthracene (SIM)	46.1	2.0	µg/L	50.0		92.1	40-140			
Fluoranthene (SIM)	40.0	10	µg/L	50.0		80.0	40-140			
Fluorene (SIM)	38.6	20	µg/L	50.0		77.3	40-140			
Indeno(1,2,3-cd)pyrene (SIM)	52.7	2.0	µg/L	50.0		105	40-140			
2-Methylnaphthalene (SIM)	37.6	20	µg/L	50.0		75.2	40-140			
Naphthalene (SIM)	34.8	20	µg/L	50.0		69.6	40-140			
Phenanthrene (SIM)	38.1	1.0	µg/L	50.0		76.2	40-140			
Pyrene (SIM)	35.8	20	µg/L	50.0		71.6	40-140			
Surrogate: Nitrobenzene-d5	84.0		µg/L	100		84.0	30-130			
Surrogate: 2-Fluorobiphenyl	58.3		µg/L	100		58.3	30-130			
Surrogate: p-Terphenyl-d14	56.1		µg/L	100		56.1	30-130			

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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 B244837 - SW-846 3510C										
LCS Dup (B244837-BSD1)										
					Prepared: 10/30/19 Analyzed: 11/01/19					
Acenaphthene (SIM)	36.6	6.0	µg/L	50.0		73.3	40-140	1.14	20	
Acenaphthylene (SIM)	37.7	4.0	µg/L	50.0		75.4	40-140	1.16	20	
Anthracene (SIM)	40.8	4.0	µg/L	50.0		81.6	40-140	1.85	20	
Benzo(a)anthracene (SIM)	41.9	1.0	µg/L	50.0		83.7	40-140	1.38	20	
Benzo(a)pyrene (SIM)	38.8	2.0	µg/L	50.0		77.5	40-140	3.65	20	
Benzo(b)fluoranthene (SIM)	43.3	1.0	µg/L	50.0		86.5	40-140	2.15	20	
Benzo(g,h,i)perylene (SIM)	41.4	10	µg/L	50.0		82.8	40-140	1.34	20	
Benzo(k)fluoranthene (SIM)	43.9	4.0	µg/L	50.0		87.9	40-140	1.05	20	
Chrysene (SIM)	32.3	4.0	µg/L	50.0		64.5	40-140	1.54	20	
Dibenz(a,h)anthracene (SIM)	45.7	2.0	µg/L	50.0		91.3	40-140	0.872	20	
Fluoranthene (SIM)	38.8	10	µg/L	50.0		77.6	40-140	3.04	20	
Fluorene (SIM)	38.3	20	µg/L	50.0		76.6	40-140	0.884	20	
Indeno(1,2,3-cd)pyrene (SIM)	51.0	2.0	µg/L	50.0		102	40-140	3.28	20	‡
2-Methylnaphthalene (SIM)	37.3	20	µg/L	50.0		74.6	40-140	0.854	20	
Naphthalene (SIM)	34.4	20	µg/L	50.0		68.8	40-140	1.21	20	
Phenanthrene (SIM)	37.5	1.0	µg/L	50.0		74.9	40-140	1.69	20	
Pyrene (SIM)	34.9	20	µg/L	50.0		69.8	40-140	2.55	20	
Surrogate: Nitrobenzene-d5	78.5		µg/L	100		78.5	30-130			
Surrogate: 2-Fluorobiphenyl	55.7		µg/L	100		55.7	30-130			
Surrogate: p-Terphenyl-d14	58.0		µg/L	100		58.0	30-130			

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).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
RL-11	Elevated reporting limit due to high concentration of target compounds.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
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.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260D in Water</i>	
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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260D in Water</i>	
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 Public 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

Contain Name: SMS Address: 3201 Spring Forest Rd Raleigh NC Phone: 910 977-1614 Project Name: NC DOT I-5878 Dunn Road TIR Project Location: Dunn, NC Project Number: 4305-19-161 Project Manager: James I. H... Con-Test Quote Name/Number: Invoice Recipient: James I. H... Sampled By: James I. H...										Requested Turnaround Time 7-Day <input type="checkbox"/> 10-Day <input type="checkbox"/> Due Date: _____ Rush Approval Required 1-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> 2-Day <input type="checkbox"/> 4-Day <input type="checkbox"/> Data Delivery Format: PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> Other: _____ CLP Like Data Pkg Required: <input type="checkbox"/> Email To: _____ Fax To #: _____										Requested Turnaround Time 7-Day <input type="checkbox"/> 10-Day <input type="checkbox"/> Due Date: _____ Rush Approval Required 1-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> 2-Day <input type="checkbox"/> 4-Day <input type="checkbox"/> Data Delivery Format: PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> Other: _____ CLP Like Data Pkg Required: <input type="checkbox"/> Email To: _____ Fax To #: _____										ANALYSIS REQUESTED 										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)									
Con-Test Work Order# TW-1		Client Sample ID / Description 		Beginning Date/Time 10/28/19 1700		Ending Date/Time 		Composite <input checked="" type="checkbox"/>		Grab <input type="checkbox"/>		Matrix Code GW		Conc Code H																																			
Relinquished by: (signature) <i>James I. H...</i> Date/Time: 10/28/19 1540										Program Information DSCA <input type="checkbox"/> UST/Trust Fund <input type="checkbox"/> SWS Landfill <input type="checkbox"/> REC <input type="checkbox"/> IHSB Orphaned Landfill State Lead Other:										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																													
Received by: (signature) <i>James I. H...</i> Date/Time: 10/29/19 1617										Project Entity <input type="checkbox"/> Government <input type="checkbox"/> Federal <input type="checkbox"/> City										Other <input type="checkbox"/> Chromatogram <input type="checkbox"/> AHA-LAP, LLC																													
Relinquished by: (signature) _____ Date/Time: _____										Municipality <input type="checkbox"/> Brownfield <input type="checkbox"/> School <input type="checkbox"/>										PCB ONLY <input type="checkbox"/> Soxhlet <input type="checkbox"/> Non Soxhlet																													
Relinquished by: (signature) _____ Date/Time: _____																																																	
Relinquished by: (signature) _____ Date/Time: _____																																																	

IMPORTANT!
The wildfires are causing hazardous conditions in California. [Learn More](#)



411359783313



Delivered
Tuesday 10/29/2019 at 9:06 am



DELIVERED

Signed for by: B.BECCA

GET STATUS UPDATES
OBTAIN PROOF OF DELIVERY

TO
EAST LONGMEADOW, MA US

Shipment Facts

TRACKING NUMBER
411359783313

SERVICE
FedEx Priority Overnight

WEIGHT
34.8 lbs / 15.79 kgs

DELIVERED TO
Shipping/Receiving

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
34.8 lbs / 15.79 kgs

PACKAGING
Your Packaging

SPECIAL HANDLING SECTION
Deliver Weekday

STANDARD TRANSIT
 10/29/2019 by 10:30 am

SHIP DATE
 Mon 10/28/2019

ACTUAL DELIVERY
Tue 10/29/2019 9:06 am

Travel History

Local Scan Time

Tuesday, 10/29/2019		
9:06 am		Delivered
7:46 am	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
7:35 am	WINDSOR LOCKS, CT	At local FedEx facility
6:23 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 S+ME

Received By MAP Date 10/29/19 Time 9:06

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 - 3.4
 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 T
 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? F 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.	<u>2</u>	1 Liter Plastic	16 oz Amb.
HCL-	<u>3</u>	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: