



**GEOPHYSICAL SURVEY AND UNDERGROUND STORAGE TANK
CLOSURE REPORT
NCDOT PROJECT NO. U-2519CB (34817.1.2)
FAYETTEVILLE OUTER LOOP SOUTH OF
SR 1400 TO EAST OF SR 1415
PARCEL #4 FORMER J&B DEVELOPMENT PROPERTY
839, 851, 883, 889, AND 893 N. REILLY RD. and 862 AMBOY DR.
PARCEL #18 CECIL HEAVNER PROPERTY
823 and 833 N. REILLY RD.
FAYETTEVILLE, CUMBERLAND COUNTY, NORTH CAROLINA**

Prepared for:

North Carolina Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, North Carolina 27699

Prepared by:

S&ME, Inc.
3201 Spring Forest Road
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S&ME Project No. 1054-10-060




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March 17, 2010

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SITE IDENTIFICATION

Site Name: NCDOT U2519CB – Parcel #4 and Parcel #18

Site Location: 851, 883, 889, 893 N. Reilly Road
Fayetteville, Cumberland County, North Carolina

NCDENR Incident Number: Not Assigned

UST Closure Contractor: EVO Corporation
1703 Vargrave Street, Winston-Salem, NC 27107
(336) 725-5844

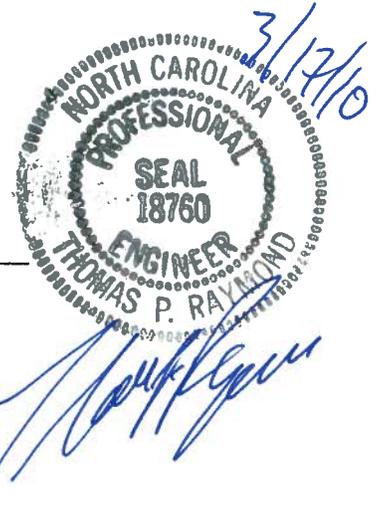
Consultant: S&ME, Inc.
Contact: Michael Pfeifer
3201 Spring Forest Road
Raleigh, North Carolina 27616
(919) 872-2660

Release Information: Date Discovered: March 1, 2010
Estimated Quantity: Unknown
Cause of Release: Unknown

Former UST System: Four 550-gallon residential heating oil USTs

Source Latitude/Longitude: 35° 06' 11.97" North
79° 00' 37.75" West

Licensed Professional Engineer: _____
Thomas P. Raymond, P.E.



1.0 SCOPE OF SERVICES

The scope of services performed for this report were performed in general accordance with S&ME's Proposal No. P036-10V, Revision 1, dated February 22, 2010, which was submitted in response to North Carolina Department of Transportation (NCDOT's) Request for Technical and Cost Proposal for UST Closure and Site Excavation Activities, dated February 16, 2010. The proposal for S&ME's Scope of Services was authorized by NCDOT's Notice to Proceed, dated February 23, 2010. The services were performed according to the terms of Contract Number 7000010304 dated June 4, 2009 between NCDOT and S&ME, Inc.

S&ME's approved Scope of Services for this project included conducting a geophysical survey on Parcel #4 and Parcel #18 to locate residential underground storage tanks (USTs), preparing a Health and Safety Plan, removing existing USTs, excavating, removing, and disposal of contaminated soils, confirmatory soil sampling, backfilling, performing a limited soil assessment in proposed utility pole foundation areas, and preparing this Report. S&ME completed the following scope of services:

- Completed the geophysical survey on Parcel #4 and Parcel #18 (no USTs were identified on Parcel #18);
- Removed four 550-gallon heating oil USTs from Parcel #4;
- Removed and properly disposed of approximately 13.02 tons of contaminated soil from 883 N. Reilly Road on Parcel #4;
- Removed and properly disposed of approximately 325 gallons of fluids from the USTs on Parcel #4;
- Collected confirmatory soil samples at 883 N. Reilly Road on Parcel #4 (one beneath the UST prior to over-excavation, four sidewall samples, and one from bottom of over-excavation);
- Backfilled the excavation with clean fill material to surface grade;
- Assessed soil in three proposed utility pole foundation areas on Parcel #4 to assess potential soil contamination; and,
- Prepared this report.

2.0 GEOPHYSICAL SURVEY

On February 24, 2010, S&ME conducted a geophysical survey of Parcel #18, and Parcel #4. Three USTs were previously identified at 893, 851, and 889 N. Reilly Road by NCDOT personnel on Parcel #4. Three additional USTs were suspected to be present on Parcel #4 at 883 N. Reilly Road, 839 N. Reilly Rd., and 862 Amboy Drive. Two additional USTs were suspected to be present on Parcel #18. **Figure 1** presents a Site Vicinity Map.

2.1 Methodology and Field Testing

S&ME completed a time domain electromagnetic (TDEM) and a ground penetrating radar (GPR) survey of the entire accessible parcel. These technologies were used in concert with one another in order to detect the presence of potential USTs at the site. A brief description of each technology is presented in the following paragraphs.

2.2 Time Domain Electromagnetic Methodology

TDEM methods measure the electrical conductivity of subsurface materials. The conductivity is determined by transmitting a time-varying magnetic pulse into the ground and measuring the amplitude and phase shift of the secondary magnetic field. The secondary magnetic field is created as the conductive materials become an inductor as the primary magnetic field is passed through them.

The TDEM survey was performed with a Geonics EM-61 MKII system, which has a 1.0-meter x 0.5-meter coil system. The EM-61 TDEM system allows discrimination between moderately conductive subsurface materials and very conductive metallic targets as the secondary electromagnetic response from metallic targets are of longer duration than those created by moderately conductive subsurface materials. Accordingly, only the later EM arrivals are recorded so that only the very conductive metallic features are targeted.

The TDEM data were acquired with a Geonics EM-61 MKII system. Due to poor GPS satellite coverage, the data were acquired without GPS positioning support. Therefore, data were acquired using a random walk acquisition method and analyzed real-time. Each TDEM anomaly was marked on the ground surface and were further explored using GPR.

2.3 Ground Penetrating Radar

GPR is an electromagnetic method that detects interfaces between subsurface materials with differing dielectric constants. The transmitter radiates electromagnetic waves into the earth from an antenna moving across the ground surface. Electromagnetic waves are reflected back to the receiver by interfaces between materials with differing dielectric constants. The intensity of the reflected signal is a function of the contrast in the dielectric constant at the interface, the conductivity of the material that the wave is traveling through, and the frequency of the signal.

A few targets were highlighted in the field for further exploration with GPR. The GPR data were acquired with a GSSI SIRS-3000 unit equipped with a 400 MHz shielded

antenna. Data were acquired using the random-walk method. The survey focused on TDEM anomalies but data were also acquired within a 20 foot perimeter around each existing house and around the footprints of the former buildings. The depth of GPR wave penetration at the site, which is a function of the conductivity of the subsurface materials and signal frequency, is approximated to be approximately five to six feet.

2.4 Results

Parcel #4

TDEM and GPR anomalies indicative of a UST were located on the north side of the former building of 883 N. Reilly Road. Figures showing the GPR and TDEM responses of the suspected UST are included in **Appendix I**. Its location was marked in the field. Several anomalies were identified adjacent to the duplex footprints and structures (located at 839 N. Reilly Road and 862 Amboy Drive), but none of these were indicative of USTs. The area surrounding 893, 889, and 851 N. Reilly were explored but no additional anomalies were found surrounding the building footprints.

Parcel #18

Several TDEM and GPR anomalies were identified adjacent to the two existing duplex houses, but none were indicative of USTs.

It should be noted that while on-site on February 24, 2010, Mr. Michael Pfeifer of S&ME spoke with Mr. Jack Swingle, the property manager for the duplex houses on Parcel #4 and Parcel #18. Mr. Swingle informed Mr. Pfeifer that there were likely only four USTs on these parcels (as located by NCDOT and S&ME). Mr. Swingle also informed Mr. Pfeifer that aboveground storage tanks were likely used at the duplex houses on Parcel #18 (823 and 833 N. Reilly Rd.) and at other addresses on Parcel #4 (839 N. Reilly Rd. and 862 Amboy Dr.) where USTs were not located.

2.5 Limitations of Report

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 conclusions submitted herein are based upon the data obtained from the non-invasive testing. As such, even within the surveyed area, the survey cannot be considered 100 percent accurate due to inherent method limitations, survey limitations, site features, and/or unforeseen site-specific conditions. Accordingly, the possibility exists that not all features have been located.

The geophysical methods used for this survey have inherent limitations and site features can cause interference. Site metallic features (e.g., cars, HVAC units, fences, utilities, reinforced concrete, etc.) can produce EM response.

The location and/or determination of the lack thereof of UST's is based on our review of provided information and of the FDEM and GPR data. Under no circumstances does S&ME assume any responsibility for damages resulting from the presence of or damage to UST's that may exist but were not identified by our survey

3.0 UST CLOSURE

S&ME conducted UST removal services in general accordance with the NCDENR Guidelines for Assessment and Correction Action, December 2008 (Guidelines).

3.1 Surrounding Property Use

The local land use in the site vicinity consists of mixed commercial and residential properties. Fort Bragg Army Base is adjacent to the north and west of the site.

3.2 UST Information

Information was provided to S&ME in NCDOT's Request for Technical and Cost Proposal (RFP) dated February 16, 2010. The RFP indicated that three USTs (each estimated to be 550-gallons) were visually identified on Parcel #4 by NCDOT personnel. S&ME also visually identified these USTs during the geophysical survey at the site on February 24, 2010. In addition to the three previously identified USTs, one additional UST was identified during the geophysical survey at 883 N. Reilly Road (on Parcel #4).

The former UST locations are shown on **Figure 2**.

3.3 Closure Procedures

S&ME personnel were on site on March 1 through March 2, 2010 to document the removal of the identified USTs on Parcel #4, site restoration activities, and to collect information suitable to compile this report. Prior to UST closure activities, S&ME's subcontractor (Bateman Civil Survey) located sub-surface utilities in the areas of the USTs.

851, 889, and 893 N. Reilly Road USTs

Prior to removal, the remaining fluids in the USTs at 851, 889, and 893 Reilly Road were pumped out by EVO and into a vacuum truck. Approximately 75 gallons of liquids were removed from each of the USTs. The liquid disposal certificates are included in **Appendix II**. Generator knowledge was used for manifest information and disposal.

After pumping the liquids from the USTs, they were excavated from the ground using a track-mounted backhoe. S&ME personnel inspected the excavated UST voids, and did not observe obvious signs of contamination in the soils beneath the former USTs. Two soil samples were collected from directly beneath each of the former USTs. The soil samples collected from beneath each of the USTs were screened on-site with a toxic vapor analyzer (TVA). The instrument was calibrated by S&ME personnel while on-site. No readings above 0.0 parts per million (ppm) were measured in any of the soil samples, therefore, no soils were excavated from these areas. The USTs appeared to be in good condition with no indications of holes or pitting. The UST disposal manifests are included in **Appendix III**.

883 N. Reilly Road UST

Prior to removal, the remaining fluids in the UST at 883 N. Reilly Road were pumped out by EVO and into a vacuum truck. Approximately 100 gallons of liquids were removed from the UST. The liquid disposal certificate is included in **Appendix II**.

After pumping the liquids from the UST, the UST was excavated from the ground using a track-mounted backhoe. S&ME personnel inspected the excavated UST void, and observed evidence of a release. S&ME collected one soil sample from directly beneath the former UST (labeled as 883-1). This sample was screened in the field using a TVA. The TVA measured 1,190 ppm.

3.4 Excavation and Confirmatory Soil Sampling – 883 N. Reilly Rd. UST

The soils surrounding the UST at 883 N. Reilly Road consisted of a fine sandy clay material overlain by topsoil. The contaminated soils around and beneath the UST were excavated and placed into trucks for off-site disposal. The excavation and UST removal was completed using a track-mounted backhoe. The limits of the completed UST excavation were approximately 12 feet wide by approximately 14 feet long. The depth of the excavation was approximately 9 feet deep (the depth limit of the backhoe). Groundwater was not encountered in the excavation pit. Approximately 13.02 tons of petroleum-contaminated soils were excavated from around and beneath the former UST, removed, loaded onto trucks, and transported and disposed of at ES&J Enterprises, Inc. in Autryville, North Carolina, a North Carolina permitted disposal facility. A copy of the soil disposal certificate, and soil disposal manifests are included in **Appendix IV**.

After the soils were removed from the former UST basin, four confirmatory soil samples were collected from the side walls of the excavation (labeled as 883-North, 883-South, 883-East, and 883-West). The sidewall samples were collected at a depth of approximately 7.0 to 8.0 feet below ground surface (bgs). In addition one sample was collected from the bottom of the excavation (labeled as 883-Bottom), at a depth of approximately 9.0 feet bgs.

See **Figure 3** for confirmatory soil sampling locations. S&ME personnel collected the confirmatory soil samples directly from the bucket of the excavation equipment using new nitrile gloves. Excavated materials were screened on-site with a TVA, which was calibrated by S&ME personnel while on-site. A portion of each of the soil samples were placed into re-sealable bags and were screened in the field using a TVA. Another portion of the sample was placed in a laboratory-supplied container and stored in an insulated container with ice for laboratory analyses. After waiting approximately 15 minutes to allow the sample to reach ambient temperature and headspace equilibrium, the TVA probe was inserted into the bag to obtain a headspace reading. Field screening results for the soil samples are summarized in **Table 1**.

The field screening of the soil samples detected organic vapors with concentrations that ranged from 100 ppm in soil sample 883-North to 1,080 ppm in soil sample 883-Bottom, collected from the bottom of the excavation.

After collecting the confirmatory soil samples, the soil excavation was backfilled with clean, imported fill material.

The confirmatory soil samples were placed in an ice-filled cooler and shipped to SGS Laboratories (SGS) of Wilmington, North Carolina, a North Carolina certified laboratory. Each of the six soil samples were analyzed for Total Petroleum Hydrocarbons- Gasoline Range Organics (TPH-GRO) by EPA Method 5030/8015 and TPH –Diesel Range Organics (DRO) by EPA Method 3550/8015.

3.5 Soil Sample Results – 883 N. Reilly Rd. UST

The laboratory analytical results of the confirmatory soil samples indicated that concentrations of TPH-GRO were present in concentrations exceeding the NCDENR UST Section Action Level of 10 milligrams per kilogram (mg/Kg) in soil samples 883-1 (309 mg/Kg), 883-Bottom (194 mg/Kg), 883-West (131 mg/Kg), and 883-East (173 mg/Kg). Concentrations of TPH-GRO were below the laboratory's detection limits in soil samples 883-South and 883-North. Concentrations of TPH-DRO exceeded the NCDENR UST Section Action Level of 10 mg/Kg in soil samples 883-1 (4,030 mg/Kg), 883-Bottom (1,490 mg/Kg), 883-West (1,390 mg/Kg), 883-East (1,420 mg/Kg), and in 883-South (17.7 mg/Kg). Concentrations of TPH-DRO were below the laboratory's detection limits in soil sample 883-North. The locations of confirmatory soil samples and TPH-GRO and TPH-DRO concentrations are shown on **Figure 3**.

A summary of the laboratory analytical results for the confirmatory soil samples, and a comparison to NCDENR's regulatory levels are included on **Table 2**. A copy of the laboratory report and chain of custody forms are included in **Appendix V**.

4.0 UTILITY POLE FOUNDATION ASSESSMENT

On March 2, 2010, in addition to removal of the USTs on Parcel #4, S&ME assessed soils at three future utility pole locations to determine if contaminated soils were present in the footprints for the future utility pole locations. A track-mounted backhoe was used to excavate and retrieve soil for on-site assessment from the proposed utility pole foundation areas. S&ME observed the excavations to depths of nine feet below ground surface at each of the locations. Groundwater was not encountered in any of the utility pole foundation excavations. Soils encountered consisted of clayey sands to sandy clays.

No petroleum odors or soil staining were encountered during the excavations for the pole foundations. In addition, S&ME scanned several soil samples from each of the excavations with the TVA. Readings of 0.0 ppm were measured for the soil samples scanned at each of the utility pole foundations. The excavations were backfilled with the excavated soils. The locations of the utility pole foundation assessment are shown on **Figure 4**.

The proposed locations of the proposed utility foundation areas were marked in the field with wooden stakes by Transmission Line Engineering prior to S&ME arriving on site.

5.0 CONCLUSIONS

S&ME has completed a geophysical survey on Parcel #4 and Parcel #18, UST closure activities on Parcel #4, and observed soil assessment excavations for future utility pole foundations on Parcel #4 at NCDOT Project U-2519CB on N. Reilly Road in Fayetteville, Cumberland County, North Carolina. The findings at the site are as follows:

- S&ME completed a geophysical survey on Parcel #4 and Parcel #18 using GPR and TDEM equipment. Three USTs were previously identified by NCDOT personnel on Parcel #4, and one additional UST was located during the geophysical survey on Parcel #4. No USTs were identified on Parcel #18;
- S&ME removed four 550-gallon heating oil USTs from Parcel #4, located at 851, 883, 889, and 893 N. Reilly Road. Approximately 325 gallons of liquids were removed from the USTs. No indications of petroleum releases from USTs located at 851, 889, or 893 N. Reilly Road were noted. Soils beneath the UST at 883 N. Reilly Road were impacted from an apparent release.
- Approximately 13.02 tons of petroleum contaminated soils were excavated and removed from the UST formerly located at 883 N. Reilly Road. The soils were disposed at ES&J Enterprises, in Autryville, North Carolina. The limits of the excavation were approximately 12 feet by approximately 14 feet. The depth of the excavation was approximately 9 feet deep. Groundwater was not encountered during excavation. The excavation was backfilled with clean, imported soils.
- S&ME collected six post-excavation confirmatory soil samples at 883 N. Reilly Road on Parcel #4 (one beneath the UST prior to over-excavation, four sidewall samples, and one from bottom of over-excavation). Concentrations of TPH-DRO and TPH-GRO were present in several of the soil samples in concentrations exceeding the NCDENR Action Level. It is likely that petroleum impacted soil will be encountered at depths greater than five feet or so bgs in the area of the former UST. NCDOT should make its contractors aware of possible petroleum contamination in this area.
- S&ME observed soil excavations in proposed three utility pole foundation locations to assess potential soil contamination from the USTs. No evidence of petroleum impact to soils in these utility pole locations was indicated during the assessment excavation activities.

TABLES

TABLE 1
Soil Field Screening Results
NCDOT Project No. U2519CB
Parcel 4 - Former J&B Development Property
883 Reilly Road
Fayetteville, Cumberland County, North Carolina
S&ME Project No. 1054-10-060

Sample ID	Depth (feet bgs)	Date Collected	FID (PPM)
883-1	5.0	3/1/2010	1,190
883-Bottom	9.0		1,080
883-West	7.0 - 8.0		600
883-East	7.0 - 8.0		600
883-South	7.0 - 8.0		650
883-North	7.0 - 8.0		100

Notes:

1. feet bgs)' is the approximate collection depth of the sample below ground surface at that location
2. FID - flame-ionization detector
3. PPM - Parts Per Million, volume in air
4. See Figure 3 for soil sample locations

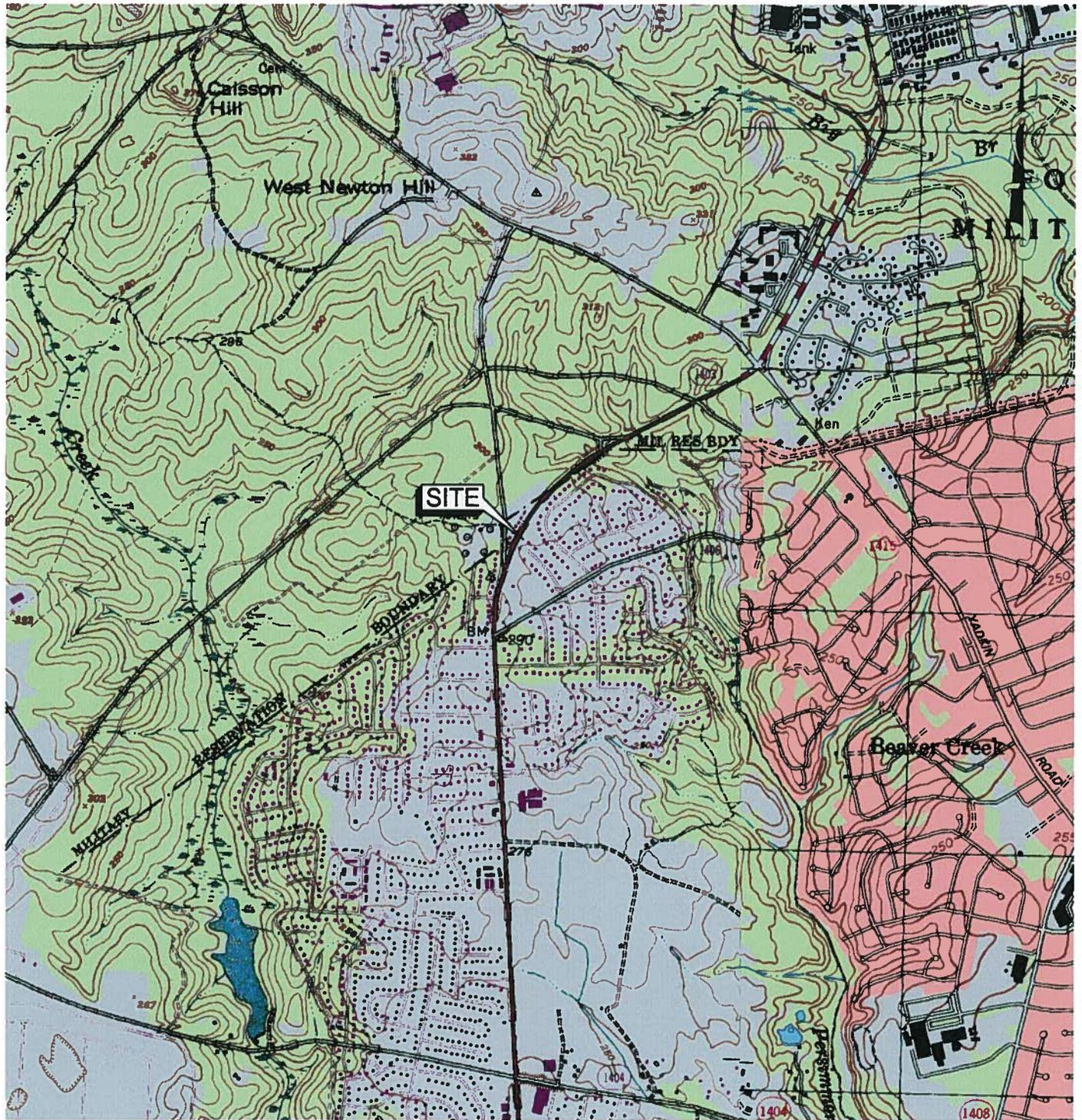
TABLE 2
Summary of Soil Sampling Results
NCDOT Project No. U-2519CB
Parcel 4 - Former J&B Development Property
883 Reilly Road
Fayetteville, Cumberland County, North Carolina
S&ME Project No. 1054-10-060

Sample ID	Sample Depth (feet below surface)	Analytical Method		Total Petroleum Hydrocarbons (mg/Kg)	
		Contaminant of Concern	Date Collected	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)
883-1	5.0		3/1/2010	309	4,030
883-Bottom	9.0			194	1,490
883-West	7.0 - 8.0			131	1,390
883-East	7.0 - 8.0			173	1,420
883-South	7.0 - 8.0			<6.99	17.7
883-North	7.0 - 8.0			<6.67	<7.12
North Carolina Action Level (mg/Kg)					10

- Notes:
1. mg/Kg: milligrams per kilogram
 2. Bold and shaded values indicate exceedance of North Carolina State Action Level
 3. See Figure 3 for sample locations

FIGURES

S:\PROJECTS\2010\10-060 NCDOT U-2519CB Geophy + USTS Fayetteville\CAD\A1688.dwg, Layout1, 3/17/2010 4:16:19 PM, 1:1

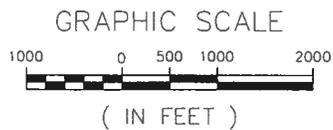


USGS SOURCE: NCGS DRG
FAYETTEVILLE NC, DATED 1997
CLIFDALE NC, DATED 1948 PHOTOREVISED 1982
CONTOUR INTERVAL 10 FEET

SCALE: 1" = 2000'
DATE: MARCH 2010
DRAWN BY: BTR
PROJECT NO: 1054-10-061



S&ME
WWW.SMEINC.COM
NC ENGINEER LICENSE #F-0176
3201 SPRING FOREST RD, RALEIGH, NC 27616



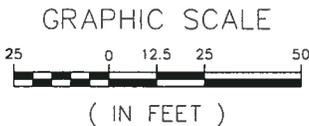
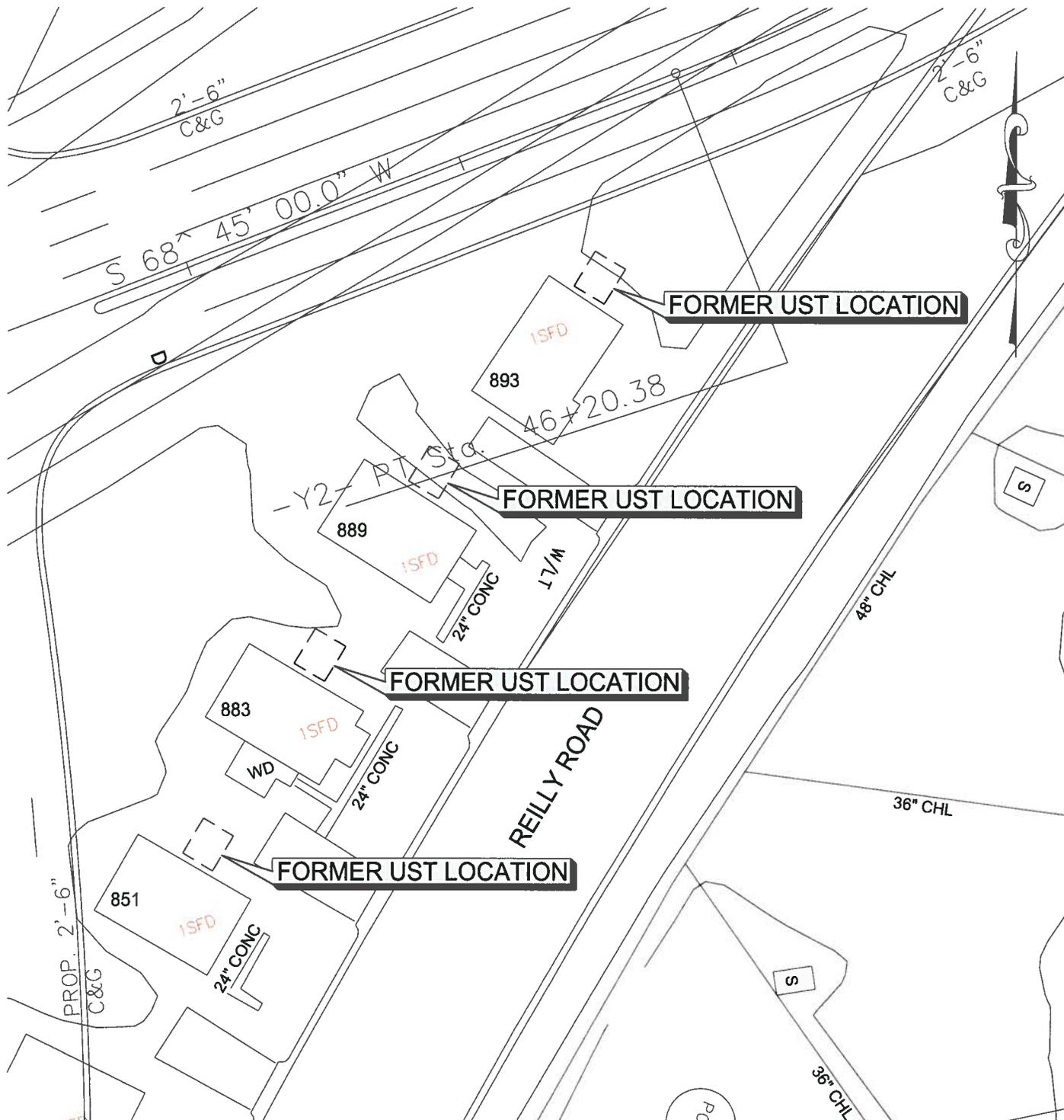
VICINITY MAP
NCDOT PROJECT U2519CB
883 N REILLY RD - PARCEL #4 J&B DEVELOPMENT
FAYETTEVILLE, NORTH CAROLINA

A-1688

FIGURE NO.

1

S:\PROJECTS\2010\10-060 NCDOT U-2519CB Geophy + USTS Fayetteville\CAD\A1689.dwg, Layout1, 3/17/2010 4:23:49 PM, 1:1



FILE SOURCE: NCDOT PROJECT U-2519CB

A-1689

SCALE: 1" = 50'

DATE: MARCH 2010

DRAWN BY: BTR

PROJECT NO: 1054-10-060

S&ME

WWW.SMEINC.COM

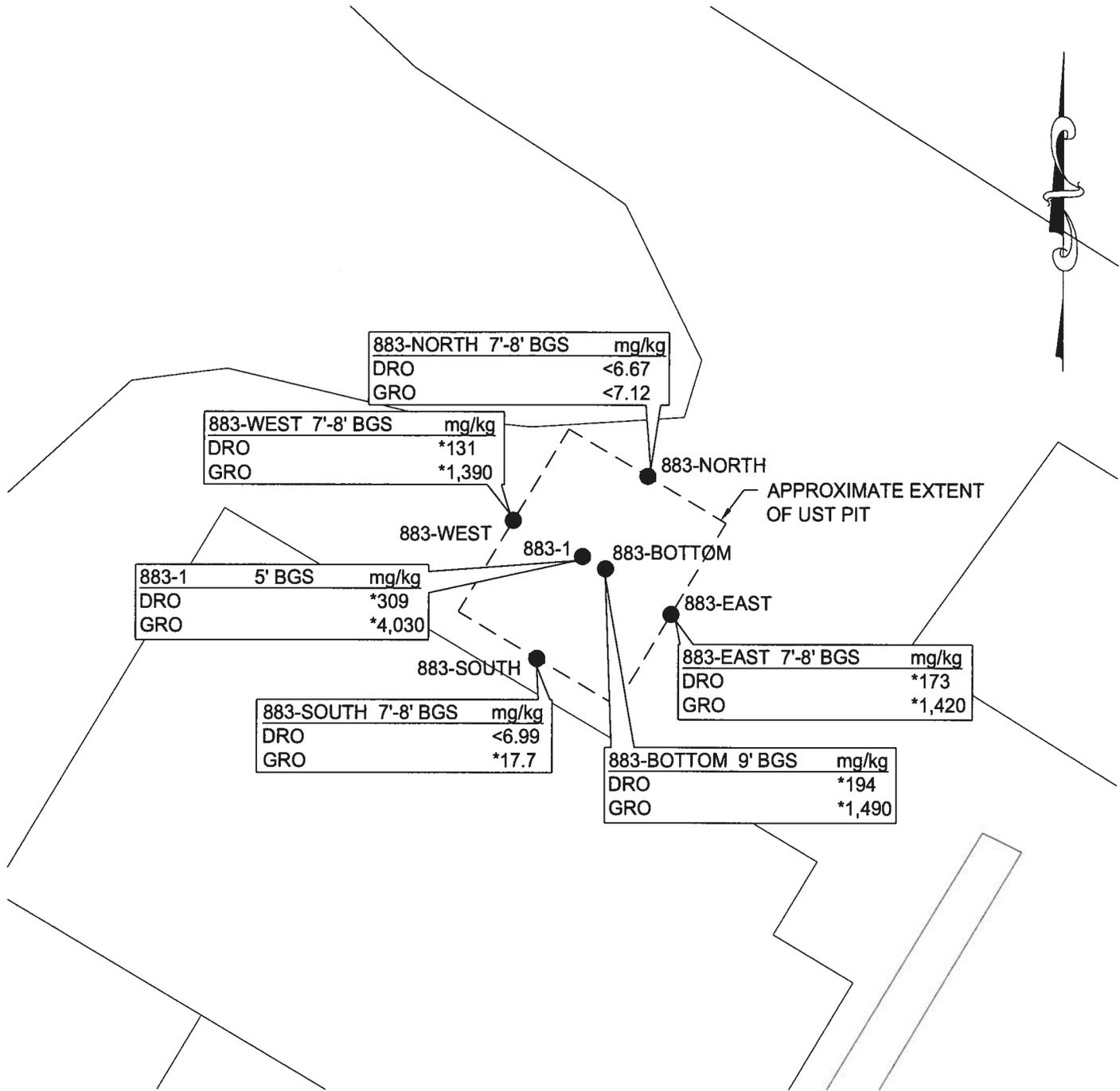
NC ENGINEER LICENSE #F-0176
3201 SPRING FOREST RD, RALEIGH, NC 27616

SITE MAP

NCDOT PROJECT U2519CB
883 N REILLY RD - PARCEL #4 J&B DEVELOPMENT
FAYETTEVILLE, NORTH CAROLINA

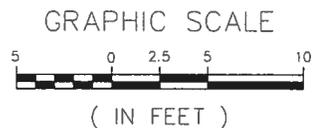
FIGURE NO.

2



LEGEND

- APPROXIMATE SOIL SAMPLE LOCATION
- SOIL SAMPLES COLLECTED ON 3/2/2010
- * INDICATES EXCEEDENCE OF NORTH CAROLINA STATE ACTION LEVEL
- mg/kg - MILLIGRAMS PER KILOGRAM
- BGS - BELOW GROUND SURFACE
- GRO - GASOLINE RANGE ORGANICS
- DRO - DIESEL RANGE ORGANICS
- NOTE: SAMPLE 883-1 WAS COLLECTED PRIOR TO OVER-EXCAVATION



FILE SOURCE: NCDOT PROJECT U-2519CB

A-1690

SCALE:	1" = 10'
DATE:	MARCH 2010
DRAWN BY:	BTR
PROJECT NO:	1054-10-060



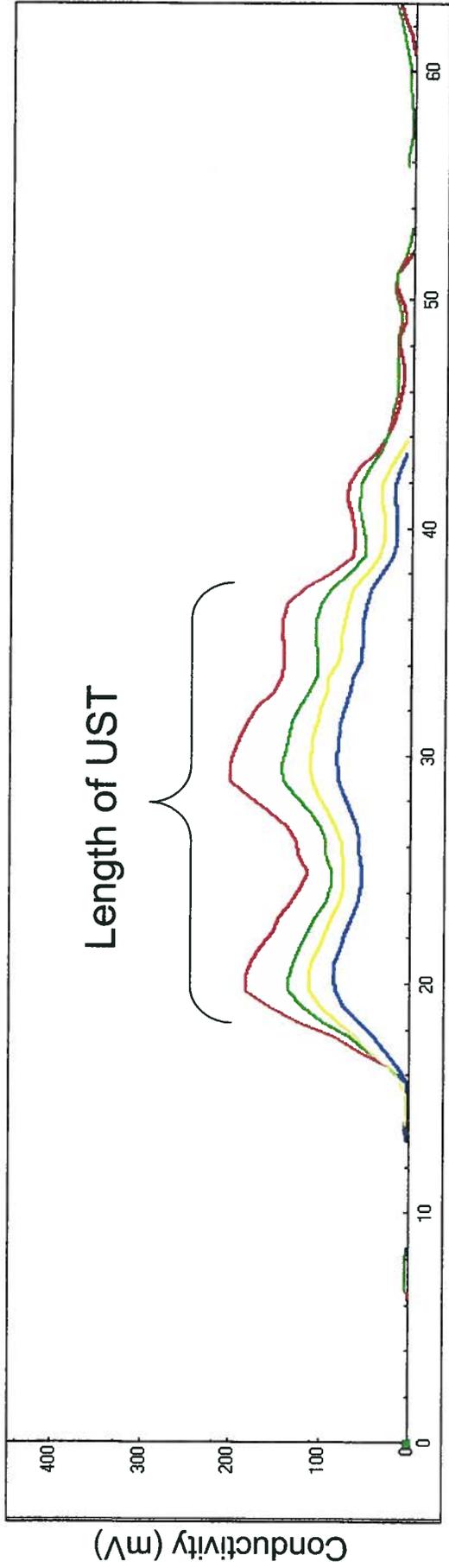
S&ME
WWW.SMEINC.COM
 NC ENGINEER LICENSE #F-0176
 3201 SPRING FOREST RD, RALEIGH, NC 27616

UST & SOIL SAMPLE LOCATION MAP
 NCDOT PROJECT U2519CB
 883 N REILLY RD - PARCEL #4 J&B DEVELOPMENT
 FAYETTEVILLE, NORTH CAROLINA

FIGURE NO.
3

APPENDIX I

Geophysical Data Figures



Distance obtained from wheel encoder

Note: Due to limited scope, rough terrain, and lack of GPS support, gridded TDEM data were not acquired for this site. Data were acquired using the random walk acquisition technique. Therefore data are presented here in profile form, rather than the typical plan view conductivity display.

SCALE: NTS

DRAWN BY: KSMM

CHECKED BY:

DATE: 3/15/10



Sample TDEM Profile Data of UST

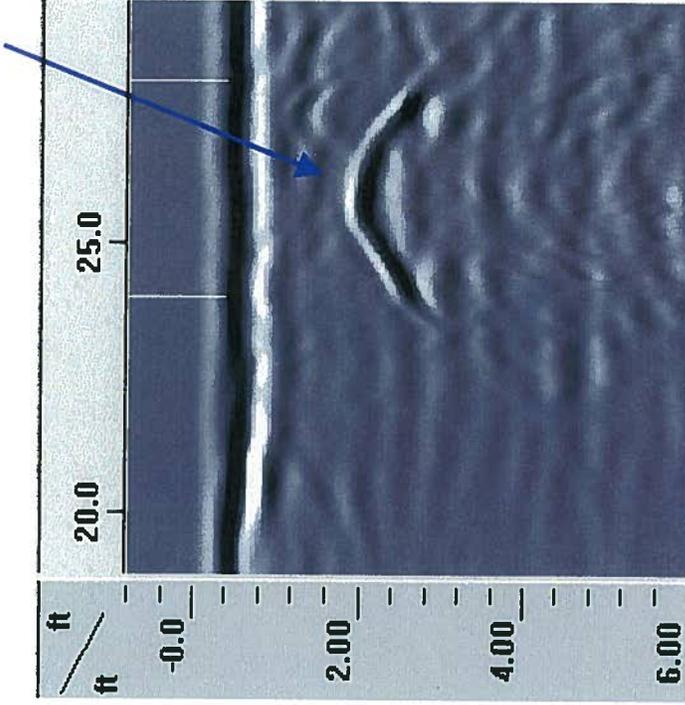
821-893 N. Reilly Street
Fayetteville, North Carolina

Job No.: 1054-10-060

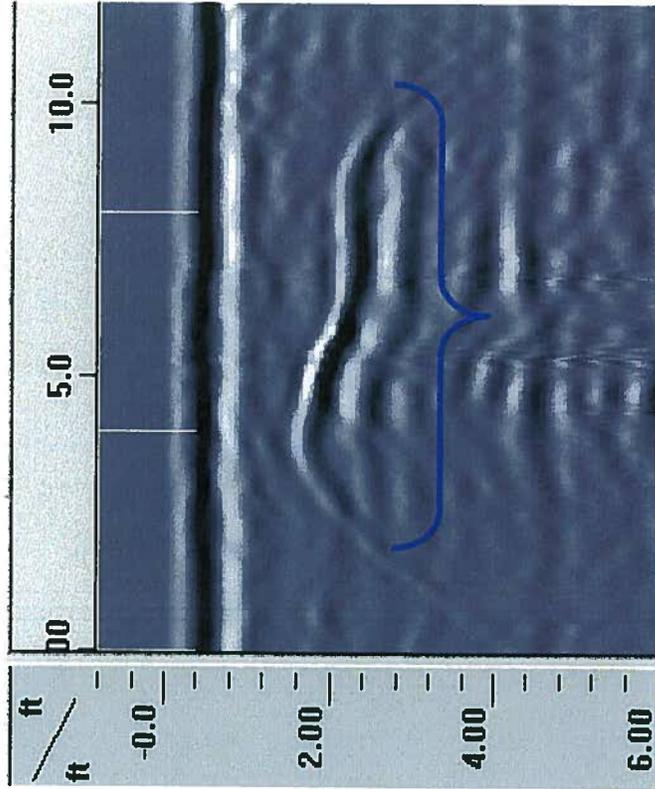
FIGURE NO.

GPR responses of suspected UST at 883 N. Reilly Street

Width of UST



Length of UST



SCALE: NTS
 DRAWN BY: KSMM
 CHECKED BY:
 DATE: 3/15/10



Sample GPR Data of UST
 821-893 N. Reilly Street
 Fayetteville, North Carolina

Job No.: 1054-10-060

FIGURE NO.

APPENDIX II

Liquid Disposal Certificates

CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 100 gallons of non-hazardous contaminated water received on 03/01/2010 from:

Generator: NCDOT

Originating at: 883 N. Reilly Road
Fayetteville, NC

EC Waste ID #: 031002

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.



Signature

Thomas W. Hammett
CEO
Evo Corporation

EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107

www.evocorp.net

NON-HAZARDOUS MATERIALS MANIFEST

Load #

Manifest No. **68060**

GENERATOR INFORMATION

Generator: NC DOT

Phone: 919-872-2660

Site Address: 883 Reilly Road

City/State: Fayetteville, NC

Contact: Michael Pfeifer

MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): _____

Material: Water

Empty Weight (lbs): _____

Contaminant: #2 Fuel Oil

Net Weight (lbs): _____

Quantity

100

Tons Drums Pails Sacs Yards Other: Gallons

TRANSPORTER INFORMATION

Transporter: Evo Corporation

Phone: 336-725-5844

Truck #: 402

Contact: Tony Disher

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: L. L. Myers

Date: 3-1-2010

FACILITY INFORMATION

Evo Project #: 031002

EVO CORPORATION
1703 Vargrave Street
Winston-Salem, NC 27107

Phone: (336) 725-5844

Contact: Tony Disher

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: E. Disher

Date: 03/01/10

White/Facility

Canary/Invoice

Goldenrod/Generator

Pink/Carrier

CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 75 gallons of non-hazardous contaminated water received on 03/01/2010 from:

Generator: NCDOT

Originating at: 851 N. Reilly Road
Fayetteville, NC

EC Waste ID #: 031027

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.



Signature

Thomas W. Hammett
CEO
Evo Corporation

EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107
www.evocorp.net

NON-HAZARDOUS MATERIALS MANIFEST

Load #

Manifest No. **68058**

GENERATOR INFORMATION

Generator: NC DOT

Phone: 919-872-2660

Site Address: 851 N. Reilly Road

City/State: Fayetteville, NC

Contact: Michael Pfeifer

MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): _____

Material: Water

Empty Weight (lbs): _____

Contaminant: #2 Fuel Oil

Net Weight (lbs): _____

Quantity

75

Tons Drums Pails Sacs Yards Other: gallons

TRANSPORTER INFORMATION

Transporter: Evo Corporation

Phone: 336-725-5844

Truck #: 402

Contact: Tony Disher

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: [Signature]

Date: 3-1-2010

FACILITY INFORMATION

EVO CORPORATION
1703 Vargrave Street
Winston-Salem, NC 27107

Evo Project #: 031027

Phone: (336) 725-5844

Contact: Tony Disher

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: [Signature]

Date: 03/01/10

White/Facility

Canary/Invoice

Goldenrod/Generator

Pink/Carrier

CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 75 gallons of non-hazardous contaminated water received on 03/01/2010 from:

Generator: NCDOT
Originating at: 893 N. Reilly Road
Fayetteville, NC
EC Waste ID #: 031026

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.



Signature

Thomas W. Hammett
CEO
Evo Corporation

EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107

www.evocorp.net

NON-HAZARDOUS MATERIALS MANIFEST

Load #

Manifest No. **68061**

GENERATOR INFORMATION

Generator: **NC DOT**
Site Address: **893 N. Reilly Road**
City/State: **Fayetteville, NC**

Phone: **919-872-2660**
Contact: **Michael Pfeifer**

MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): _____ Material: **Water**
Empty Weight (lbs): _____ Contaminant: **#2 Fuel Oil**
Net Weight (lbs): _____

Quantity

75

Tons Drums Pails Sacs Yards Other: **Gallons**

TRANSPORTER INFORMATION

Transporter: **Evo Corporation**
Truck #: _____

Phone: **336-725-5844**
Contact: **Tony Disher**

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: *[Signature]*

Date: **3-1-2010**

FACILITY INFORMATION

EVO CORPORATION
1703 Vargrave Street
Winston-Salem, NC 27107

Evo Project #: **031026**
Phone: **(336) 725-5844**
Contact: **Tony Disher**

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: *[Signature]*

Date: **03/01/10**

White/Facility

Canary/Invoice

Goldenrod/Generator

Pink/Carrier

CERTIFICATE OF DISPOSAL

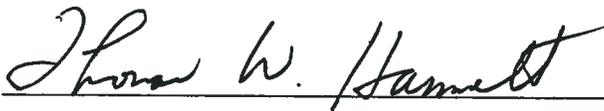
Evo Corporation does hereby certify that 75 gallons of non-hazardous contaminated water received on 03/01/2010 from:

Generator: NCDOT

Originating at: 889 N. Reilly Road
Fayetteville, NC

EC Waste ID #: 031028

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.



Signature

Thomas W. Hammett
CEO
Evo Corporation

EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107

www.evocorp.net

NON-HAZARDOUS MATERIALS MANIFEST

Load #

Manifest No. **68057**

GENERATOR INFORMATION

Generator: NC DOT

Phone: 919-872-2660

Site Address: 889 N. Reilly Road

City/State: Fayetteville, NC

Contact: Michael Pfeifer

MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): _____

Material: Water

Empty Weight (lbs): _____

Contaminant: #2 Fuel Oil

Net Weight (lbs): _____

Quantity

75

Tons Drums Pails Sacs Yards Other: gallons

TRANSPORTER INFORMATION

Transporter: Evo Corporation

Phone: 336-725-5844

Truck #: 402

Contact: Tony Disher

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: [Signature]

Date: 3-1-2010

FACILITY INFORMATION

Evo Project #: 031028

EVO CORPORATION
1703 Vargrave Street
Winston-Salem, NC 27107

Phone: (336) 725-5844

Contact: Tony Disher

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: [Signature]

Date: 03/01/10

White/Facility

Canary/Invoice

Goldenrod/Generator

Pink/Carrier

APPENDIX III

Tank Disposal Certificates

TANK DISPOSAL CERTIFICATE

Tank Owner: NCDOT

Site Address: 893 N. Reilly Road
Fayetteville, NC

Tank Description:

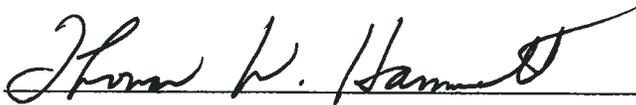
<u>Tank Number</u>	<u>Size of Tank</u>	<u>Contents</u>
1	550 Gallons	#2 Fuel Oil

Transporter: Evo Corporation

EC Project #: 031026

Disposal Certification:

Evo Corporation does hereby certify that the above named storage tank was transported to OmniSource Southeast in Winston-Salem, NC for proper disposal and recycling.



Signature

Thomas W. Hammett
CEO
Evo Corporation

TANK DISPOSAL CERTIFICATE

Tank Owner: NCDOT
Site Address: 883 N. Reilly Road
Fayetteville, NC

Tank Description:

<u>Tank Number</u>	<u>Size of Tank</u>	<u>Contents</u>
1	550 Gallons	#2 Fuel Oil

Transporter: Evo Corporation

EC Project #: 031002

Disposal Certification:

Evo Corporation does hereby certify that the above named storage tank was transported to OmniSource Southeast in Winston-Salem, NC for proper disposal and recycling.



Signature

Thomas W. Hammett
CEO
Evo Corporation



ENVIRONMENTAL AND INDUSTRIAL RESOURCES

1703 Vargrave Street
Winston-Salem, NC 27107
ph 336-725-5844
fax 336-725-6244

TANK DISPOSAL CERTIFICATE

Tank Owner: NCDOT
Site Address: 851 N. Reilly Road
Fayetteville, NC

Tank Description:

<u>Tank Number</u>	<u>Size of Tank</u>	<u>Contents</u>
1	550 Gallons	#2 Fuel Oil

Transporter: Evo Corporation

EC Project #: 031027

Disposal Certification:

Evo Corporation does hereby certify that the above named storage tank was transported to OmniSource Southeast in Winston-Salem, NC for proper disposal and recycling.

Signature

Anthony H. Disher
COO
Evo Corporation



1703 Vargrave Street
Winston-Salem, NC 27107
ph 336-725-5844
fax 336-725-6244

TANK DISPOSAL CERTIFICATE

Tank Owner: NCDOT
Site Address: 889 N. Reilly Road
Fayetteville, NC

Tank Description:

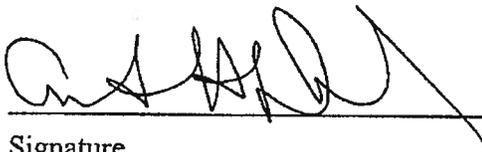
<u>Tank Number</u>	<u>Size of Tank</u>	<u>Contents</u>
1	550 Gallons	#2 Fuel Oil

Transporter: Evo Corporation

EC Project #: 031028

Disposal Certification:

Evo Corporation does hereby certify that the above named storage tank was transported to OmniSource Southeast in Winston-Salem, NC for proper disposal and recycling.



Signature

Anthony H. Disher
COO
Evo Corporation

APPENDIX IV

Soil Disposal Certificates and Manifests

CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 13.02 tons of non-hazardous contaminated material received on 03/02/2010 from:

Generator: NCDOT

Originating at: 883 N. Reilly Road
Fayetteville, NC

EC Waste ID #: 031002

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.



Signature

Thomas W. Hammett
CEO
Evo Corporation

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

5. Generator's Name and Mailing Address

EVO Corporation
 1763 Varravae
 Winston-Salem, NC 27107
 Generator's Phone: 336-725-5844

Generator's Site Address (if different than mailing address)

N.C. DOT
 883 Reilly RP
 Fayetteville, N.C.

6. Transporter 1 Company Name

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

E S & J ENTERPRISES, INC.
 1555 HOLLAND RD. - AUTRYVILLE, NC 28318

U.S. EPA ID Number

SR0600035

Facility's Phone: **(910) 567-6138**

9. Waste Shipping Name and Description

10. Containers

No. Type

11. Total Quantity

12. Unit Wt./Vol.

1.

PETROLEUM CONTAMINATED SOIL

1302 TONS.

LBS.

26,040

2.

3.

4.

13. Special Handling Instructions and Additional Information

EVO# 031002

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Officer's Printed/Typed Name

Signature

Month Day Year

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

GARY McGuffin

Gary McGuffin

3 2 10

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

Rick Wms.

Rick Wms.

3 2 10

NORTH CAROLINA
PUBLIC WEIGHMASTER
LICENSE EXPIRES JUNE 30, 2010
RICKY L. WILLIAMS 27363
Ricky Williams
INVALID UNLESS SIGNED

13.02 TONS.

08-02-10
Tare 1
Gross 24440 lb
Tare 00 lb 87
Net 24440 lb

08-02-10
Tare 1
Gross 24440 lb
Tare 00 lb 87
Net 24440 lb



J.A. KING
& COMPANY, L.L.C.



26,040

MEASUREMENT PROFESSIONALS SINCE 1939

P.O. Box 21225 • 2620 High Point Road • Greensboro, NC 27420-1225
Ph: (336) 292-0511 • Fax: (336) 294-9664

APPENDIX V

Laboratory Analytical Results and Chain of Custody Forms



Michael Pfeifer
S&ME
3201 Spring Forest Rd.
Raleigh, NC 27616

Report Number: G108-1837

Client Project: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Dear Michael Pfeifer,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Barbara Hager at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America, Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America, Inc.

Barbara Hager *March 8, 2010*

Project Manager Date
Barbara Hager

SGS North America, Inc.
List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

UJ = Target analytes with recoveries that are $10\% < \%R < LCL$; # of MEs are allowable and compounds are not detected in the sample.

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block; see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 883-1

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Lab Sample ID: G108-1837-1A

Lab Project ID: G108-1837

Report Basis: Dry Weight

Analyzed By: BAO

Date Collected: 3/1/2010 12:15

Date Received: 3/3/2010

Matrix: Soil

Solids 84.75

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	309	6.74	mg/Kg	10	03/06/10 19:47

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	101.0	101.0		70-130

Comments:

Batch Information

Analytical Batch: VP030610

Analytical Method: 8015

Instrument ID: GC4

Analyst: BAO

Prep Method: 5030

Initial Wt/Vol: 5.25 g

Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By: 
GRO.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 883-Bottom

Analyzed By: BAO

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Date Collected: 3/1/2010 16:30

Lab Sample ID: G108-1837-2A

Date Received: 3/3/2010

Lab Project ID: G108-1837

Matrix: Soil

Report Basis: Dry Weight

Solids 84.79

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	194	6.84	mg/Kg	5	03/06/10 18:27

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	98.1	98.1		70-130

Comments:

Batch Information

Analytical Batch: VP030610
Analytical Method: 8015
Instrument ID: GC4
Analyst: BAO

Prep Method: 5030
Initial Wt/Vol: 5.17 g
Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By: 
GRO.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 883-West

Client Project ID: NCDOT Rellly Rd. U-2519CB WBS 34817.1.2

Lab Sample ID: G108-1837-3A

Lab Project ID: G108-1837

Report Basis: Dry Weight

Analyzed By: BAO

Date Collected: 3/1/2010 16:45

Date Received: 3/3/2010

Matrix: Soil

Solids 84.42

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	131	7.08	mg/Kg	5	03/06/10 18:53

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	94.3	94.3		70-130

Comments:

Batch Information

Analytical Batch: VP030610
Analytical Method: 8015
Instrument ID: GC4
Analyst: BAO

Prep Method: 5030
Initial Wt/Vol: 5.02 g
Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By: 
GRO.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 883-East

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Lab Sample ID: G108-1837-4A

Lab Project ID: G108-1837

Report Basis: Dry Weight

Analyzed By: BAO

Date Collected: 3/1/2010 17:15

Date Received: 3/3/2010

Matrix: Soil

Solids 83.37

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	173	7.10	mg/Kg	5	03/06/10 19:20

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	95.8	95.8		70-130

Comments:

Batch Information

Analytical Batch: VP030610
Analytical Method: 8015
Instrument ID: GC4
Analyst: BAO

Prep Method: 5030
Initial Wt/Vol: 5.07 g
Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By: BAO
GRO.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 883-South

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Lab Sample ID: G108-1837-5A

Lab Project ID: G108-1837

Report Basis: Dry Weight

Analyzed By: BAO

Date Collected: 3/1/2010 17:30

Date Received: 3/3/2010

Matrix: Soil

Solids 83.61

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.99	mg/Kg	1	03/06/10 17:33

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	86.1	86.1		70-130

Comments:

Batch Information

Analytical Batch: VP030610

Analytical Method: 8015

Instrument ID: GC4

Analyst: BAO

Prep Method: 5030

Initial Wt/Vol: 5.13 g

Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By: 
GRO.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 883-North

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Lab Sample ID: G108-1837-6A

Lab Project ID: G108-1837

Report Basis: Dry Weight

Analyzed By: BAO

Date Collected: 3/2/2010 11:00

Date Received: 3/3/2010

Matrix: Soil

Solids 85.71

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.67	mg/Kg	1	03/06/10 17:59

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	87.5	87.5		70-130

Comments:

Batch Information

Analytical Batch: VP030610

Analytical Method: 8015

Instrument ID: GC4

Analyst: BAO

Prep Method: 5030

Initial Wt/Vol: 5.25 g

Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By: 
GRO.XLS

**Results for Total Petroleum Hydrocarbons
by GC/FID 8015**

Client Sample ID: 883-1

Date Collected: 3/1/2010 12:15

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Date Received: 3/3/2010

Lab Sample ID: G108-1837-1D

Matrix: Soil

Lab Project ID: G108-1837

Solids 84.75

Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	4030	289	mg/Kg	40	03/05/10 23:59
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	NA	NA

Comments:

NA : Surrogates diluted out

Batch Information

Analytical Batch: EP030510
 Analytical Method: 8015
 Instrument: GC6
 Analyst: DTF

Prep batch: 16157
 Prep Method: 3541
 Prep Date: 03/03/10
 Initial Prep Wt/Vol: 32.69 G
 Prep Final Vol: 10 mL

Analyst: Fak

NC Certification #481

Reviewed By: 
 DRO.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 883-Bottom

Date Collected: 3/1/2010 16:30

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Date Received: 3/3/2010

Lab Sample ID: G108-1837-2D

Matrix: Soil

Lab Project ID: G108-1837

Solids 84.79

Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	1490	71.8	mg/Kg	10	03/05/10 16:04
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	NA	NA

Comments:

NA : Surrogates diluted out

Batch Information

Analytical Batch: EP030510
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 16157
Prep Method: 3541
Prep Date: 03/03/10
Initial Prep Wt/Vol: 32.87 G
Prep Final Vol: 10 mL

Analyst: FN

NC Certification #481

Reviewed By: 
DRO.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 883-West

Date Collected: 3/1/2010 16:45

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Date Received: 3/3/2010

Lab Sample ID: G108-1837-3D

Matrix: Soil

Lab Project ID: G108-1837

Solids 84.42

Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	1390	71.1	mg/Kg	10	03/05/10 16:32
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	NA	NA

Comments:

NA : Surrogates diluted out

Batch Information

Analytical Batch: EP030510
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 16157
Prep Method: 3541
Prep Date: 03/03/10
Initial Prep Wt/Vol: 33.32 G
Prep Final Vol: 10 mL

Analyst: F.A.

NC Certification #481

N.C. Certification #481

Reviewed By: [Signature]
DRO.XLS
Page 11 of 15

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 883-East Date Collected: 3/1/2010 17:15
 Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2 Date Received: 3/3/2010
 Lab Sample ID: G108-1837-4D Matrix: Soil
 Lab Project ID: G108-1837 Solids 83.37
 Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	1420	74.4	mg/Kg	10	03/05/10 17:01
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	NA	NA

Comments:
NA : Surrogates diluted out

Batch Information

Analytical Batch: EP030510 Prep batch: 16157
 Analytical Method: 8015 Prep Method: 3541
 Instrument: GC6 Prep Date: 03/03/10
 Analyst: DTF Initial Prep Wt/Vol: 32.26 G
 Prep Final Vol: 10 mL

Analyst: FA

NC Certification #481

Reviewed By: USA
DRO.XLS

**Results for Total Petroleum Hydrocarbons
by GC/FID 8015**

Client Sample ID: 883-South

Date Collected: 3/1/2010 17:30

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Date Received: 3/3/2010

Lab Sample ID: G108-1837-5D

Matrix: Soil

Lab Project ID: G108-1837

Solids 83.61

Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	17.7	7.21	mg/Kg	1	03/05/10 17:28
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	33	82.4

Comments:

Batch Information

Analytical Batch: EP030510
 Analytical Method: 8015
 Instrument: GC6
 Analyst: DTF

Prep batch: 16157
 Prep Method: 3541
 Prep Date: 03/03/10
 Initial Prep Wt/Vol: 33.17 G
 Prep Final Vol: 10 mL

Analyst: Fek

NC Certification #481

Reviewed By: 
 DRO.XLS

SGS North America, Inc.

**Results for Total Petroleum Hydrocarbons
by GC/FID 8015**

Client Sample ID: 883-North

Date Collected: 3/2/2010 11:00

Client Project ID: NCDOT Reilly Rd. U-2519CB WBS 34817.1.2

Date Received: 3/3/2010

Lab Sample ID: G108-1837-6D

Matrix: Soil

Lab Project ID: G108-1837

Solids 85.71

Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.12	mg/Kg	1	03/05/10 17:56
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	32.1	80.3

Comments:

Batch Information

Analytical Batch: EP030510
 Analytical Method: 8015
 Instrument: GC6
 Analyst: DTF

Prep batch: 16157
 Prep Method: 3541
 Prep Date: 03/03/10
 Initial Prep Wt/Vol: 32.76 G
 Prep Final Vol: 10 mL

Analyst: Fed

NC Certification #481

Reviewed By: 
 DRO.XLS



CHAIN OF CUSTODY RECORD
SGS North America Inc.

- Alaska
- New Jersey
- North Carolina
- Maryland
- New York
- Ohio

www.us.sgs.com

096376

1 CLIENT: **S+MC | MCDOT** PHONE NO: **(80) 849.2517**

CONTACT: **Mike Pfeifer / S+MC** SITE/PWSID#:

PROJECT: **MCDOT 2011/10. U-2519CB**

REPORTS TO: **S+MC** **Att: Mike Pfeifer**

3201 Spring Forest Rd Raleigh, NC FAX NO.:

INVOICE TO: **MCDOT** QUOTE #: **Young 6/10/08**

Professional Services Management Unit **Chemical**

Paul Service, Carolina 1547 P.O. NUMBER:

Raleigh, NC 27609-1572

SGS Reference: **G108-1837** PAGE **1** OF **1**

No	CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	PRESERVATIVES USED	ANALYSIS REQUIRED	REMARKS
883-1	3	G	✓	✓	IF GRAB ORP one
883-Bottom	3	G	✓	✓	at or above 10mg/kg
883-West	3	G	✓	✓	Thru row 826/8270
883-East	3	G	✓	✓	VPM/SPH.
883-South	3	G	✓	✓	
883-North	3	G	✓	✓	

2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX
883-1		3-1-10	12:15	Soil
883-Bottom		"	4:30	Soil
883-West		"	4:45	Soil
883-East		"	5:15	Soil
883-South		"	6:30	Soil
883-North		3-2-10	11:00am	Soil

4

Shipping Carrier: _____

Shipping Ticket No: _____

Special Deliverable Requirements: _____

Special Instructions: _____

Samples Received Cold? (Circle) YES NO

Temperature °C: **2.3, 2.9**

Chain of Custody Seal: (Circle) INTACT BROKEN **ABSENT**

Requested Turnaround Time: RUSH STD _____ Date Needed

5

Collected/Relinquished By: (1) **James Montgomery S+MC** Date **3-2-10** Time **6:00** Received By: _____

Relinquished By: (2) _____ Date **3-3-10** Time **10:00** Received By: **John Pfeifer**

Relinquished By: (3) _____ Date _____ Time _____ Received By: _____

Relinquished By: (4) _____ Date _____ Time _____ Received By: _____