



**NC Department of Transportation
Preliminary Site Assessment
State Project: R-3405
WBS Element: 35579.1.1**

**Gary B. Miller Property
Parcel #11
February 14, 2011**

**AMEC Earth and Environmental, Inc. of North Carolina
AMEC Project: 562113405**

**Troy L. Holzschuh
Engineering Technician**



**Helen P. Corley, L.G.
Associate Hydrogeologist**



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1.0 INTRODUCTION

In accordance with the North Carolina Department of Transportation (NCDOT) Request for Proposal, dated November 19, 2010, AMEC Earth and Environmental, Inc. of North Carolina (AMEC) has performed a Preliminary Site Assessment (PSA) for the Gary B. Miller Property (the Site) to be effected by a road improvement project along NC 18, Sparta Rd. The Site which is located at 645 Sparta Rd currently operates as a used car business called Gary's Auto Sales. The property is located on the northwestern corner of the intersection of Sparta Rd. and Handy Walker Street in North Wilkesboro of Wilkes County, North Carolina. The investigation was conducted in accordance with AMEC's Technical and Cost proposal dated December 3, 2010.

NCDOT contracted AMEC to perform a PSA on the Gary B. Miller Property due to the architectural styling of the building on the parcel that suggests it could have operated as a gas station at one time. According to NCDENR's Underground Storage Tank (UST) section registry there are no facility IDs or Groundwater Incidents associated with this Site. The PSA was performed to determine if soils have been impacted by petroleum compounds as a result of past and present uses of the property within the proposed design project area. This site will be affected by construction activities associated with new drainage features for the NCDOT road improvement project along Sparta Rd.

The following report summarizes the site history, geophysical survey, location and capacities of any USTs, and describes our field investigation with results of chemical analyses. The report includes the evaluation of the analytical data with regards to the presence or absence of soil contamination within the NCDOT design area of parcel #11 and estimates the extent of soil contamination, if applicable. Appendix A includes a photo log for Parcel #11.

1.1 Site Location and Vicinity

The Gary B. Miller Property parcel is located on the northwestern side of the intersection of Sparta Rd. with Handy Walker Street, North Wilkesboro, Wilkes County, North Carolina. The properties to the north and west are residential with single family homes. The property to the east, across Sparta Rd, is a graveyard, Mount Lawn Memorial Park. The property to the south and across Handy Walker Street is a produce store, Roberts Produce. Figure 1 shows the site location and vicinity.

1.2 Site Description and History

The proposed DOT project will parallel the eastern property edge of Parcel #11 along Sparta Rd. The Site currently operates as a used car business. The site has one single story building on the property. The building is used as an office. North of the single story building is an aluminum car port. Used cars are parked in front of the building perpendicular to Sparta Rd. up and down the eastern edge of the parcel. The back yard is fenced in with a chain link fence. Appendix A includes a photo log for Parcel #11.

AMEC studied the NCDENR UST Registered Tanks Database and the NCDENR Incident Management Database. No known tanks or incidences are associated with this site.

2.0 GEOLOGY

2.1 Regional Geology

The Gary B. Miller Property is located within the metamorphic sediments of the Inner Piedmont Physiographic Province of western North Carolina. The Grace Shumate Property is located within the Alligator Back Formation of the Ocoee Supergroup located in the Blue Ridge Physiographic Province of western North Carolina. The Alligator Back Formation comprises metamorphic sedimentary rocks that are 750 million years in age. The rocks include mica schist and phyllite that are interlayered with minor biotite. The Alligator Back rocks were named for the large sections of gneiss that descend from the peak of Bluff Mountain that resemble an alligator.

2.2 Site Geology

Site geology was observed through the sampling of 4 shallow direct push probe soil borings (SB) onsite. Borings were extended to a depth of 10 feet below ground surface (bgs). Native soils generally consisted of orange, well sorted clayey silt. Damp soil conditions were typically first encountered at a depth of 0.5 feet (ft) below ground surface (bgs). Boring logs are presented in Appendix B.

3.0 FIELD ACTIVITIES

3.1 Preliminary Activities

Prior to commencing field sampling activities at the site, several tasks were accomplished in preparation for the subsurface investigation. The Health and Safety Plan (HSP) was modified to include the site-specific health and safety information. On January 17, 2011 a private utility locating company, Priority Underground Locating of Huntersville, North Carolina cleared the proposed drilling locations that were marked in the field by AMEC personnel. North Carolina-1-Call was contacted on January 19, 2011 to report the proposed drilling activities and subsequently notify all affected utilities for the parcel. Carolina Soil Investigations, LLC (CSI Drilling) of Olin, North Carolina was retained by AMEC to perform the direct push sampling for soil borings. AMEC coordinated with Schnabel Engineering South (Schnabel) who performed electromagnetic geophysical surveys onsite during December. The geophysical results were reviewed and discussed at their completion. Prism Laboratories, Inc. was contacted for acquisition of sample bottles. Soil boring locations were focused just beyond the existing ROW. Boring locations were strategically placed on proposed drainage features and along the front of the parcel to maximize the likelihood of intercepting any potential soil contamination.

3.2 Site Reconnaissance

AMEC personnel completed site reconnaissance on November 22, 2010. During reconnaissance, the area was visually examined for the presence of any UST, overhead utilities or areas/obstructions that could potentially affect the subsurface investigation. The number of boring locations was discussed. Boring locations were marked on January 17, 2011.

3.3 Geophysical Survey

Schnabel performed the geophysical surveys on December 8, 2010. Schnabel utilized a Geonics EM61-MK2 to perform the electromagnetic induction surveys. Ground-penetrating radar (GPR) data were not collected due to the lack of EM61 anomalies that suggested probable USTs. The EM61 instrument is specifically calibrated to detect metal anomalies that are buried to about 8 feet bgs. The data collected by Schnabel did not indicate the

presence of metallic USTs in the areas surveyed on the site. The complete report can be found in Appendix C.

3.4 Well Survey

No well survey was performed as part of this PSA and no monitoring wells were observed on the parcel.

3.5 Soil Sampling

Soil boring occurred on January 27, 2011 at Parcel #11. Four direct push soil borings were conducted within the NCDOT design project on Parcel #11, which includes the eastern side of the site. Figure 2 presents the Site Map with boring locations and identifications. These samples were placed along the eastern edge of the parcel which runs parallel with Sparta Rd and near the proposed drainage features from the NCDOT design project. The first boring (P11-SB-1) was placed at the northern end of the site, targeting a proposed catch basin location. Soil borings P11-SB-2 through P11-SB-4 were placed in twenty five foot intervals along the remaining eastern edge of the parcel. Screened soil from boring locations did not exhibit elevated Photo Ionized Detector (PID) readings; therefore AMEC personnel believed to have had adequate coverage of the site.

Soil samples were collected in accordance with EPA protocols in laboratory-supplied containers. The soil samples for Total Petroleum Hydrocarbons (TPH) –Gasoline Range Organics (GRO) analysis were collected using the 5030 prep method with methanol preservation. Samples for TPH-Diesel Range Organics (DRO) analysis were collected in 4oz. glass containers. Once placed in the containers, the samples were labeled with the sample number, time of collection, date of collection, name of the collector, and the requested analysis. The samples were packed on ice, and then hand delivered to Prism Laboratories in Charlotte, a North Carolina Certified Laboratory following proper chain-of-custody procedures.

4.0 SOIL SAMPLING RESULTS

AMEC conducted soil sampling at the Site on January 27, 2011. The purpose of the sampling was to determine if releases of petroleum hydrocarbons had occurred, and if so, to estimate the volume of soil that might require special handling during construction

activities. The sampling was accomplished using direct push methods accompanied by field screening for organic vapors with a PID. The laboratory results with PID readings are tabulated in Table 1.

A minimum of one soil sample was collected from each of the 4 completed soil borings from Parcel #11. Typically, if impacted soil is identified, then additional soil samples are obtained; however, at Parcel #11 PID readings did not warrant any additional soil samples. Analyses of soil samples for DRO and GRO did not indicate any sample locations with detections above the reporting limits. Figure 3 shows the Site Map with Analytical Data

Since the field investigation and the Laboratory analytical report did not indicate contamination, an estimation of contamination was not warranted.

Copies of the original laboratory report and chain-of-custody documentation are included as Appendix D.

5.0 CONCLUSIONS

The following conclusions are based upon AMEC's evaluation of field observations and laboratory analyses of samples collected from the Site on January 27, 2011.

- The property presently operates as a used car lot.
- UST Database for Incident Management does not have any incidences associated with this site.
- NCDENR UST Registered Tanks Database does not identify the presence of any USTs at the Site.
- Geophysical EM data did not indicate the presence of metallic USTs in the areas surveyed.
- Four soil samples were collected and analyzed for TPH GRO and DRO.
- Laboratory analyses did not indicate DRO and GRO detections above the analytical method reporting level.

6.0 RECOMMENDATIONS

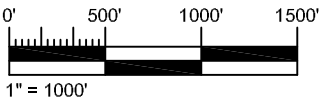
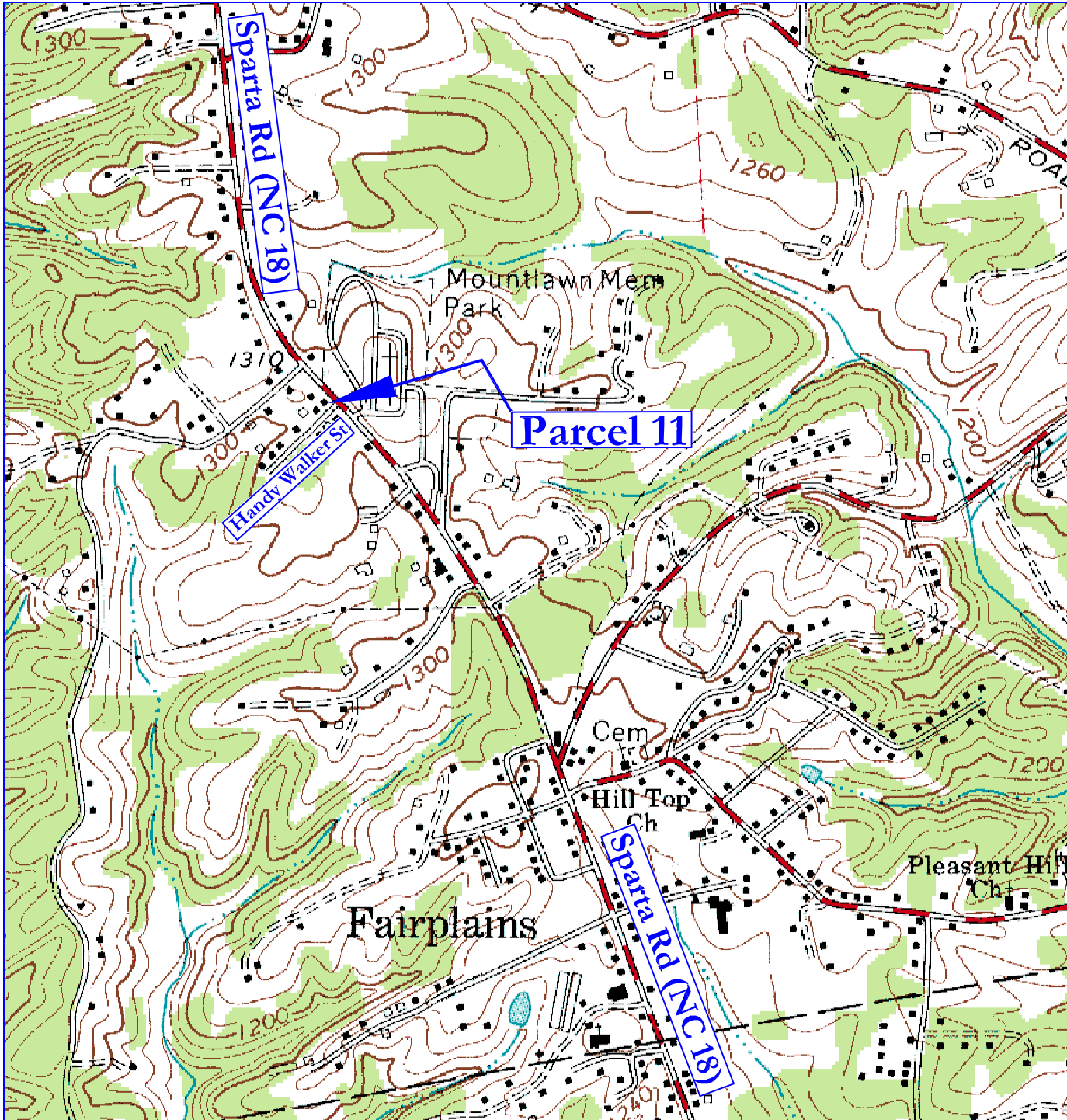
Since no soil contamination was found at this site during field investigation activities or by laboratory analyses, and no known USTs or Groundwater incidences are associated with this property, AMEC does not recommend any additional action.

TABLES

Table 1
Soil Sampling Analytical Results, DRO-GRO
Parcel 11, Gary B. Miller Property
NC DOT
North Wilkesboro, Wilkes County, North Carolina

SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH (ft bgs)	PID READINGS (ppm)	EPA Method 8015B	
				DRO (mg/kg)	GRO (mg/kg)
NC Action Levels				10	10
P11-SB-1	1/27/2011	3 - 5	0	<8.8	<5.0
P11-SB-2	1/27/2011	3 - 5	0	<8.8	<4.6
P11-SB-3	1/27/2011	3 - 5	0	<8.6	<4.6
P11-SB-4	1/27/2011	3 - 5	0	<8.1	<4.5
NOTES: ft bgs = feet below ground surface; ppm = parts per million mg/kg = milligrams per kilogram Bold Concentrations Exceed Action Levels DRO = Diesel Range Organics GRO = Gasoline Range Organics Standards derived from the North Carolina UST Section Guidelines for Assessment and Corrective Action					

FIGURES



7.5 Minute Quadrangle
 North Carolina, 1983
 Photorevised 1993

VICINITY MAP

Parcel #11, Gary B. Miller Property
 (Gary's Auto Sales)
 North Wilkesboro, Wilkes County, NC

DRAWING NAME: J:\NCDOT\Wilkes\FIC1 DATE: 2 24 11

SCALE: 1 INCH = 1,000 FEET DR TLH CHK HPC REV

PREPARED FOR:
 NC Department Of Transportation
 Geotechnical Unit
 WBS Element: 35579.1.1
 TIP# R-3405


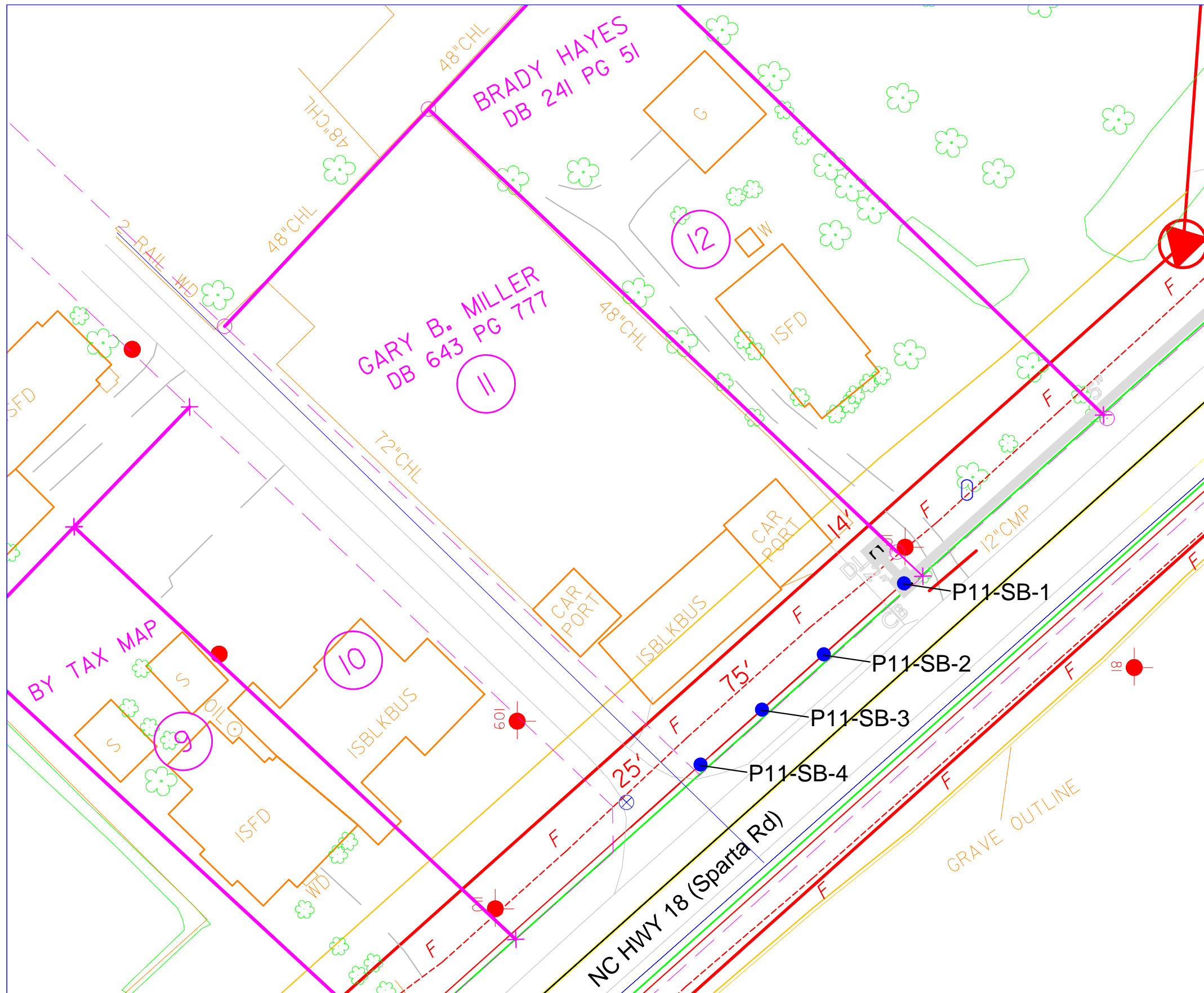








Prepared By:
 338 N Elm Ave
 Suite 112
 Greensboro, NC 27401
 (336) 691-5398

Figure:
 Figure 1



LEGEND

-  Proposed Right of Way
-  Existing Property Line
-  Existing Right of Way
-  Cut Line
-  Fill Line
-  Soil Boring Location
January 2011
-  Utility Easement
-  Utility Pole

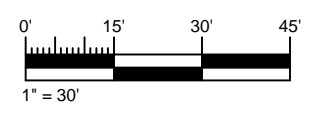
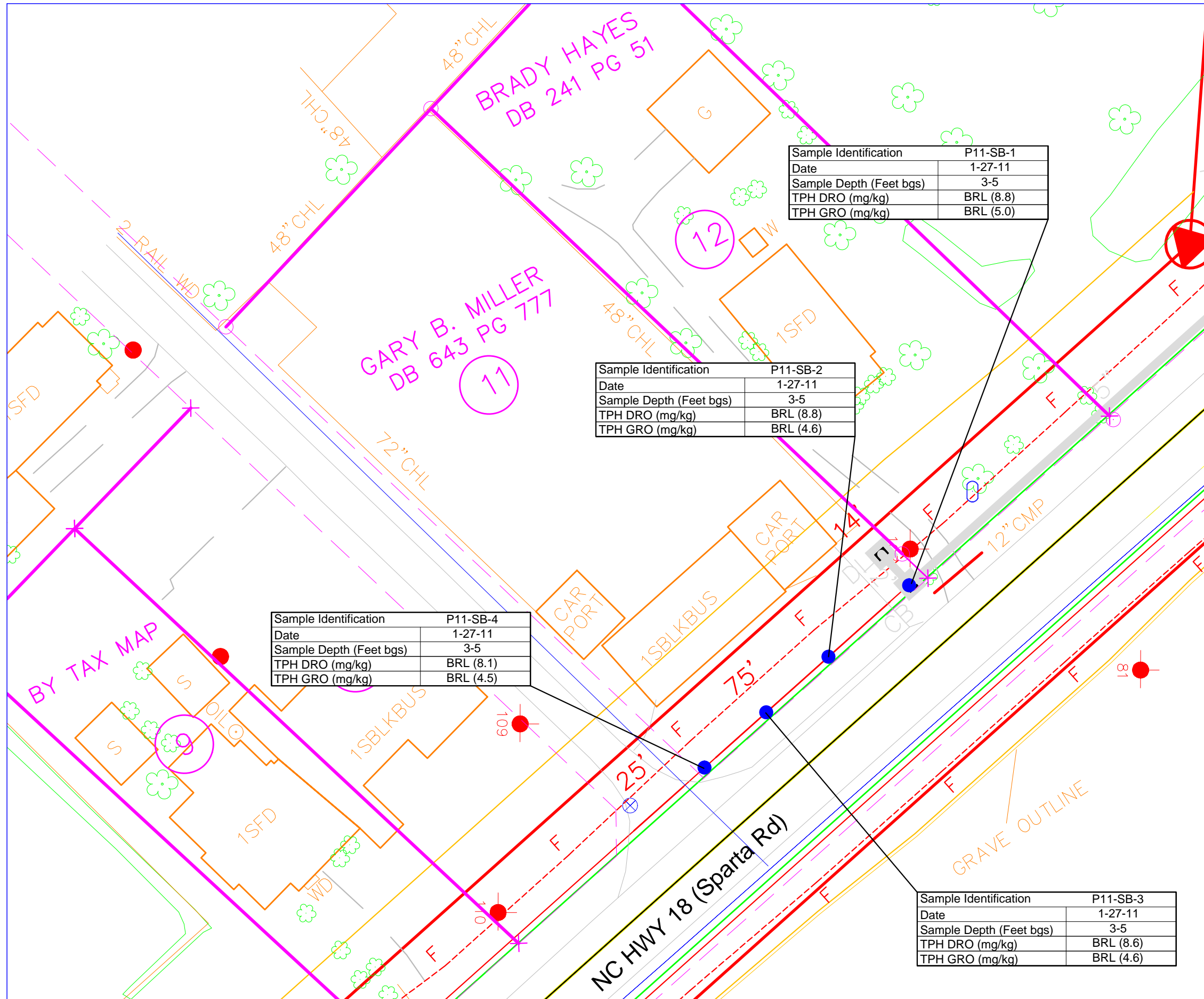


Figure 2
Parcel #11 Gary B Miller Property
Site Map

NC Department of Transportation
Geotechnical Unit
WBS Element: 35579.1.1
TIP# R-3405





Sample Identification	P11-SB-1
Date	1-27-11
Sample Depth (Feet bgs)	3-5
TPH DRO (mg/kg)	BRL (8.8)
TPH GRO (mg/kg)	BRL (5.0)

Sample Identification	P11-SB-2
Date	1-27-11
Sample Depth (Feet bgs)	3-5
TPH DRO (mg/kg)	BRL (8.8)
TPH GRO (mg/kg)	BRL (4.6)

Sample Identification	P11-SB-4
Date	1-27-11
Sample Depth (Feet bgs)	3-5
TPH DRO (mg/kg)	BRL (8.1)
TPH GRO (mg/kg)	BRL (4.5)

Sample Identification	P11-SB-3
Date	1-27-11
Sample Depth (Feet bgs)	3-5
TPH DRO (mg/kg)	BRL (8.6)
TPH GRO (mg/kg)	BRL (4.6)

LEGEND

- Proposed Right of Way
- Existing Property Line
- Existing Right of Way
- Cut Line
- Fill Line
- Soil Boring Location January 2011
- Utility Easement
- Utility Pole

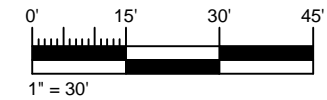


Figure 3
Parcel #11 Gary B Miller Property
Site Map

NC Department of Transportation
Geotechnical Unit
WBS Element: 35579.1.1
TIP# R-3405



APPENDIX A

PHOTO LOG



Photo 1

Viewing northwest from across Sparta Road. Photo is of the proposed ROW which runs parallel to Sparta Road.



Photo 2

The photo shows CSI preparing to Drill



338 North Elm Street, Suite 112
Greensboro, NC 27401

W.O. 562113405
PROCESSED TLH
DATE January 2011
PAGE

PHOTOGRAPHIC LOG

Preliminary Site Assessment
Parcel 11, Sparta Road, North Wilkesboro, NC

APPENDIX B
BORING LOGS



AMEC Earth & Environmental, Inc. BORING LOG

Boring/Well No.: P11-SB2	Site Name: Parcel 11
Date: 1-27-11	Location: North Wilkesboro, Wilkes Co., NC
Job No.: 562113405	Sample Method: Direct Push
AMEC Rep: Troy Holzschuh	Drilling Method: Direct Push
Drilling Company: CSI	Driller Name/Cert #: Keith Speece - 2856-A

Remarks:

Depth (ft BLS)	PID/OVA Reading (ppm)	Blow Counts	Soil/Lithologic Description
0-0.5			Aggregate
0.5-2	0		Brown/Orange, Well Sorted, Clayey Silt, Damp
2-4	0		Orange/Yellow, Well Sorted, Clayey Silt, Damp
4-6	0		Orange/Yellow, Well Sorted, Clayey Silt, Damp
6-8	0		Pink/Orange, Well Sorted, Silt, Damp
8-10	0		Pink/Orange, Well Sorted, Silt, Damp

WELL CONSTRUCTION DETAILS (If Applicable)	
Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



AMEC Earth & Environmental, Inc.
BORING LOG

Boring/Well No.: P11-SB4	Site Name: Parcel 11
Date: 1-27-11	Location: North Wilkesboro, Wilkes Co., NC
Job No.: 562113405	Sample Method: Direct Push
AMEC Rep: Troy Holzschuh	Drilling Method: Direct Push
Drilling Company: CSI	Driller Name/Cert #: Keith Speece - 2856-A

Remarks:

Depth (ft BLS)	PID/OVA Reading (ppm)	Blow Counts	Soil/Lithologic Description
0-0.5			Aggregate
0.5-2	0		Yellow/Orange, Well Sorted, Clayey Silt, Damp
2-3	0		Orange, Well Sorted, Clayey Silt, Damp
3-5	0		Pink/Yellow, Marbled, Well Sorted, Silt, Damp
5-7	0		Pink/Yellow, Marbled, Well Sorted, Silt, Damp
7-10	0		Pink/Yellow, Marbled, Well Sorted, Silt, Damp

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:

APPENDIX C
GEOPHYSICAL SURVEY REPORT



Schnabel
ENGINEERING

January 28, 2011

Ms. Helen Corley, LG
AMEC Earth and Environmental of North Carolina, Inc.
101 W. Friendly Avenue, Suite 603
Greensboro, NC 27401

RE: State Project: R-3405
 WBS Element: 35579.1.1
 County: Wilkes
 Description: NC 18 from SR 1002 (Mountain View Road) to SR 1717 (Yellow Banks Road)

**Subject: Project 09210013.34 Report on Geophysical Surveys
 Parcel 11, Wilkes County, North Carolina**

Dear Ms. Corley:

SCHNABEL ENGINEERING SOUTH, PC (Schnabel) is pleased to present this report on the geophysical surveys we conducted on the subject property. We understand this letter report will be included as an appendix in your report to the NCDOT. The report includes two 11x17 color figures and two 8.5x11 color figures.

INTRODUCTION

The work described in this report was conducted on December 8, 2010, by Schnabel under our 2009 contract with the NCDOT. The work was conducted over the accessible areas of the parcel as indicated by the NCDOT to support their environmental assessment of the subject property. Photographs of the parcel are included on Figure 1. The property is located on the north side of the intersection of Handy Walker Street and Sparta Road in North Wilkesboro, NC. The purpose of the geophysical surveys was to locate possible metal underground storage tanks (USTs) in the accessible areas of the right-of-way and/or easement.

The geophysical investigation consisted of electromagnetic (EM) induction surveys using a Geonics EM61-MK2 instrument. The EM61 metal detector is used to locate metal objects buried up to about eight feet below ground surface. Photographs of the equipment used are shown on Figure 2.

schnabel-eng.com

T/ 336-274-9456 F/ 336-274-9486
11A Oak Branch Drive / Greensboro, NC / 27407

FIELD METHODOLOGY

Locations of geophysical data points were obtained using a sub-meter Trimble Pro-XRS DGPS system. References to direction and location in this report are based on the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 83 datum, with units in US survey feet. The locations of existing site features (monitoring wells, signs, etc.) were recorded for later correlation with the geophysical data and for location references to the NCDOT drawings.

The EM61 data were collected along parallel survey lines spaced approximately 2.5 feet apart. The EM61 and DGPS data were recorded digitally using a field computer and later transferred to a desktop computer for data processing.

DISCUSSION OF RESULTS

The contoured EM61 data collected over Parcel 11 are shown on Figures 3 and 4. The EM61 early time gate results are plotted on Figure 3. The early time gate data provide the more sensitive detection of metal objects. Figure 4 shows the difference between the response of the top and bottom coils of the EM61 instrument (differential response). The difference is taken to remove the effect of surface and very shallowly buried metallic objects. Typically, the differential response emphasizes anomalies from deeper and larger objects such as USTs.

The early time gate and differential results show anomalies apparently caused by reinforced concrete, buried utilities, or known site features (Figures 3 and 4). GPR data were not collected at the site due to a lack of differential EM61 anomalies that suggested the presence of unknown USTs. The geophysical data do not indicate the presence of metallic USTs within the areas surveyed.

CONCLUSIONS

Our evaluation of the geophysical data collected on the subject property on Project R-3405 in North Wilkesboro, NC indicates the following:

The geophysical data do not indicate the presence of metallic USTs in the areas surveyed on the subject property.

LIMITATIONS

These services have been performed and this report prepared for AMEC Earth and Environmental of North Carolina, Inc. and the North Carolina Department of Transportation in accordance with generally accepted guidelines for conducting geophysical surveys. It is generally recognized that the results of geophysical surveys are non-unique and may not represent actual subsurface conditions.

We appreciate the opportunity to have provided these services. Please call if you need additional information or have any questions.

Sincerely,

SCHNABEL ENGINEERING SOUTH, PC



Jeremy S. Strohmeyer, LG
Project Manager



Edward D. Billington, LG
Senior Vice President

JW:JS:NB

Attachments: Figures (4)

FILE: G:\2009 PROJECTS\09210013 (NCDOT 2009 GEOTECH UNIT SERVICES)\09210013.34 (R-3405, WILKES COUNTY)\REPORT\PARCEL 11\SCHNABEL GEOPHYSICAL REPORT ON PARCEL 11 (R-3405).DOCX



Parcel 11 – Gary B. Miller Property, looking northwest



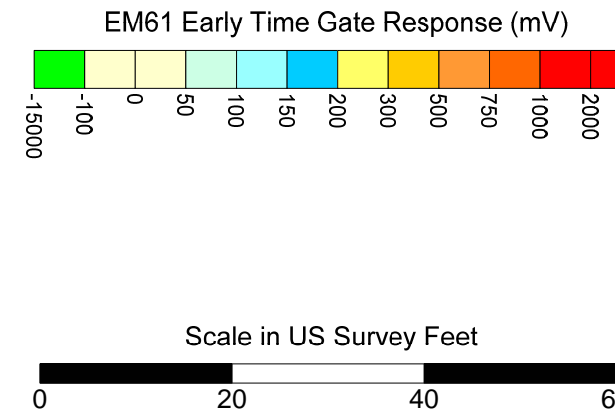
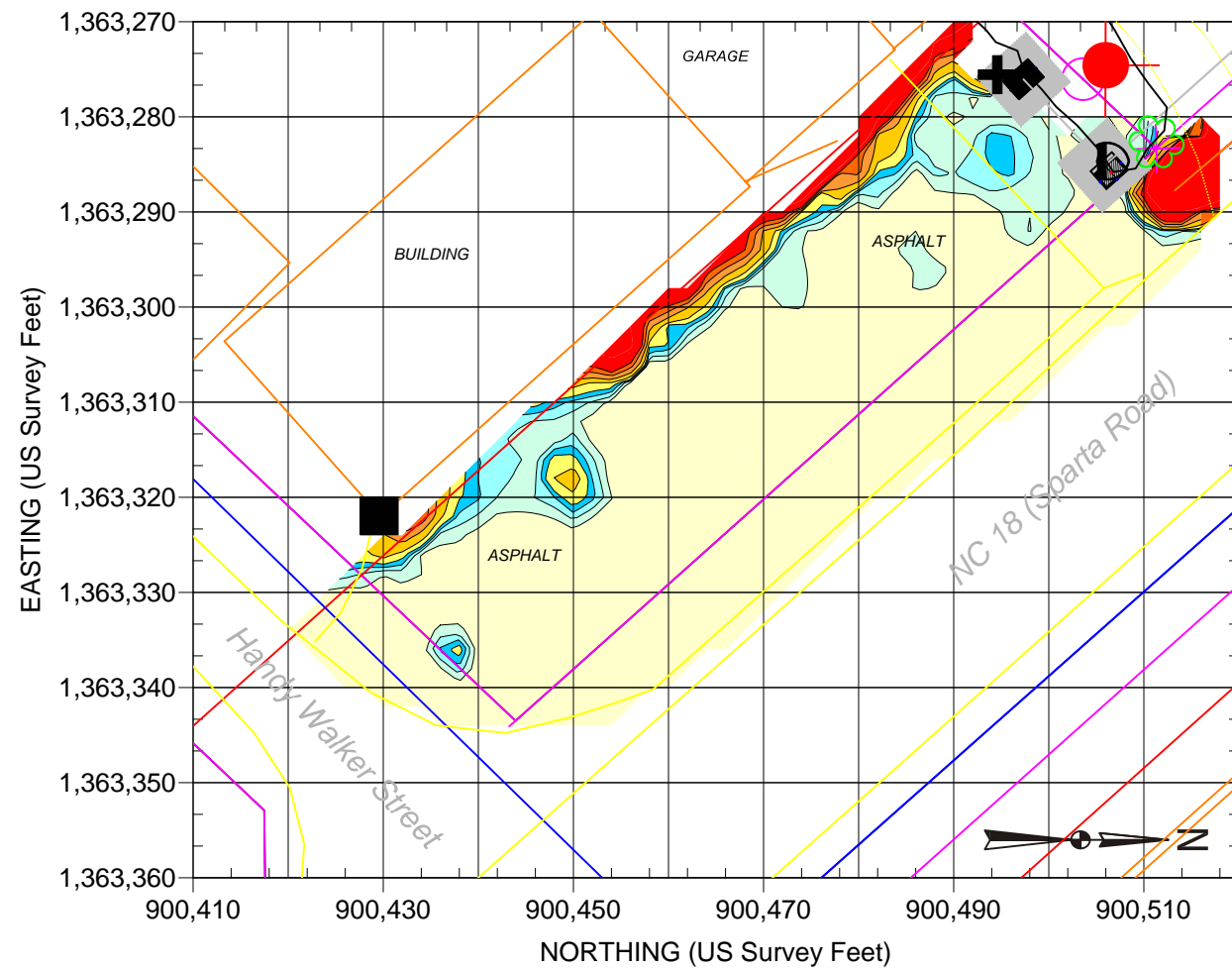
Parcel 11 – Gary B. Miller Property, looking west



Geonics EM61-MK2



GSSI SIR-3000



EXPLANATION	
	SIGN
	UTILITY POLE
	GUY WIRE
	MISCELLANEOUS METALLIC OBJECT
	UTILITY MANHOLE, METER, BOX, ETC.
	LIGHT POLE
	STORM SEWER INLET
	UST LID
	DOT PROPOSED RW
	DOT PROPOSED UTILITY EASEMENT
	PROPERTY LINE
	UTILITY (AS MARKED BY OTHERS OR AS PROVIDED BY NCDOT [VARIOUS COLORS])
	EXAMPLE GPR LINE LOCATION
	GPR SURVEY AREA
	LOCATION OF KNOWN OR SUSPECT USTS MARKED ON SITE

REF.: NCDOT FILE: r3405_ddc_psh05_060530.dgn
(FOR SOME SITE FEATURES)

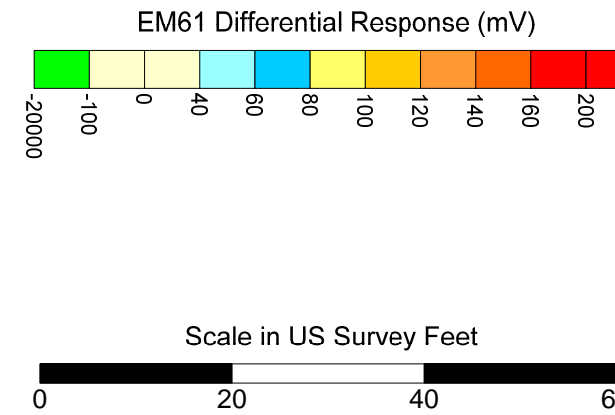
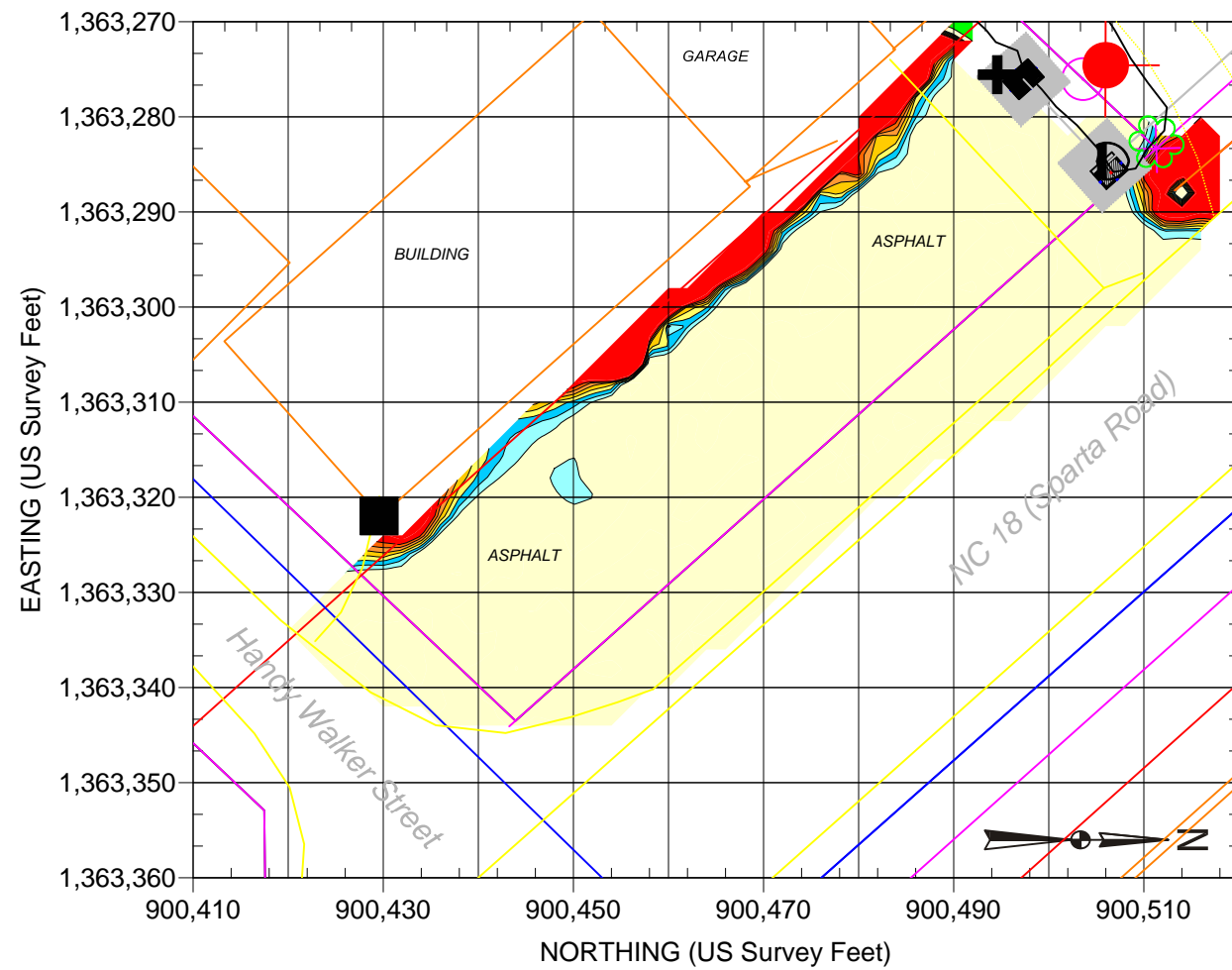
Note: The contour plot shows the earliest and most sensitive time gate of the EM61 bottom coil/channel in millivolts (mV). The EM data were collected on December 8, 2010, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina Zone 3200, using the NAD 1983 datum.



STATE PROJECT R-3405
WILKES COUNTY, NORTH CAROLINA
NC DEPARTMENT OF TRANSPORTATION
PROJECT NO. 09210013.34

PARCEL 11
EARLY TIME GATE
RESPONSE

FIGURE 3



EXPLANATION	
	SIGN
	UTILITY POLE
	GUY WIRE
	MISCELLANEOUS METALLIC OBJECT
	UTILITY MANHOLE, METER, BOX, ETC.
	LIGHT POLE
	STORM SEWER INLET
	UST LID
	DOT PROPOSED RW
	DOT PROPOSED UTILITY EASEMENT
	PROPERTY LINE
	UTILITY (AS MARKED BY OTHERS OR AS PROVIDED BY NCDOT [VARIOUS COLORS])
	EXAMPLE GPR LINE LOCATION
	GPR SURVEY AREA
	LOCATION OF KNOWN OR SUSPECT USTS MARKED ON SITE

REF.: NCDOT FILE: r3405_ddc_psh05_060530.dgn
(FOR SOME SITE FEATURES)

Note: The contour plot shows the difference, in millivolts (mV), between the readings from the top and bottom coils of the EM61. The difference is taken to reduce the effect of shallow metal objects and emphasize anomalies caused by deeper metallic objects, such as drums and tanks. The EM data were collected on December 8, 2010, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 1983 datum.



STATE PROJECT R-3405
WILKES COUNTY, NORTH CAROLINA
NC DEPARTMENT OF TRANSPORTATION
PROJECT NO. 09210013.34

PARCEL 11
DIFFERENTIAL
RESPONSE

FIGURE 4

APPENDIX D

LABORATORY ANALYTICAL RESULTS

AMEC Earth & Env. Inc.(DOT Gree)
Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Wilkes County Parcel 11
Project No.: WBS #35579.1.1
Lab Submittal Date: 01/28/2011
Prism Work Order: 1010639

This data package contains the analytical results for the project identified above and includes a Case Narrative, Sample Results and Chain of Custody. Unless otherwise noted, all samples were received in acceptable condition and processed according to the referenced methods.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative.

Please call if you have any questions relating to this analytical report.

Respectfully,

PRISM LABORATORIES, INC.



President/Project Manager



Reviewed By

Data Qualifiers Key Reference:

BRL Below Reporting Limit

MDL Method Detection Limit

RPD Relative Percent Difference

* Results reported to the reporting limit. All other results are reported to the MDL with values between MDL and reporting limit indicated with a J.

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received
P11-SB-1(3-5)	1010639-01	Solid	01/27/11	01/28/11
P11-SB-2(3-5)	1010639-02	Solid	01/27/11	01/28/11
P11-SB-3(3-5)	1010639-03	Solid	01/27/11	01/28/11
P11-SB-4(3-5)	1010639-04	Solid	01/27/11	01/28/11

Samples received in good condition at 2.2 degrees C unless otherwise noted.

AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Wilkes County
Parcel 11
Project No.: WBS #35579.1.1
Sample Matrix: Solid

Client Sample ID: P11-SB-1(3-5)
Prism Sample ID: 1010639-01
Prism Work Order: 1010639
Time Collected: 01/27/11 13:20
Time Submitted: 01/28/11 14:40

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	8.8	1.4	1	*8015C	2/3/11 5:11	JMV	P1B0050
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			90 %		49-124	
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	BRL	mg/kg dry	5.0	0.65	50	*8015C	2/2/11 1:32	HPE	P1B0015
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			77 %		55-129	
General Chemistry Parameters									
% Solids	78.5	% by Weight	0.100	0.100	1	*SM2540 G	2/2/11 15:15	JAB	P1B0058

AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Wilkes County
Parcel 11
Project No.: WBS #35579.1.1
Sample Matrix: Solid

Client Sample ID: P11-SB-2(3-5)
Prism Sample ID: 1010639-02
Prism Work Order: 1010639
Time Collected: 01/27/11 13:30
Time Submitted: 01/28/11 14:40

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Diesel Range Organics by GC/FID

Diesel Range Organics	BRL	mg/kg dry	8.8	1.4	1	*8015C	2/2/11 18:35	JMV	P1B0050
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			80 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.6	0.59	50	*8015C	2/2/11 2:03	HPE	P1B0015
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			87 %		55-129	

General Chemistry Parameters

% Solids	80.0	% by Weight	0.100	0.100	1	*SM2540 G	2/2/11 15:15	JAB	P1B0058
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AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Wilkes County
Parcel 11
Project No.: WBS #35579.1.1
Sample Matrix: Solid

Client Sample ID: P11-SB-3(3-5)
Prism Sample ID: 1010639-03
Prism Work Order: 1010639
Time Collected: 01/27/11 13:40
Time Submitted: 01/28/11 14:40

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Diesel Range Organics by GC/FID

Diesel Range Organics	BRL	mg/kg dry	8.6	1.4	1	*8015C	2/2/11 19:10	JMV	P1B0050
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			90 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.6	0.60	50	*8015C	2/2/11 3:37	HPE	P1B0015
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			104 %		55-129	

General Chemistry Parameters

% Solids	80.9	% by Weight	0.100	0.100	1	*SM2540 G	2/2/11 15:15	JAB	P1B0058
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AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Wilkes County
Parcel 11
Project No.: WBS #35579.1.1
Sample Matrix: Solid

Client Sample ID: P11-SB-4(3-5)
Prism Sample ID: 1010639-04
Prism Work Order: 1010639
Time Collected: 01/27/11 13:50
Time Submitted: 01/28/11 14:40

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Diesel Range Organics by GC/FID

Diesel Range Organics	BRL	mg/kg dry	8.1	1.3	1	*8015C	2/3/11 9:20	JMV	P1B0050
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			102 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.5	0.59	50	*8015C	2/2/11 4:09	HPE	P1B0015
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			92 %		55-129	

General Chemistry Parameters

% Solids	86.1	% by Weight	0.100	0.100	1	*SM2540 G	2/2/11 15:15	JAB	P1B0058
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AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Wilkes County Parcel
11
Project No: WBS #35579.1.1

Prism Work Order: 1010639
Time Submitted: 1/28/11 2:40:00PM

Gasoline Range Organics by GC/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1B0015 - 5035										
Blank (P1B0015-BLK1)										
Prepared & Analyzed: 02/01/11										
Gasoline Range Organics	BRL	5.0	mg/kg wet							
Surrogate: a,a,a-Trifluorotoluene	4.85		mg/kg wet	5.00		97	55-129			
LCS (P1B0015-BS1)										
Prepared & Analyzed: 02/01/11										
Gasoline Range Organics	34.0	5.0	mg/kg wet	50.0		68	67-116			
Surrogate: a,a,a-Trifluorotoluene	4.05		mg/kg wet	5.00		81	55-129			
LCS Dup (P1B0015-BSD1)										
Prepared & Analyzed: 02/01/11										
Gasoline Range Organics	35.2	5.0	mg/kg wet	50.0		70	67-116	4	200	
Surrogate: a,a,a-Trifluorotoluene	4.10		mg/kg wet	5.00		82	55-129			
Matrix Spike (P1B0015-MS1)										
Source: 1010639-01 Prepared: 02/01/11 Analyzed: 02/02/11										
Gasoline Range Organics	47.3	6.4	mg/kg dry	63.7	BRL	74	57-113			
Surrogate: a,a,a-Trifluorotoluene	6.05		mg/kg dry	6.37		95	55-129			
Matrix Spike Dup (P1B0015-MSD1)										
Source: 1010639-01 Prepared: 02/01/11 Analyzed: 02/02/11										
Gasoline Range Organics	50.5	6.4	mg/kg dry	63.7	BRL	79	57-113	7	23	
Surrogate: a,a,a-Trifluorotoluene	6.18		mg/kg dry	6.37		97	55-129			

AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Wilkes County Parcel
11
Project No: WBS #35579.1.1

Prism Work Order: 1010639
Time Submitted: 1/28/11 2:40:00PM

Diesel Range Organics by GC/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1B0050 - 3545A										
Blank (P1B0050-BLK1)										
					Prepared: 02/01/11 Analyzed: 02/02/11					
Diesel Range Organics	BRL	7.0	mg/kg wet							
Surrogate: <i>o</i> -Terphenyl	1.34		mg/kg wet	1.60		84	49-124			
LCS (P1B0050-BS1)										
					Prepared: 02/01/11 Analyzed: 02/02/11					
Diesel Range Organics	55.3	7.0	mg/kg wet	80.0		69	55-109			
Surrogate: <i>o</i> -Terphenyl	1.36		mg/kg wet	1.60		85	49-124			
LCS Dup (P1B0050-BSD1)										
					Prepared: 02/01/11 Analyzed: 02/02/11					
Diesel Range Organics	57.1	7.0	mg/kg wet	80.0		71	55-109	3	200	
Surrogate: <i>o</i> -Terphenyl	1.41		mg/kg wet	1.60		88	49-124			
Matrix Spike (P1B0050-MS1)										
				Source: 1010639-01		Prepared: 02/01/11 Analyzed: 02/02/11				
Diesel Range Organics	71.8	8.9	mg/kg dry	101	BRL	71	50-117			
Surrogate: <i>o</i> -Terphenyl	1.75		mg/kg dry	2.02		87	49-124			
Matrix Spike Dup (P1B0050-MSD1)										
				Source: 1010639-01		Prepared: 02/01/11 Analyzed: 02/02/11				
Diesel Range Organics	66.0	8.8	mg/kg dry	101	BRL	65	50-117	8	24	
Surrogate: <i>o</i> -Terphenyl	1.57		mg/kg dry	2.02		77	49-124			

AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Wilkes County Parcel
11
Project No: WBS #35579.1.1

Prism Work Order: 1010639
Time Submitted: 1/28/11 2:40:00PM

General Chemistry Parameters - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch P1B0058 - NO PREP

Blank (P1B0058-BLK1)

Prepared & Analyzed: 02/02/11

% Solids	100	0.100	% by Weight							
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Sample Extraction Data

Prep Method: 3545A

Lab Number	Batch	Initial	Final	Date
1010639-01	P1B0050	25.19 g	1 mL	02/01/11
1010639-02	P1B0050	25 g	1 mL	02/01/11
1010639-03	P1B0050	25.17 g	1 mL	02/01/11
1010639-04	P1B0050	25.06 g	1 mL	02/01/11

Prep Method: 5035

Lab Number	Batch	Initial	Final	Date
1010639-01	P1B0015	6.41 g	5 mL	02/01/11
1010639-02	P1B0015	6.84 g	5 mL	02/01/11
1010639-03	P1B0015	6.65 g	5 mL	02/01/11
1010639-04	P1B0015	6.39 g	5 mL	02/01/11

NO PREP

Lab Number	Batch	Initial	Final	Date
1010639-01	P1B0058	30 g	30 mL	02/02/11
1010639-02	P1B0058	30 g	30 mL	02/02/11
1010639-03	P1B0058	30 g	30 mL	02/02/11
1010639-04	P1B0058	30 g	30 mL	02/02/11



Full-Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
Phone: 704/529-6364 • Fax: 704/525-0409

Client Company Name: AMEC E&E

Report To/Contact Name: Helen Corley

Reporting Address: 338 N Elm St
Greensboro, NC 27401

Phone: 336-691-5398 Fax (Yes) (No):

Email (Yes) (No) Email Address: helen.corley@amec.com

EDD Type: PDF Excel Other

Site Location Name: Parcel 11

Site Location Physical Address: N Wilkesboro

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING: WBS: 35579.1.1

Project Name: Wilkes County

Short Hold Analysis: (Yes) (No) (Yes) (No) UST Project: (Yes) (No)

*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements

Invoice To: Helen Corley

Address: Same

Purchase Order No./Billing Reference WBS: 35579.1.1

Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days

"Working Days" 6-9 Days Standard 10 days Rush Work Must Be Pre-Approved

Samples received after 15:00 will be processed next business day.

Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY			
	YES	NO	N/A
Samples INTACT upon arrival?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received ON WET ICE? Temp <u>2.2</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PROPER PRESERVATIVES indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received WITHIN HOLDING TIMES?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CUSTODY SEALS INTACT?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VOLATILES rec'd W/O HEADSPACE?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PROPER CONTAINERS used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC USACE FL NC

SC OTHER N/A

Water Chlorinated: YES NO

Sample Iced Upon Collection: YES NO

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER			PRESERVATIVES	ANALYSES REQUESTED				REMARKS	PRISM LAB ID NO.	
				*TYPE SEE BELOW	NO.	SIZE		DRD	GR/MS					
P11-SB-1 (3-5)	1-27-11	1320	Soil	6 VOA	4	2G 2VOA	MDMP methanol	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				2x 40ml (Meth) 1x 4oz (Clr) 1x 2oz	01
P11-SB-2 (3-5)	↓	1330	↓	↓	↓	↓	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					02
P11-SB-3 (3-5)	↓	1340	↓	↓	↓	↓	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					03
P11-SB-4 (3-5)	↓	1350	↓	↓	↓	↓	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					04

Sampler's Signature: Troy L Holzschuh Sampled By (Print Name): Troy L Holzschuh Affiliation: AMEC

PRESS DOWN FIRMLY - 3 COPIES

Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature) <u>Troy L Holzschuh</u>	Received By: (Signature)	Date <u>1-28-11</u>	Military/Hours <u>1440</u>
Relinquished By: (Signature)	Received By: (Signature)	Date	
Relinquished By: (Signature)	Received For Prism Laboratories By: <u>T.L.O.</u>	Date <u>1/28/11</u>	Military/Hours <u>1440</u>
Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.		COC Group No. <u>1010639</u>	

PRISM USE ONLY	
Site Arrival Time:	
Site Departure Time:	
Field Tech Fee:	
Mileage:	

NPDES: <input type="checkbox"/> NC <input type="checkbox"/> SC	UST: <input type="checkbox"/> NC <input type="checkbox"/> SC	GROUNDWATER: <input type="checkbox"/> NC <input type="checkbox"/> SC	DRINKING WATER: <input type="checkbox"/> NC <input type="checkbox"/> SC	SOLID WASTE: <input type="checkbox"/> NC <input type="checkbox"/> SC	RCRA: <input type="checkbox"/> NC <input type="checkbox"/> SC	CERCLA: <input type="checkbox"/> NC <input type="checkbox"/> SC	LANDFILL: <input type="checkbox"/> NC <input type="checkbox"/> SC	OTHER: <input type="checkbox"/> NC <input type="checkbox"/> SC
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SEE REVERSE FOR TERMS & CONDITIONS

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)