

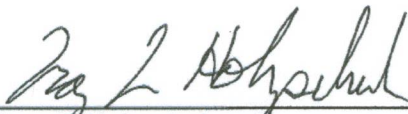


**NC Department of Transportation
Preliminary Site Assessment
State Project: U-2551
WBS Element: 34832.1.1**

**Mary Brittain Property
Parcel #20
January 14, 2011**

**AMEC Earth and Environmental, Inc. of North Carolina
AMEC Project: 562112551**





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Engineering Technician



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Senior Project Manager



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1.0 INTRODUCTION

In accordance with the North Carolina Department of Transportation (NCDOT) Request for Proposal, dated November 3, 2010, AMEC Earth and Environmental, Inc. of North Carolina (AMEC) has performed a Preliminary Site Assessment (PSA) for the Mary Brittain Property formerly Brittain's Store (the Site) to be effected by a road improvement project along SR 1922, Enola Rd. The Site building which is located on 600 Enola Rd was built in 1922 and formerly operated as a gas station and is identified as Parcel #20 within the NCDOT U-2551 design project. The property, located on the southwest corner of Enola Rd and SR 1940 (Pete Brittain Rd), is in Morganton of Burke County, North Carolina. The investigation was conducted in accordance with AMEC's Technical and Cost proposal dated November 3, 2010.

NCDOT contracted AMEC to perform a PSA on the Mary Brittain Property due to the presence of two underground storage tanks (UST) on the property. The property was a gas station with convenience store. The PSA was performed to determine if soils have been impacted by petroleum compounds as a result of past uses of the property within the proposed expanded right-of-way (ROW). This parcel will be a total take by the NCDOT for the widening of the Enola Rd and Pete Brittain Rd intersection.

The following report describes our field investigations and results of chemical analyses. It includes the evaluation of the analytical data with regards to the presence or absence of soil contamination within the proposed ROW and estimates the extent of soil contamination.

1.1 Site Location and History

The Mary Brittain Property parcel is located on the southwestern side of Enola Rd, at the intersection of Pete Brittain Road in Morganton, Burke County, North Carolina. The former gas station was built in 1922. Currently the property is not operational as a business. However the back half of the building is being leased as an apartment. It is located within the Metamorphic sediments of the Inner Piedmont Physiographic Province of western North Carolina. Figure 1 shows the site location and vicinity.

AMEC studied the NCDENR UST Registered Tanks Database and no tanks are registered in association with this property. AMEC also reviewed the NCDENR Incident Management Database and did not find any incident numbers associated with this property.

1.2 Site Description

The Site was formerly a gas station. The proposed DOT project will encompass the entire property of Parcel #18. Two USTs were observed at this facility. Appendix A includes a photo log for Parcel #18.

The surrounding properties are residential and municipal. The parcel directly south is Mary Brittain's single family home located on a different tract of parcel 20. Directly across Enola Road at the southeastern corner of the Enola and Pete Brittain Rd. intersection are the Liberty Middle School ball fields. The Liberty Middle School building is located on the northeastern corner of the intersection. The property on the northwestern corner of Enola Rd and Pete Brittain Rd is wooded with a residence on the northern end of the parcel. The property west of the site is residential with a single family home.

2.0 GEOLOGY

2.1 Regional Geology

The Mary Brittain Property is located within the Metamorphic sediments of the Inner Piedmont Physiographic Province of western North Carolina. The Inner Piedmont belt is the most intensely deformed and metamorphosed segment of the Piedmont. The metamorphic rocks range from 500 to 750 million years in age. They include gneiss and schist that have been intruded by younger granitic rocks. The northeast-trending Brevard fault zone forms much of the boundary between the Blue Ridge and Inner Piedmont belts.

2.2 Site Geology

Site geology was observed through the sampling of 10 shallow direct push probe soil borings (SB) onsite. Borings ranged in total depth of 10 feet to 15 feet (ft) below ground surface (bgs). Native soils generally consisted of orange, well sorted and clayey silt.

Damp soil conditions were typically first encountered at a depth of 0.5 ft 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 necessary for the field activities. On December 2, 2010 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 December 6 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 two geophysical surveys (electromagnetic and ground penetrating radar) onsite during December. The geophysical results were reviewed and discussed at the completion of each survey. Prism Laboratories, Inc. was contacted for acquisition of sample bottles. Soil boring locations were selected within the proposed expanded ROW particularly near the two suspected USTs to maximize the likelihood of intercepting any potential soil contamination.

3.2 Site Reconnaissance

AMEC personnel completed site reconnaissance on November 11, 2010. During reconnaissance, the area was visually examined for the presence of any UST or areas/obstructions that could potentially affect the subsurface investigation and the number of boring locations was discussed. Boring locations were marked on December 2, 2010.

3.3 Geophysical Survey

Schnabel performed the geophysical surveys on December 1 and 3, 2010. Schnabel utilized a Geonics EM61-MK2 to perform the electromagnetic induction surveys and a Geophysical Survey Systems SIR-3000 to conduct the ground-penetrating radar (GPR) investigations. These instruments are specifically calibrated to detect metal anomalies that are buried deeply and are characteristically large. The data collected by Schnabel indicates the presence of two probable USTs within the proposed expanded ROW. The two USTs are denoted in Figure 2. Based on the geophysics report, each UST expected to be 560 gallon in capacity. UST-1 is buried 3 to 4 feet bgs. UST-2 is buried 2 to 3 feet bgs. The complete report can be found in Appendix C.

3.4 Well Survey

No well survey was performed as part of this PSA.

3.5 Soil Sampling

Soil boring occurred on December 9, 2010 at Parcel #20. Ten direct push soil borings were conducted within the proposed expanded ROW on Parcel #20 that consist of the northeastern tract on the property. Figure 2 presents the Site Map with boring locations and identifications. These samples were located to optimize the likelihood of intercepting any potential soil contamination by targeting the two USTs, the car port, and the northern and eastern edges of the site. The first two borings P20-SB-1 and P20-SB-2 were placed on the northern side of the parcel. Soil borings P20-SB-3 through P20-SB-7 were placed on the around and between the probable USTs. Soil borings P20SB-8 though –SB10 were added to further define the extent of contamination. Underground utilities prevented any borings from being drilled east of P20-SB-6. Elevated PID readings were observed through most of the soil column in borings P20-SB-5 through SB-8. The maximum PID value for each boring is shown in Table 1.

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 December 9, 2010. 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 10 completed soil borings from Parcel #20. Typically, when impacted soil is identified, additional soil samples are obtained. PID readings warranted the addition of four deeper soil samples for vertical delineation in borings, P20-SB-5 through –SB-8, and four additional borings for horizontal delineation. Analyses of soil samples for DRO and GRO indicated five samples from four boring locations with concentrations above the 10 mg/kg NCDENR Initial Action Level for TPH in soil. Their DRO concentrations ranged from 460 to 3,200 mg/kg, while GRO detections ranged from 47 to 12,000 mg/kg. These samples were all collected adjacent to UST-2 that is situated near the carport (likely a former canopy) as shown on Figure 3. In three of the borings only the deeper soil samples from the depth interval of 13-15 ft bgs were impacted. However in boring P20-SB-7, placed directly south of UST-2, both the 4 to 5 ft and 13-15 ft samples were impacted, suggesting a release from the UST stems from the south side of the UST.

In Figure 4, the estimated area of soil contamination has been drawn; however, the extent of the soil contamination was not well defined to the west and east of UST-2 due to underground utilities and the car port, respectively prohibiting drilling. The estimated soil impact area as drawn on Figure 4 is 358 square feet. Using the depth of impact to be the sample depth (15 ft) since the sample's depth represents the highest PID reading, 5,370 cubic feet or 199 cubic yards were calculated as the approximate impacted soil volume.

This is considered a minimum volume since impacted soil delineation was not accomplished.

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 December 9, 2010.

- The property is presently not operational as a business. However the back half of the building is being leased as an apartment.
- The two 560 gallon tanks are not registered with the NCDENR UST Registered Tanks Database.
- Ten soil samples were collected and analyzed for TPH GRO and DRO.
- Laboratory analyses of soil samples confirmed five DRO and GRO detections >10 mg/kg NC Action Level with maximum concentrations of 3,200 and 12,000 mg/kg, respectively.
- An estimated minimum of 199 cubic yards of petroleum-impacted soil may be intercepted during excavation activities in this area.

6.0 RECOMMENDATIONS

Since the parcel will be a total take the USTs and any associated piping must be properly closed by removal. Soil will have to be sampled during closure activities and handled following NCDENR's Tank Closure Guidelines. AMEC understands that a party other than NCDOT may implement the UST closure. In such a situation NCDOT should be wary of intercepting contaminated soil during road construction activities, thus AMEC recommends the following potential action:

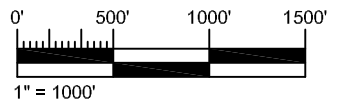
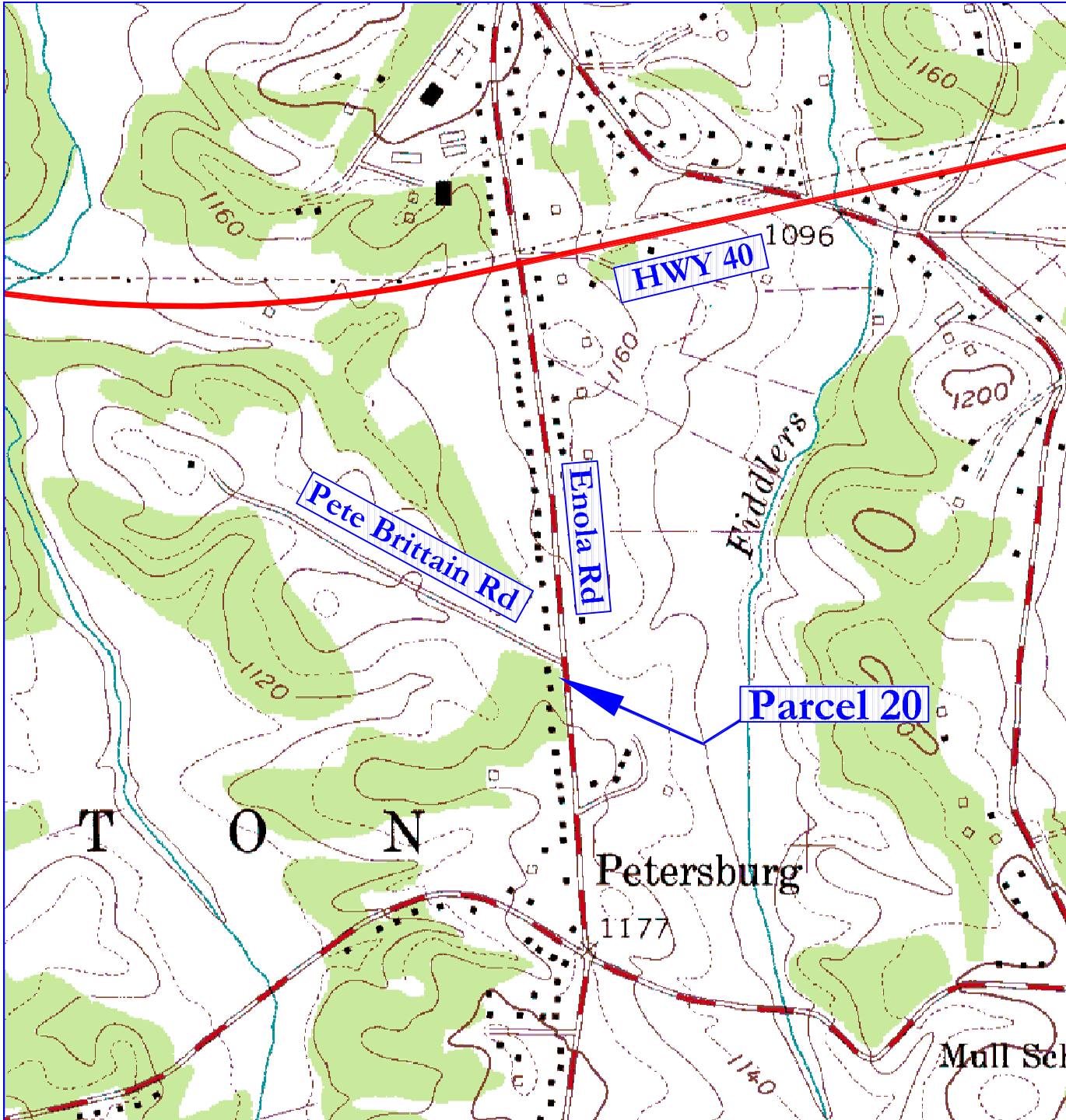
- Segregation with proper disposal of potentially petroleum-impacted soil during roadway improvement construction operations.

TABLES

Table 1
 Soil Sampling Analytical Results, DRO-GRO
 Parcel 20, Mary Brittain Property (Formerly Brittain's Store)
 NC DOT
 Morganton, Burke 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
P20-SB-1	12/9/2010	4-5	0	<8.5	<4.6
P20-SB-2	12/9/2010	4 - 5	0	<8.6	<5.2
P20-SB-3	12/9/2010	8-10	0	<8.7	<5.2
P20-SB-4	12/9/2010	8-10	0	<8.6	<5.0
P20-SB-5	12/9/2010	4 - 5	0	<8.7	<4.5
P20-SB-5	12/9/2010	13 - 15	1763	1,100	7,400
P20-SB-6	12/9/2010	4 - 5	4.7	<8.9	<5.0
P20-SB-6	12/9/2010	13 - 15	2336	2,000	12,000
P20-SB-7	12/9/2010	4 - 5	58.1	3,200	47
P20-SB-7	12/9/2010	13 - 15	1276	460	3,800
P20-SB-8	12/9/2010	4 - 5	2.5	<8.8	<4.9
P20-SB-8	12/9/2010	13 - 15	1702	1,600	2,400
P20-SB-9	12/9/2010	5 - 6	1.4	<8.5	<4.6
P20-SB-10	12/9/2010	5 - 6	0	<8.7	<4.7
NOTES: bgs = below ground surface; ppm = parts per million 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

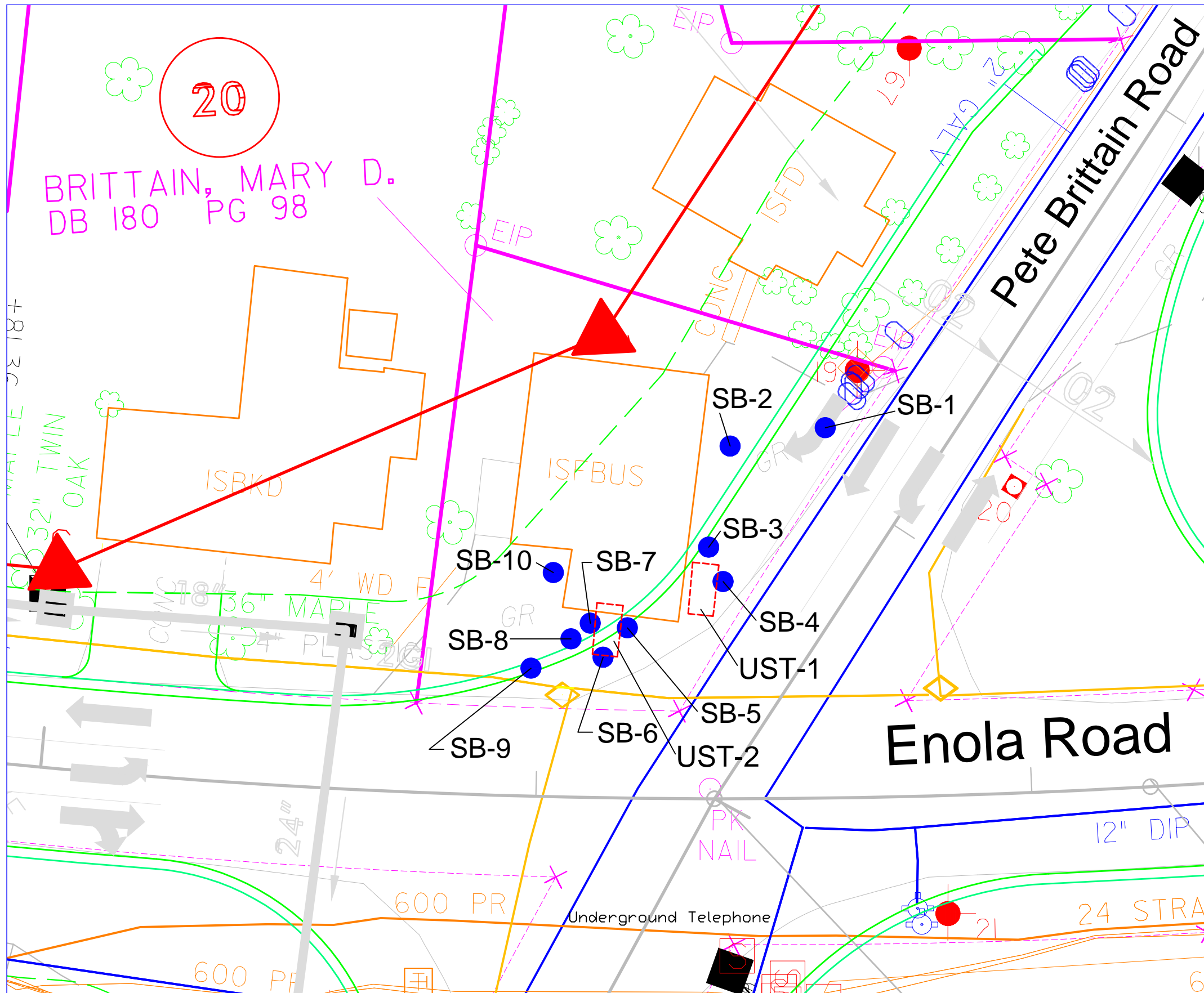
Parcel #20, Mary Brittain Property
 (Former Brittain's Store)
 Morganton, Burke County, NC

DRAWING NAME: J:\NCDOT\Burke\FIC1	DATE: 1/14/11
SCALE: 1 INCH = 1,000 FEET	DR: TLH CHK: HPC REV:










PREPARED FOR:
 NC Department Of Transportation
 Geotechnical Unit
 WBS Element: 34832.1.1
 TIP# U-2551

Prepared By:
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Figure:
 Figure 1



LEGEND

-  Proposed Right of Way
-  Existing Property Line
-  Existing Right of Way
-  C Cut Line
-  F Fill Line
-  Soil Boring Location December 2010
-  Probable UST
-  Underground Gas Line
-  Underground Water Line

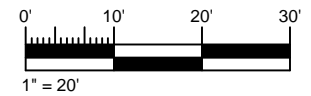
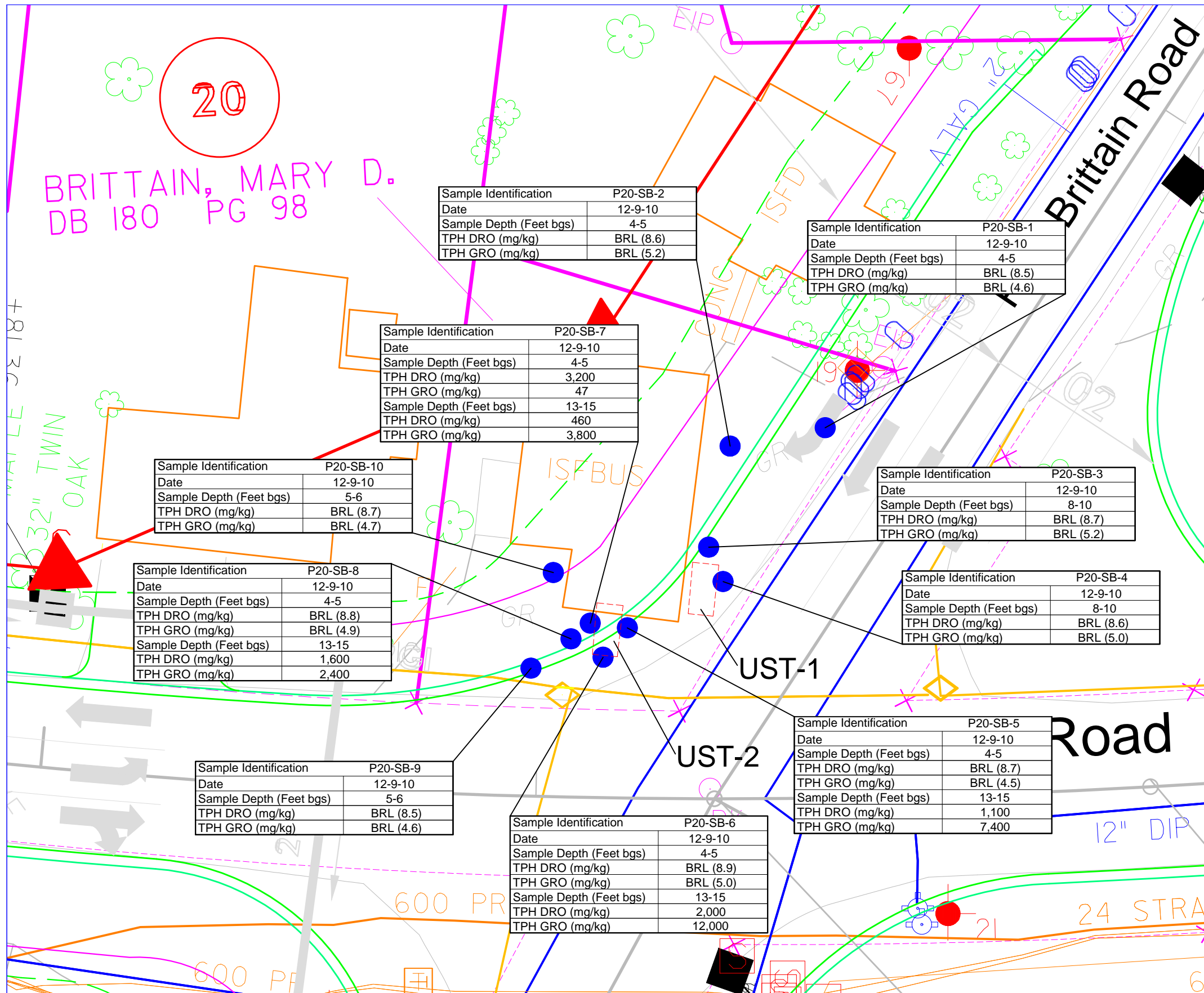


Figure 2
Parcel #20 Mary Brittain Property
Site Map With Sample Locations

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WBS Element: 34832.1.1
TIP# U-2551





LEGEND

- Proposed Right of Way
- Existing Property Line
- Existing Right of Way
- Cut Line
- Fill Line
- Soil Boring Location December 2010
- Probable UST
- Underground Gas Line
- Underground Water Line

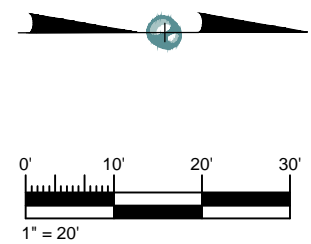


Figure 3
Parcel #20 Mary Brittain Property
Site Map With Analytical Data

NC Department of Transportation
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 TIP# U-2551



Sample Identification	P20-SB-2
Date	12-9-10
Sample Depth (Feet bgs)	4-5
TPH DRO (mg/kg)	BRL (8.6)
TPH GRO (mg/kg)	BRL (5.2)

Sample Identification	P20-SB-1
Date	12-9-10
Sample Depth (Feet bgs)	4-5
TPH DRO (mg/kg)	BRL (8.5)
TPH GRO (mg/kg)	BRL (4.6)

Sample Identification	P20-SB-7
Date	12-9-10
Sample Depth (Feet bgs)	4-5
TPH DRO (mg/kg)	3,200
TPH GRO (mg/kg)	47
Sample Depth (Feet bgs)	13-15
TPH DRO (mg/kg)	460
TPH GRO (mg/kg)	3,800

Sample Identification	P20-SB-10
Date	12-9-10
Sample Depth (Feet bgs)	5-6
TPH DRO (mg/kg)	BRL (8.7)
TPH GRO (mg/kg)	BRL (4.7)

Sample Identification	P20-SB-3
Date	12-9-10
Sample Depth (Feet bgs)	8-10
TPH DRO (mg/kg)	BRL (8.7)
TPH GRO (mg/kg)	BRL (5.2)

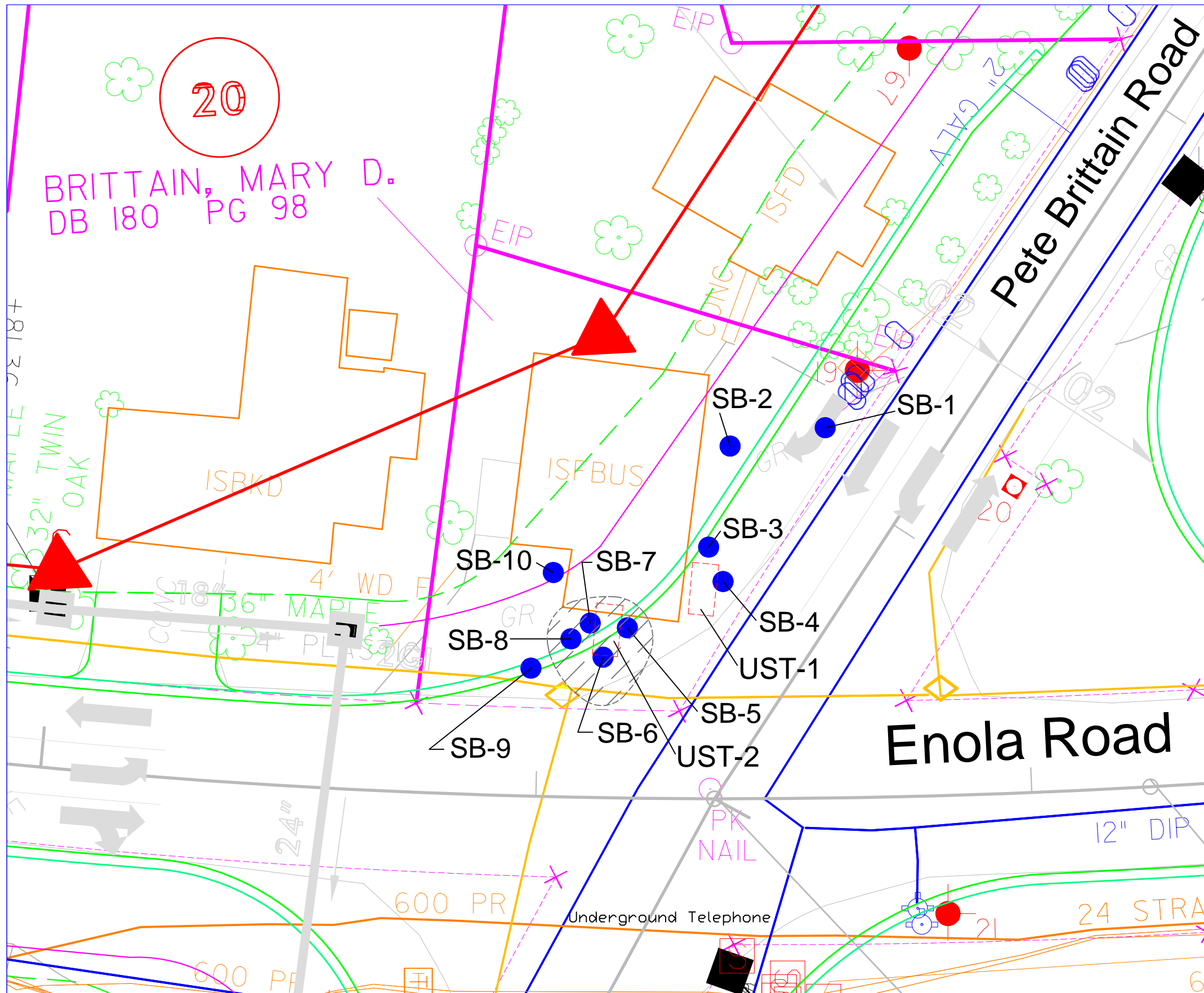
Sample Identification	P20-SB-8
Date	12-9-10
Sample Depth (Feet bgs)	4-5
TPH DRO (mg/kg)	BRL (8.8)
TPH GRO (mg/kg)	BRL (4.9)
Sample Depth (Feet bgs)	13-15
TPH DRO (mg/kg)	1,600
TPH GRO (mg/kg)	2,400

Sample Identification	P20-SB-4
Date	12-9-10
Sample Depth (Feet bgs)	8-10
TPH DRO (mg/kg)	BRL (8.6)
TPH GRO (mg/kg)	BRL (5.0)

Sample Identification	P20-SB-9
Date	12-9-10
Sample Depth (Feet bgs)	5-6
TPH DRO (mg/kg)	BRL (8.5)
TPH GRO (mg/kg)	BRL (4.6)

Sample Identification	P20-SB-5
Date	12-9-10
Sample Depth (Feet bgs)	4-5
TPH DRO (mg/kg)	BRL (8.7)
TPH GRO (mg/kg)	BRL (4.5)
Sample Depth (Feet bgs)	13-15
TPH DRO (mg/kg)	1,100
TPH GRO (mg/kg)	7,400

Sample Identification	P20-SB-6
Date	12-9-10
Sample Depth (Feet bgs)	4-5
TPH DRO (mg/kg)	BRL (8.9)
TPH GRO (mg/kg)	BRL (5.0)
Sample Depth (Feet bgs)	13-15
TPH DRO (mg/kg)	2,000
TPH GRO (mg/kg)	12,000



LEGEND












-  Proposed Right of Way
 -  Existing Property Line
 -  Existing Right of Way
 -  C Cut Line
 -  F Fill Line
 -  Soil Boring Location December 2010
 -  Probable UST
 -  Underground Gas Line
 -  Underground Water Line
 -  Estimated Area of Contamination = 358 sq ft
- 

Figure 4
Parcel #20 Mary Brittain Property
Site Map With Estimated Area of Contamination

NC Department of Transportation
Geotechnical Unit
WBS Element: 34832.1.1
TIP# U-2551



APPENDIX A

PHOTO LOG



Photo 1

Viewing Northwest from the southeastern portion of the site.



Photo 2

Viewing west from the north eastern portion of the site.



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Preliminary Site Assessment
Parcel 20, 600 Enola Rd, Morganton, NC



Photo 3

Viewing east-southeast beyond a probable UST. UST is located on the northeastern corner of Parcel 20.



Photo 4

Second probable UST, located in front of the former Brittain's Store .



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PHOTOGRAPHIC LOG

Preliminary Site Assessment
Parcel 20, 600 Enola Rd, Morganton, NC

APPENDIX B
BORING LOGS

APPENDIX C
GEOPHYSICAL SURVEY REPORT

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. The GPR data were collected along survey lines spaced one to two feet apart in orthogonal directions over areas of reinforced concrete and anomalous EM readings not attributed to cultural features. The GPR data were reviewed in the field to evaluate the possible presence of USTs. The GPR data also were recorded digitally and later transferred to a desktop computer for further review.

DISCUSSION OF RESULTS

The contoured EM61 data collected over Parcel 20 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). The GPR data collected over the EM61 anomaly near the northeastern corner of the building indicate the presence of a probable UST located within approximately 2 to 4 feet of the northeastern corner of the building. The GPR data collected over the EM61 anomaly near the eastern edge of the canopy indicate the presence of a probable UST located beneath the eastern edge of the canopy. The USTs are inside the limits of the planned right-of way and/or easement. Example GPR images showing the reflections from the probable USTs are shown on Figures 3 and 4. Figures 3 and 4 also include the locations of the probable USTs as marked in the field. The GPR data indicate that probable UST No. 1 is buried approximately 3.0 to 4.0 feet below ground surface and is about 42 inches in diameter and about 8 feet long, equivalent to a capacity of about 560 gallons. The GPR data indicate that probable UST No. 2 is buried approximately 2.0 to 3.0 feet below ground surface and is about 42 inches in diameter and about 8 feet long, equivalent to a capacity of about 560 gallons. Photographs of the probable UST locations, as marked in the field, are included on Figure 5.

CONCLUSIONS

Our evaluation of the geophysical data collected on the subject property on Project U-2551 in Morganton, NC indicates the following:

The geophysical data indicate the presence of two probable USTs on Parcel 20 located on the east side of the building and at the northeast corner of the building. The USTs are inside the planned right-of-way and/or easement. Probable UST No. 1 is about 560-gallon capacity and is buried about 3.0 to 4.0 feet below ground surface. Probable UST No. 2 is about 560-gallon capacity and is buried about 2.0 to 3.0 feet below ground surface.

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. Strohmeier, LG
Project Manager



Edward D. Billington, LG
Senior Vice President

JW:JS:NB

Attachments: Figures (5)

FILE: G:\2009 PROJECTS\09210013 (NCDOT 2009 GEOTECH UNIT SERVICES)\09210013.32 (U-2551, BURKE COUNTY)\REPORT\PARCEL 20\SCHNABEL GEOPHYSICAL REPORT ON PARCEL 20 (U-2551).DOCX



Parcel 20 – Mary Brittain Property, looking south



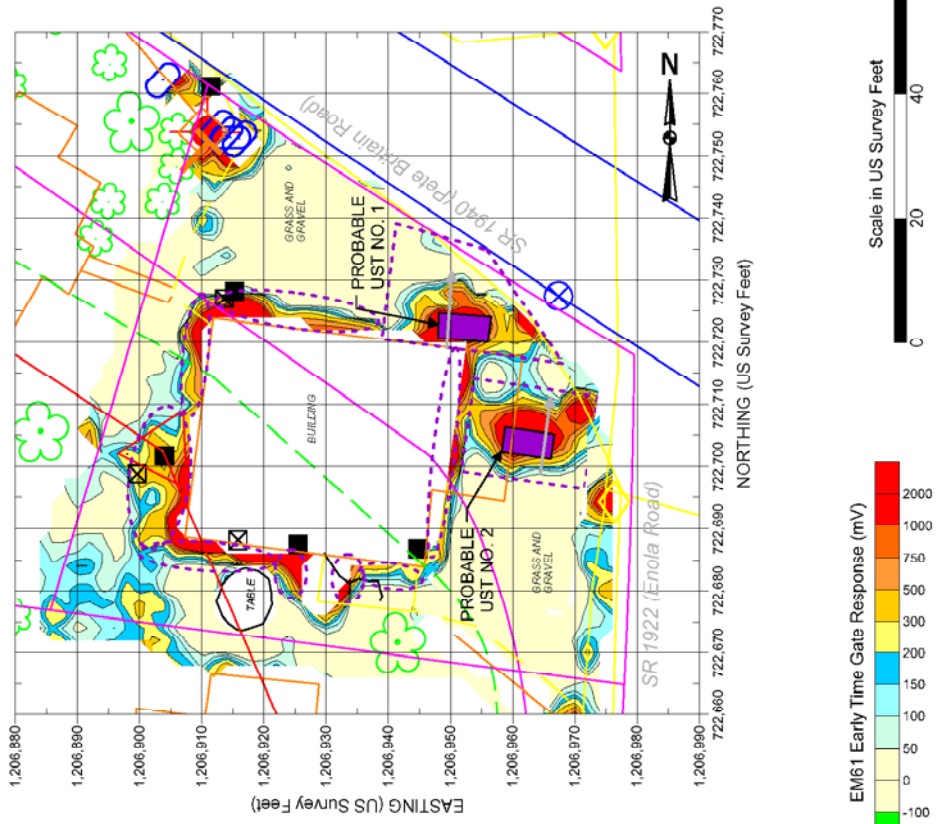
Parcel 20 – Mary Brittain Property, looking southeast



Geonics EM61-MK2



GSSI SIR-3000

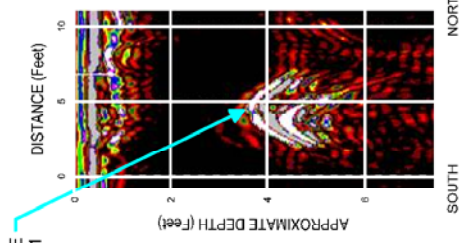


EXPLANATION

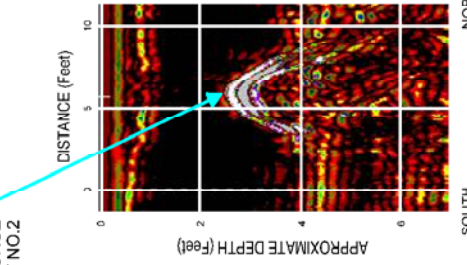
○	SIGN
●	UTILITY POLE
+	GUY WIRE
■	MISCELLANEOUS METALLIC OBJECT
⊗	UTILITY LID
⊙	STORM SEWER INLET
⊕	UST LID
◆	DOT PROPOSED RAW
○	DOT PROPOSED UTILITY ENHANCEMENT
—	PROPERTY LINE
- - -	UTILITY (AS MARKED BY OTHERS OR AS PROVIDED BY NCDOT [VARIOUS CO. ORS])
—	EXAMPLE GPR LINE LOCATION
↑	GPR SURVEY GRID
□	LOCATION OF UST MARKED ON SITE

REF.: NCDOT FILE: u2551.dwg_psh_06.dgn
(FOR SOME SITE FEATURES)

EXAMPLE GPR RESPONSE FROM PROBABLE UST NO. 1



EXAMPLE GPR RESPONSE FROM PROBABLE UST NO. 2



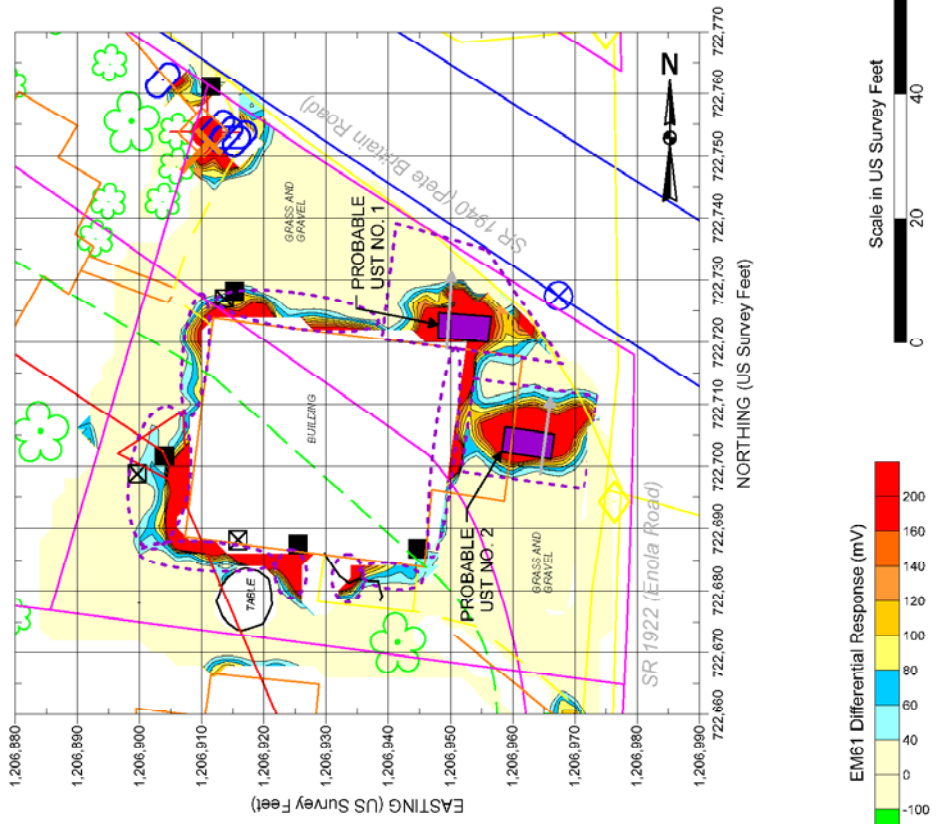
Note: The contour plot shows the earliest and most sensitive time gate of the EM61 bottom coil/channel in millivolts (mV). The EM data were collected on December 1, 2010, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXR DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina Zone 3200, using the NAD 1983 datum. GPR data were acquired on December 3, 2010, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.



STATE PROJECT U-2551
BURKE COUNTY, NORTH CAROLINA
NC DEPARTMENT OF TRANSPORTATION
PROJECT NO. 092100-3.32

PARCEL 20
EARLY TIME GATE
RESPONSE

FIGURE 3

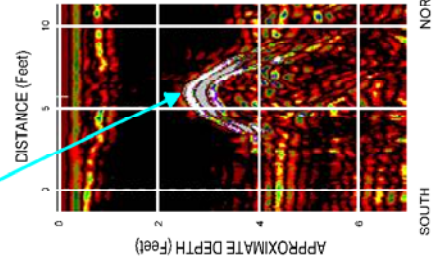
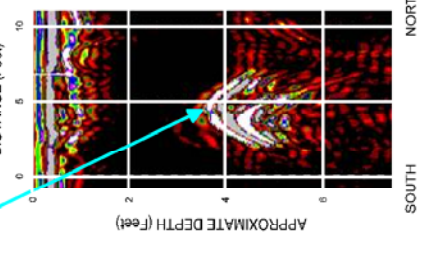


EXPLANATION	
○	SIGN
⊙	UTILITY POLE
+	GUY WIRE
■	MISCELLANEOUS METALLIC OBJECT
⊗	UTILITY LID
⊙	LIGHT POLE
⊗	STORM SEWER INLET
⊙	UST LID
⊙	DOT PROPOSED RAW
⊙	DOT PROPOSED UTILITY ENHANCEMENT
—	PROPERTY LINE
—	UTILITY (AS MARKED BY OTHERS OR AS PROVIDED BY NCDOT [VARIOUS CO. ORS])
—	EXAMPLE GPR LINE LOCATION
—	GPR SURVEY GRID
—	LOCATION OF UST MARKED ON SITE

REF.: NCDOT FILE: u2551.dwg_psh_06.dgn
(FOR SOME SITE FEATURES)

EXAMPLE GPR RESPONSE FROM PROBABLE UST NO. 1

EXAMPLE GPR RESPONSE FROM PROBABLE UST NO. 2



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 1, 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. GPR data were acquired on December 3, 2010, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.



STATE PROJECT U-2551
BURKE COUNTY, NORTH CAROLINA
NC DEPARTMENT OF TRANSPORTATION
PROJECT NO. 082100-3.32

PARCEL 20
DIFFERENTIAL
RESPONSE



Parcel 20 – Mary Brittain Property, looking east. Photo shows approximate marked location of probable UST No. 1 near the northeastern corner of the building.



Parcel 20 – Mary Brittain Property, looking west. Photo shows approximate marked location of probable UST No. 2 near the eastern edge of the canopy.



STATE PROJECT U-2551
NC DEPT. OF TRANSPORTATION
BURKE CO., NORTH CAROLINA
PROJECT NO. 09210013.32

PHOTOS OF PROBABLE
UST LOCATIONS
PARCEL 20

FIGURE 5

APPENDIX D

LABORATORY ANALYTICAL RESULTS

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

Project: NCDOT: Burke County Parcel 20
Project No.: WBS #34832.1.1
Lab Submittal Date: 12/10/2010
Prism Work Order: 0120336

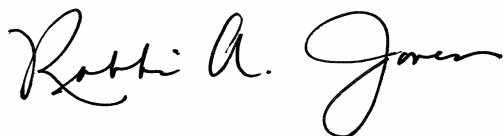
This data package contains the analytical results for the project identified above and includes a Case Narrative, Sample Results and Chain of Custody. Unless otherwise noted, all samples were received in acceptable condition and processed according to the referenced methods.

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:

- A Surrogate recovery above the control limit. There was no detection of GRO in the sample. No further action was taken.
- DO Surrogates diluted out.
- 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
P-20-SB-1 (4-5)	0120336-01	Solid	12/09/10	12/10/10
P-20-SB-2 (4-5)	0120336-02	Solid	12/09/10	12/10/10
P-20-SB-3 (8-10)	0120336-03	Solid	12/09/10	12/10/10
P-20-SB-4 (8-10)	0120336-04	Solid	12/09/10	12/10/10
P-20-SB-5 (4-5)	0120336-05	Solid	12/09/10	12/10/10
P-20-SB-5 (13-15)	0120336-06	Solid	12/09/10	12/10/10
P-20-SB-6 (4-5)	0120336-07	Solid	12/09/10	12/10/10
P-20-SB-6 (13-15)	0120336-08	Solid	12/09/10	12/10/10
P-20-SB-7 (4-5)	0120336-09	Solid	12/09/10	12/10/10
P-20-SB-7 (13-15)	0120336-10	Solid	12/09/10	12/10/10
P-20-SB-8 (4-5)	0120336-11	Solid	12/09/10	12/10/10
P-20-SB-8 (13-15)	0120336-12	Solid	12/09/10	12/10/10
P-20-SB-9 (5-6)	0120336-13	Solid	12/09/10	12/10/10
P-20-SB-10 (5-6)	0120336-14	Solid	12/09/10	12/10/10

Samples received in good condition at 1.8 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: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-1 (4-5)
Prism Sample ID: 0120336-01
Prism Work Order: 0120336
Time Collected: 12/09/10 10:10
Time Submitted: 12/10/10 10:43

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	8.5	1.4	1	*8015C	12/16/10 17:57	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			76 %		49-124	
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	BRL	mg/kg dry	4.6	0.60	50	*8015C	12/15/10 13:10	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			151 %		55-129	A
General Chemistry Parameters									
% Solids	82.5	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362

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

Project: NCDOT: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-2 (4-5)
Prism Sample ID: 0120336-02
Prism Work Order: 0120336
Time Collected: 12/09/10 10:20
Time Submitted: 12/10/10 10:43

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	12/16/10 18:32	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			89 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	5.2	0.68	50	*8015C	12/15/10 13:41	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			143 %		55-129	A

General Chemistry Parameters

% Solids	81.0	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362
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AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-3 (8-10)
Prism Sample ID: 0120336-03
Prism Work Order: 0120336
Time Collected: 12/09/10 10:30
Time Submitted: 12/10/10 10:43

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	8.7	1.4	1	*8015C	12/16/10 19:07	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			86 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	5.2	0.68	50	*8015C	12/15/10 14:12	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			153 %		55-129	A

General Chemistry Parameters

% Solids	79.9	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362
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AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-4 (8-10)
Prism Sample ID: 0120336-04
Prism Work Order: 0120336
Time Collected: 12/09/10 10:40
Time Submitted: 12/10/10 10:43

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	12/16/10 19:43	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			89 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	5.0	0.65	50	*8015C	12/15/10 14:42	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			168 %		55-129	A

General Chemistry Parameters

% Solids	81.1	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362
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AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-5 (4-5)
Prism Sample ID: 0120336-05
Prism Work Order: 0120336
Time Collected: 12/09/10 10:45
Time Submitted: 12/10/10 10:43

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	8.7	1.4	1	*8015C	12/16/10 20:18	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			84 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.5	0.58	50	*8015C	12/15/10 15:13	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			134 %		55-129	A

General Chemistry Parameters

% Solids	80.2	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362
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AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-5 (13-15)
Prism Sample ID: 0120336-06
Prism Work Order: 0120336
Time Collected: 12/09/10 10:50
Time Submitted: 12/10/10 10:43

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	1100	mg/kg dry	180	29	20	*8015C	12/17/10 1:02	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			0 %		49-124	DO
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	7400	mg/kg dry	230	30	2000	*8015C	12/16/10 11:56	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			0 %		55-129	DO
General Chemistry Parameters									
% Solids	78.8	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362

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

Project: NCDOT: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-6 (4-5)
Prism Sample ID: 0120336-07
Prism Work Order: 0120336
Time Collected: 12/09/10 11:00
Time Submitted: 12/10/10 10:43

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	8.9	1.4	1	*8015C	12/16/10 21:29	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			80 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	5.0	0.65	50	*8015C	12/15/10 15:44	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			130 %		55-129	A

General Chemistry Parameters

% Solids	78.7	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362
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AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-6 (13-15)
Prism Sample ID: 0120336-08
Prism Work Order: 0120336
Time Collected: 12/09/10 11:05
Time Submitted: 12/10/10 10:43

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	2000	mg/kg dry	170	28	20	*8015C	12/17/10 0:26	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			0 %		49-124	DO
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	12000	mg/kg dry	560	73	5000	*8015C	12/16/10 12:27	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			0 %		55-129	DO
General Chemistry Parameters									
% Solids	81.6	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362

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

Project: NCDOT: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-7 (4-5)
Prism Sample ID: 0120336-09
Prism Work Order: 0120336
Time Collected: 12/09/10 11:15
Time Submitted: 12/10/10 10:43

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	3200	mg/kg dry	180	29	20	*8015C	12/16/10 23:51	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			0 %		49-124	DO
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	47	mg/kg dry	4.6	0.59	50	*8015C	12/16/10 10:23	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			90 %		55-129	
General Chemistry Parameters									
% Solids	78.0	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362

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

Project: NCDOT: Burke County
Parcel 20
Project No.: WBS #34832.1.1
Sample Matrix: Solid

Client Sample ID: P-20-SB-7 (13-15)
Prism Sample ID: 0120336-10
Prism Work Order: 0120336
Time Collected: 12/09/10 11:20
Time Submitted: 12/10/10 10:43

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	460	mg/kg dry	82	13	10	*8015C	12/17/10 8:20	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			75 %		49-124	
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	3800	mg/kg dry	200	27	2000	*8015C	12/16/10 11:25	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			0 %		55-129	DO
General Chemistry Parameters									
% Solids	84.8	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362

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

Project: NCDOT: Burke County
 Parcel 20
 Project No.: WBS #34832.1.1
 Sample Matrix: Solid

Client Sample ID: P-20-SB-8 (4-5)
 Prism Sample ID: 0120336-11
 Prism Work Order: 0120336
 Time Collected: 12/09/10 11:30
 Time Submitted: 12/10/10 10:43

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	12/16/10 22:40	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			81 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.9	0.64	50	*8015C	12/15/10 16:15	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			95 %		55-129	

General Chemistry Parameters

% Solids	79.6	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362
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AMEC Earth & Env. Inc.(DOT Gree)
 Attn: Helen Corley
 338 North Elm St. Suite 112
 Greensboro, NC 27401

Project: NCDOT: Burke County
 Parcel 20
 Project No.: WBS #34832.1.1
 Sample Matrix: Solid

Client Sample ID: P-20-SB-8 (13-15)
 Prism Sample ID: 0120336-12
 Prism Work Order: 0120336
 Time Collected: 12/09/10 11:35
 Time Submitted: 12/10/10 10:43

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	1600	mg/kg dry	170	27	20	*8015C	12/16/10 23:16	JMV	P0L0326
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			0 %		49-124	DO
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	2400	mg/kg dry	100	13	1000	*8015C	12/16/10 10:54	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			0 %		55-129	DO
General Chemistry Parameters									
% Solids	82.9	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362

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

Project: NCDOT: Burke County
 Parcel 20
 Project No.: WBS #34832.1.1
 Sample Matrix: Solid

Client Sample ID: P-20-SB-9 (5-6)
 Prism Sample ID: 0120336-13
 Prism Work Order: 0120336
 Time Collected: 12/09/10 11:45
 Time Submitted: 12/10/10 10:43

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	8.5	1.4	1	*8015C	12/17/10 19:31	JMV	P0L0363
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			88 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.6	0.60	50	*8015C	12/15/10 17:48	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			102 %		55-129	

General Chemistry Parameters

% Solids	82.0	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362
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AMEC Earth & Env. Inc.(DOT Gree)
 Attn: Helen Corley
 338 North Elm St. Suite 112
 Greensboro, NC 27401

Project: NCDOT: Burke County
 Parcel 20
 Project No.: WBS #34832.1.1
 Sample Matrix: Solid

Client Sample ID: P-20-SB-10 (5-6)
 Prism Sample ID: 0120336-14
 Prism Work Order: 0120336
 Time Collected: 12/09/10 12:10
 Time Submitted: 12/10/10 10:43

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	8.7	1.4	1	*8015C	12/17/10 20:41	JMV	P0L0363
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			85 %		49-124	

Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.7	0.61	50	*8015C	12/15/10 18:18	HPE	P0L0294
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			141 %		55-129	A

General Chemistry Parameters

% Solids	80.1	% by Weight	0.100	0.100	1	*SM2540 G	12/16/10 16:00	JAB	P0L0362
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AMEC Earth & Env. Inc.(DOT Gree)
Attn: Helen Corley
338 North Elm St. Suite 112
Greensboro, NC 27401

Project: NCDOT: Burke County Parcel
20
Project No: WBS #34832.1.1

Prism Work Order: 0120336
Time Submitted: 12/10/10 10:43:00AM

Gasoline Range Organics by GC/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch P0L0294 - 5035									
Blank (P0L0294-BLK1)									
Prepared & Analyzed: 12/15/10									
Gasoline Range Organics	BRL	5.0	mg/kg wet						
Surrogate: a,a,a-Trifluorotoluene	5.70		mg/kg wet	5.00		114	55-129		
LCS (P0L0294-BS1)									
Prepared & Analyzed: 12/15/10									
Gasoline Range Organics	52.6	5.0	mg/kg wet	50.0		105	67-116		
Surrogate: a,a,a-Trifluorotoluene	5.70		mg/kg wet	5.00		114	55-129		
LCS Dup (P0L0294-BSD1)									
Prepared & Analyzed: 12/15/10									
Gasoline Range Organics	53.4	5.0	mg/kg wet	50.0		107	67-116	1	200
Surrogate: a,a,a-Trifluorotoluene	5.70		mg/kg wet	5.00		114	55-129		

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

Project: NCDOT: Burke County Parcel
 20
 Project No: WBS #34832.1.1

Prism Work Order: 0120336
 Time Submitted: 12/10/10 10:43:00AM

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 P0L0326 - 3545A										
Blank (P0L0326-BLK1)										
Prepared: 12/15/10 Analyzed: 12/16/10										
Diesel Range Organics	BRL	7.0	mg/kg wet							
Surrogate: o-Terphenyl	1.51		mg/kg wet	1.60		94	49-124			
LCS (P0L0326-BS1)										
Prepared: 12/15/10 Analyzed: 12/16/10										
Diesel Range Organics	62.0	7.0	mg/kg wet	79.6		78	55-109			
Surrogate: o-Terphenyl	1.91		mg/kg wet	1.59		120	49-124			
LCS Dup (P0L0326-BSD1)										
Prepared: 12/15/10 Analyzed: 12/16/10										
Diesel Range Organics	57.2	7.0	mg/kg wet	79.5		72	55-109	8	200	
Surrogate: o-Terphenyl	1.74		mg/kg wet	1.59		110	49-124			
Batch P0L0363 - 3545A										
Blank (P0L0363-BLK1)										
Prepared: 12/16/10 Analyzed: 12/17/10										
Diesel Range Organics	BRL	7.0	mg/kg wet							
Surrogate: o-Terphenyl	1.35		mg/kg wet	1.60		84	49-124			
LCS (P0L0363-BS1)										
Prepared: 12/16/10 Analyzed: 12/17/10										
Diesel Range Organics	51.5	7.0	mg/kg wet	79.9		64	55-109			
Surrogate: o-Terphenyl	1.59		mg/kg wet	1.60		99	49-124			
LCS Dup (P0L0363-BSD1)										
Prepared: 12/16/10 Analyzed: 12/17/10										
Diesel Range Organics	55.4	7.0	mg/kg wet	79.9		69	55-109	7	200	
Surrogate: o-Terphenyl	1.71		mg/kg wet	1.60		107	49-124			

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

Project: NCDOT: Burke County Parcel
20
Project No: WBS #34832.1.1

Prism Work Order: 0120336
Time Submitted: 12/10/10 10:43:00AM

General Chemistry Parameters - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0L0362 - NO PREP										
Blank (P0L0362-BLK1)					Prepared & Analyzed: 12/16/10					
% Solids	100	0.100	% by Weight							
Duplicate (P0L0362-DUP1)					Source: 0120336-09 Prepared & Analyzed: 12/16/10					
% Solids	77.2	0.100	% by Weight		78.0			1	20	

Sample Extraction Data

Prep Method: 3545A

Lab Number	Batch	Initial	Final	Date
0120336-01	P0L0326	25.09 g	1 mL	12/15/10
0120336-02	P0L0326	25.1 g	1 mL	12/15/10
0120336-03	P0L0326	25.12 g	1 mL	12/15/10
0120336-04	P0L0326	25.14 g	1 mL	12/15/10
0120336-05	P0L0326	25.14 g	1 mL	12/15/10
0120336-06	P0L0326	25.13 g	1 mL	12/15/10
0120336-07	P0L0326	25.11 g	1 mL	12/15/10
0120336-08	P0L0326	25.06 g	1 mL	12/15/10
0120336-09	P0L0326	25.05 g	1 mL	12/15/10
0120336-10	P0L0326	25.13 g	1 mL	12/15/10
0120336-11	P0L0326	25.05 g	1 mL	12/15/10
0120336-12	P0L0326	25.07 g	1 mL	12/15/10
0120336-13	P0L0363	25.06 g	1 mL	12/16/10
0120336-14	P0L0363	25.02 g	1 mL	12/16/10

Prep Method: 5035

Lab Number	Batch	Initial	Final	Date
0120336-01	P0L0294	6.53 g	5 mL	12/15/10
0120336-02	P0L0294	5.92 g	5 mL	12/15/10
0120336-03	P0L0294	6 g	5 mL	12/15/10
0120336-04	P0L0294	6.15 g	5 mL	12/15/10
0120336-05	P0L0294	6.97 g	5 mL	12/15/10
0120336-06	P0L0294	5.44 g	5 mL	12/15/10
0120336-07	P0L0294	6.39 g	5 mL	12/15/10
0120336-08	P0L0294	5.44 g	5 mL	12/15/10
0120336-09	P0L0294	7.01 g	5 mL	12/15/10
0120336-10	P0L0294	5.78 g	5 mL	12/15/10
0120336-11	P0L0294	6.4 g	5 mL	12/15/10
0120336-12	P0L0294	5.85 g	5 mL	12/15/10
0120336-13	P0L0294	6.62 g	5 mL	12/15/10
0120336-14	P0L0294	6.7 g	5 mL	12/15/10

NO PREP

Lab Number	Batch	Initial	Final	Date
0120336-01	P0L0362	30 g	30 mL	12/16/10
0120336-02	P0L0362	30 g	30 mL	12/16/10
0120336-03	P0L0362	30 g	30 mL	12/16/10
0120336-04	P0L0362	30 g	30 mL	12/16/10
0120336-05	P0L0362	30 g	30 mL	12/16/10
0120336-06	P0L0362	30 g	30 mL	12/16/10
0120336-07	P0L0362	30 g	30 mL	12/16/10
0120336-08	P0L0362	30 g	30 mL	12/16/10
0120336-09	P0L0362	30 g	30 mL	12/16/10
0120336-10	P0L0362	30 g	30 mL	12/16/10
0120336-11	P0L0362	30 g	30 mL	12/16/10
0120336-12	P0L0362	30 g	30 mL	12/16/10
0120336-13	P0L0362	30 g	30 mL	12/16/10
0120336-14	P0L0362	30 g	30 mL	12/16/10

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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: AMEL E+E
Report To/Contact Name: Helen Corley
Reporting Address: 338 N Elm Street
Greensboro, NC 27401
Phone: 336-691-5398 Fax (Yes) (No):
Email (Yes) (No) Email Address: helen.corley@amel.com
EDD Type: PDF Excel Other
Site Location Name: Parcel 20
Site Location Physical Address: Morganton, NC

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2 QUOTE # TO ENSURE PROPER BILLING: WBS: 34832.1

Project Name: Burke County
Short Hold Analysis: (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

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>1.8</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 type="checkbox"/>	<input checked="" type="checkbox"/>
VOLATILES rec'd W/OUT HEADSPACE?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PROPER CONTAINERS used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Purchase Order No./Billing Reference WBS: 34832.1.1
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)

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					
P-20-SB-1(4-5)	12-9-10	1010	Soil	VOA/G	3/2	VOA/G	None methanol	X	X		01
P-20-SB-2(4-5)		1020									02
P-20-SB-3(8-10)		1030									03
P-20-SB-4(8-10)		1040									04
P-20-SB-5(4-5)		1045									05
P-20-SB-5(13-15)		1050									06
P-20-SB-6(4-5)		1100									07
P-20-SB-6(13-15)		1105									08
P-20-SB-7(4-5)		1115									09
P-20-SB-7(13-15)		1120									10

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

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>12-10-10</u>	Military/Hours	Additional Comments:
Relinquished By: (Signature)	Received By: (Signature)	Date		
Relinquished By: (Signature)	Received For Prism Laboratories By: <u>[Signature]</u>	Date <u>12-10-10</u>	10:43	
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>0120336</u>		

PRISM USE ONLY

Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

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)



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Phone: 336-691-5348 Fax (Yes) (No):
Email (Yes) (No) Email Address: helen.corley@amec.com
EDD Type: PDF Excel Other
Site Location Name: Parcel 20
Site Location Physical Address: Morganton, NC

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2 QUOTE # TO ENSURE PROPER BILLING: WBS: 34832-1-1

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*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: 34832-1-1
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>1.8</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 type="checkbox"/>	<input checked="" type="checkbox"/>
VOLATILES rec'd W/OUT HEADSPACE?	<input type="checkbox"/>	<input 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				
P-20-SB-8(4-5)	12-9-10	1130	Soil	VOA/G	3/2	VOA/G	none methanol	X X		11
P-20-SB-8(1345)	↓	1135	↓	↓	↓	↓	↓	↓ ↓		12
P-20-SB-9(5-6)	↓	1145	↓	↓	↓	↓	↓	↓ ↓		13
P-20-SB-10(5-6)	↓	1210	↓	↓	↓	↓	↓	↓ ↓		14

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

PRESS DOWN FIRMLY - 3 COPIES

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<input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input checked="" type="checkbox"/> Hand-delivered <input type="checkbox"/> Prism Field Service <input type="checkbox"/> Other				

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
--	--	--	---	--	---	---	---	--

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)