

June 25, 2010

Ms. Cheryl Youngblood  
North Carolina Department of Transportation  
Geotechnical Engineering Unit  
1589 Mail Service Center  
Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment  
Kyle and Frances Harris Property (Parcel #166)  
1399 Union Cross Road  
Kernersville, Forsyth County, North Carolina  
NCDOT Tip No. U-4909  
WBS Element 40278.1.1  
AECOM Project No. 60155373

Dear Ms. Youngblood:

AECOM Technical Services of North Carolina, Inc., (AECOM) has completed the Preliminary Site Assessment conducted at the above-referenced property. The work was performed in accordance with the Technical and Cost proposal dated May 3, 2010, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated May 5, 2010. Activities associated with the assessment consisted of conducting a geophysical investigation, collecting soil samples for laboratory analysis, and reviewing applicable North Carolina Department of Environment and Natural Resources (NCDENR) records. The purpose of this report is to document the field activities, present the laboratory analyses, and provide recommendations regarding the property.

### **Location and Description**

The Kyle and Frances Harris Property (Parcel #166) is located at 1399 Union Cross Road (SR 2643) in Kernersville, Forsyth County, North Carolina. The property is situated on the northeast quadrant at the intersection of Union Cross Road and Old Salem Road (SR 2632) (Figure 1). Based on information supplied by the NCDOT and the site visit, AECOM understands that the site is an active gas station/convenience store (Union Cross Mart) where three 8,000-gallon gasoline underground storage tanks (USTs) are present. The structure on the property consists of one block building with an asphalt parking lot in front (Figure 2). The NCDOT has advised that the right-of-way/easement will affect most of the property, including the existing USTs and pump islands. Because of the presence of USTs and pump islands, the NCDOT requested a Preliminary Site Assessment. The scope of work as defined in the Request for Technical and Cost Proposal was to evaluate the site with respect to the presence of USTs and assess where

contamination exists on the property. An estimate of the quantity of impacted soil was to be provided.

AECOM reviewed the on-line NCDENR Incident Management database and no Incident Number has been assigned to the property. AECOM also examined the UST registration database to obtain UST ownership information. According to the database, the former USTs on the property were operated under Facility Number 0-025043. The operator and owner of the tanks were listed as follows:

Owner

Kyle's Friendly Service, Inc.  
127 Blue Bell Road  
Greensboro, NC 27406-5301  
(336) 272-6464

Operator

Union Cross Mart  
1399 Union Cross Road  
Kernersville, NC 27284  
(336) 996-5060

### **Geophysical Survey**

Prior to AECOM's mobilization to the site, Pyramid Environmental conducted a geophysical survey as part of this project to evaluate if USTs were present on the proposed right-of-way/easement. The geophysical survey consisted of an electromagnetic survey using a Geonics EM61 time-domain electromagnetic induction meter to locate buried metallic objects, specifically USTs. A survey grid was laid out at the property with the X-axis oriented approximately parallel to Old Salem Road and the Y-axis oriented approximately perpendicular to Old Salem Road. The grid was located to cover the accessible portions of the proposed right-of-way. The survey lines were spaced 5 feet apart. Magnetic data was collected continuously along each survey line with a data logger. After collection, the data was reviewed in the field with graphical computer software. Following the electromagnetic survey, a ground penetrating radar (GPR) survey was conducted to further evaluate any significant metallic anomalies.

Access was available to all areas of the proposed right-of-way/easement on the property and several anomalies were detected with the geophysical survey. All of these anomalies were attributed to buried utility lines or conduits, or vehicles. A detailed report of findings and interpretations is presented in Attachment A.

### **Site Assessment Activities**

On May 26, 2010, AECOM mobilized to the site to conduct a Geoprobe<sup>®</sup> direct push investigation to evaluate soil conditions within the proposed right-of-way/easement. Continuous sampling using direct push technology (American Environmental Drilling of Aberdeen, North Carolina) resulted in generally good recovery of soil samples from the direct-push holes. Soil samples were collected and contained in acetate sleeves inside the direct push sampler. Each of these sleeves was divided into 2-foot long sections for soil sample screening. Each 2-foot interval was placed in a resealable plastic bag and the bag was set aside for a sufficient amount of

time to allow volatilization of organic compounds from the soil to the bag headspace. The probe of a flame ionization detector/photo ionization detector (FID/PID) was inserted into the bag and the reading was recorded. After terminating the sample hole, the soil sample from the depth interval with the highest FID/PID reading was submitted to Prism Laboratories in Charlotte, North Carolina, using standard chain-of-custody procedures. The laboratory analyzed the soil samples for total petroleum hydrocarbons (TPH) in the diesel range organics (DRO) and gasoline range organics (GRO).

Nine direct-push holes (FH-1 through FH-9) were advanced within the proposed right-of-way/easement to a depth of 10 to 15 feet as shown in Figure 2 and Attachment B. The borings were located to evaluate the entire right-of-way/easement (Attachment C). Borings FH-1 through FH-6 were located to evaluate the soil conditions adjacent to the existing USTs and pump islands, and borings FH-7 through FH-9 were placed to assess soil conditions at proposed drop inlet locations. The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 3 inches of asphalt/gravel or topsoil. Below the surface covering, the material was a medium brown silt/clay to a depth of about 4 to 8 feet. Below this material was a medium to olive brown silt/sand. Several of the borings encountered a tan to white coarse-grained sand at a depth of about 9 to 10 feet. With the exception of borings FH-4 and FH-7, the borings were terminated at a depth of 15 feet. Borings FH-4 and FH-7 were terminated at a depth of 10 feet where groundwater was observed. No groundwater was noted in any of the other borings. Based on field screening, soil samples were submitted for laboratory analysis, which are summarized in Table 1. Following completion, each boring was backfilled in accordance with 15A NCAC 2C.

### **Analytical Results**

Based on the laboratory reports, summarized in Table 1 and presented in Attachment D, petroleum hydrocarbon compounds identified as GRO were detected in one of the nine soil samples collected from the site. The soil sample from boring FH-6 contained a GRO concentration above the method quantitation limit. According to the North Carolina Underground Storage Tank Section's Underground Storage Tank Closure Policy dated August 24, 1998, the action level for TPH analyses is 10 milligrams per kilogram (mg/kg) for both gasoline and diesel fuel. However, that agency's "Guidelines for Assessment and Corrective Action," dated December 2008, does not allow for use of TPH analyses for confirmation of the extent of petroleum contamination or its cleanup. As a result, while TPH concentrations are no longer applicable in determining if soil contamination is present, this analysis is a legitimate screening tool. Based on the TPH action level for UST closures, the assumed action level for this report is 10 mg/kg. The GRO concentration in the soil sample from boring FH-6 (23 mg/kg) was present at a concentration above the assumed action level.

Ms. Cheryl Youngblood  
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## Conclusions and Recommendations

A Preliminary Site Assessment was conducted to evaluate the Kyle and Frances Property (Parcel #166) located at 1399 Union Cross Road in Kernersville, Forsyth County, North Carolina. Nine soil borings were advanced to evaluate the soil conditions throughout the right-of-way/easement. The laboratory reports of the soil samples from these borings suggest that a GRO concentration was present above the assumed action level in one of the nine soil samples analyzed.

To evaluate the volume of soil requiring possible remediation, the soil samples with TPH concentrations above 10 mg/kg were considered. The analytical results of the soil samples suggest that the soil from boring FH-6 contained a TPH concentration identified as GRO above the assumed action level. A review of the field screening readings (Table 1) suggests that the potential contamination is likely present at a 4-foot thickness. Because the contamination was detected in only one boring and at a relative low concentration, AECOM assumed the potential contamination to be contained within a 5-foot radius around the boring. Using a cylinder volume equation, AECOM calculated the volume of potentially contaminated soil to be about 11.6 cubic yards. This volume is estimated from TPH analytical data, which are no longer valid for remediation of sites reported after January 2, 1998. After this date, MADEP EPH/VPH and EPA Method 8260/8270 analyses will likely be required to confirm cleanup. However, these analyses do not correlate exactly with TPH data and, as a result, the actual volume of contaminated soil may be higher or lower.

The attached Figure 2 shows that a fill section is proposed for the areas where the potentially contaminated soil is located. Because the area is in a fill section, the contaminated soil will likely not affect the project.

AECOM appreciates the opportunity to work with the NCDOT on this project. Because compounds were detected above the applicable action levels in the soil samples, AECOM recommends that a copy of this report be submitted to the Winston-Salem Regional Office UST Section. If you have any questions, please contact me at (919) 854-6238.

Sincerely,

Michael W. Branson, P.G.  
Project Manager

Attachments

c: Project File

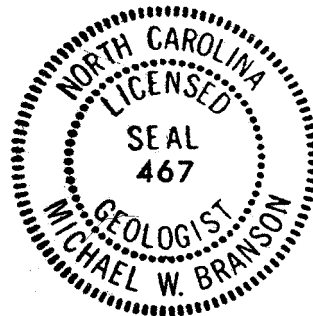


TABLE 1

SOIL FIELD SCREENING AND ANALYTICAL RESULTS  
 KYLE AND FRANCES HARRIS PROPERTY (PARCEL #166)  
 KERNERSVILLE, FORSYTH COUNTY, NORTH CAROLINA  
 NCDOT PROJECT NO. U-4909  
 WBS ELEMENT 40278.1.1  
 AECOM PROJECT NO. 60155373

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
FH-1	0 - 2	28			
	2 - 4	87			
	4 - 6	85	FH-1	DRO (BQL) GRO (BQL)	10 10
	6 - 8	25			
	8 - 10	35			
	10 - 12	15			
	12 - 14	6.81			
	14 - 15	4.23			
FH-2	0 - 2	15			
	2 - 4	27			
	4 - 6	61	FH-2	DRO (BQL) GRO (BQL)	10 10
	6 - 8	28			
	8 - 10	32			
	10 - 12	8.23			
	12 - 14	5.79			
	14 - 15	6.27			
FH-3	0 - 2	6.62			
	2 - 4	19			
	4 - 6	24			
	6 - 8	4.67			
	8 - 10	69	FH-3	DRO (BQL) GRO (BQL)	10 10
	10 - 12	26			
	12 - 14	9.37			
	14 - 15	11			
FH-4	0 - 2	1.58	FH-4	DRO (BQL) GRO (BQL)	10 10
	2 - 4	1.20			
	4 - 6	1.12			
	6 - 8	0.65			
	8 - 10	1.31			
FH-5	0 - 2	3.74			
	2 - 4	15			
	4 - 6	37			
	6 - 8	1.60			
	8 - 10	5.01	FH-5	DRO (BQL) GRO (BQL)	10 10
	10 - 12	6.46			
	12 - 14	4.04			
	14 - 15	71			
FH-6	0 - 2	16			
	2 - 4	55			
	4 - 6	87			
	6 - 8	35			
	8 - 10	17			
	10 - 12	206	FH-6	DRO (BQL) GRO (23)	10 10
	12 - 14	85			
	14 - 15	36			



TABLE 1 (cont)

SOIL FIELD SCREENING AND ANALYTICAL RESULTS  
 KYLE AND FRANCES HARRIS PROPERTY (PARCEL #166)  
 KERNERSVILLE, FORSYTH COUNTY, NORTH CAROLINA  
 NCDOT PROJECT NO. U-4909  
 WBS ELEMENT 40278.1.1  
 AECOM PROJECT NO. 60155373

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
FH-7	0 - 2	2.07			
	2 - 4	9.19			
	4 - 6	18			
	6 - 8	57	FH-7	DRO (BQL) GRO (BQL)	10 10
	8 - 10	15			
FH-8	0 - 2	7.85			
	2 - 4	24			
	4 - 6	21			
	6 - 8	39			
	8 - 10	207	FH-8	DRO (BQL) GRO (BQL)	10 10
	10 - 12	2.49			
	12 - 14	6.07			
14 - 15	33				
FH-9	0 - 2	1.72			
	2 - 4	1.88			
	4 - 6	2.24	FH-9	DRO (BQL) GRO (BQL)	10 10
	6 - 8	1.90			
	8 - 10	2.03			
	10 - 12	1.01			
	12 - 14	1.2			
14 - 15	1.62				

Soil samples were collected on May 26, 2010.

DRO - Diesel range organics.

GRO - Gasoline range organics.

BQL - Below quantitation limit.

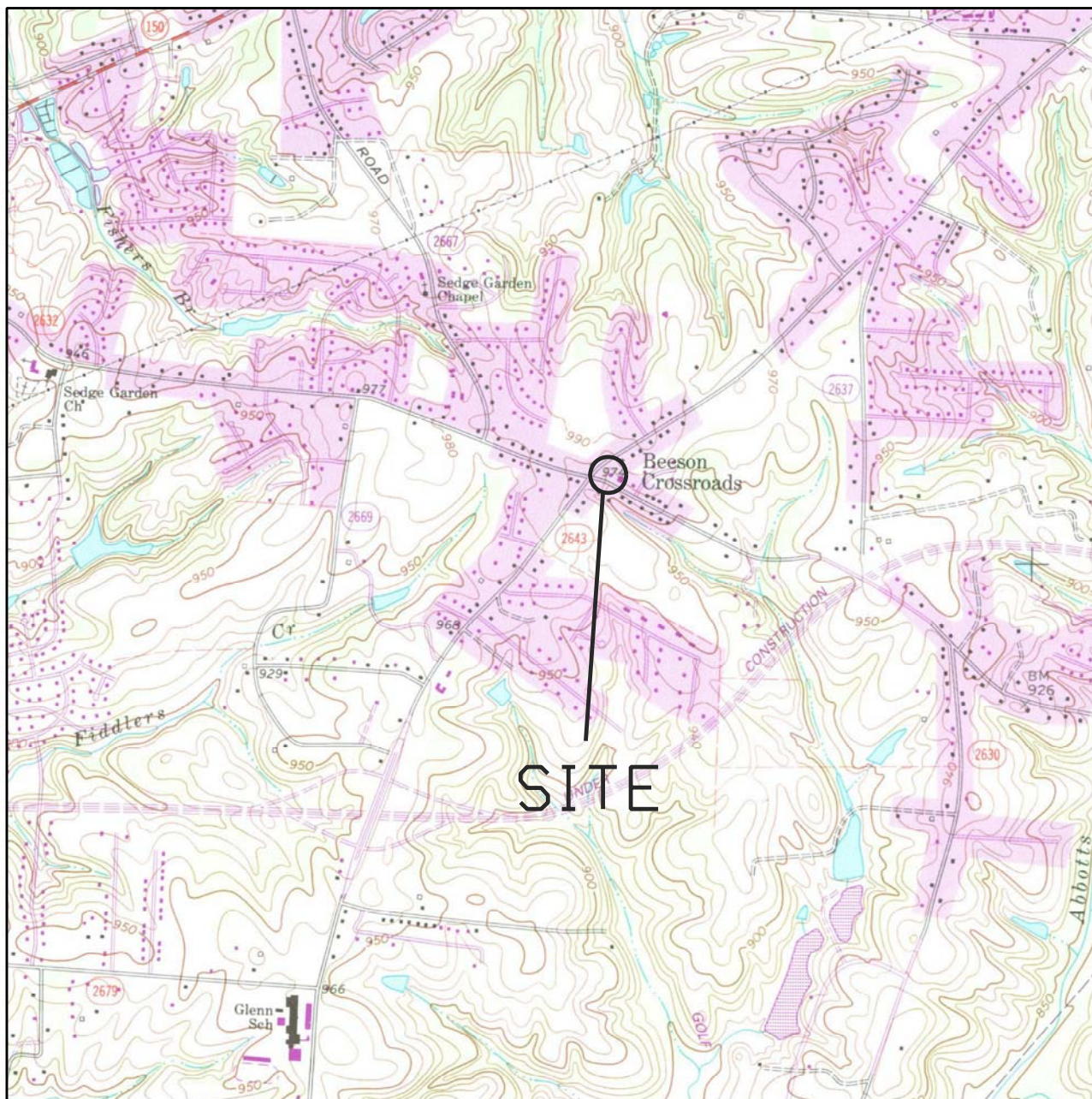
ppm - parts per million.

mg/kg - milligrams per kilogram.

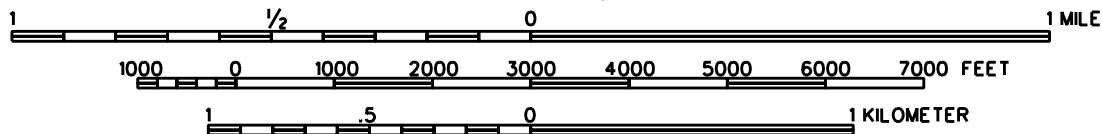
**BOLD** values are present above the assumed action level.



## **FIGURES**



SCALE 1:24,000



SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: KERNERSVILLE, NC (REV 1994)



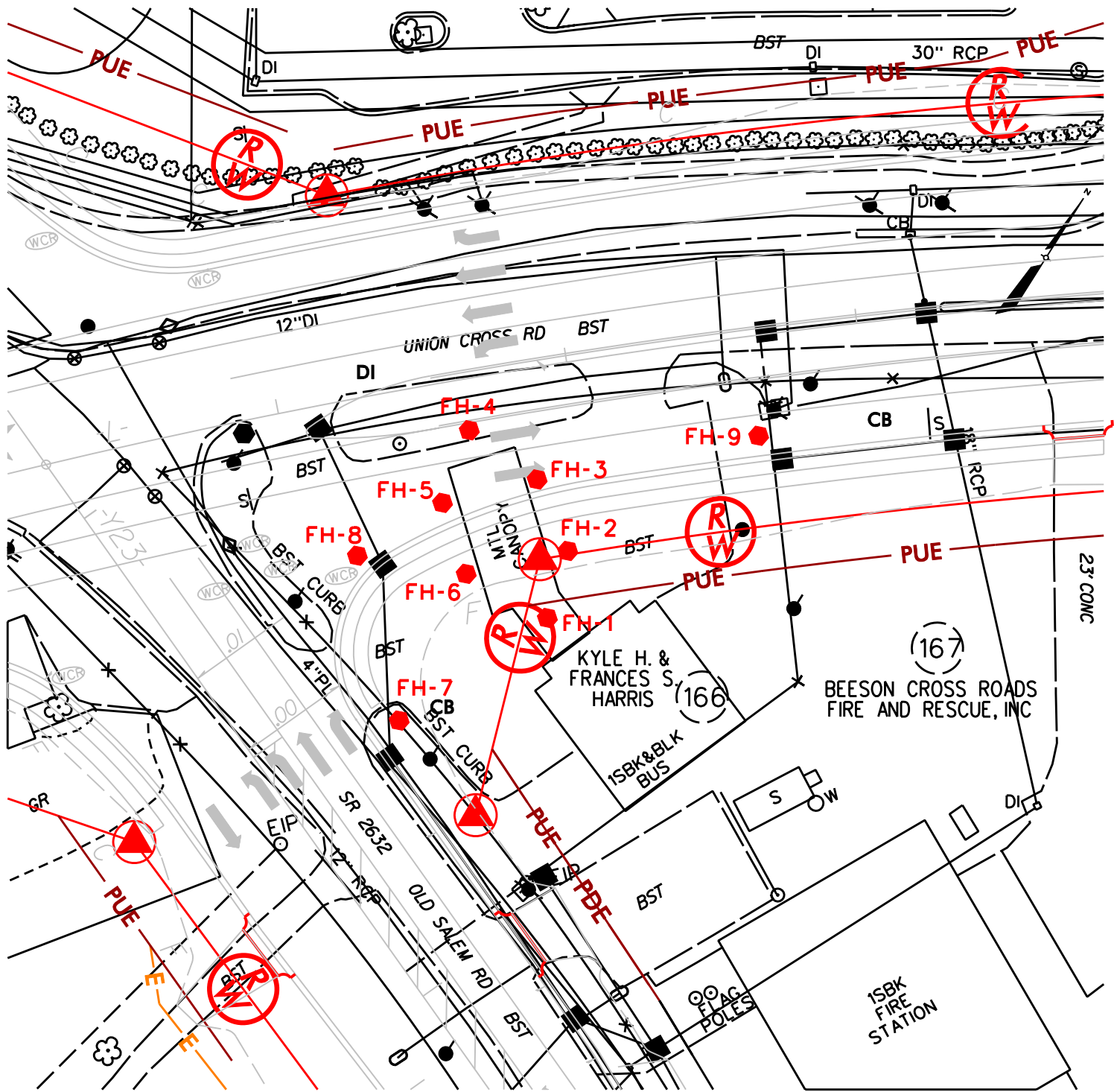
**FIGURE 1**  
**VICINITY MAP**

KYLE AND FRANCES HARRIS PROPERTY (PARCEL #166)  
KERNERSVILLE, FORSYTH COUNTY NORTH CAROLINA

MAY 2010

60155373



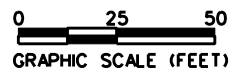


NOTE: EXISTING USTS LOCATED UNDER PUMP ISLAND

**LEGEND**

**FH-1**

● SOIL SAMPLE LOCATION AND IDENTIFICATION



**FIGURE 2**  
**SITE MAP**

KYLE AND FRANCES HARRIS PROPERTY (PARCEL •166)  
KERNERSVILLE, FORSYTH COUNTY, NORTH CAROLINA

MAY 2010

60155373

**ATTACHMENT A**

**GEOPHYSICAL INVESTIGATION REPORT**

*EM61 & GPR SURVEYS*

**KYLE & FRANCIS HARRIS PROPERTY**

**PARCEL 166**

**Forsyth County, North Carolina**

**June 7, 2010**

**Report prepared for: Michael W. Branson, PG  
AECOM Environment  
701 Corporate Center Drive, Suite 475  
Raleigh, North Carolina 27607**

**Prepared by: \_\_\_\_\_  
Mika Trifunovic**

**Reviewed by: \_\_\_\_\_  
Douglas Canavello, PG**

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GREENSBORO, NC 27416-0265  
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**AECOM Environment**  
**GEOPHYSICAL INVESTIGATION REPORT**  
**KYLE & FRANCIS HARRIS PROPERTY**  
**PARCEL 166**  
**Forsyth County, North Carolina**

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FIGURES

Figure 1	Geophysical Equipment & Site Photographs
Figure 2	EM61 Metal Detection – Bottom Coil Results
Figure 3	EM61 Metal Detection – Differential Results

## **1.0 INTRODUCTION**

Pyramid Environmental conducted geophysical investigations for AECOM Environment across the accessible portions of the Kyle and Francis Harris property (Parcel 166) located along the northeast corner of the Union Cross Road and Old Salem Road intersection in Forsyth County, North Carolina. The property contains the BP gas station facility and consists primarily of asphalt and grass surfaces with a steel reinforced concrete pump island area.

The geophysical investigation was conducted on May 11 and 19, 2010 to determine if unknown, metallic, underground storage tanks (USTs) were present beneath the property. AECOM Environment representative Mr. Michael Branson, PG identified the geophysical survey area to Pyramid Environmental personnel prior to the investigation. The geophysical survey area has a maximum length and width of 200 feet and 190 feet respectively. Photographs of the geophysical equipment used in this investigation and the Kyle and Francis Harris property (Parcel 166) are shown in **Figure 1**.

## **2.0 FIELD METHODOLOGY**

Prior to conducting the geophysical investigation, a 10-foot by 10-foot survey grid was established across the geophysical survey area (property) using measuring tapes, pin flags and water-based marking paint. These grid marks were used as X-Y coordinates for location control when collecting the geophysical data and establishing base maps for the geophysical results.

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection surveys and ground penetrating radar (GPR) surveys. The EM survey was performed on May 11, 2010 using a Geonics EM61-MK1 metal detection instrument. According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. Smaller objects (1-foot or less in size) can be detected to a maximum depth of 4 to 5 feet. All of the EM61 data were digitally collected at approximately 0.8 foot intervals along northerly-southerly, or easterly-westerly, parallel survey lines spaced five feet apart. All of the data were downloaded to a computer and

reviewed in the field and office using the Geonics DAT61W and Surfer for Windows Version 7.0 software programs.

GPR surveys were conducted on May 19, 2010 across selected EM61 differential anomalies and areas containing steel reinforced concrete using a GSSI SIR-2000 unit equipped with a 400 MHz antenna. Data were digitally collected in a continuous mode along X-axis and/or Y-axis survey lines, spaced 2.5 to 5.0 feet apart using a vertical scan of 512 samples, at a rate of 48 scans per second. A 70 MHz high pass filter and an 800 MHz low pass filter were used during data acquisition with the 400 MHz antenna. GPR data were collected down to a maximum depth of approximately 5 feet, based on an estimated two-way travel time of 8 nanoseconds per foot. All of the GPR data were downloaded to a field computer and reviewed in the field and office using Radprint software.

Contour plots of the EM61 bottom coil and differential results are presented in **Figures 2 and 3**, respectively. The bottom coil results represent the most sensitive component of the EM61 instrument and detect metal objects regardless of size. The bottom coil response can be used to delineate metal conduits or utility lines, small, isolated metal objects, and areas containing insignificant metal debris. The differential results are obtained from the difference between the top and bottom coils of the EM61 instrument. The differential results focus on the larger metal objects such as drum and UST-size objects and ignore the smaller insignificant metal objects.

Preliminary geophysical results obtained from Parcel 166 were emailed to Mr. Branson during the week of May 17, 2010.

### **3.0 DISCUSSION OF RESULTS**

The linear EM61 bottom coil anomalies intersecting grid lines X=40 Y=82, X=70 Y=136, X=85 Y=167, X=120 Y=72, and X=130 Y=114 are probably in response to buried conduits or lines. The linear anomalies intersecting grid lines X=135 Y=177 and X=145 Y=150 are probably in response to the concrete parking curbs or to conduits buried beneath the parking curbs. Based on the bottom coil results, several conduits may also run from the store to the pump island area and intersect grid

coordinates X=130 Y=105. GPR data suggest the high-amplitude bottom coil anomalies (contours shaded in red) such as the ones intersecting grid coordinates X=142 Y=110 and X=170 Y=83 are in response to the building, steel reinforced concrete and equipment.

GPR data suggest the differential anomalies centered near grid coordinates X=100 Y=110 are probably in response to the steel reinforced concrete, gas pumps and the metal covers of the active USTs. GPR data suggest that the differential anomalies centered near grid coordinates X=105 Y=185 are in response to the parked vehicle and adjacent utility-related equipment. Similarly, the negative differential anomalies centered near grid coordinates X=100 Y=214 and X=120 Y=210 are probably in response to the road sign and utility boxes, respectively.

Excluding the known and active USTs centered near grid coordinates X=100 Y=110 and located within the pump island area, the geophysical investigation suggest the surveyed portion of Parcel 166 does not contain unknown, buried metallic USTs.

#### **4.0 SUMMARY & CONCLUSIONS**

Our evaluation of the EM61 and GPR data collected across the Kyle and Francis Harris property (Parcel 166) located along the northeast corner of the Union Cross Road and Old Salem Road intersection in Forsyth County, North Carolina, provides the following summary and conclusions:

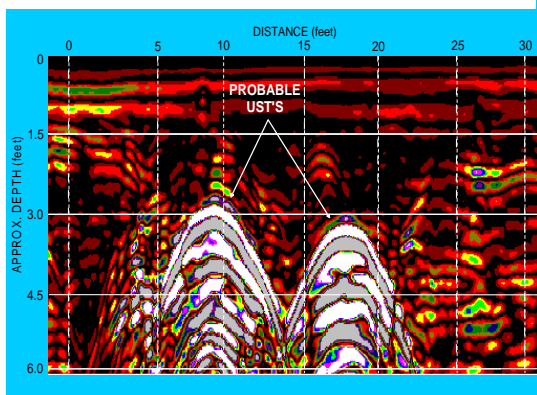
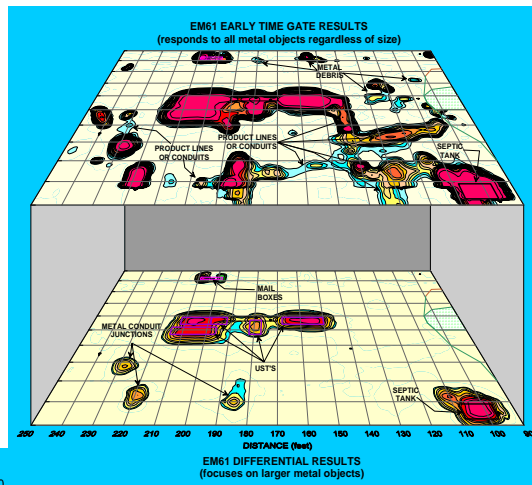
- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the surveyed portions of the site.
- The linear EM61 bottom coil anomalies intersecting grid lines X=40 Y=82, X=70 Y=136, X=85 Y=167, X=120 Y=72, and X=130 Y=114 are probably in response to buried conduits or lines. The linear anomalies intersecting grid lines X=135 Y=177 and X=145 Y=150 are in response to the concrete parking curbs or to conduits buried beneath the parking curbs.

- GPR data suggest the differential anomalies centered near grid coordinates X=100 Y=110 are probably in response to the steel reinforced concrete, gas pumps and the metal covers of the active USTs.
- GPR data suggest the remaining EM61 anomalies are probably in response to known surface objects or utility-related equipment/lines.
- Excluding the known and active USTs centered near grid coordinates X=100 Y=110 and located within the pump island area, the geophysical investigation suggest the surveyed portion of Parcel 166 does not contain unknown, buried metallic USTs.

## **5.0 LIMITATIONS**

EM61 and GPR surveys have been performed and this report prepared for AECOM Environment in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR are non-unique and may not represent actual subsurface conditions. Excluding the active (known) USTs, the EM61 and GPR results obtained for this project have not conclusively determined that the site does not contain unknown, buried metallic USTs, but that none were detected.

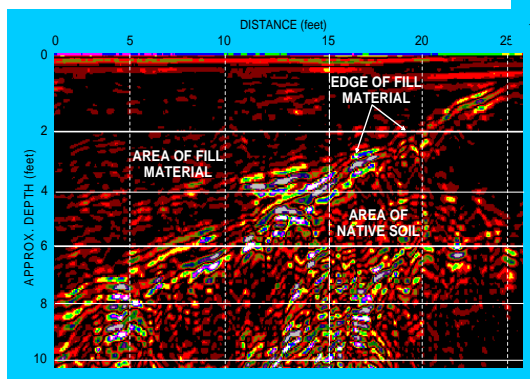
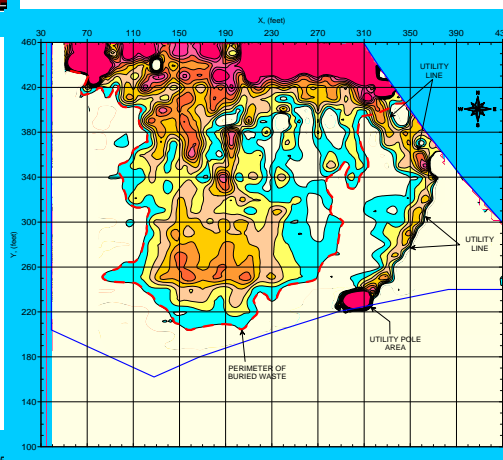




## FIGURES

(on the following pages)

Figures shown on this page are for esthetic purposes only and are not related to the geophysical results discussed in this report.



The photograph shows the Geonics EM61 metal detector that was used to conduct the metal detection survey across the accessible portions of Parcel 166 on May 11, 2010.



The photographs show the SIR-2000 GPR system equipped with a 400 MHz antenna that were used to conduct the ground penetrating radar investigation at Parcel 166 on May 19, 2010.



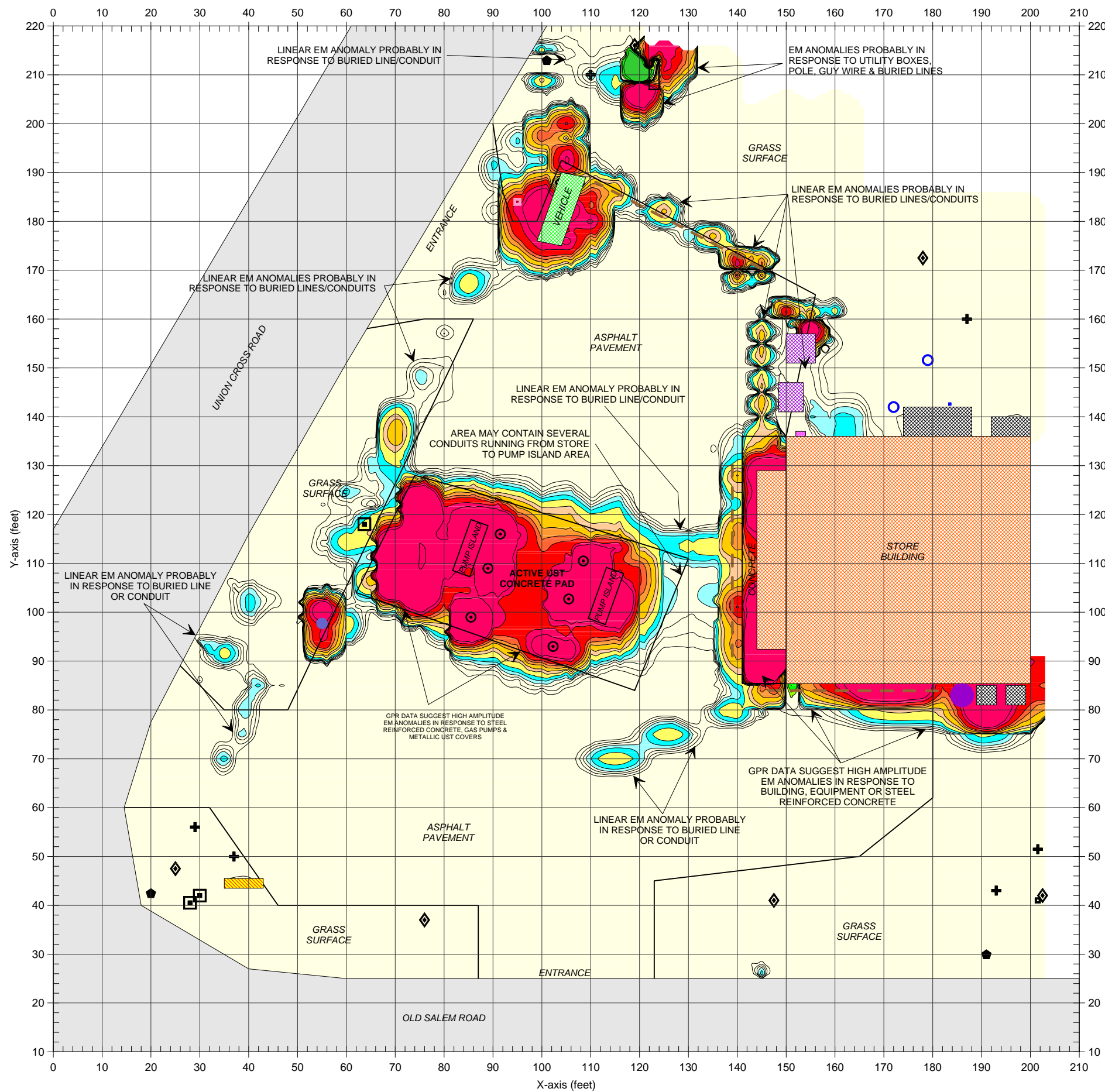
The photograph shows the BP gas station at the Kyle & Frances Harris property (Parcel 166) located at the intersection of Union Cross Road and Old Salem Road in Forsyth County, North Carolina. The photograph is viewed in an easterly direction.



CLIENT	AECOM ENVIRONMENT		DATE	05/28/10	BY	MJD
SITE	KYLE & FRANCES HARRIS PROPERTY (PARCEL 166)		LAY		CHKD	
CITY	FORSYTH COUNTY	STATE	NORTH CAROLINA	ENG		
TITLE	GEOPHYSICAL RESULTS		NO.	2010-109	PROJ	

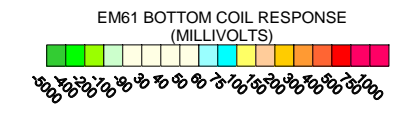
GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS

FIGURE 1



**LEGEND**

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- BUSINESS SIGN
- ELECTRICAL BOX
- AIR VAC MACHINE
- CONCRETE WELL COVER
- GUY WIRE
- MAILBOX
- MISC. EQUIPMENT
- MONITORING WELL
- PARKING CURBS
- PROPANE CYLINDER
- ROAD SIGN
- STORM SEWER GRATE
- UST VENT PIPES
- UST VALVE COVER
- UTILITY POLE
- UTILITY LINE BOX
- WATER METER BOX
- VEHICLE



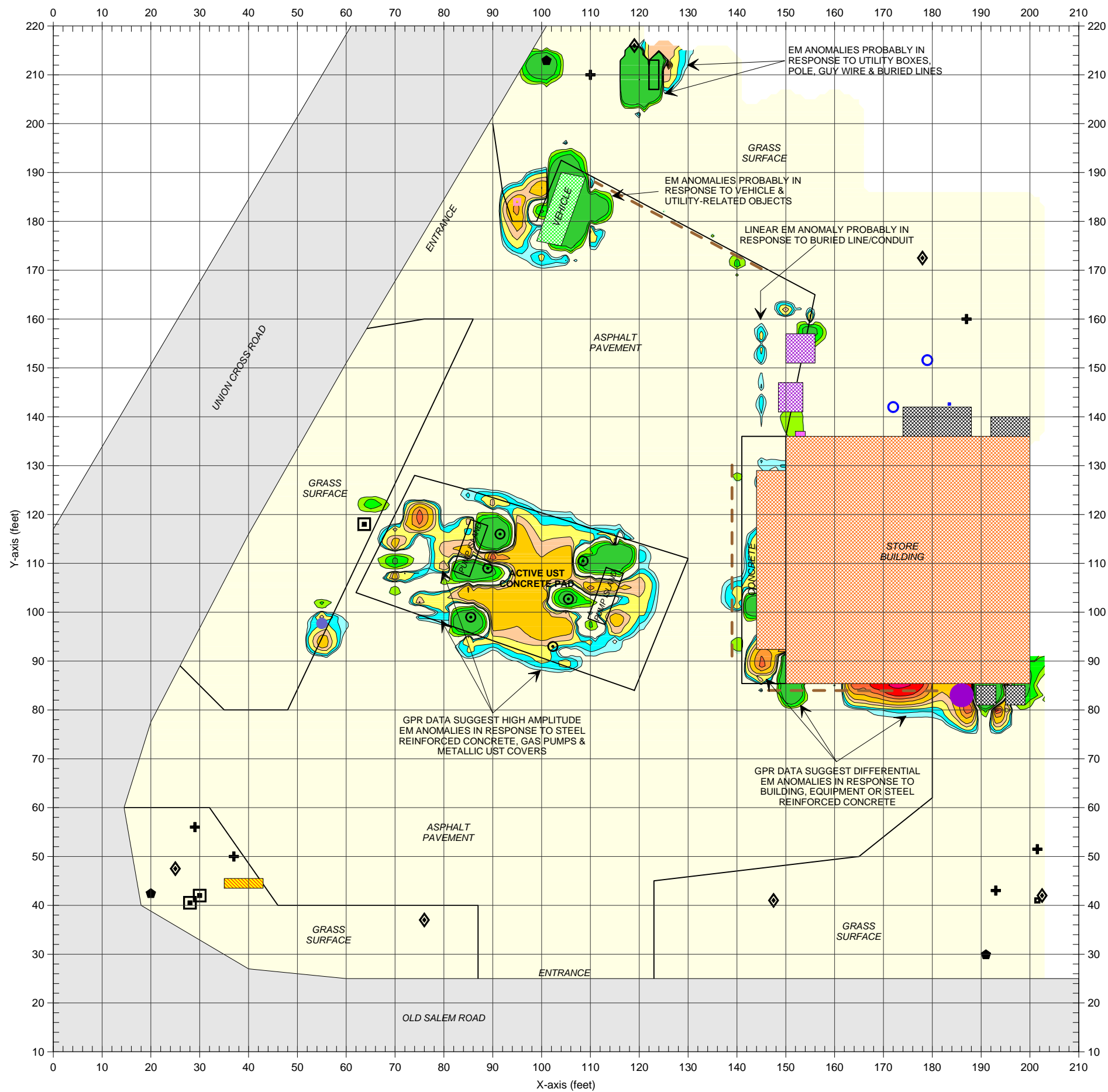
The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on May 11, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on May 19, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

Excluding the known and active USTs located beneath the pump island area, the geophysical investigation suggests that the surveyed portions of Parcel 166 do not contain unknown, buried metallic USTs.

**EM61 METAL DETECTION (BOTTOM COIL RESULTS)**

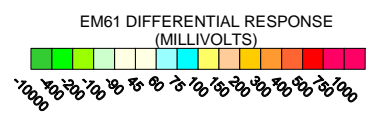
FIGURE 2

CLIENT	AECOM ENVIRONMENT	DATE	05/28/10	DRAWN	MJD
SITE	KYLE & FRANCES HARRIS PROPERTY (PARCEL 166)	LAY		CHKD	
CITY	FORSYTH COUNTY	DWG		FIGURE	
TITLE	NORTH CAROLINA	J-NO.	2010-109		
GEOPHYSICAL RESULTS					



**LEGEND**

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- BUSINESS SIGN
- ELECTRICAL BOX
- AIR VAC MACHINE
- CONCRETE WELL COVER
- + GUY WIRE
- MAILBOX
- MISC. EQUIPMENT
- MONITORING WELL
- PARKING CURBS
- PROPANE CYLINDER
- ◆ ROAD SIGN
- STORM SEWER GRATE
- UST VENT PIPES
- UST VALVE COVER
- ◆ UTILITY POLE
- UTILITY LINE BOX
- WATER METER BOX
- VEHICLE



Note: The contour plot shows the differential response between the bottom and top coils of the EM61 instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM metal detection data were collected on May 11, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on May 19, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

Excluding the known and active USTs located beneath the pump island area, the geophysical investigation suggests that the surveyed portions of Parcel 166 do not contain unknown, buried metallic USTs.

**EM61 METAL DETECTION (DIFFERENTIAL RESULTS)**

FIGURE 3

AECOM ENVIRONMENT	MJD	05/28/10	2010-109
KYLE & FRANCES HARRIS PROPERTY (PARCEL 166)	DRWN	DATE	FIGURE
FORSYTH COUNTY	CHKD	LAY	2010-109
NORTH CAROLINA	DATE	DWG	2010-109
STATE	CLIENT	SITE	TITLE
GEOPHYSICAL RESULTS			

**PYRAMID**  
ENVIRONMENTAL & ENGINEERING, P.C.

**ATTACHMENT B**

# TEST BORING REPORT

**PROJECT** KYLE HARRIS PROPERTY (PARCEL 166)  
**CLIENT** NCDOT (WBS 40278.1.1)  
**PROJECT NUMBER** 60155373 (U-4909)  
**CONTRACTOR** AED  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** FH-1  
**PAGE** 1  
**ELEVATION** \_\_\_\_\_  
**DATE** 5/26/2010  
**DRILLER** KELLY  
**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			28		2" ASPHALT/GRAVEL, MEDIUM BROWN SILT/CLAY, DRY, NO ODOR
			87		AS ABOVE, DRY, SLIGHT ODOR.
			85		MEDIUM TO OLIVE BROWN SILT/SAND, DRY, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			25		AS ABOVE, DRY, SLIGHT ODOR.
			35		MEDIUM BROWN PLASTIC CLAY, DRY, SLIGHT ODOR.
			15		AS ABOVE, DRY, NO ODOR.
15.0			6.81		AS ABOVE, DRY, NO ODOR.
			4.23		AS ABOVE, DRY, NO ODOR.
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					



# TEST BORING REPORT

**PROJECT** KYLE HARRIS PROPERTY (PARCEL 166)  
**CLIENT** NCDOT (WBS 40278.1.1)  
**PROJECT NUMBER** 60155373 (U-4909)  
**CONTRACTOR** AED  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** FH-2  
**PAGE** 1  
**ELEVATION** \_\_\_\_\_  
**DATE** 5/26/2010  
**DRILLER** KELLY  
**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			15		2" TOPSOIL, MEDIUM BROWN SILT/CLAY, DRY, NO ODOR.
			27		AS ABOVE, DRY, NO ODOR.
			61		MEDIUM TO OLIVE BROWN SILT/SAND, DRY, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			28		MEDIUM BROWN PLASTIC SILT/CLAY, DRY, NO ODOR.
			32		AS ABOVE, DRY, NO ODOR.
			8.23		AS ABOVE, DRY, NO ODOR.
15.0			5.79		AS ABOVE, DRY, NO ODOR.
			6.27		AS ABOVE, DRY, NO ODOR.
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					



# TEST BORING REPORT

**PROJECT** KYLE HARRIS PROPERTY (PARCEL 166)  
**CLIENT** NCDOT (WBS 40278.1.1)  
**PROJECT NUMBER** 60155373 (U-4909)  
**CONTRACTOR** AED  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** FH-3  
**PAGE** 1  
**ELEVATION** \_\_\_\_\_  
**DATE** 5/26/2010  
**DRILLER** KELLY  
**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			6.62		3" ASPHALT/GRAVEL, MEDIUM BROWN SILT/CLAY, DRY, NO ODOR.
			19		AS ABOVE, DRY, NO ODOR.
10.0			24		MEDIUM TO OLIVE BROWN SILT/SAND, DRY, NO ODOR.
			4.67		MEDIUM BROWN PLASTIC SILT/CLAY, DRY, NO ODOR.
15.0			69		AS ABOVE TO 9 FEET. BECOMES TAN TO WHITE COARSE-GRAINED SAND, MOIST, NO ODOR.. SUBMIT TO LABORATORY FOR ANALYSIS.
			26		AS ABOVE TO 11 FEET. BECOMES MEDIUM BROWN PLASTIC SILT/CLAY, MOIST, NO ODOR.
20.0			9.37		AS ABOVE, DRY, NO ODOR.
			11		





# TEST BORING REPORT

**PROJECT** KYLE HARRIS PROPERTY (PARCEL 166)  
**CLIENT** NCDOT (WBS 40278.1.1)  
**PROJECT NUMBER** 60155373 (U-4909)  
**CONTRACTOR** AED  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** FH-4  
**PAGE** 1  
**ELEVATION** \_\_\_\_\_  
**DATE** 5/26/2010  
**DRILLER** KELLY  
**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			1.58		2" TOPSOIL, MEDIUM BROWN STIFF SILT/CLAY, DRY, NO ODOR.
				1.20	AS ABOVE, DRY, NO ODOR.
				1.12	AS ABOVE, DRY, NO ODOR.
				0.65	AS ABOVE BECOMONG SOFT, DRY, NO ODOR.
				1.31	AS ABOVE, WET AT 10 FEET, NO ODOR.
10.0					BORING TERMINATED AT 10 FEET. GROUNDWATER ENCOUNTERED AT 10 FEET.
15.0					
20.0					



# TEST BORING REPORT

**PROJECT** KYLE HARRIS PROPERTY (PARCEL 166)  
**CLIENT** NCDOT (WBS 40278.1.1)  
**PROJECT NUMBER** 60155373 (U-4909)  
**CONTRACTOR** AED  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** FH-5  
**PAGE** 1  
**ELEVATION** \_\_\_\_\_  
**DATE** 5/26/2010  
**DRILLER** KELLY  
**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			3.74		2" ASPHALT/GRAVEL, MEDIUM BROWN STIFF SILT/CLAY, DRY, NO ODOR
			15		MEDIUM TO OLIVE BROWN SILT/SAND, DRY, NO ODOR.
			37		AS ABOVE, DRY, NO ODOR.
10.0			1.60		AS ABOVE, DRY, NO ODOR.
			5.01		AS ABOVE, DRY, NO ODOR.
			6.46		AS ABOVE, DRY, NO ODOR.
15.0			4.04		AS ABOVE, DRY, NO ODOR.
			71		MEDIUM BROWN COARSE-GRAINED SAND, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					



# TEST BORING REPORT

**PROJECT** KYLE HARRIS PROPERTY (PARCEL 166)  
**CLIENT** NCDOT (WBS 40278.1.1)  
**PROJECT NUMBER** 60155373 (U-4909)  
**CONTRACTOR** AED  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** FH-6  
**PAGE** 1  
**ELEVATION** \_\_\_\_\_  
**DATE** 5/26/2010  
**DRILLER** KELLY  
**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			16		2" ASPHALT/GRAVEL, MEDIUM BROWN SILT/CLAY, DRY, NO ODOR
			55		MEDIUM TO OLIVE BROWN SILT/SAND, DRY, NO ODOR.
			87		AS ABOVE, DRY, SLIGHT ODOR.
10.0			35		MEDIUM BROWN PLASTIC SILT/CLAY, DRY, NO ODOR.
			17		AS ABOVE, DRY, NO ODOR.
			206		AS ABOVE, DRY, MODERATE ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
15.0			85		AS ABOVE, DRY, MODERATE ODOR.
			36		AS ABOVE, DRY, MODERATE ODOR.
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					



# TEST BORING REPORT

**PROJECT** KYLE HARRIS PROPERTY (PARCEL 166)  
**CLIENT** NCDOT (WBS 40278.1.1)  
**PROJECT NUMBER** 60155373 (U-4909)  
**CONTRACTOR** AED  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** FH-7  
**PAGE** 1  
**ELEVATION** \_\_\_\_\_  
**DATE** 5/26/2010  
**DRILLER** KELLY  
**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			2.07		MEDIUM TO REDDISH BROWN SILT/CLAY, DRY, NO ODOR.
			9.19		AS ABOVE, DRY, NO ODOR.
5.0			18		AS ABOVE TO 5 FEET. BECOMES MEDIUM TO OLIVE BROWN SILT/SAND, DRY, NO ODOR.
			57		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			15		AS ABOVE, WET AT 10 FEET, NO ODOR.
10.0					BORING TERMINATED AT 10 FEET. GROUNDWATER ENCOUNTERED AT 10 FEET.
15.0					
20.0					



# TEST BORING REPORT

**PROJECT** KYLE HARRIS PROPERTY (PARCEL 166)  
**CLIENT** NCDOT (WBS 40278.1.1)  
**PROJECT NUMBER** 60155373 (U-4909)  
**CONTRACTOR** AED  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** FH-8  
**PAGE** 1  
**ELEVATION** \_\_\_\_\_  
**DATE** 5/26/2010  
**DRILLER** KELLY  
**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			7.85		2" ASPHALT/GRAVEL, MEDIUM BROWN SILT/CLAY, DRY, NO ODOR
			24		MEDIUM TO OLIVE BROWN SILT/SAND, DRY, NO ODOR.
10.0			21		AS ABOVE, DRY, NO ODOR.
			39		AS ABOVE, DRY, SLIGHT ODOR.
15.0			207		AS ABOVE, DRY, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			2.49		AS ABOVE, DRY, NO ODOR.
20.0			6.07		AS ABOVE, DRY, NO ODOR.
			33		AS ABOVE, DRY, NO ODOR.
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.



# TEST BORING REPORT

**PROJECT** KYLE HARRIS PROPERTY (PARCEL 166)  
**CLIENT** NCDOT (WBS 40278.1.1)  
**PROJECT NUMBER** 60155373 (U-4909)  
**CONTRACTOR** AED  
**EQUIPMENT** GEOPROBE

**BORING NUMBER** FH-9  
**PAGE** 1  
**ELEVATION** \_\_\_\_\_  
**DATE** 5/26/2010  
**DRILLER** KELLY  
**PREPARED BY** BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			1.72		2" TOPSOIL, MEDIUM TO REDDISH BROWN STIFF SILT/CLAY, DRY, NO ODOR.
			1.88		AS ABOVE, DRY, NO ODOR.
			2.24		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			1.90		AS ABOVE TO 7 FEET. BECOMES MOTTLED MEDIUM BROWN, REDDISH BROWN, AND TAN SILT/SAND, DRY, NO ODOR.
			2.03		AS ABOVE, DRY, NO ODOR.
			1.01		AS ABOVE, DRY, NO ODOR.
15.0			1.20		AS ABOVE, DRY, NO ODOR.
			1.62		AS ABOVE, DRY, NO ODOR.
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					



**ATTACHMENT C**

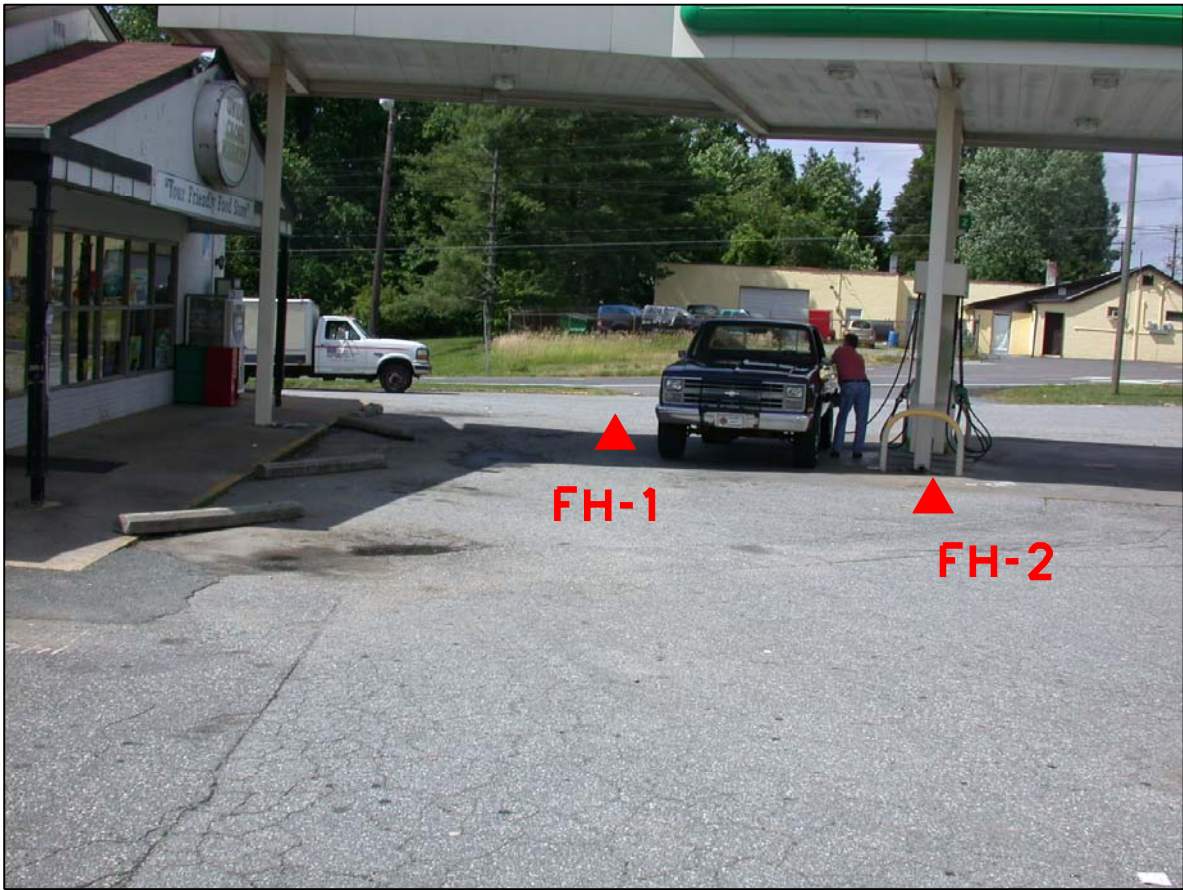


PHOTO 1 - BORING IN PROPOSED R/W LOOKING SOUTH

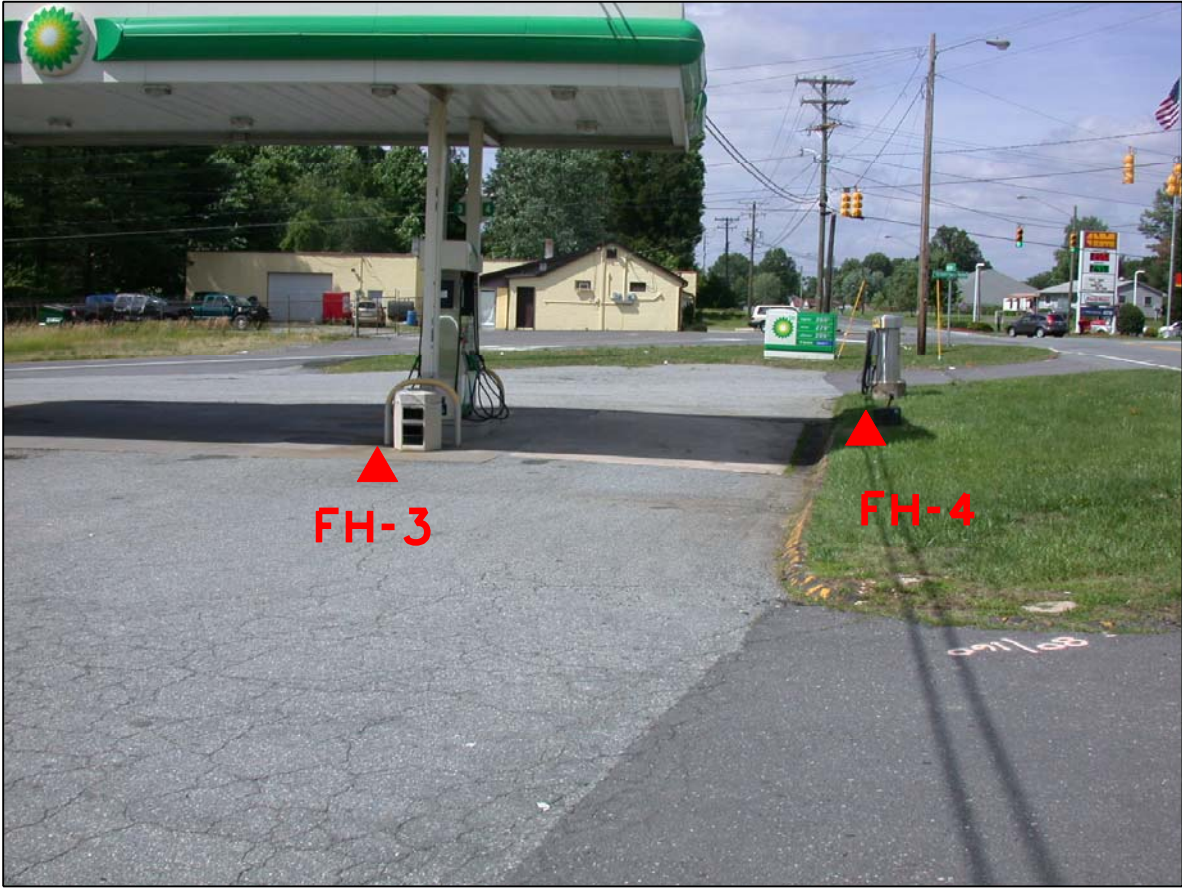


PHOTO 2 - BORINGS IN PROPOSED R/W LOOKING SOUTHWEST



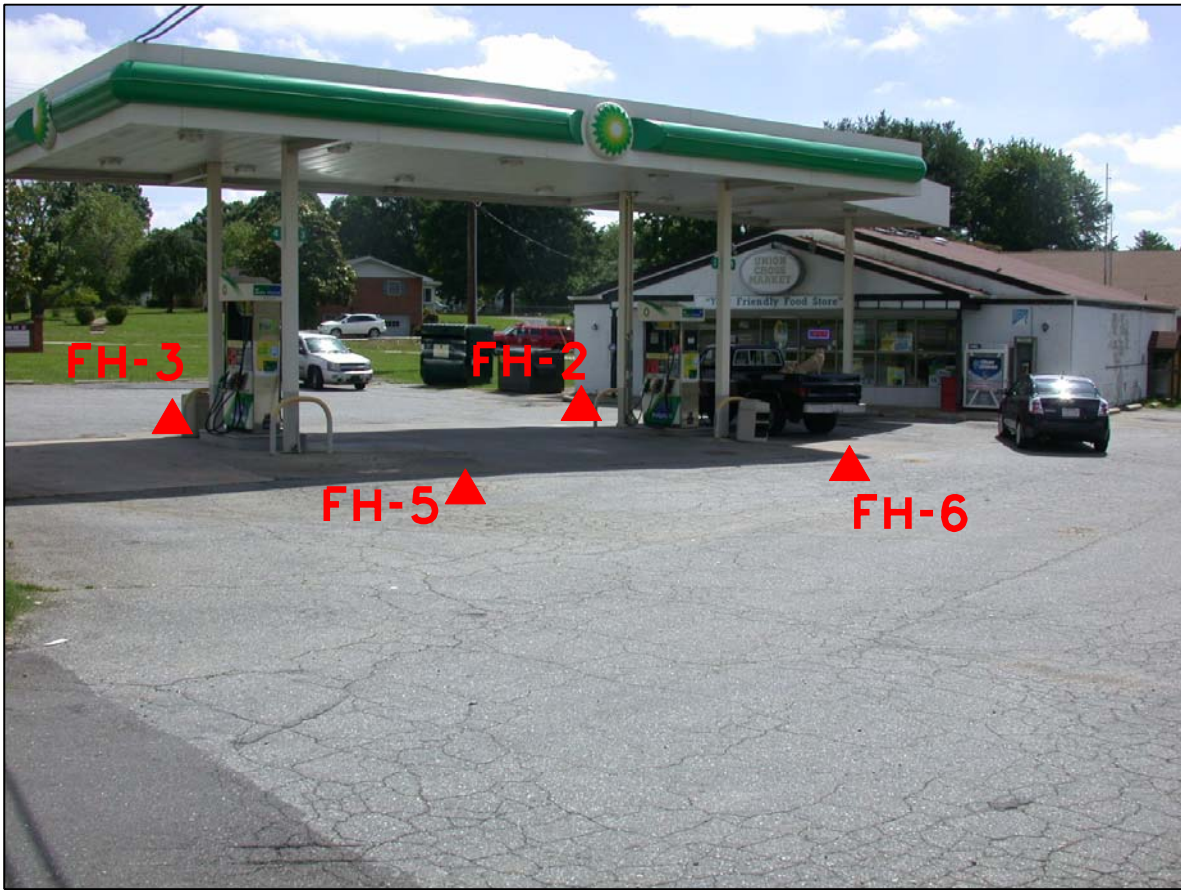


PHOTO 3 - BORINGS WITHIN PROPOSED R/W LOOKING NORTHEAST



PHOTO 4 - BORING WITHIN PROPOSED R/W LOOKING EAST



PHOTO 5 - BORINGS WITHIN PROPOSED R/W LOOKING EAST



PHOTO 6 - BORING WITHIN PROPOSED R/W LOOKING SOUTHEAST

**ATTACHMENT D**

AECOM (Earth Tech) NCDOT Proj.  
Mike Branson  
Suite 475, 701 Corporate Center Dr.  
Raleigh, NC 27607

Project: NCDOT - Harris Property  
Project No.: WBS#40278.1.1  
Lab Submittal Date: 05/28/2010  
Prism Work Order: 0050748

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
FH-1	0050748-01	Solid	05/26/10	05/28/10
FH-2	0050748-02	Solid	05/26/10	05/28/10
FH-3	0050748-03	Solid	05/26/10	05/28/10
FH-4	0050748-04	Solid	05/26/10	05/28/10
FH-5	0050748-05	Solid	05/26/10	05/28/10
FH-6	0050748-06	Solid	05/26/10	05/28/10
FH-7	0050748-07	Solid	05/26/10	05/28/10
FH-8	0050748-08	Solid	05/26/10	05/28/10
FH-9	0050748-09	Solid	05/26/10	05/28/10

Samples received in good condition at 4.6 degrees C unless otherwise noted.

AECOM (Earth Tech) NCDOT Proj.  
 Attn: Mike Branson  
 Suite 475, 701 Corporate Center Dr.  
 Raleigh, NC 27607

Project: NCDOT - Harris Property  
 Project No.: WBS#40278.1.1  
 Sample Matrix: Solid

Client Sample ID: FH-1  
 Prism Sample ID: 0050748-01  
 Prism Work Order: 0050748  
 Time Collected: 05/26/10 08:00  
 Time Submitted: 05/28/10 08:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<b>Diesel Range Organics by GC/FID</b>									
Diesel Range Organics	BRL	mg/kg dry	8.7	1.4	1	*8015C	6/10/10 15:13	JMV	P0F0249
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			79 %		49-124	
<b>Gasoline Range Organics by GC/FID</b>									
Gasoline Range Organics	BRL	mg/kg dry	5.3	0.69	50	*8015C	6/2/10 21:09	HPE	P0F0039
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			96 %		55-129	
<b>General Chemistry Parameters</b>									
% Solids	80.1	% by Weight	0.100	0.100	1	*SM2540 G	6/2/10 18:00	PJF	P0F0067

AECOM (Earth Tech) NCDOT Proj.  
 Attn: Mike Branson  
 Suite 475, 701 Corporate Center Dr.  
 Raleigh, NC 27607

Project: NCDOT - Harris Property  
 Project No.: WBS#40278.1.1  
 Sample Matrix: Solid

Client Sample ID: FH-2  
 Prism Sample ID: 0050748-02  
 Prism Work Order: 0050748  
 Time Collected: 05/26/10 08:30  
 Time Submitted: 05/28/10 08:15

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	10	1.7	1	*8015C	6/10/10 15:49	JMV	P0F0249
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			94 %		49-124	

**Gasoline Range Organics by GC/FID**

Gasoline Range Organics	BRL	mg/kg dry	5.3	0.68	50	*8015C	6/2/10 21:41	HPE	P0F0039
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			80 %		55-129	

**General Chemistry Parameters**

% Solids	68.1	% by Weight	0.100	0.100	1	*SM2540 G	6/2/10 18:00	PJF	P0F0067
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AECOM (Earth Tech) NCDOT Proj.  
Attn: Mike Branson  
Suite 475, 701 Corporate Center Dr.  
Raleigh, NC 27607

Project: NCDOT - Harris Property  
Project No.: WBS#40278.1.1  
Sample Matrix: Solid

Client Sample ID: FH-3  
Prism Sample ID: 0050748-03  
Prism Work Order: 0050748  
Time Collected: 05/26/10 08:45  
Time Submitted: 05/28/10 08:15

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	9.2	1.5	1	*8015C	6/10/10 12:15	JMV	P0F0249
			Surrogate				Recovery		Control Limits
			o-Terphenyl				84 %		49-124

### Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	5.6	0.73	50	*8015C	6/2/10 22:12	HPE	P0F0039
			Surrogate				Recovery		Control Limits
			a,a,a-Trifluorotoluene				93 %		55-129

### General Chemistry Parameters

% Solids	76.3	% by Weight	0.100	0.100	1	*SM2540 G	6/2/10 18:00	PJF	P0F0067
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AECOM (Earth Tech) NCDOT Proj.  
Attn: Mike Branson  
Suite 475, 701 Corporate Center Dr.  
Raleigh, NC 27607

Project: NCDOT - Harris Property  
Project No.: WBS#40278.1.1  
Sample Matrix: Solid

Client Sample ID: FH-4  
Prism Sample ID: 0050748-04  
Prism Work Order: 0050748  
Time Collected: 05/26/10 09:00  
Time Submitted: 05/28/10 08:15

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	9.0	1.5	1	*8015C	6/11/10 10:40	JMV	P0F0249
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			70 %		49-124	

### Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.4	0.57	50	*8015C	6/2/10 23:46	HPE	P0F0039
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			77 %		55-129	

### General Chemistry Parameters

% Solids	77.8	% by Weight	0.100	0.100	1	*SM2540 G	6/2/10 18:00	PJF	P0F0067
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AECOM (Earth Tech) NCDOT Proj.  
Attn: Mike Branson  
Suite 475, 701 Corporate Center Dr.  
Raleigh, NC 27607

Project: NCDOT - Harris Property  
Project No.: WBS#40278.1.1  
Sample Matrix: Solid

Client Sample ID: FH-5  
Prism Sample ID: 0050748-05  
Prism Work Order: 0050748  
Time Collected: 05/26/10 09:15  
Time Submitted: 05/28/10 08:15

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	9.4	1.5	1	*8015C	6/10/10 12:51	JMV	P0F0249
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			76 %		49-124	

### Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	5.7	0.74	50	*8015C	6/3/10 0:18	HPE	P0F0039
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			90 %		55-129	

### General Chemistry Parameters

% Solids	74.5	% by Weight	0.100	0.100	1	*SM2540 G	6/2/10 18:00	PJF	P0F0067
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AECOM (Earth Tech) NCDOT Proj.  
 Attn: Mike Branson  
 Suite 475, 701 Corporate Center Dr.  
 Raleigh, NC 27607

Project: NCDOT - Harris Property  
 Project No.: WBS#40278.1.1  
 Sample Matrix: Solid

Client Sample ID: FH-6  
 Prism Sample ID: 0050748-06  
 Prism Work Order: 0050748  
 Time Collected: 05/26/10 09:30  
 Time Submitted: 05/28/10 08:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
<b>Diesel Range Organics by GC/FID</b>									
Diesel Range Organics	BRL	mg/kg dry	8.2	1.3	1	*8015C	6/10/10 13:26	JMV	P0F0249
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			80 %		49-124	
<b>Gasoline Range Organics by GC/FID</b>									
Gasoline Range Organics	23	mg/kg dry	4.3	0.56	50	*8015C	6/3/10 0:49	HPE	P0F0039
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			98 %		55-129	
<b>General Chemistry Parameters</b>									
% Solids	85.2	% by Weight	0.100	0.100	1	*SM2540 G	6/2/10 18:00	PJF	P0F0067

AECOM (Earth Tech) NCDOT Proj.  
Attn: Mike Branson  
Suite 475, 701 Corporate Center Dr.  
Raleigh, NC 27607

Project: NCDOT - Harris Property  
Project No.: WBS#40278.1.1  
Sample Matrix: Solid

Client Sample ID: FH-7  
Prism Sample ID: 0050748-07  
Prism Work Order: 0050748  
Time Collected: 05/26/10 09:45  
Time Submitted: 05/28/10 08:15

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	9.7	1.6	1	*8015C	6/10/10 16:25	JMV	P0F0249
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			83 %		49-124	

### Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.9	0.63	50	*8015C	6/3/10 1:20	HPE	P0F0039
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			81 %		55-129	

### General Chemistry Parameters

% Solids	72.2	% by Weight	0.100	0.100	1	*SM2540 G	6/2/10 18:00	PJF	P0F0067
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AECOM (Earth Tech) NCDOT Proj.  
 Attn: Mike Branson  
 Suite 475, 701 Corporate Center Dr.  
 Raleigh, NC 27607

Project: NCDOT - Harris Property  
 Project No.: WBS#40278.1.1  
 Sample Matrix: Solid

Client Sample ID: FH-8  
 Prism Sample ID: 0050748-08  
 Prism Work Order: 0050748  
 Time Collected: 05/26/10 10:00  
 Time Submitted: 05/28/10 08:15

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	9.0	1.5	1	*8015C	6/10/10 14:02	JMV	P0F0249
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			56 %		49-124	

**Gasoline Range Organics by GC/FID**

Gasoline Range Organics	BRL	mg/kg dry	4.9	0.64	50	*8015C	6/3/10 1:52	HPE	P0F0039
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			105 %		55-129	

**General Chemistry Parameters**

% Solids	77.6	% by Weight	0.100	0.100	1	*SM2540 G	6/2/10 18:00	PJF	P0F0067
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AECOM (Earth Tech) NCDOT Proj.  
Attn: Mike Branson  
Suite 475, 701 Corporate Center Dr.  
Raleigh, NC 27607

Project: NCDOT - Harris Property

Project No.: WBS#40278.1.1  
Sample Matrix: Solid

Client Sample ID: FH-9  
Prism Sample ID: 0050748-09  
Prism Work Order: 0050748  
Time Collected: 05/26/10 10:15  
Time Submitted: 05/28/10 08:15

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	9.0	1.4	1	*8015C	6/10/10 14:38	JMV	P0F0249
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			67 %		49-124	

### Gasoline Range Organics by GC/FID

Gasoline Range Organics	BRL	mg/kg dry	4.6	0.60	50	*8015C	6/3/10 2:23	HPE	P0F0039
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			92 %		55-129	

### General Chemistry Parameters

% Solids	77.7	% by Weight	0.100	0.100	1	*SM2540 G	6/2/10 18:00	PJF	P0F0067
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AECOM (Earth Tech) NCDOT Proj.  
Attn: Mike Branson  
Suite 475, 701 Corporate Center Dr.  
Raleigh, NC 27607

Project: NCDOT - Harris Property

Project No: WBS#40278.1.1

Prism Work Order: 0050748

Time Submitted: 5/28/10 8:15:00AM

**Gasoline Range Organics by GC/FID - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch P0F0039 - 5035</b>										
<b>Blank (P0F0039-BLK1)</b>										
Prepared & Analyzed: 06/02/10										
Gasoline Range Organics	BRL	5.0	mg/kg wet							
Surrogate: a,a,a-Trifluorotoluene	5.05		mg/kg wet	5.00		101	55-129			
<b>LCS (P0F0039-BS1)</b>										
Prepared & Analyzed: 06/02/10										
Gasoline Range Organics	49.4	5.0	mg/kg wet	50.0		99	67-116			
Surrogate: a,a,a-Trifluorotoluene	5.40		mg/kg wet	5.00		108	55-129			
<b>LCS Dup (P0F0039-BSD1)</b>										
Prepared & Analyzed: 06/02/10										
Gasoline Range Organics	49.9	5.0	mg/kg wet	50.0		100	67-116	0.9	200	
Surrogate: a,a,a-Trifluorotoluene	5.50		mg/kg wet	5.00		110	55-129			

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Attn: Mike Branson  
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Raleigh, NC 27607

Project: NCDOT - Harris Property

Project No: WBS#40278.1.1

Prism Work Order: 0050748

Time Submitted: 5/28/10 8:15:00AM

**Diesel Range Organics by GC/FID - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch P0F0249 - 3545A</b>										
<b>Blank (P0F0249-BLK1)</b>										
					Prepared: 06/09/10 Analyzed: 06/10/10					
Diesel Range Organics	BRL	7.0	mg/kg wet							
Surrogate: <i>o</i> -Terphenyl	1.52		mg/kg wet	1.59		96	49-124			
<b>LCS (P0F0249-BS1)</b>										
					Prepared: 06/09/10 Analyzed: 06/10/10					
Diesel Range Organics	66.3	7.0	mg/kg wet	80.0		83	55-109			
Surrogate: <i>o</i> -Terphenyl	1.60		mg/kg wet	1.60		100	49-124			
<b>LCS Dup (P0F0249-BSD1)</b>										
					Prepared: 06/09/10 Analyzed: 06/10/10					
Diesel Range Organics	72.3	7.0	mg/kg wet	79.7		91	55-109	9	200	
Surrogate: <i>o</i> -Terphenyl	1.63		mg/kg wet	1.59		102	49-124			



### Sample Extraction Data

**Prep Method: 3545A**

Lab Number	Batch	Initial	Final	Date
0050748-01	P0F0249	25.1 g	1 mL	06/09/10
0050748-02	P0F0249	25.06 g	1 mL	06/09/10
0050748-03	P0F0249	25.03 g	1 mL	06/09/10
0050748-04	P0F0249	25.01 g	1 mL	06/09/10
0050748-05	P0F0249	24.94 g	1 mL	06/09/10
0050748-06	P0F0249	25.1 g	1 mL	06/09/10
0050748-07	P0F0249	25.02 g	1 mL	06/09/10
0050748-08	P0F0249	25.07 g	1 mL	06/09/10
0050748-09	P0F0249	25.08 g	1 mL	06/09/10

**Prep Method: 5035**

Lab Number	Batch	Initial	Final	Date
0050748-01	P0F0039	5.84 g	5 mL	06/02/10
0050748-02	P0F0039	6.97 g	5 mL	06/02/10
0050748-03	P0F0039	5.8 g	5 mL	06/02/10
0050748-04	P0F0039	7.38 g	5 mL	06/02/10
0050748-05	P0F0039	5.87 g	5 mL	06/02/10
0050748-06	P0F0039	6.86 g	5 mL	06/02/10
0050748-07	P0F0039	7.1 g	5 mL	06/02/10
0050748-08	P0F0039	6.57 g	5 mL	06/02/10
0050748-09	P0F0039	6.94 g	5 mL	06/02/10

**NO PREP**

Lab Number	Batch	Initial	Final	Date
0050748-01	P0F0067	30 g	30 mL	06/02/10
0050748-02	P0F0067	30 g	30 mL	06/02/10
0050748-03	P0F0067	30 g	30 mL	06/02/10
0050748-04	P0F0067	30 g	30 mL	06/02/10
0050748-05	P0F0067	30 g	30 mL	06/02/10
0050748-06	P0F0067	30 g	30 mL	06/02/10
0050748-07	P0F0067	30 g	30 mL	06/02/10
0050748-08	P0F0067	30 g	30 mL	06/02/10
0050748-09	P0F0067	30 g	30 mL	06/02/10

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# CHAIN OF CUSTODY RECORD

**PRISM**  
LABORATORIES, INC.  
Full-Service Analytical & Environmental Solutions

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

Client Company Name: AECOM  
Report To/Contact Name: MIKE BRANSON  
Reporting Address: 201 CORPORATE CENTER DR  
475 RALEIGH NC 27607  
Phone: 919 851 6238 Fax: (No) (No): 919 851 6239  
Email: (No) Email Address: MIKE.BRANSON@AECOM.COM  
EDD Type: PDF  Excel  Other   
Site Location Name: HARRIS PROPERTY  
Site Location Physical Address: RESEARCH

PAGE OF QUOTE # TO ENSURE PROPER BILLING: NC201 HARRIS

Project Name: NC201 HARRIS UST Project:  (Yes)  (No)  
Short Hold Analysis: (Yes)  (No)   
\*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements 4300129131  
Invoice To: AECOM Reg 10572209  
Address:

Purchase Order No./Billing Reference: 605# 40278.1.1  
Requested Due Date  1 Day  2 Days  3 Days  4 Days  5 Days  
"Working Days"  6-9 Days  Standard 10 days  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)

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				
FH-1	5/26/10	0800	Soil	CG	4	4/VOA	MeOH	Pre GPR	4oz, 2oz	01
FH-2	5/26/10	0830	Soil	CG	4	4/VOA	MeOH			02
FH-3	5/26/10	0845	Soil	CG	4	4/VOA	MeOH			03
FH-4	5/26/10	0900	Soil	CG	4	4/VOA	MeOH			04
FH-5	5/26/10	0915	Soil	CG	4	4/VOA	MeOH			05
FH-6	5/26/10	0930	Soil	CG	4	4/VOA	MeOH			06
FH-7	5/26/10	0945	Soil	CG	4	4/VOA	MeOH			07
FH-8	5/26/10	1000	Soil	CG	4	4/VOA	MeOH			08
FH-9	5/26/10	1015	Soil	CG	4	4/VOA	MeOH			09

Sample Iced Upon Collection: YES  NO

Water Chlorinated: YES  NO

Certification: NELAC  USACE  FL  NC

SC  OTHER  N/A

Additional Comments: 1/NOISE - NC DOT  
UNDER BLANKET  
PO

Site Arrival Time: \_\_\_\_\_

Site Departure Time: \_\_\_\_\_

Field Tech Fee: \_\_\_\_\_

Mileage: \_\_\_\_\_

PRISM USE ONLY

PRISM USE ONLY

PRISM USE ONLY

PRISM USE ONLY

PRISM USE ONLY

PRISM USE ONLY

Sampled By (Print Name) M Branson Affiliation AECOM

Date 05/27/10 Military/Hours 1100

Date 5/28/10 1230

Date 5/28/10 815

COC Group No. 0050748

Received By (Signature) [Signature]

Received By (Signature) [Signature]

Received By (Signature) [Signature]

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.

Fed Ex  UPS  Hand-delivered  Prism Field Service  Other

NPDES:  NC  SC  NC  SC  NC  SC  NC  SC  NC  SC

GROUNDWATER:  NC  SC  NC  SC  NC  SC  NC  SC

DRINKING WATER:  NC  SC  NC  SC  NC  SC  NC  SC

SOLID WASTE:  NC  SC  NC  SC  NC  SC  NC  SC

OTHER:  NC  SC  NC  SC  NC  SC  NC  SC

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

SEE REVERSE FOR TERMS & CONDITIONS

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