

August 23, 2007

Mr. Don Moore
North Carolina Department of Transportation
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment
Bonnie Lunsford and Donna Lunsford Dunevant Property (Parcel #048)
1150 Virgilina Road
Roxboro, Person County, North Carolina
NCDOT Project R-2241A
WBS Element 34406.1.1
Earth Tech Project No. 100407

Dear Mr. Moore:

Earth Tech of North Carolina, Inc., (Earth Tech) 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 June 6, 2007, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated June 6, 2007. 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 Bonnie Lunsford and Donna Lunsford Dunevant Property (Parcel #048) is located at 1150 Virgilina Road in Roxboro, North Carolina. The property is situated on the southeast quadrant of the intersection of Virgilina Road (NC 49) and Broad Road (Figure 1). Based on information supplied by the NCDOT and the site visit, Earth Tech understands that the site is an active gas station/convenience store (Food Mart 10) where one 8,000-gallon gasoline UST, one 6,000-gallon gasoline UST, and one 4,000-gallon diesel fuel UST are registered at the site. The structure on the property is a single-story block building with an asphalt parking area. The currently registered USTs are located on the south side of the pump island. Earth Tech was advised that the proposed right-of-way/easement will not affect the building and the UST area, but the easement will affect the pump island. As a result, the NCDOT requested a Preliminary Site Assessment.

Earth Tech reviewed the North Carolina Department of Environment and Natural Resources (NCDENR) Incident Management database and no incident number was assigned to the site.

Earth Tech also reviewed the UST registration database to obtain UST ownership/responsible party information. According to the database and on-site UST Permit, the USTs on the property are operated under Facility Number 0-019366. The operator and owner of the tanks are listed as follows:

<u>Owner</u>	<u>Operator</u>
Cary Oil Company PO Box 5189 Cary, North Carolina 27512-5189 (919) 462-1100	Food Mart 10 1150 Virgilina Road Roxboro, North Carolina 27573 (336) 599-0031

Geophysical Survey

Prior to Earth Tech's mobilization to the site, Pyramid Environmental conducted a geophysical survey as part of this project to evaluate if additional USTs, other than the ones identified or removed, were present on the proposed right-of-way. 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 Virgilina Road and the Y-axis oriented approximately parallel to Broad Road. The grid was located to cover the accessible portions of the proposed right-of-way. The survey lines were spaced 1.5 meters (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, if necessary.

Several anomalies were detected in the geophysical survey. However, these anomalies were generally attributed to buried utility lines, conduits, or parked vehicles. The survey concluded that no metallic USTs, other than those identified as currently registered, were present on the proposed right-of-way or easement. A detailed report of findings and interpretations is presented in Attachment A.

Site Assessment Activities

On July 9, 2007, Earth Tech mobilized to the site to conduct a Geoprobe[®] direct push investigation to evaluate soil conditions within the proposed right-of-way and easement. Continuous sampling using direct push technology (Regional Probing of Wake Forest, North Carolina) resulted in generally good recovery of soil samples from the direct-push holes. Soil samples were collected and contained in 1.2-meter (4-foot) long acetate sleeves inside the direct push sampler. Each of these sleeves was divided in half for soil sample screening. Each 0.6-meter (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, Inc., 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).

Four direct-push holes (LD-1 through LD-4) were advanced within the proposed right-of-way to a depth of 3.6 meters (12 feet) as shown in Figure 2 and Attachment B. The borings were located to evaluate the area adjacent to the pump island and the proposed easement (Attachment C). Borings LD-1 and LD-2 were located to evaluate the soil conditions at each end of the pump island and borings LD-3 and LD-4 were placed to assess the horizontal extent of potential contamination. The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 10 to 15 centimeters (4 to 6 inches) of asphalt, concrete, or gravel. Below the surface treatment to a depth of 3.6 meters (12 feet) was a mottled medium brown, tan, and white silt/clay. All the borings were terminated at a depth of 3.6 meters (12 feet). No groundwater was encountered in any of the borings. Based on field screening, soil samples were submitted for laboratory analysis, which are summarized in Table 1.

Analytical Results

Based on the laboratory reports, summarized in Table 1 and presented in Attachment D, petroleum hydrocarbon compounds identified as DRO and/or GRO were detected in two of the four soil samples collected from the site (Figure 3). 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 April 2001, 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 soil sample collected from boring LD-1 contained both a DRO concentration (1600 mg/kg) and GRO concentration (400 mg/kg) above the 10 mg/kg assumed action level.

Conclusions and Recommendations

A Preliminary Site Assessment was conducted to evaluate the Bonnie Lunsford and Donna Lunsford Dunevant Property (Parcel #048) located at 1150 Virgilina Road in Roxboro, Person County, North Carolina. Four soil borings were advanced to evaluate the soil conditions with respect to the areas adjacent to the existing pump islands and within the proposed right-of-way. The laboratory reports of

the soil samples from these borings suggest that DRO and/or GRO concentrations were present above the assumed action level in one of the four 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 LD-1 contained TPH concentrations identified as DRO and GRO above the assumed action level. Field screening and observations suggest that contamination in boring LD-1 is at a thickness of about 3 meters (10 feet). In order to calculate the volume of potentially contaminated soil, a planimeter was used to obtain the surface area affected as shown on Figure 3 in square meters. This measurement was then multiplied by the potential contaminant thickness for a total volumetric calculation. Based on the planimetric measurements (43 square meters) and contaminated soil thickness, Earth Tech estimates a total contaminated soil volume for the site to be approximately 129 cubic meters (167 cubic yards). The volume of potentially affected soil was estimated based on the 10 mg/kg isoconcentration contour shown on Figure 3 and the planimetric measurements within that boundary. 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.

Earth Tech appreciates the opportunity to work with the NCDOT on this project. Because compounds were detected above the applicable action levels in the soil samples, Earth Tech recommends that a copy of this report be submitted to the Division of Waste Management, UST Section, in the Raleigh Regional Office. 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
BONNIE LUNS福德 AND DONNA DUNEVA NT PROPERTY (PARCEL #048)
ROXBORO, PERSON COUNTY, NORTH CAROLINA
NCDOT PROJECT NO. R-2241A
WBS ELEMENT 34406.1.1
EARTH TECH PROJECT NO. 100407

LOCATION	DEPTH (m)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
LD-1	0 - 0.6	12.58			
	0.6 - 1.2	34			
	1.2 - 1.8	63			
	1.8 - 2.4	63	LD-1	DRO (1600) GRO (400)	10 10
	2.4 - 3.0	42			
	3.0 - 3.6	52			
LD-2	0 - 0.6	0.01			
	0.6 - 1.2	0.11			
	1.2 - 1.8	0.12			
	1.8 - 2.4	0.09			
	2.4 - 3.0	0.31	LD-2	DRO (BQL) GRO (BQL)	10 10
	3.0 - 3.6	0.05			
LD-3	0 - 0.6	1.13			
	0.6 - 1.2	1.23	LD-3	DRO (BQL) GRO (BQL)	10 10
	1.2 - 1.8	0.83			
	1.8 - 2.4	0.27			
	2.4 - 3.0	0.33			
	3.0 - 3.6	0.14			
LD-4	0 - 0.6	0.45			
	0.6 - 1.2	0.61			
	1.2 - 1.8	0.92	LD-4	DRO (9.6) GRO (BQL)	10 10
	1.8 - 2.4	0.61			
	2.4 - 3.0	0.01			
	3.0 - 3.6	0.41			

Soil samples were collected on July 9, 2007.

DRO - Diesel range organics.

GRO - Gasoline range organics.

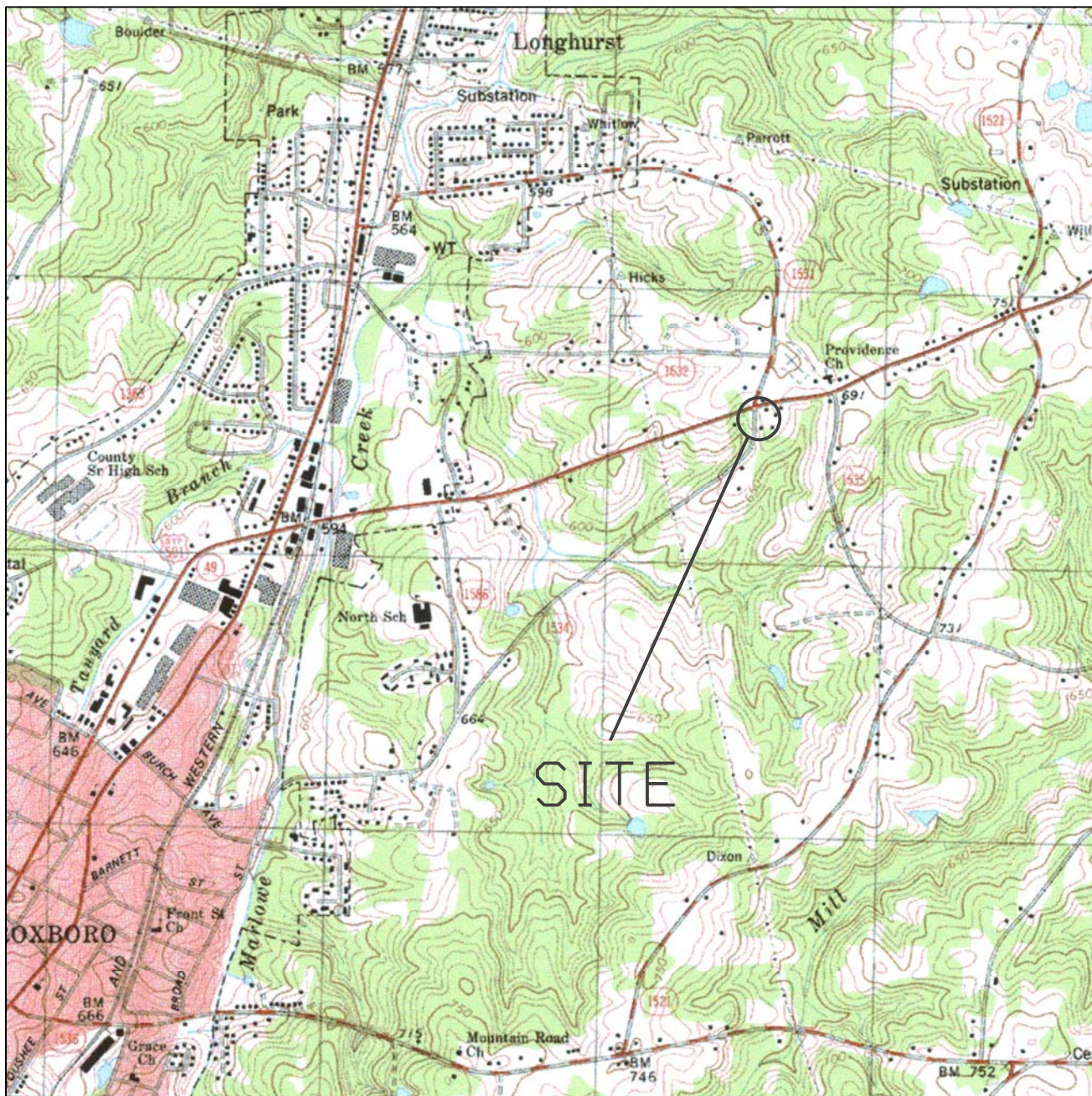
BQL - Below quantitation limit.

ppm - parts per million.

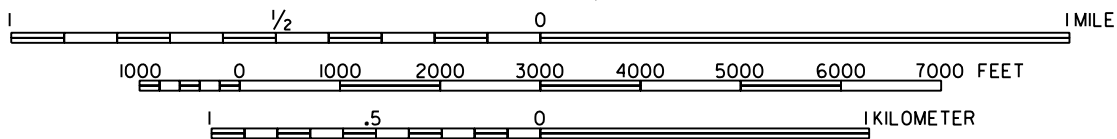
mg/kg - milligrams per kilogram.

BOLD values are above the assumed action level.

FIGURES



SCALE 1:24,000



SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: ROXBORO, NC (1982)

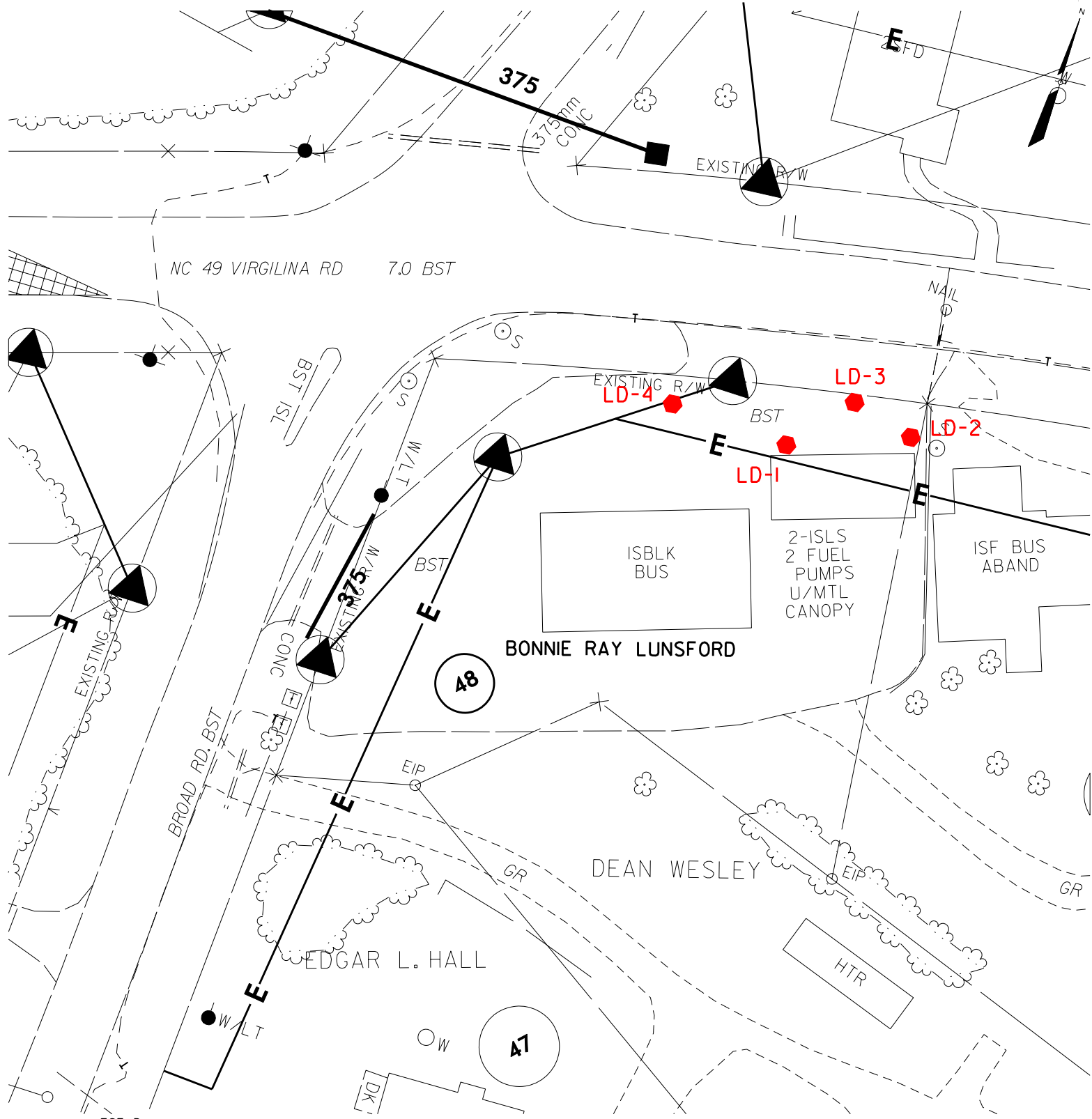


FIGURE I VICINITY MAP

BONNIE LUNSFORD AND DONNA DUNEVANT PROPERTY (PARCEL #048)
ROXBORO, PERSON COUNTY, NORTH CAROLINA

JULY 2007

100407



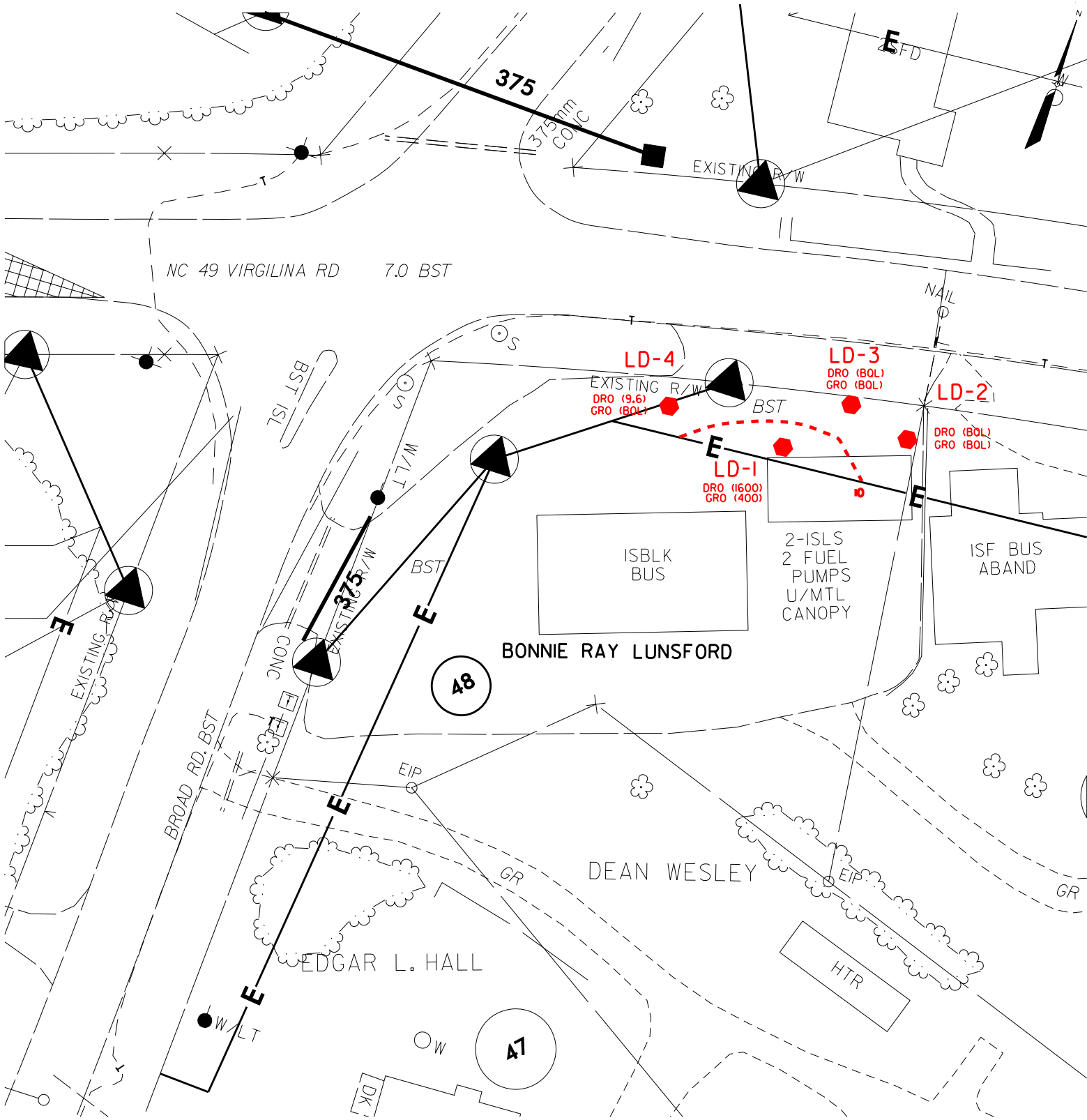


FIGURE 3
ANALYTICAL RESULTS MAP

BONNE LUNSFORD AND DONNA DUNEVAUT PROPERTY (PARCEL #048)

ROXBORO, PERSON COUNTY, NORTH CAROLINA

JULY 2007

100407



ATTACHMENT A

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

**BONNIE RAY LUNSFORD PROPERTY (PARCEL 48)
Roxboro, North Carolina**

July 16, 2007

**Report prepared for: Mike Branson
Earth Tech, Inc.
701 Corporate Center Drive, Suite 475
Raleigh, North Carolina 27607**

**Prepared by: _____
Mark J. Denil, PG**

**Reviewed by: _____
Douglas Canavello, PG**

**PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
700 NORTH EUGENE ST.
GREENSBORO, NC 27401
(336) 335-3174**

Earth Tech of North Carolina, Inc.
GEOPHYSICAL INVESTIGATION REPORT
BONNIE RAY LUNSFORD PROPERTY (PARCEL 48)
Roxboro, North Carolina

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- 2.0 FIELD METHODOLOGY
- 3.0 DISCUSSION OF RESULTS
- 4.0 SUMMARY & CONCLUSIONS
- 5.0 LIMITATIONS

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- Figure 1 Geophysical Equipment & Site Photographs
- Figure 2 EM61 Bottom Coil Results
- Figure 3 EM61 Differential Results

1.0 INTRODUCTION

Pyramid Environmental conducted geophysical investigations for Earth Tech of North Carolina, Inc. within the proposed Right-of-Way (ROW) area at the Bonnie Ray Lunsford property (Parcel 48) located along the south side of NC 49 (Virginia Road) near Roxboro, North Carolina. The site consists of an active Citgo gas station and store surrounded by an asphalt-covered parking lot and two pump islands. The geophysical investigation was conducted during the period of June 21-27, 2007 to determine if unknown, metallic, underground storage tanks (USTs) were present beneath the proposed ROW area of the property. The work was done as part of the North Carolina Department of Transportation (NCDOT) road-widening project.

Earth Tech's representative Mr. Michael Branson, PG, provided site maps that outlined the geophysical survey area (ROW area) of the site and visited the site with a Pyramid Environmental representative prior to conducting the investigation. Photographs of the Lunsford property (Parcel 48) and the geophysical equipment used at this site 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 proposed ROW area of Parcel 49 using water-based marking paint and pin flags. These 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 investigations consisted of electromagnetic (EM) induction-metal detection surveys and ground penetrating radar (GPR) surveys. The EM surveys were performed on June 21, 2007, 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. The EM61 data were digitally collected along easterly-westerly parallel survey lines spaced five feet apart. The data were downloaded to a computer and reviewed in the office using the Geonics DAT61W and Surfer for Windows Version 7.0 software programs.

Contour plots of the EM61 bottom coil results and the EM61 differential results for Parcel 48 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 drums and USTs and ignore the smaller insignificant metal objects.

GPR surveys were conducted on June 27, 2007, across selected EM61 differential anomalies using a GSSI SIR-2000 unit equipped with a 400 MHz antenna. GPR data were digitally collected in a continuous mode along X and/or Y survey lines, spaced two to five feet apart using a vertical scan of 512 samples, at a rate of 48 scans per second. An 80 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 five feet, based on an estimated two-way travel time of 9 nanoseconds per foot. The GPR data were downloaded to a field computer and later reviewed in the field and office using Radprint software. The locations of the GPR lines acquired at Parcel 48 are shown as solid purple lines in Figure 3.

Preliminary contour plots of the EM61 bottom coil and the differential results for the site were emailed to Mr. Branson during the week of July 2, 2007.

3.0 DISCUSSION OF RESULTS

GPR surveys suggest the high amplitude EM61 anomalies centered near grid coordinates X=45 Y=65, X=50 Y=40, X=55 Y=78, and X=92 Y=93 are probably in response to steel reinforced concrete underlying the asphalt pavement. The EM anomalies centered near grid coordinates X=196 Y=98 and X=220 Y=105 are probably in response to steel reinforced concrete that lies beneath the asphalt and/or pump island related equipment. GPR data also suggest that the remaining metal

detection anomalies, such as the ones centered near grid coordinates X=35 Y=33, X=60 Y=25, X=74 Y=125, X=86 Y=110, X=93 Y=130, and X=100 Y=120 are probably in response to known cultural features such as metal poles, phones, electrical boxes, etc.

The geophysical investigation conducted at Parcel 48 suggests that the proposed ROW area does not contain metallic USTs.

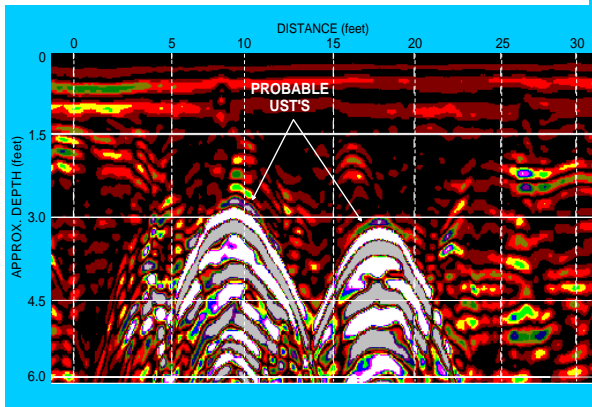
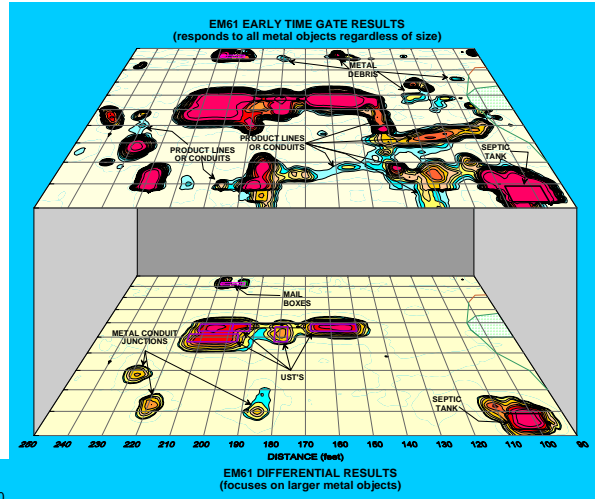
4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected across the proposed ROW area at the Bonnie Ray Lunsford property (Parcel 48) located near Roxboro, North Carolina, provides the following summary and conclusions:

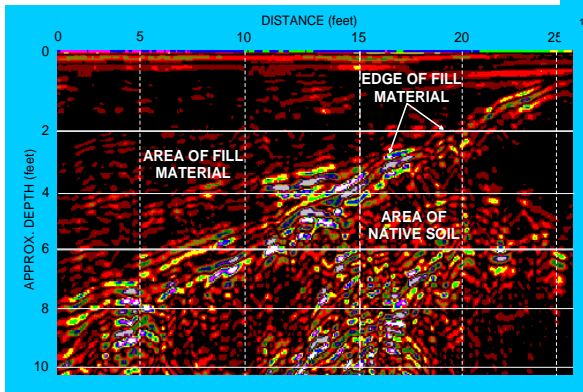
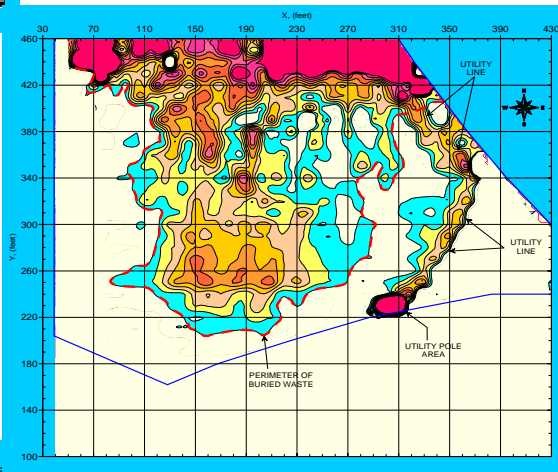
- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the surveyed portions of the proposed ROW area of the site.
- GPR surveys suggest the high amplitude EM61 anomalies centered near grid coordinates X=45 Y=65, X=50 Y=40, X=55 Y=78, and X=92 Y=93 are probably in response to steel reinforced concrete underlying the asphalt pavement.
- GPR data also suggest that the remaining metal detection anomalies, such as the ones centered near grid coordinates X=35 Y=33, X=60 Y=25, X=74 Y=125, X=86 Y=110, X=93 Y=130, and X=100 Y=120 are probably in response to known cultural features such as metal poles, phones, electrical boxes, etc.
- The geophysical investigation conducted at Parcel 48 suggests that the proposed ROW area does not contain metallic USTs.

5.0 LIMITATIONS

EM61 and GPR surveys have been performed and this report prepared for Earth Tech of North Carolina, Inc. 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. The EM61 and GPR results obtained for this project do not conclusively determine that the proposed ROW area does not contain metallic USTs but that none were detected.



FIGURES
(on the following pages)



The photo shows the Geonics EM61 metal detector that was used to conduct the metal detection survey at Parcel 48 on June 21, 2007.



The photos show the SIR-2000 GPR system equipped with a 400 MHz antenna that were used to conduct the ground penetrating radar investigation at Parcel 48 on June 27, 2007.



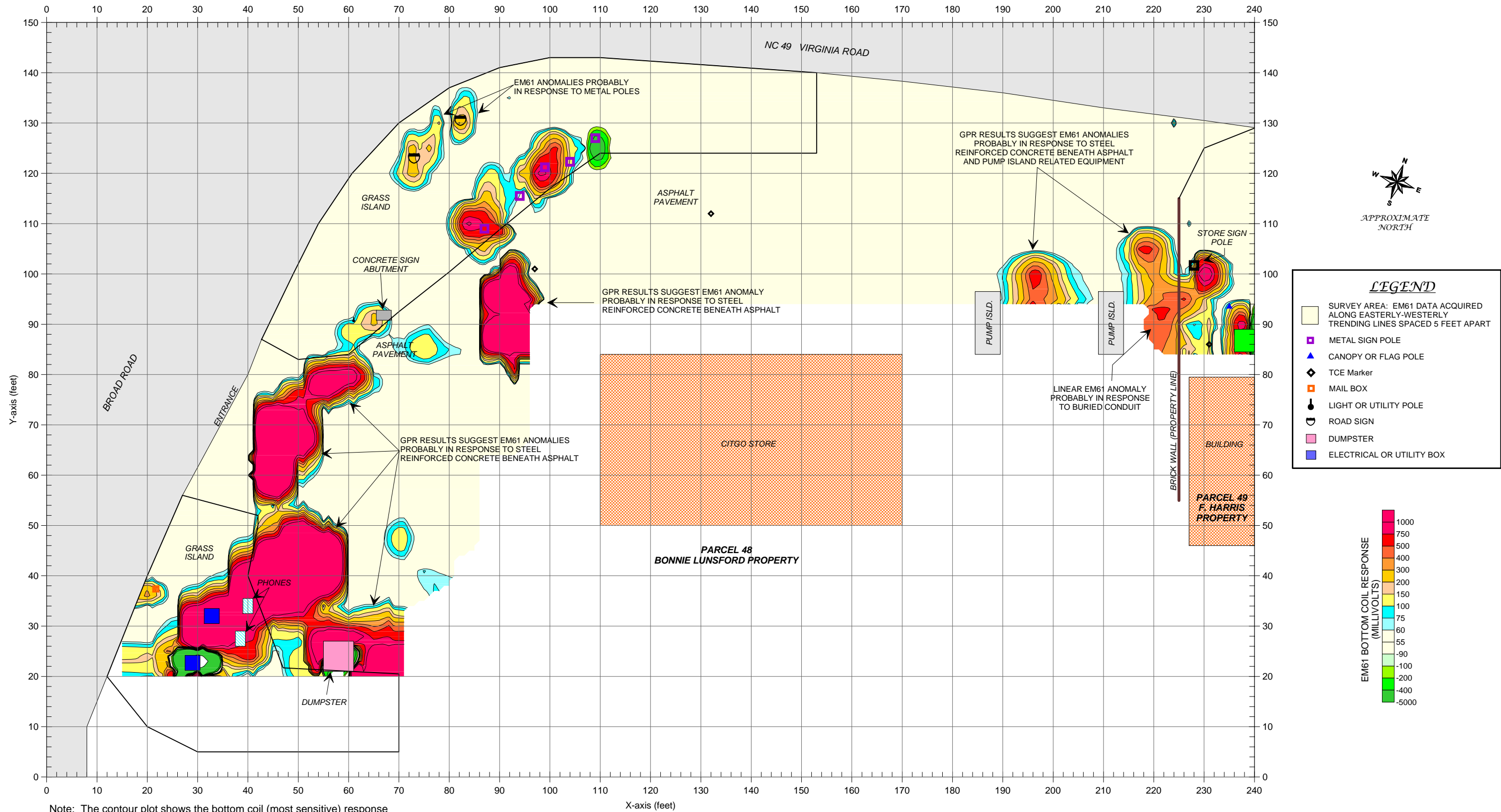
The photograph shows a portion of the geophysical survey area located at Parcel 48. The photo is viewed in a southeasterly direction.



CLIENT	EARTH TECH OF NORTH CAROLINA, INC.		DATE	07/13/07	BY	MJD
PROJECT	BONNIE LUNSFORD PROPERTY - PARCEL 48		LAY		OPND	
CITY	ROXBORO	STATE	NORTH CAROLINA			
TITLE	GEOPHYSICAL RESULTS		NO.	2007-163	PROJ#	

PHOTOGRAPHS OF
GEOPHYSICAL EQUIPMENT
& SURVEY AREA

FIGURE 1



Note: 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 June 21, 2007 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on June 27, 2007 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

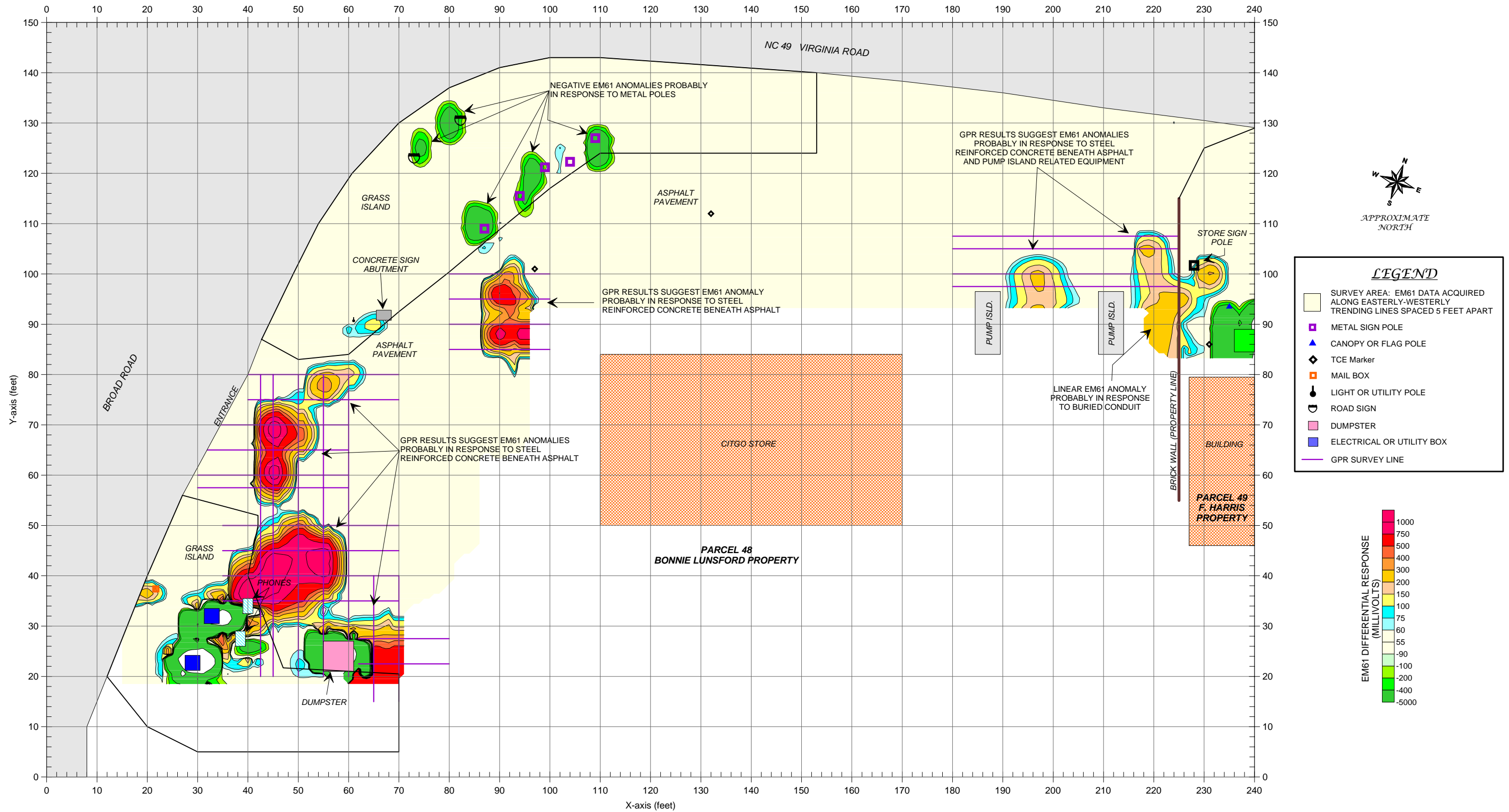
The geophysical results suggest the proposed ROW area does not contain metallic USTs



CLIENT	EARTH TECH OF NORTH CAROLINA, INC.		DATE	07/11/07	DRWN	MJD
SITE	BONNIE LUNSFORD PROPERTY - (PARCEL 48)		LAY		CHKD	
CITY	ROXBORO	STATE	NORTH CAROLINA	DWG		
TITLE	GEOPHYSICAL RESULTS		NO.	2007-163	FIGURE	

**EM61
BOTTOM COIL
RESULTS**

FIGURE 2



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 EM61 data were collected on June 21, 2007 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on June 27, 2007 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

The geophysical results suggest the proposed ROW area does not contain metallic USTs



CLIENT	EARTH TECH OF NORTH CAROLINA, INC.		DATE	07/11/07	DRWN	MJD
SITE	BONNIE LUNSFORD PROPERTY - (PARCEL 48)		LAY		CHKD	
CITY	ROXBORO	STATE	NORTH CAROLINA	DWG		
TITLE	GEOPHYSICAL RESULTS		NO.	2007-163	FIGURE	

EM61 DIFFERENTIAL RESULTS

FIGURE 3

ATTACHMENT B

TEST BORING REPORT

PROJECT LUNSFORD PROPERTY (PARCEL 48)
CLIENT NCDOT (R-2241A)
PROJECT NUMBER 100407 (34406.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER LD-1
PAGE 1
ELEVATION _____
DATE JULY 9, 2007
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			12.58		8" ASPHALT/CONCRETE, MOTTLED MEDIUM BROWN AND YELLOW BROWN SILT/CLAY, DRY, SLIGHT ODOR.
			34		AS ABOVE, DRY, SLIGHT ODOR.
5.0			63		AS ABOVE, DRY, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			63		AS ABOVE, DRY, SLIGHT ODOR.
			42		AS ABOVE, DRY, SLIGHT ODOR.
10.0			52		AS ABOVE, DRY, SLIGHT ODOR.
					BORING TERMINATED AT 12 FEET. NO GROUNDWATER ENCOUNTERED.
15.0					
20.0					

TEST BORING REPORT

PROJECT LUNSFORD PROPERTY (PARCEL 48)
CLIENT NCDOT (R-2241A)
PROJECT NUMBER 100407 (34406.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER LD-2
PAGE 1
ELEVATION _____
DATE JULY 9, 2007
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			0.01		8" ASPHALT/CONCRETE, MOTTLED MEDIUM BROWN, TAN, AND WHITE SILT/CLAY, DRY, NO ODOR.
			0.11		AS ABOVE, DRY, NO ODOR.
			0.12		AS ABOVE, DRY, NO ODOR.
10.0			0.09		AS ABOVE, DRY, NO ODOR.
			0.31		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			0.05		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 12 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT LUNSFORD PROPERTY (PARCEL 48)
CLIENT NCDOT (R-2241A)
PROJECT NUMBER 100407 (34406.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER LD-3
PAGE 1
ELEVATION _____
DATE JULY 9, 2007
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			1.13		6" ASPHALT/GRAVEL, MOTTLED MEDIUM BROWN, TAN, AND WHITE SILT/CLAY, DRY, NO ODOR.
			1.23		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
5.0			0.83		AS ABOVE, DRY, NO ODOR.
			0.27		AS ABOVE, DRY, NO ODOR.
10.0			0.33		AS ABOVE, DRY, NO ODOR.
			0.14		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 12 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT LUNSFORD PROPERTY (PARCEL 48)
CLIENT NCDOT (R-2241A)
PROJECT NUMBER 100407 (34406.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER LD-4
PAGE 1
ELEVATION _____
DATE JULY 9, 2007
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			0.45		4" ASPHALT/GRAVEL, MEDIUM TO REDDISH BROWN SILT/CLAY, DRY, NO ODOR.
			0.61		AS ABOVE, DRY, NO ODOR.
			0.92		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			0.61		AS ABOVE, DRY, NO ODOR.
			0.01		MOTTLED MEDIUM BROWN AND TAN SILT/CLAY, DRY, NO ODOR.
			0.41		AS ABOVE, DRY, NO ODOR.
15.0					
20.0					

ATTACHMENT C

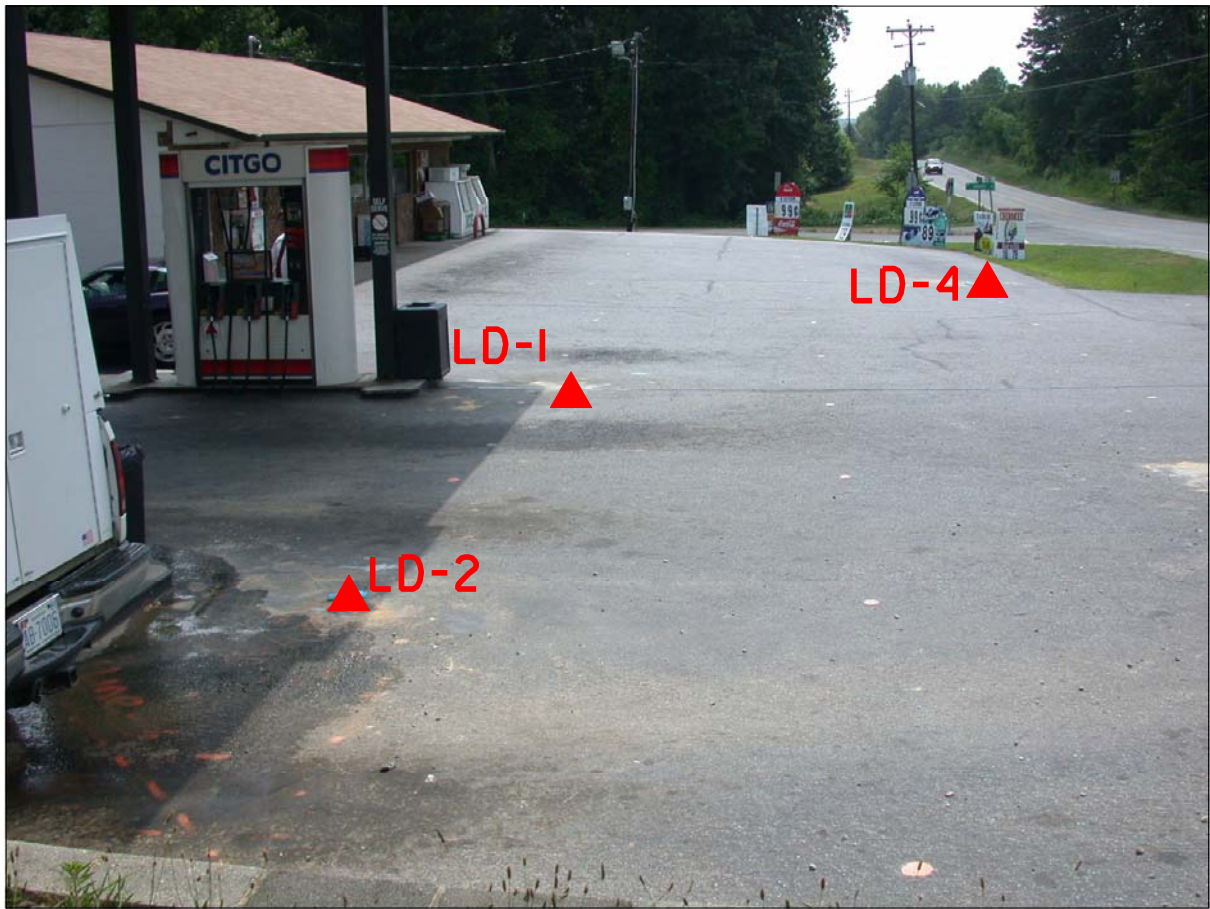


PHOTO 1- BORINGS AT LUNSFORD PROPERTY LOOKING EAST FROM PROPERTY LINE

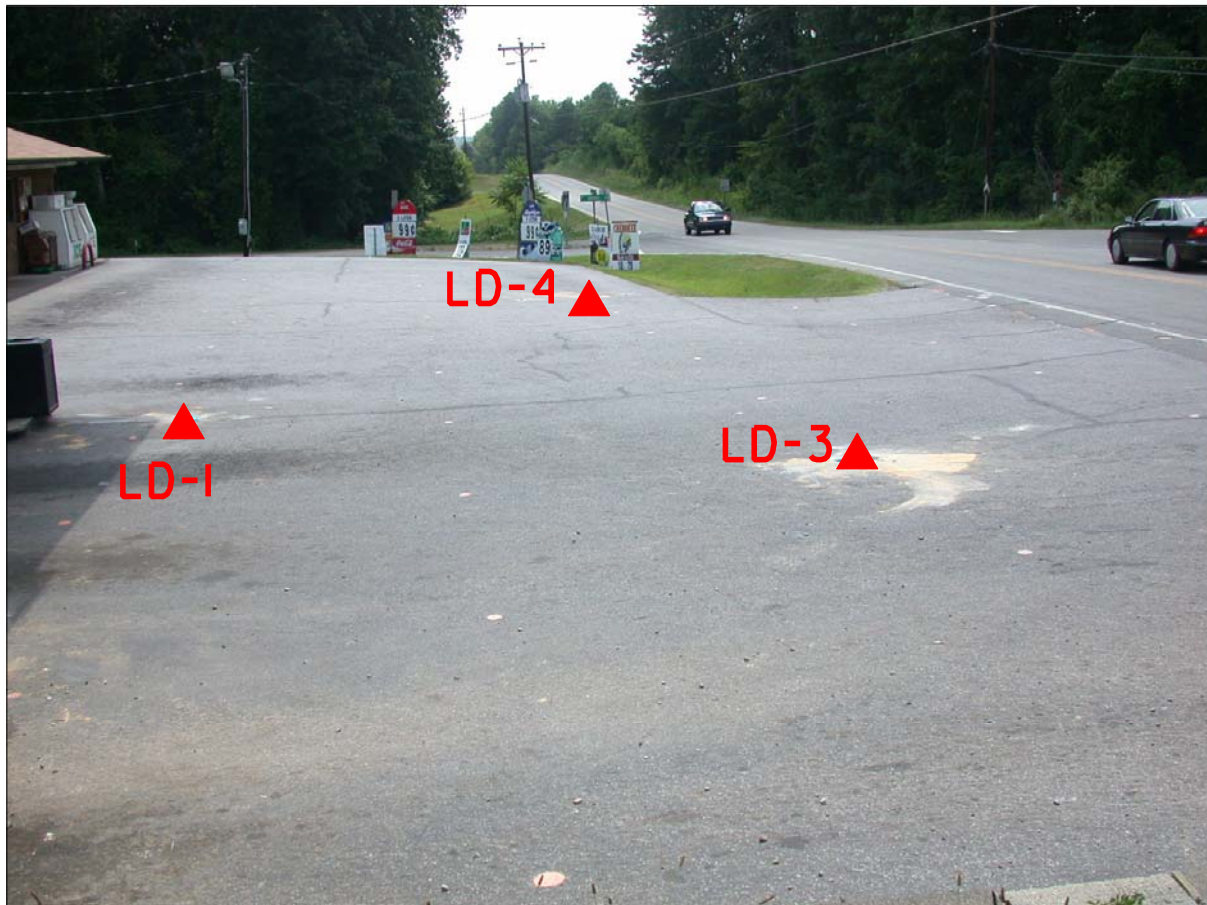


PHOTO 2 - BORINGS AT LUNSFORD PROPERTY LOOKING EAST FROM PROPERTY LINE

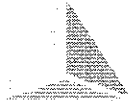


PHOTO 3 - BORINGS AT LUNSFORD PROPERTY LOOKING SOUTH FROM STREET



PHOTO 4 - BORINGS AT LUNSFORD PROPERTY LOOKING SOUTH FROM STREET

ATTACHMENT D



PRISM
LABORATORIES, INC.

Case Narrative

Date: 07/26/07
Company: N. C. Department of Transportation
Contact: Mike Branson
Address: c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Client Project ID: NCDOT - Lundsford
Prism COC Group No: G0707274
Collection Date(s): 07/09/07
Lab Submittal Date(s): 07/11/07

Client Project Name Or No: WBS# 34406.1.1

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 6 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

No Anomalies Reported

Volatile Analysis

No Anomalies Reported

Metals Analysis

N/A

Wet Lab and Micro Analysis

N/A

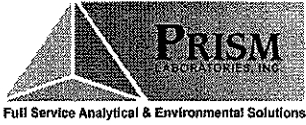
Please call if you have any questions relating to this analytical report.

Date Reviewed by: <u>Robbi A. Jones</u>	Project Manager: <u>Angela D. Overcash</u>
Signature: <u><i>Robbi A. Jones</i></u>	Signature: _____
Review Date: <u>07/26/07</u>	Approval Date: <u>07/26/07</u>

Data Qualifiers Key Reference:

- B: Compound also detected in the method blank.
- #: Result outside of the QC limits.
- DO: Compound diluted out.
- E: Estimated concentration, calibration range exceeded.
- J: The analyte was positively identified but the value is estimated below the reporting limit.
- H: Estimated concentration with a high bias.
- L: Estimated concentration with a low bias.
- M: A matrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735

Laboratory Report

07/26/07

N. C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Lundsford
 Project No.: WBS# 34406.1.1
 Sample Matrix: Soil

Client Sample ID: LD-1
 Prism Sample ID: 186791
 COC Group: G0707274
 Time Collected: 07/09/07 13:30
 Time Submitted: 07/11/07 16:10

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	83.9	%			1	SM2540 G	07/19/07 15:02	ddixon	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	1600	mg/kg	83	10	10	8015B			Q25201
Sample Preparation:			25.17 g /		1 mL	3545	07/19/07 11:30	jvogel	P18952
						Surrogate	% Recovery		Control Limits
						o-Terphenyl	DO #		49 - 124
Sample Weight Determination									
Weight 1	5.14	g			1	GRO	07/17/07 0:00	lbrown	
Weight 2	5.58	g			1	GRO	07/17/07 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	400	mg/kg	12	1.2	100	8015B	07/18/07 14:18	hwagner	Q25096
						Surrogate	% Recovery		Control Limits
						aaa-TFT	76		55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
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Laboratory Report

07/26/07

N. C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Lundsford
 Project No.: WBS# 34406.1.1
 Sample Matrix: Soil

Client Sample ID: LD-2
 Prism Sample ID: 186792
 COC Group: G0707274
 Time Collected: 07/09/07 14:00
 Time Submitted: 07/11/07 16:10

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	82.1	%			1	SM2540 G	07/19/07 15:02	ddixon	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	8.5	1.1	1	8015B			Q25201
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Sample Preparation: 25.16 g / 1 mL 3545 07/19/07 11:30 jvogel P18952

Surrogate	% Recovery	Control Limits
o-Terphenyl	101	49 - 124

Sample Weight Determination

Weight 1	5.04	g			1	GRO	07/17/07 0:00	lbrown	
Weight 2	4.94	g			1	GRO	07/17/07 0:00	lbrown	

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.1	0.63	50	8015B	07/18/07 11:41	hwagner	Q25096
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Surrogate	% Recovery	Control Limits
aaa-TFT	72	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Angela D. Overcash, V.P. Laboratory Services



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Laboratory Report

07/26/07

N. C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Lundsford
 Project No.: WBS# 34406.1.1
 Sample Matrix: Soil

Client Sample ID: LD-3
 Prism Sample ID: 186793
 COC Group: G0707274
 Time Collected: 07/09/07 14:15
 Time Submitted: 07/11/07 16:10

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	79.3	%			1	SM2540 G	07/19/07 15:02	ddixon	
Diesel Range Organics (DRO) by GC-FID									
Diesel Range Organics (DRO)	BRL	mg/kg	8.8	1.1	1	8015B			Q25201
Sample Preparation:			25.48 g	/	1 mL	3545	07/19/07 11:30	jvogel	P18952
						Surrogate	% Recovery	Control Limits	
						o-Terphenyl	84	49 - 124	
Sample Weight Determination									
Weight 1	5.98	g			1	GRO	07/17/07 0:00	lbrown	
Weight 2	5.97	g			1	GRO	07/17/07 0:00	lbrown	
Gasoline Range Organics (GRO) by GC-FID									
Gasoline Range Organics (GRO)	BRL	mg/kg	6.3	0.66	50	8015B	07/18/07 0:20	hwagner	Q25096
						Surrogate	% Recovery	Control Limits	
						aaa-TFT	89	55 - 129	

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
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Laboratory Report

07/26/07

N. C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Lundsford
 Project No.: WBS# 34406.1.1
 Sample Matrix: Soil

Client Sample ID: LD-4
 Prism Sample ID: 186794
 COC Group: G0707274
 Time Collected: 07/09/07 14:30
 Time Submitted: 07/11/07 16:10

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	81.3	%			1	SM2540 G	07/19/07 15:02	ddixon	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	9.6	mg/kg	8.6	1.1	1	8015B			Q25201
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Sample Preparation: 25.1 g / 1 mL 3545 07/19/07 11:30 jvogel P18952

Surrogate	% Recovery	Control Limits
o-Terphenyl	98	49 - 124

Sample Weight Determination

Weight 1	5.98	g			1	GRO	07/17/07 0:00	lbrown	
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Weight 2	5.70	g			1	GRO	07/17/07 0:00	lbrown	
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Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	6.2	0.64	50	8015B	07/18/07 0:53	hwagner	Q25096
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Surrogate	% Recovery	Control Limits
aaa-TFT	102	55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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NC Certification No. 402
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Level II QC Report

07/26/07

N. C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Lundsford
 Project No.: WBS# 34406.1.1

COC Group Number: G0707274
 Date/Time Submitted: 07/11/07 16:10

Gasoline Range Organics (GRO) by GC-FID, method 8015B

Method Blank									
	Result	RL	Control Limit	Units			QC Batch ID		
Gasoline Range Organics (GRO)	ND	5	<2.5	mg/kg			Q25096		
Laboratory Control Sample									
	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	QC Batch ID		
Gasoline Range Organics (GRO)	44.55	50		mg/kg	89	67-116	Q25096		
Matrix Spike									
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	QC Batch ID		
186665 Gasoline Range Organics (GRO)	59.9	50		mg/kg	97	57-113	Q25096		
Matrix Spike Duplicate									
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
186665 Gasoline Range Organics (GRO)	60.45	50		mg/kg	98	57-113	1	0 - 23	Q25096

Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank									
	Result	RL	Control Limit	Units			QC Batch ID		
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg			Q25201		
Laboratory Control Sample									
	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	QC Batch ID		
Diesel Range Organics (DRO)	81.6	80		mg/kg	102	55-109	Q25201		
Matrix Spike									
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	QC Batch ID		
186672 Diesel Range Organics (DRO)	91.9	80		mg/kg	115	50-117	Q25201		
Matrix Spike Duplicate									
Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
186672 Diesel Range Organics (DRO)	85.8	80		mg/kg	107	50-117	7	0 - 24	Q25201

#-See Case Narrative

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Full Service Analytical & Environmental Solutions

449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
 Phone: 704/528-6364 • Fax: 704/525-0409

Client Company Name: EMMEX TEST
 Report To/Contact Name: Mike Branson
 Reporting Address: 701 Corporate Center Dr
51E 475 Raleigh NC 27607

Phone: 919 854 6330 Fax: (65) (No) 919 854 6257
 Email: (65) (No) Email Address Mike Branson
 EDD Type: PDF Excel Other
 Site Location Name: Lundsford
 Site Location Physical Address: 1150 Viegler Dr

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING:
 Project Name: NC DOT - Lundsford
 Short Hold Analysis: (Yes) (No) UST Project: (Yes) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I III IV)
 provisions and/or QC Requirements
 Invoice To: NC DOT
 Address:

Purchase Order No./Billing Reference WRS # 34406.1.1
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 6-9 Days Standard: 10 days Pre-Approved
 "Working Days" Rush Work Must Be
 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

Samples INTACT upon arrival? YES NO N/A
 Received ON WETICE? Temp 37°
 PROPER PRESERVATIVES indicated?
 Received WITHIN HOLDING TIMES?
 CUSTODY SEALS INTACT?
 VOLATILES rec'd W/OUT HEADSPACE?
 PROPER CONTAINERS used?

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 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				
LD-1	7/9/07	1330	SOIL	CG	3	4oz/VOA	MeOH	<u>NO</u>		186791
LD-2	7/9/07	1400	SOIL	CG	3	4oz/VOA	MeOH			186792
LD-3	7/9/07	1415	SOIL	CG	3	4oz/VOA	MeOH			186793
LD-4	7/9/07	1430	SOIL	CG	3	4oz/VOA	MeOH			186794

Sampler's Signature: M Branson Sampled By (Print Name): M Branson Affiliation: EMMEX TEST
 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): M Branson Date: 07-10-07 Military Hours: 1445
 Relinquished By (Signature): Alex Kassirer Date: 7-11-07 Military Hours: 1435
 Relinquished By (Signature): David Moore Date: 7/11/07 Military Hours: 1610
 Method of Shipment: Hand-delivered UPS Other
 NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST CO UNTIL RECEIVED AT THE LABORATORY.
 NPDES: NC SC Other
 DRINKING WATER: NC SC Other
 GROUNDWATER: NC SC Other
 SOLID WASTE: NC SC Other
 RCRA: NC SC Other
 CERCLA: NC SC Other
 LANDFILL: NC SC Other
 ADDITIONAL COMMENTS: 68707274
 PRESS DOWN FIRMLY - 3 COPIES
 PRISM USE ONLY
 Site Arrival Time: _____
 Site Departure Time: _____
 Field Tech Fee: _____
 Mileage: _____
 SEE REVERSE FOR TERMS & CONDITIONS
 ORIGINAL