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September 14, 2010

Mr. Ethan Caldwell, LG North Carolina Department of Transportation Geotechnical Engineering Unit 1589 Mail Service Center Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment

Ruby Tuesday, Inc., Property (Parcel #28)

223 S. Bragg Blvd.

Spring Lake, Cumberland County, North Carolina

NCDOT Tip No. U-4444B WBS Element 36492.1.2

AECOM Project No. 60158550

Dear Mr. Caldwell:

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 July 6, 2010, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated July 7, 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 Ruby Tuesday, Inc., Property (Parcel #28) is located at 223 S. Bragg Boulevard in Spring Lake, Cumberland County, North Carolina. The property is situated on the west side of Bragg Boulevard and about 250 feet south of the intersection of Bragg Boulevard and Lake Avenue (Figure 1). Based on information supplied by the NCDOT and the site visit, AECOM understands that the site is a former gas station where four underground storage tanks (USTs) reportedly were removed in 1993. These USTs included one 280-gallon kerosene tank; two 2,000-gallon gasoline tanks; and one 1,000-gallon gasoline tank. As of the date of this report, the gas station structures have been demolished and a Ruby Tuesday restaurant has been built on the site. The structure on the site consists of a block building with an asphalt parking lot (Figure 2). The NCDOT has advised that the proposed right-of-way/easement will affect a portion of the the parking lot and landscaping in the front and a portion of the parking lot in the rear of the building (Figure 2). Because of the former tanks, the NCDOT requested a Preliminary Site

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Assessment. The scope of work as defined in the Request for Technical and Cost Proposal was to evaluate the proposed right-of-way with respect to the presence of known and unknown USTs and assess where contamination may exist on the right-of-way. If present, an estimate of the quantity of impacted soil was to be provided.

AECOM reviewed the on-line NCDENR Incident Management database and Groundwater Incident Number 11931 has been assigned to the property. According to the database, "a leak was detected when USTs were removed." No additional information was available. AECOM also examined the UST registration database to obtain UST ownership information. Four USTs were operated on the site and then closed under Facility ID 0-011264. The operator and owner of the tanks are listed as follows:

Owner McMillian-Shuler Oil Co., Inc. 708 S. Winslow Street Fayetteville, NC 28306 (910) 484-7196 Operator Rhodes Shell Service 223 S. Bragg Boulevard Spring Lake, NC 27390 No telephone

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 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 perpendicular to Bragg Boulevard and the Y-axis oriented approximately parallel to Bragg Boulevard. 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 where needed to further evaluate any significant metallic anomalies.

Access was available to all areas of the right-of-way and several anomalies were detected with the geophysical survey. Most of these anomalies were attributed to buried utility lines or conduits. However, an anomaly in the rear of the property was identified and confirmed as underground propane tanks. Attachment A presents a detailed report of findings and interpretations.

Site Assessment Activities

On August 11, 2010, AECOM mobilized to the site to conduct a Geoprobe[®] direct push investigation to evaluate soil conditions within the proposed right-of-way/easement. Continuous



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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 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 for analysis to SGS North America in Wilmington, 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).

Three direct-push holes (RT-1 through RT-3) were advanced within the right-of-way to a depth of 10 feet as shown in Figure 2 and Attachment B. Borings RT-1 through RT-3 were located to evaluate the conditions within the right-of-way along Bragg Boulevard (Attachment C). Although underground propane tanks were present on the property, these tanks were not considered as an environmental liability and no borings were advanced in their vicinity. The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 2 to 3 inches of asphalt or topsoil. Below the surface to a depth of 6 to 8 feet was a medium brown, loose, coarse-grained sand. Underlying this material was a medium brown sand/clay. No bedrock was encountered in any of the borings. The "Geologic Map of North Carolina" dated 1985 indicates that the site is underlain by the Middendorf and Cape Fear Formations, each of which consists predominantly of sand and mudstone. The soil observed at the site is consistent with this parent rock. All the borings were terminated at a depth of 10 feet. No groundwater was observed in any of the borings. Based on field screening, soil samples were submitted for laboratory analyses, 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, no petroleum hydrocarbon compounds identified as DRO and/or GRO were detected in any of the six soil samples collected from the site on August 11, 2010. Consequently, no concentrations are present above applicable action levels.



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Conclusions and Recommendations

A Preliminary Site Assessment was conducted to evaluate the Ruby Tuesday, Inc., Property (Parcel #28) located at 223 N. Bragg Boulevard in Spring Lake, Cumberland County, North Carolina. A geophysical investigation was conducted to evaluate the site for unknown USTs. The investigation indicated that no metallic USTs were present within the proposed right-of-way at the front of the property, but two underground propane tanks were detected at the rear of the property. Three soil borings were advanced to evaluate the soil conditions throughout the proposed right-of-way. The laboratory reports of the soil samples from these borings suggest that no DRO and/or GRO concentrations were present above the action level in any of the three soil samples analyzed.

AECOM appreciates the opportunity to work with the NCDOT on this project. Because no compounds were detected above the method detection limits in the soil samples, no notification is required to the NCDENR. If you have any questions, please contact me at (919) 854-6238.

Michael W. Branson

Michael W. Branson, P.G.

Project Manager

Attachments

c: Project File





TABLE 1

SOIL FIELD SCREENING AND ANALYTICAL RESULTS RUBY TUESDAY, INC., PROPERTY (PARCEL #28) SPRING LAKE, CUMBERLAND COUNTY, NORTH CAROLINA NCDOT PROJECT NO. U-4444B WBS ELEMENT 36492.1.2 AECOM PROJECT NO. 60158550

LOCATION	DEPTH (ft)	FID READING	SAMPLE ID	ANALYTICAL	ASSUMED
		(ppm)		RESULTS	ACTION LEVEL
				(mg/kg)	(mg/kg)
RT-1	0 - 2	2.33			
	2 - 4	2.50	RT-1	DRO (BQL)	10
				GRO (BQL)	10
	4 - 6	2.10			
	6 - 8	2.46			
	8 - 10	1.40			
RT-2	0 - 2	2.42			
	2 - 4	2.29			
	4 - 6	2.34			
	6 - 8	2.71	RT-2	DRO (BQL)	10
				GRO (BQL)	10
	8 - 10	1.97			
RT-3	0 - 2	1.50			
	2 - 4	2.45			
	4 - 6	2.54			
	6 - 8	3.11			
	8 - 10	3.26	RT-3	DRO (BQL)	10
				GRO (BQL)	10

Soil samples were collected on August 11, 2010.

DRO - Diesel range organics.

GRO - Gasoline range organics.

BQL - Below quantitation limit.

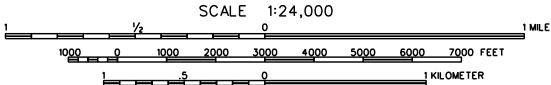
ppm - parts per million.

mg/kg - milligrams per kilogram.









SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: MANCHESTER, NC (REV 1987)



FIGURE 1

VICINITY MAP
RUBY TUESDAY, INC., PROPERTY (PARCEL *28)
SPRING LAKE, CUMBERLAND COUNTY NORTH CAROLINA

AUGUST 2010 60158550

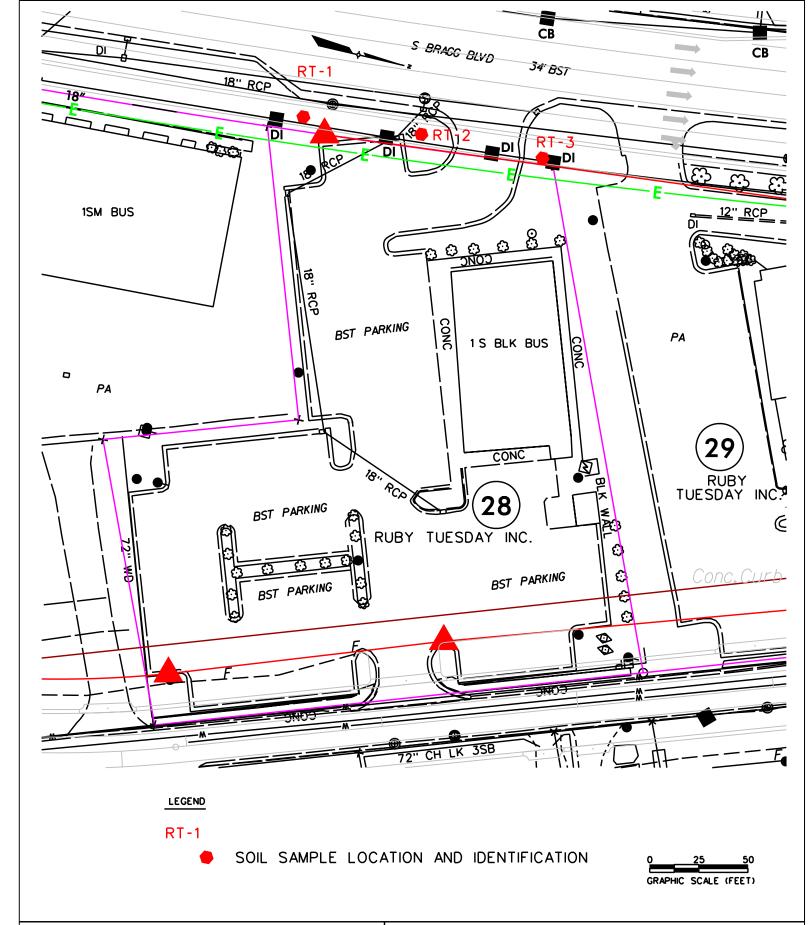


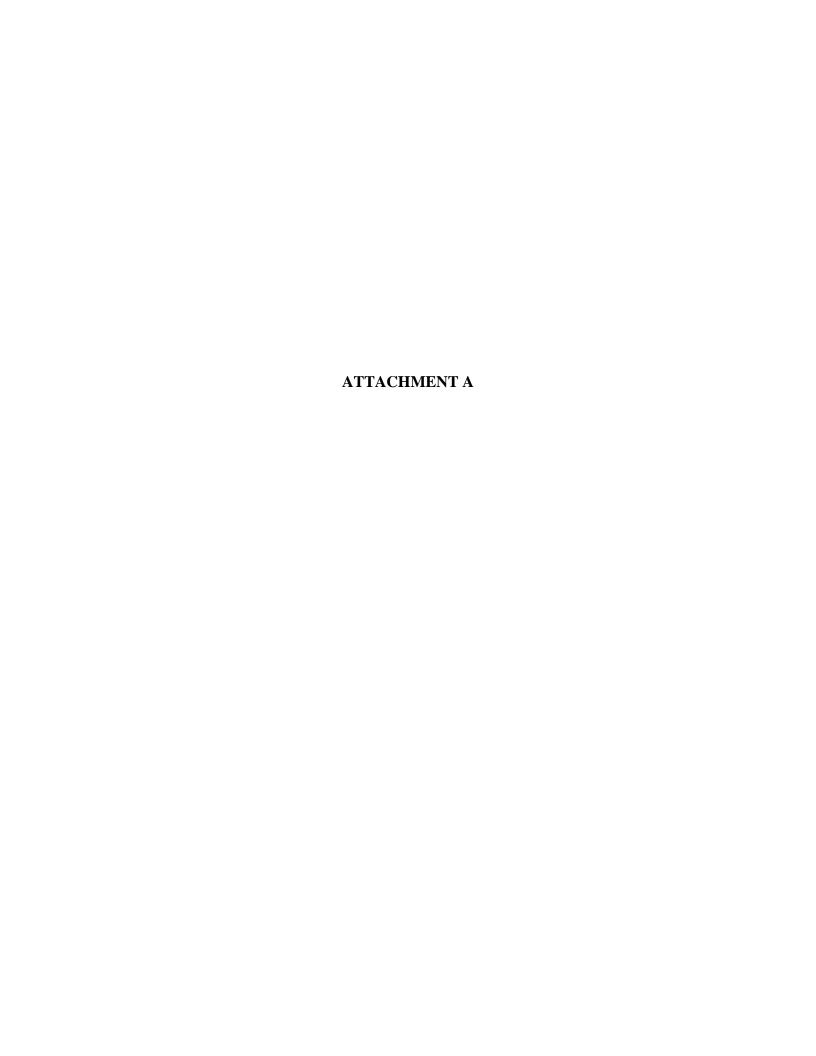


FIGURE 2 SITE MAP

RUBY TUESDAY PROPERTY (PARCEL *28)
SPRING LAKE, CUMBERLAND COUNTY, NORTH CAROLINA

AUGUST 2010

60158550



GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

RUBY TUESDAY INC. PROPERTY (PARCEL 28)
South Bragg Boulevard
Spring Lake, North Carolina

August 25, 2010

Report prepared for: Michael W. Branson, PG

AECOM Environment

701 Corporate Center Drive, Suite 475

Raleigh, North Carolina 27607

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Mark J. Denil. P.G.

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Douglas Canavello, P.G.

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C. P.O. Box 16265 GREENSBORO, NC 27416-0265 (336) 335-3174

AECOM Environment GEOPHYSICAL INVESTIGATION REPORT RUBY TUESDAY INC. PROPERTY (PARCEL 28) Spring Lake, North Carolina

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1.0 INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for AECOM Environmental across

the proposed Right-of-Way (ROW) areas along the front portion and back portion of the Ruby

Tuesday Inc. property (Parcel 28) located along the easterly side of South Bragg Boulevard

approximately 0.2 miles north of Poe Avenue in Spring Lake, North Carolina. Conducted on July 22

and August 2, 2010, the geophysical investigation was performed as part of the North Carolina

Department of Transportation (NCDOT) preliminary site assessment project to determine if

unknown, metallic underground storage tanks (USTs) were present beneath the proposed ROW areas

of the site.

The proposed front ROW area of Parcel 28 is located between South Bragg Boulevard and the Ruby

Tuesday restaurant building and parking lot. The proposed front ROW area consists primarily of

grass and asphalt surfaces and the geophysical survey area has a maximum length and width of 150

feet and 55 feet, respectively. The proposed back ROW area of Parcel 28 is located adjacent to South

Third Street and consists primarily of an asphalt-covered parking lot and two grass islands. The

geophysical survey area of the proposed back ROW area has a maximum length and width of 255

feet and 55 feet, respectively.

AECOM Environment representative Mr. Michael Branson, PG identified the geophysical survey

areas to Pyramid Environmental personnel and provided site maps showing the boundaries of the

proposed survey areas prior to conducting the investigation. Photographs of the geophysical

equipment used in this investigation and the proposed ROW areas at the Ruby Tuesday Inc. property

(Parcel 28) are shown in **Figure 1**.

2.0 FIELD METHODOLOGY

Prior to conducting the geophysical investigation, a 10-foot by 20-foot survey grid was established

across the geophysical survey areas using measuring tapes and water-based marking paint. These

grid marks were used as X-Y coordinates for location control when collecting the geophysical data

Ruby Tuesday Inc. Property (Parcel 28) – Geophysical Report Pyramid Environmental & Engineering, P.C.

08/25/10

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 July 22, 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, 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 August 2, 2010 across selected EM61 differential anomalies 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.

Preliminary contour plots of the EM61 bottom coil and EM61 differential results obtained from the two survey areas were emailed to Mr. Branson during the week of August 9, 2010.

3.0 DISCUSSION OF RESULTS

3.1 Proposed Front ROW Area

Contour plots of the EM61 bottom coil and differential results from the proposed front ROW area 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.

The linear EM61 anomalies intersecting grid coordinates X=25 Y=310 and X=50 Y=330 are probably in response to buried utility lines or conduits. Similarly, the lower amplitude, linear, bottom coil anomalies intersecting grid coordinates X=36 Y=413 and X=65 Y=417 are probably in response to buried conduits. The bottom coil anomaly centered near grid coordinates X=45 Y=388 is probably in response to buried, miscellaneous debris or a small object.

GPR data suggest the EM61 differential anomaly centered near grid lines X=30 Y=428 is in response to a segment of buried conduit or a miscellaneous metal object. The remaining EM61 anomalies are probably in response to known surface objects or miscellaneous debris/objects. The geophysical investigation suggests that the proposed front ROW area does not contain unknown, metallic USTs.

3.2 Proposed Back ROW Area

Contour plots of the EM61 bottom coil and differential results from the proposed back ROW area are presented in **Figures 4 and 5**, respectively. The linear EM61 bottom coil anomalies intersecting grid coordinates X=20 Y=222, X=20 Y=250 and X=65 Y=250 are probably in response to buried utility lines or conduits. The linear, bottom coil anomalies intersecting grid coordinates X=55 Y=80 and X=55 Y=200 are probably in response to the steel reinforced concrete parking curbs. Similarly, the linear bottom coil anomaly intersecting grid coordinates X=25 Y=18 is probably in response to the steel reinforced concrete parking curbs and/or a buried conduit. The bottom coil anomalies centered near grid coordinates X=40 Y=127 and X=55 Y=163 are probably in response to buried miscellaneous debris or small, insignificant objects.

GPR data suggest the high amplitude EM61 anomaly centered near grid coordinates X=47 Y=247 is in response to two active, metallic, propane USTs. Each of the two probable, active USTs is

approximately 15 feet long, 4 feet wide and buried 1.7 feet below present grade. The axes of the probable USTs are oriented in a northerly-southerly direction and visible valve covers identify the center portions of the tanks. The footprints of the two probable, metallic USTs were marked in the field using orange marking paint and pin flags. The images of GPR survey lines Y=246 and X=51 which cross the two probable USTs and a photograph showing the location of the probable USTs are

The remaining EM61 anomalies shown in Figures 4 and 5 are probably in response to known surface objects, structures and/or buried lines.

4.0 SUMMARY & CONCLUSIONS

presented in **Figure 6**.

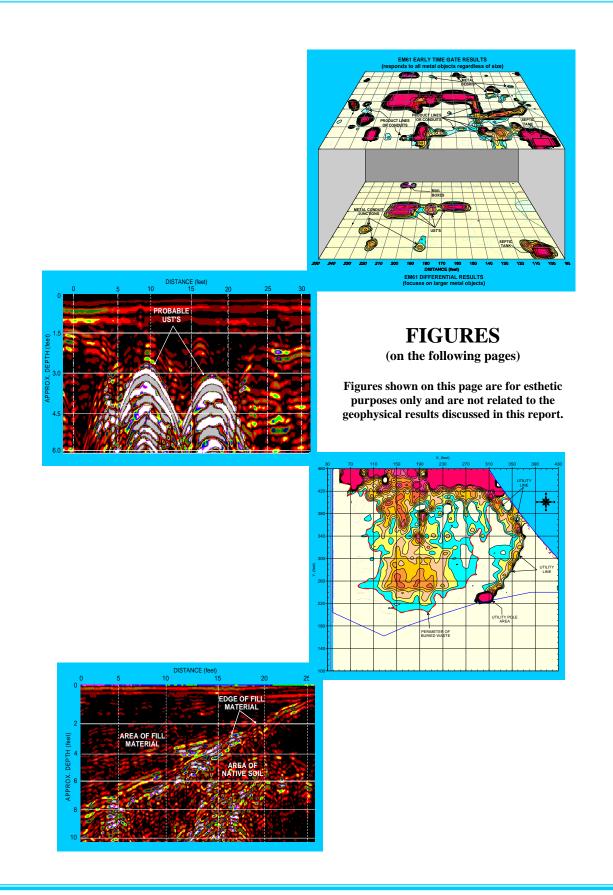
Our evaluation of the EM61 and GPR data collected across the Ruby Tuesday Inc. property (Parcel 28) located along the east side of South Bragg Boulevard in Spring Lake, North Carolina, provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the surveyed portions of the site.
- At the proposed front ROW area, the linear EM61 anomalies intersecting grid coordinates X=25 Y=310, X=36 Y=413, X=50 Y=330, and X=65 Y=417 are probably in response to buried utility lines or conduits.
- The remaining EM61 anomalies are probably in response to known surface objects or miscellaneous debris/objects. The geophysical investigation suggests that the proposed front ROW area does not contain unknown, metallic USTs.
- At the proposed back ROW area, the linear EM61 bottom coil anomalies intersecting grid coordinates X=20 Y=222, X=20 Y=250 and X=65 Y=250 are probably in response to buried utility lines or conduits.

- The linear, bottom coil anomalies intersecting grid coordinates X=25 Y=18, X=55 Y=80 and X=55 Y=200 are probably in response to the steel reinforced concrete parking curbs.
- GPR data suggest the high amplitude EM61 anomaly centered near grid coordinates X=47 Y=247 is in response to two active, metallic, propane USTs. Each of the two probable, active USTs is approximately 15 feet long, 4 feet wide and buried 1.7 feet below present grade.

5.0 LIMITATIONS

EM61 and GPR surveys have been performed and this report prepared for AECOM Environmental 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 have not conclusively determined that two probable, active USTs are present within the surveyed portions of the site but that only two probable USTs were detected.





The photograph shows the Geonics EM61 metal detector that was used to conduct the metal detection survey across the proposed ROW areas at the Ruby Tuesday Inc. property on July 22, 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 the Ruby Tuesday Inc. property on August 2, 2010.



The photograph shows the front proposed ROW area at the Ruby Tuesday Inc. property located along the east side of South Bragg Boulevard in Spring Lake, North Carolina. The photograph is viewed in a northerly direction.

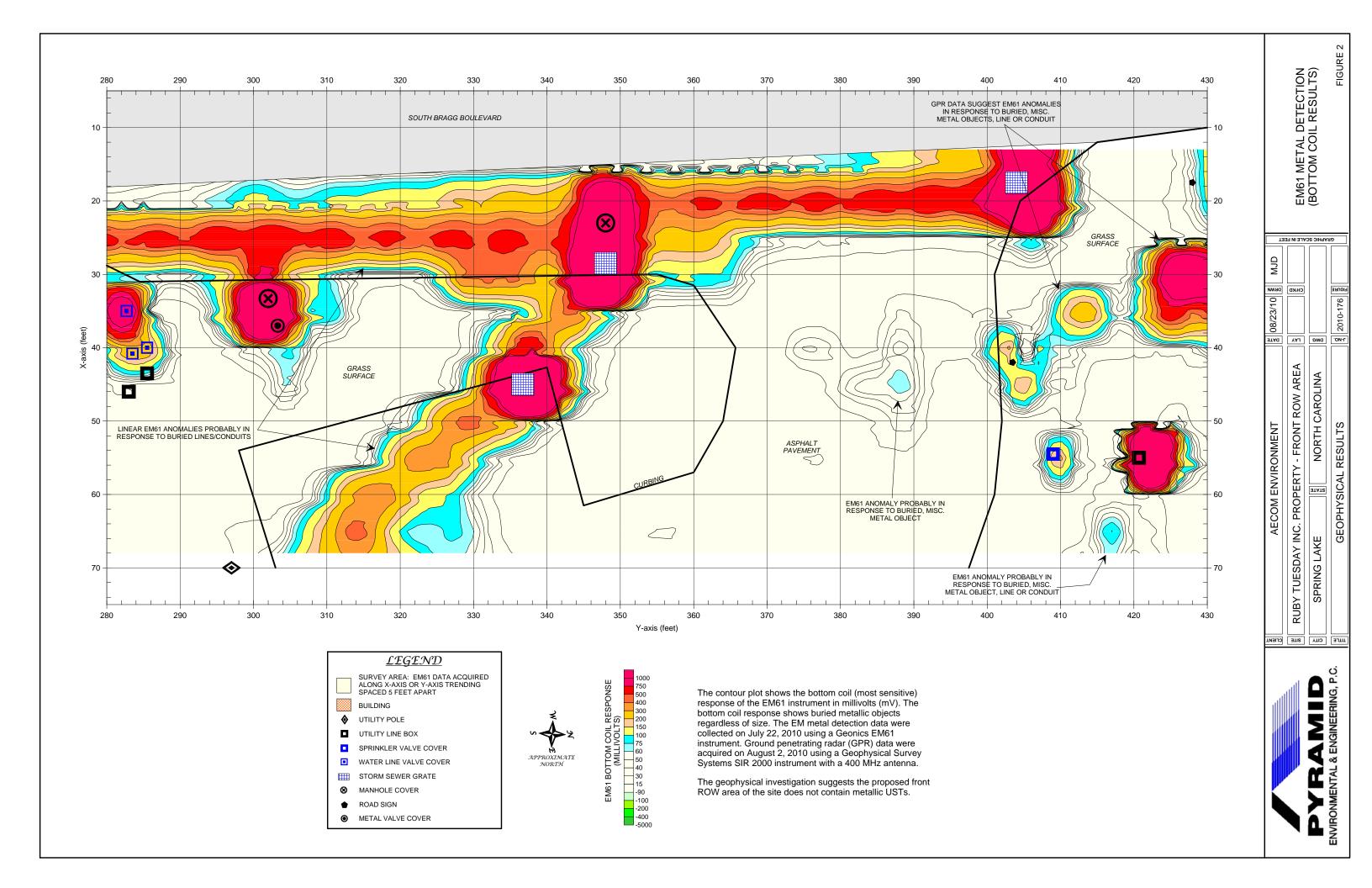
The photograph shows the back proposed ROW area at the Ruby Tuesday Inc. property located along the west side of South Third Street in Spring Lake, North Carolina. The photograph is viewed in a northerly direction.

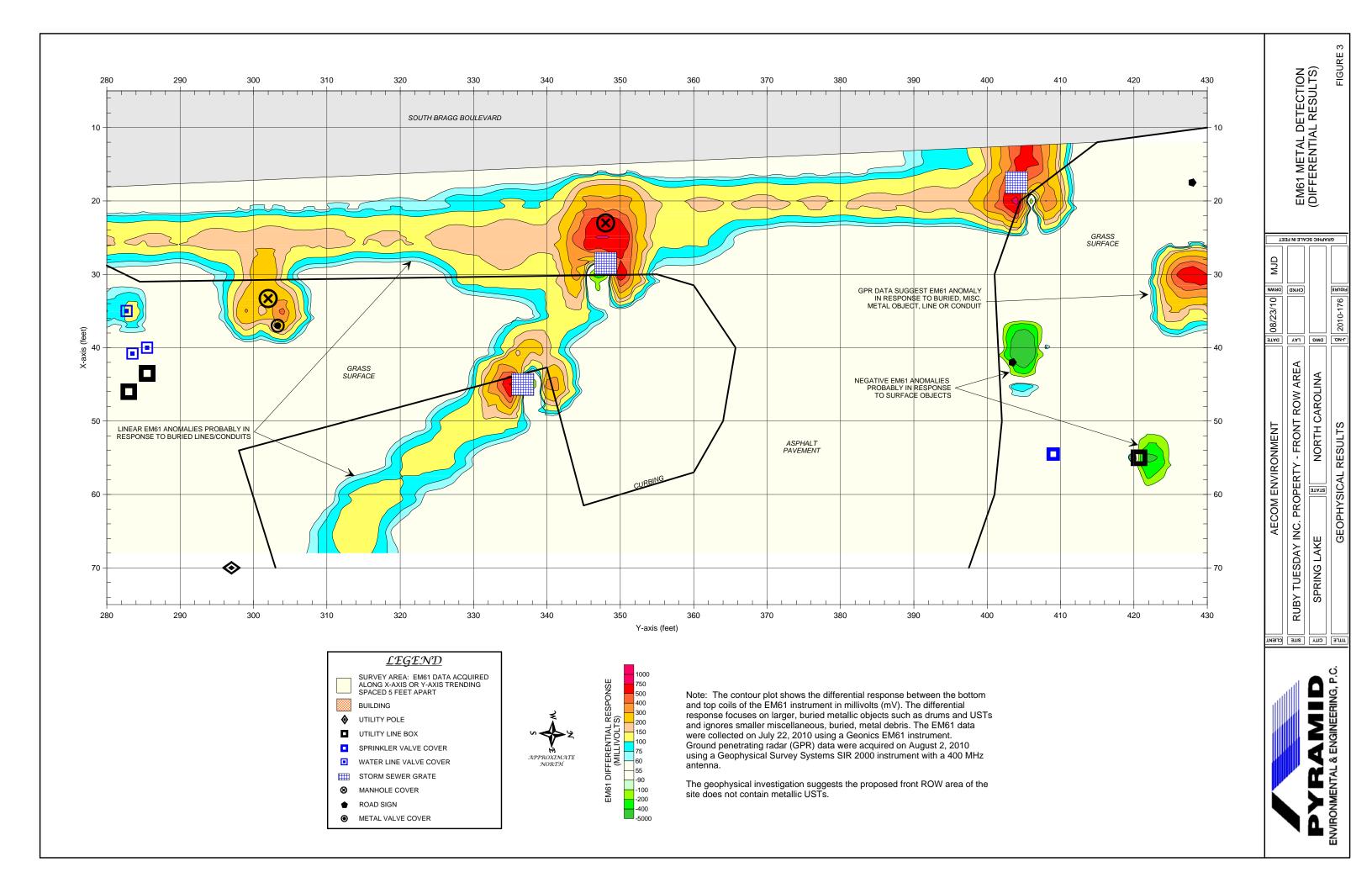


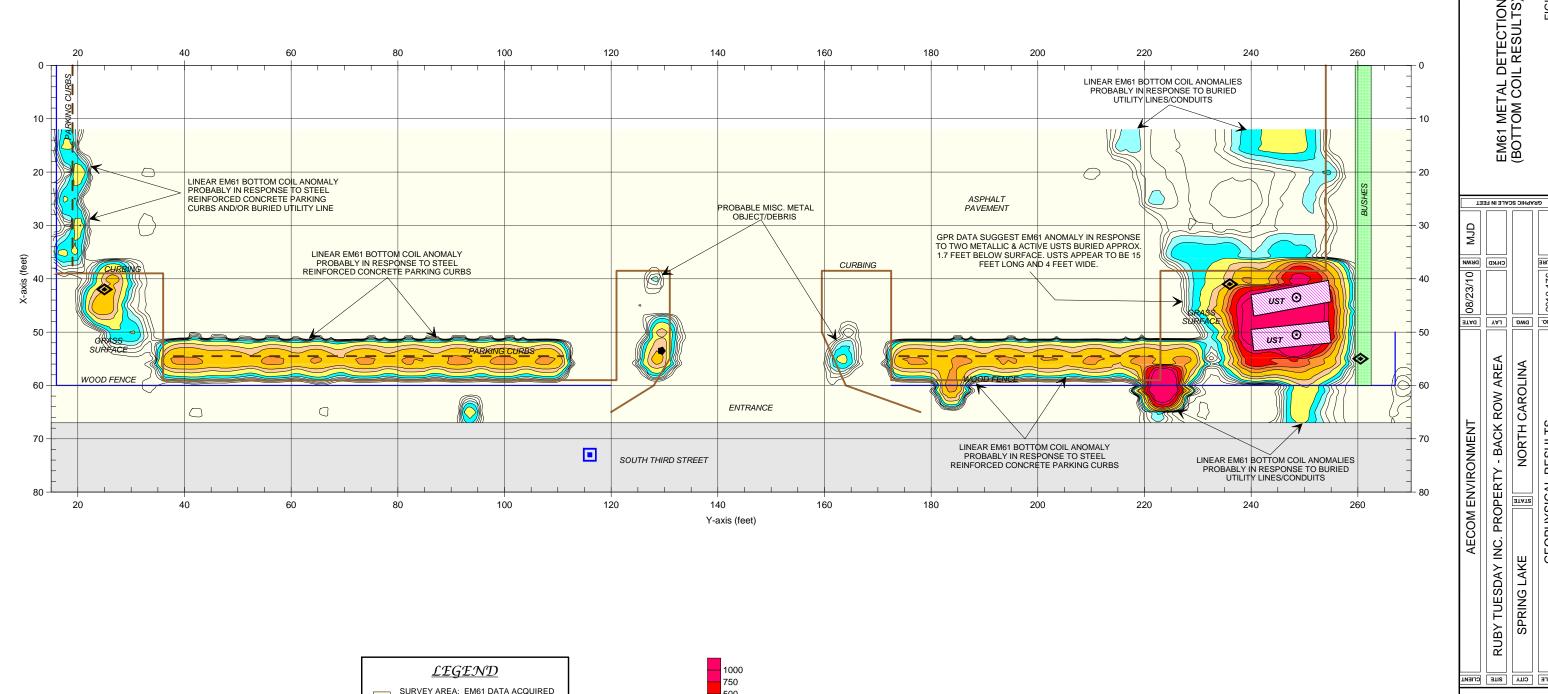


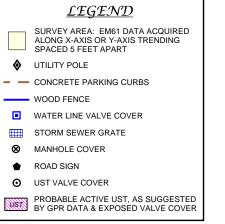
	AECOM ENVIRONMENT	08/23/10 MJD MJD
	RUBY TUESDAY INC. PROPERTY (PARCEL 28)	GH'KD GH'KD
į	SPRING LAKE	DMG
	GEOPHYSICAL RESULTS	(2010-176) 함께 기계

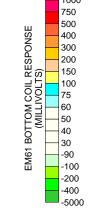
GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS











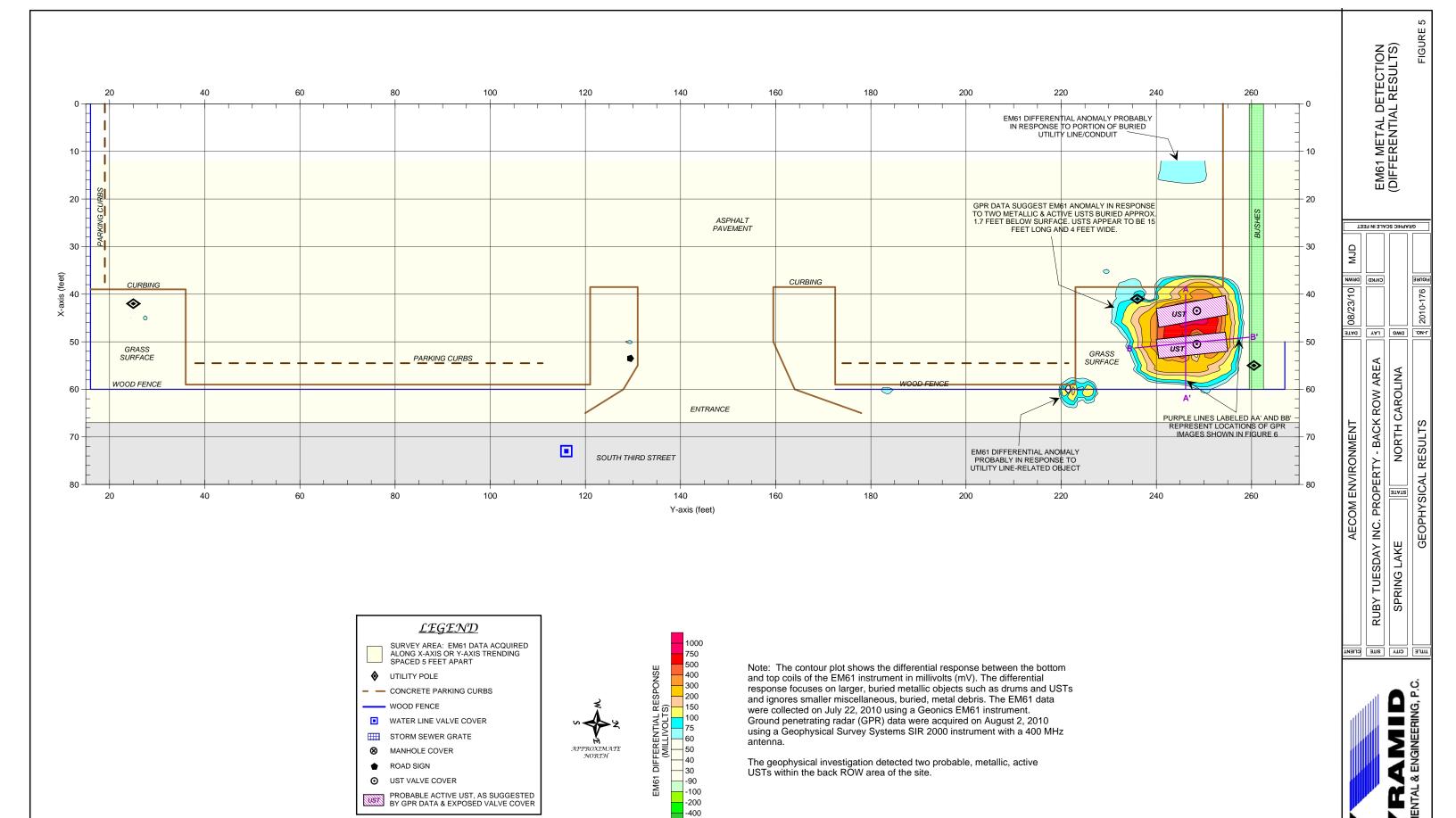
APPROXIMATE NORTH

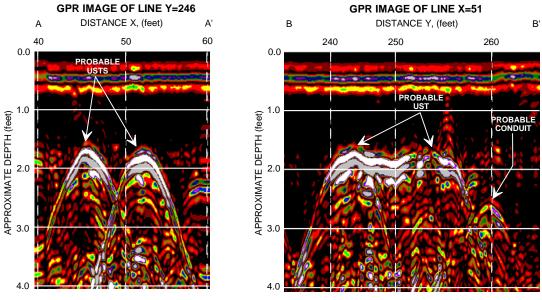
The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on July 22, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on August 2, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

The geophysical investigation detected two probable, metallic USTs within the back ROW area of the site.

EM61 METAL DETECTION (BOTTOM COIL RESULTS)

$\overline{}$	$\overline{}$	$\overline{}$	=
MJD			
DKWN	СН.КD		FIGURE
08/23/10			2010-176
TAG	YAJ	DMC	J-NO.
AECOM ENVIRONMENT	RTY - BACK ROW AREA	NORTH CAROLINA	GEOPHYSICAL RESULTS
面	빛	STATE	22
AECOM	RUBY TUESDAY INC. PROPERTY - BACK ROW AREA	SPRING LAKE	GEOPHYS
СГІЕИЈ	ЭШВ	ΥПЭ	ЭЛІЦ





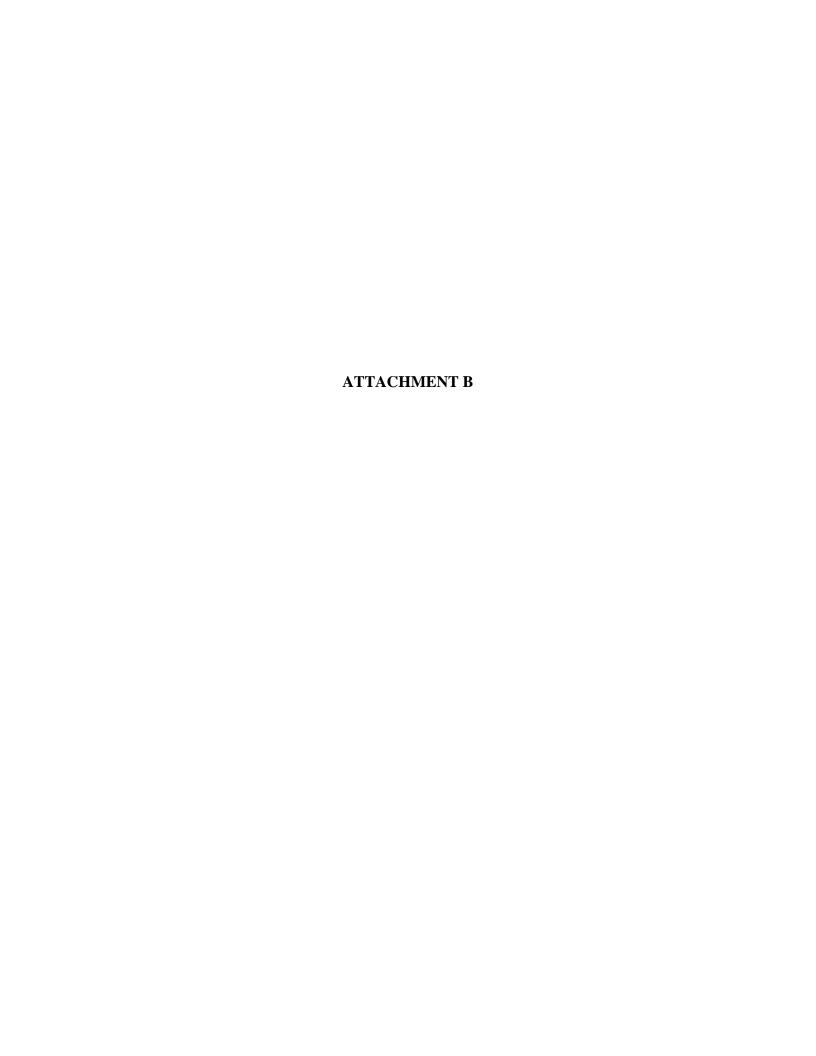
The GPR images obtained along a portion of survey lines Y=246 and X=51 recorded high amplitude anomalies that are probably in response to two metallic, active USTs buried approx. 1.7 feet below the grass surface. The solid purple lines labeled AA' and BB' in the photograph below and in Figure 5 show the locations of the GPR images.



The orange rectangles in the photograph represents the approximate perimeters of the two probable, metallic, active USTs, as suggested by the GPR data and visible valve covers, centered near grid coordinates X=47 Y=247. Each of the USTs appears to be approximately 15 feet long, 4 feet wide and oriented in a northerly-southerly direction. The solid purple lines in the photograph labeled AA' and BB' represent the approximate locations of the GPR images shown above. The photograph is viewed in a northerly direction.



CLIENT	AECOM ENVIRONMENT	08/23/10 MJD	Γ
망	RUBY TUESDAY INC. PROPERTY - BACK ROW AREA	GHK0	
Œ	SPRING LAKE	DWG	
Ę	GEOPHYSICAL RESULTS	2010-176	ı



TEST BORING REPORT

PROJE	CT RUB	Y TUESDA	Y, INC., P	ROPERTY	(PARCEL 28) BORING NUMBER RT-1
CLIEN	T NCDO	Γ			PAGE 1
PROJE	CT NUM	IBER 6015	58550 (WE	S 36492.1.	
CONT	RACTOR	REGIONA	AL PROBI	NG	DATE 8/11/2010
EQUIP	MENT 9	GEOPROBE			DRILLER OPPER
					PREPARED BY BRANSON
DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			2.33		2" TOPSOIL, MEDIUM BROWN, LOOSE, COARSE-GRAINED SAND, DRY,
					NO ODOR.
			2.50		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR
					ANALYSIS.
			2.10		AS ABOVE, DRY, NO ODOR.
5.0					
			2.46		AS ABOVE, DRY, NO ODOR.
					12012012,211,11002011
			1.40		MEDIUM BROWN SAND/CLAY, STIFF, DRY, NO ODOR.
					INDIONI BROWN SIEND/CENT, STET, BRI, INC OBOR.
10.0					BORING TERMINATED AT 10 FEET. NO GROUNDWATER
					ENCOUNTERED
4					
15.0					



20.0

TEST BORING REPORT

PROJE	CT RUB	Y TUESDA	Y, INC., PI	ROPERTY	(PARCEL 28) BORING NUMBER RT-2
CLIEN	T NCDO	Γ			PAGE 1
PROJE	CT NUM	BER 6015	58550 (WB	S 36492.1.	
CONTI	RACTOR	REGIONA	AL PROBI	NG	DATE 8/11/2010
EQUIP	MENT C	SEOPROBE			DRILLER OPPER
					PREPARED BY BRANSON
	1	T == ====			
DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			2.42		2" TOPSOIL, MEDIUM BROWN, LOOSE, COARSE-GRAINED SAND, DRY, NO ODOR.
			2.29		AS ABOVE, DRY, NO ODOR.
			2.34		AS ABOVE, DRY, NO ODOR.
5.0			2.71		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR
					ANALYSIS.
			1.97		MEDIUM BROWN SAND/CLAY, STIFF, DRY, NO ODOR.
10.0					BORING TERMINATED AT 10 FEET. NO GROUNDWATER ENCOUNTERED
15.0					



TEST BORING REPORT

PROJE	ECT RUB	Y TUESDA`	Y, INC., P	ROPERTY	(PARCEL 28) BORING NUMBER RT-3
CLIEN	T NCDO	Γ			PAGE 1
PROJE	ECT NUM	IBER <u>6015</u>	8550 (WB	S 36492.1.	
CONT	RACTOR	REGIONA	AL PROBI	NG	DATE 8/11/2010
EQUIP	MENT C	GEOPROBE	,		DRILLER OPPER
					PREPARED BY BRANSON
DEPTH	CASING	BLOWS	OVA	SAMPLE	
IN FEET	BLOWS FOOT	PER 6 INCHES	(ppm)	DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			1.50		2" TOPSOIL, MEDIUM BROWN, LOOSE, COARSE-GRAINED SAND, DRY,
	-				NO ODOR.
			2.45		AS ABOVE, DRY, NO ODOR.
			2.54		AS ABOVE, DRY, NO ODOR.
5.0					
			3.11		AS ABOVE, DRY, NO ODOR.
			3.26		MEDIUM BROWN SAND/CLAY, STIFF, DRY, NO ODOR. SUBMIT TO
					LABORATORY FOR ANALYSIS.
10.0					
					BORING TERMINATED AT 10 FEET. NO GROUNDWATER
					ENCOUNTERED
15.0					
		—			



20.0

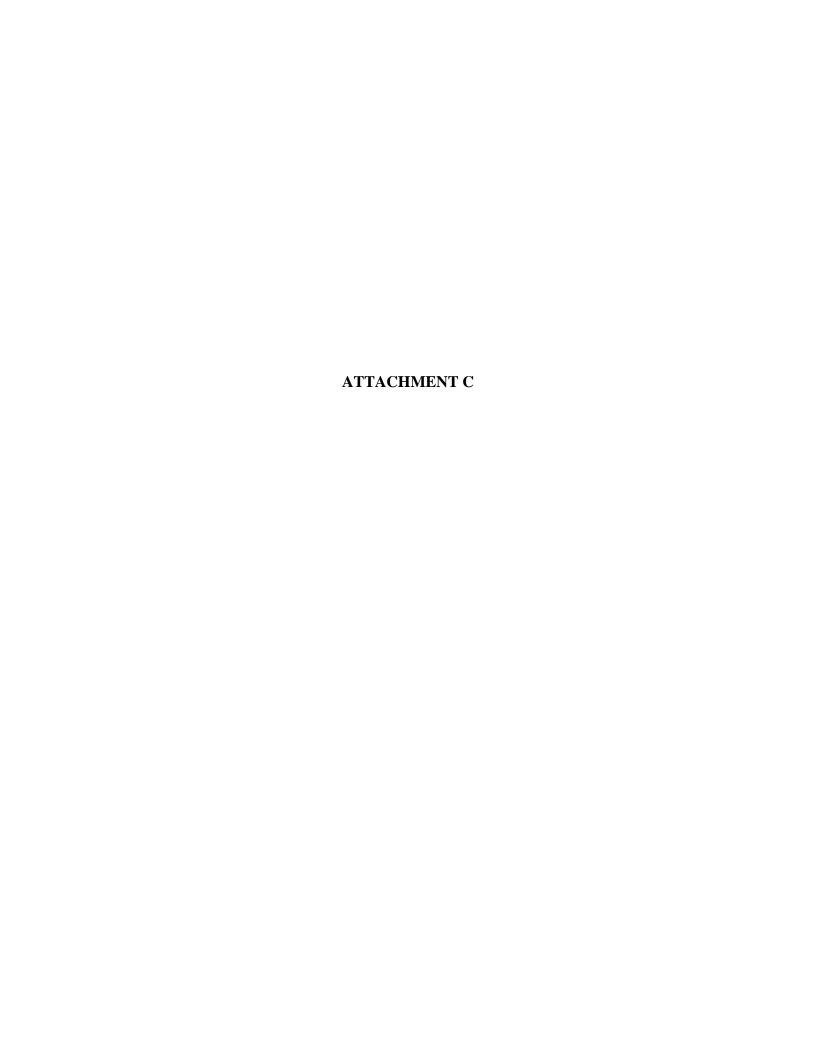




PHOTO 1 - BORING IN PROPOSED R/W LOOKING NORTHEAST



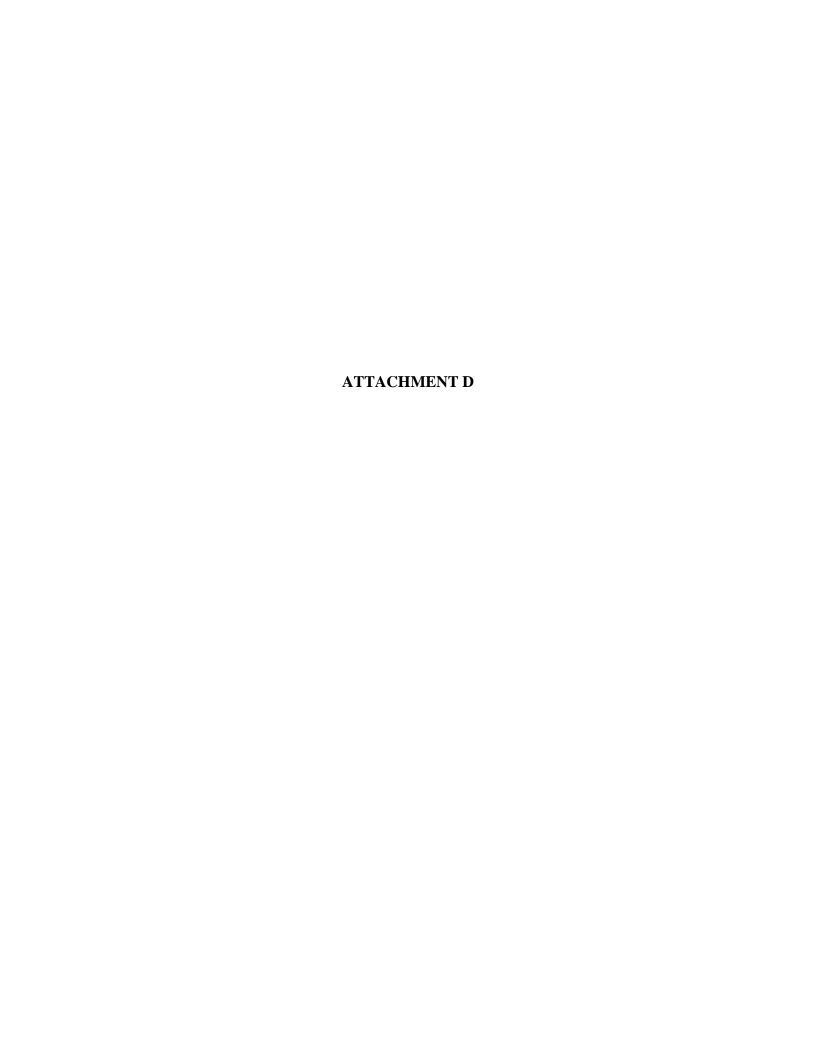
PHOTO 2 - BORINGS IN PROPOSED R/W LOOKING NORTHEAST



PHOTO 3 - BORING WITHIN PROPOSED R/W LOOKING EAST



PHOTO 4 - UNDERGROUND PROPANE TANKS AT REAR OF PROPERTY





Mike Branson **AECOM** 701 Corporate Center Drive Suite 475 Raleigh, NC 27607

Report Number:

G1037-101

Client Project:

NCDOT

Dear Mike Branson,

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

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

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

Sincerely,

SGS North America, Inc.

Barbara Hager

List of Reporting Abbreviations And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

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

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

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

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

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

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

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

% Rec = Percent Recovery

% soilds = Percent Solids

Special Notes:

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

MI34.021808.4

Results for Total Petroleum Hydrocarbons by GC/FID 8015

Client Sample ID: RT-1

Client Project ID: NCDOT

Lab Sample ID: G1037-101-1A

Lab Project ID: G1037-101 Report Basis: Dry Weight Analyzed By: LMC

Date Collected: 8/11/2010 7:45

Date Received: 8/12/2010

Matrix: Soil

Solids 96.02

Analyte	Result	RL		Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.66		mg/Kg	1	08/18/10 23:10
Surrogate Spike Results						
BFB		Added 100	Result 98.7	Recovery 98.7	Flag	Limits 70-130

Comments:

Batch Information

Analytical Batch: VP081810 Analytical Method: 8015

Instrument ID: GC4

Analyst: LMC

Prep Method: 5035 Initial Wt/Vol: 5.52 g

Final Volume: 5 mL

NC Certification #481

N.C. Certification #481

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Results for Total Petroleum Hydrocarbons by GC/FID 8015

Client Sample ID: RT-2

Client Project ID: NCDOT

Lab Sample ID: G1037-101-2A

Lab Project ID: G1037-101

Report Basis: Dry Weight

Analyzed By: LMC

Date Collected: 8/11/2010 8:00

Date Received: 8/12/2010

Matrix: Soil

Solids 87.73

Analyte	Result	RL		Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	4.54		mg/Kg	1	08/18/10 23:38
Surrogate Spike Results						
BFB		Added 100	Result 99.3	Recovery 99.3	Flag	Limits 70-130

Comments:

Batch Information

Analytical Batch: VP081810

Analytical Method: 8015 Instrument ID: GC4

Analyst: LMC

Prep Method: 5035 Initial Wt/Vol: 7.54 g

Final Volume: 5 mL

Analyst: WM

Reviewed By: GROXIS

NC Certification #481

Results for Total Petroleum Hydrocarbons by GC/FID 8015

Client Sample ID: RT-3

Client Project ID: NCDOT

Lab Sample ID: G1037-101-3A

Lab Project ID: G1037-101 Report Basis: Dry Weight Analyzed By: LMC

Date Collected: 8/11/2010 8:15

Date Received: 8/12/2010

Matrix: Soil

Solids 88.33

Analyte	Result	RL		Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	4.57		mg/Kg	1	08/19/10 00:05
Surrogate Spike Results						
BFB		Added 100	Result 98.5	Recovery 98.5	Flag	Limits 70-130

Comments:

Batch Information

Analytical Batch: VP081810 Analytical Method: 8015 Instrument ID: GC4

Analyst: LMC

Prep Method: 5035 Initial Wt/Vol: 7.43 g Final Volume: 5 mL

Analyst: ______

Reviewed By:

NC Certification #481

N.C. Certification #481

Results for Total Petroleum Hydrocarbons by GC/FID 8015

Client Sample ID: RT-1
Client Project ID: NCDOT

Lab Sample ID: G1037-101-1D Lab Project ID: G1037-101 Date Collected: 8/11/2010 7:45

Date Received: 8/12/2010

Matrix: Soil

Solids 96.02

Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.43	mg/Kg	1	08/18/10 01:01
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	33	82.6

Comments:

Batch Information

Analytical Batch: EP081710 Analytical Method: 8015 Instrument: GC6

Strument: GC6
Analyst: DTF

Prep batch: 17210 Prep Method: 3541 Prep Date: 08/16/10

Initial Prep Wt/Vol: 32.38 G Prep Final Vol: 10 mL

Analyst: FA

Reviewed By: DRO.XLS

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NC Certification #481

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

Client Sample ID: RT-2 Client Project ID: NCDOT

Lab Sample ID: G1037-101-2D Lab Project ID: G1037-101

Date Collected: 8/11/2010 8:00

Date Received: 8/12/2010

Matrix: Soil

Solids 87.73

Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.94	mg/Kg	1	08/18/10 01:30
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	29	72.6

Comments:

Batch Information

Analytical Batch: EP081710 Analytical Method: 8015

Instrument: GC6 Analyst: DTF

Prep batch: 17210 Prep Method: 3541

Prep Date: 08/16/10

Initial Prep Wt/Vol: 32.87 G Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

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N.C. Certification #481

Results for Total Petroleum Hydrocarbons by GC/FID 8015

Client Sample ID: RT-3
Client Project ID: NCDOT

Lab Sample ID: G1037-101-3D Lab Project ID: G1037-101 Date Collected: 8/11/2010 8:15

Date Received: 8/12/2010

Matrix: Soil Solids 88.33

Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.60	mg/Kg	1	08/18/10 01:57
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	29.3	73.2

Comments:

Batch Information

Analytical Batch: EP081710 Analytical Method: 8015 Instrument: GC6

Analyst: DTF

Prep Method: 3541 Prep Date: 08/16/10 Initial Prep Wt/Vol: 34.33 G

Prep Final Vol: 10 mL

Prep batch: 17210

Analyst: FA

Reviewed By:

NC Certification #481

N.C. Certification #481 Page 8 of 9



CHAIN OF CUSTODY RECORD SGS North America Inc.

Locations Nationwide Alaska

New Jersey
 North Carolina

www.us.sgs.com

100611

MarylandNew YorkOhio

SGS North America, Inc. ABSENT REMARKS Samples Received Cold? (Circle) YES
Temperature °C: ~ Chain of Custody Seal: (Circle) BROKEN OT STD PAGE INTACT Fed Ex Special Deliverable Requirements: Date Needec Requested Turnaround Time: Special Instructions: Shipping Ticket No: Shipping Carrier: 91037-10 □ RUSH. Analysis Required \bigcirc SGS Reference: SOMP PMOS G= GRAB O 0 h 00ZF4-ZUK0 3 3 5014 2016 Soll MATRIX P.O. NUMBER: WAS #3 6 491. 1.2 SITE/PWSID#: RUBY TUESDAY CONTACT. My Le 1S. ANDEN PHONE NO. 1941 854 623 Received By: Received By: Received By: Received By: 0800 6745 1815 FAX NO.: (919) 858 6259 TIME w/"/8 8/11/1/8 8/11/60 64:6 ald 18 (730 DATE Time Time QUOTE # 8/11/69 Date Date Date Date SAMPLE IDENTIFICATION RT-2 87-3 RT-1 Collected/Reynquished By:(1) CLIENT: AECOM REPORTS TO: ABOVE INVOICE TO: NODE PROJECT: NUTOT Relinquished By: (2) Relinquished By: (3) Relinquished By: (4) LAB NO.

ದಿ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 56\<u>55</u>9ਿ ದಿ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab Pink - Retained by Client

S