

January 27, 2010

Mr. Terry Fox, PG
North Carolina Department of Transportation
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment
SAJON Properties, LLC Property (Parcel #138)
5020 US 220
Summerfield, Guilford County, North Carolina
NCDOT Tip No. R-2309AB
WBS Element 34418.1.1
AECOM Project No. 60144352

Dear Mr. Fox:

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 December 21, 2009, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated December 22, 2009. 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 SAJON Properties, LLC Property (Parcel #138) is located at 5020 US 220 in Summerfield, Guilford County, North Carolina. The property is situated on the east side of US 220 approximately 700 feet north of the intersection of US 220 and Scalesville Road (NC 150) (Figure 1). Based on information supplied by the NCDOT and the site visit, AECOM understands that the site is vacant/abandoned and may have been a gas station in the past. The structures on the property consist of two wood-framed buildings and a shed (Figure 2). The NCDOT has advised that the right-of-way/easement will affect the buildings. Because of the unknown nature of the site history, 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 known and unknown 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. No other information was available on-line and no further file review was conducted. AECOM also examined the UST registration database to obtain UST ownership information. According to the database, the USTs on the property are operated under Facility Number 0-009529. No USTs have been registered for the address.

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 US 220 and the Y-axis oriented approximately perpendicular to US 220. 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 if such a survey was considered necessary.

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. Most of these anomalies were attributed to buried utility lines or conduits, or vehicles. However, one anomaly situated at the northwest corner of the building was interpreted as two small USTs. These probable USTs were buried about 2.2 feet deep and oriented in a roughly north-south direction. Fill ports for the tanks were noted. A detailed report of findings and interpretations is presented in Attachment A.

Site Assessment Activities

On January 13, 2009, AECOM mobilized to the site to conduct a Geoprobe[®] direct push investigation to evaluate soil conditions within the proposed right-of-way/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 4-foot long 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, Inc. 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).

Six direct-push holes (SP-1 through SP-6) were advanced within the proposed right-of-way/easement, as shown in Figure 2 and Attachment B, to a depth of 14 feet. The borings were located to evaluate the entire right-of-way/easement on the property (Attachment C). Borings SP-1, SP-2, and SP-3 were located to evaluate soil conditions adjacent to the probable USTs; borings SP-4 and SP-5 were situated to assess the conditions near the former propane tank, and boring SP-6 was placed to evaluate conditions near the proposed drop inlet. The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 3 inches of gravel or topsoil. Below the surface to a depth of about 6 feet was a medium to reddish brown silt/clay. Underlying this stratum was a saprolite consisting of a mottled light brown and white silt/sand. No bedrock was encountered in any of the borings. All the borings were terminated at a depth of 14 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 the completion of each boring, it 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 DRO and/or GRO were detected in one of the six soil samples collected from the site. The soil sample from boring SP-2 contained a DRO 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 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 DRO concentration in the soil sample from boring SP-2 (9.65 mg/kg) was present at a concentration below the 10 mg/kg assumed action level.

Conclusions and Recommendations

A Preliminary Site Assessment was conducted to evaluate the SAJON Properties LLC Property (Parcel #138) located at 5020 US 220 in Summerfield, Guilford County, North Carolina. Six soil borings were advanced to evaluate the soil conditions throughout the site. The laboratory reports of the soil samples from these borings suggest that no DRO and/or GRO concentrations were present above the assumed action level in any of the six soil samples analyzed. As such, no soil within the right-of-way appears to be affected by petroleum contamination.

Mr. Terry Fox
January 27, 2010
Page 4

AECOM appreciates the opportunity to work with the NCDOT on this project. While no compounds were detected above the assumed action levels in the soil samples, NCDENR guidelines require that all compounds detected above the method detection limit be reported. As such, AECOM recommends that a copy of this report be submitted to the Guilford County Department of Public health. This agency has been granted oversight jurisdiction for environmental issues in Guilford County by the NCDENR. 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
 SAJON PROPERTIES, LLC, PROPERTY (PARCEL #138)
 SUMMERFIELD, GUILFORD COUNTY, NORTH CAROLINA
 NCDOT PROJECT NO. R-2309AB
 WBS ELEMENT 34418.1.1
 AECOM PROJECT NO. 60144352

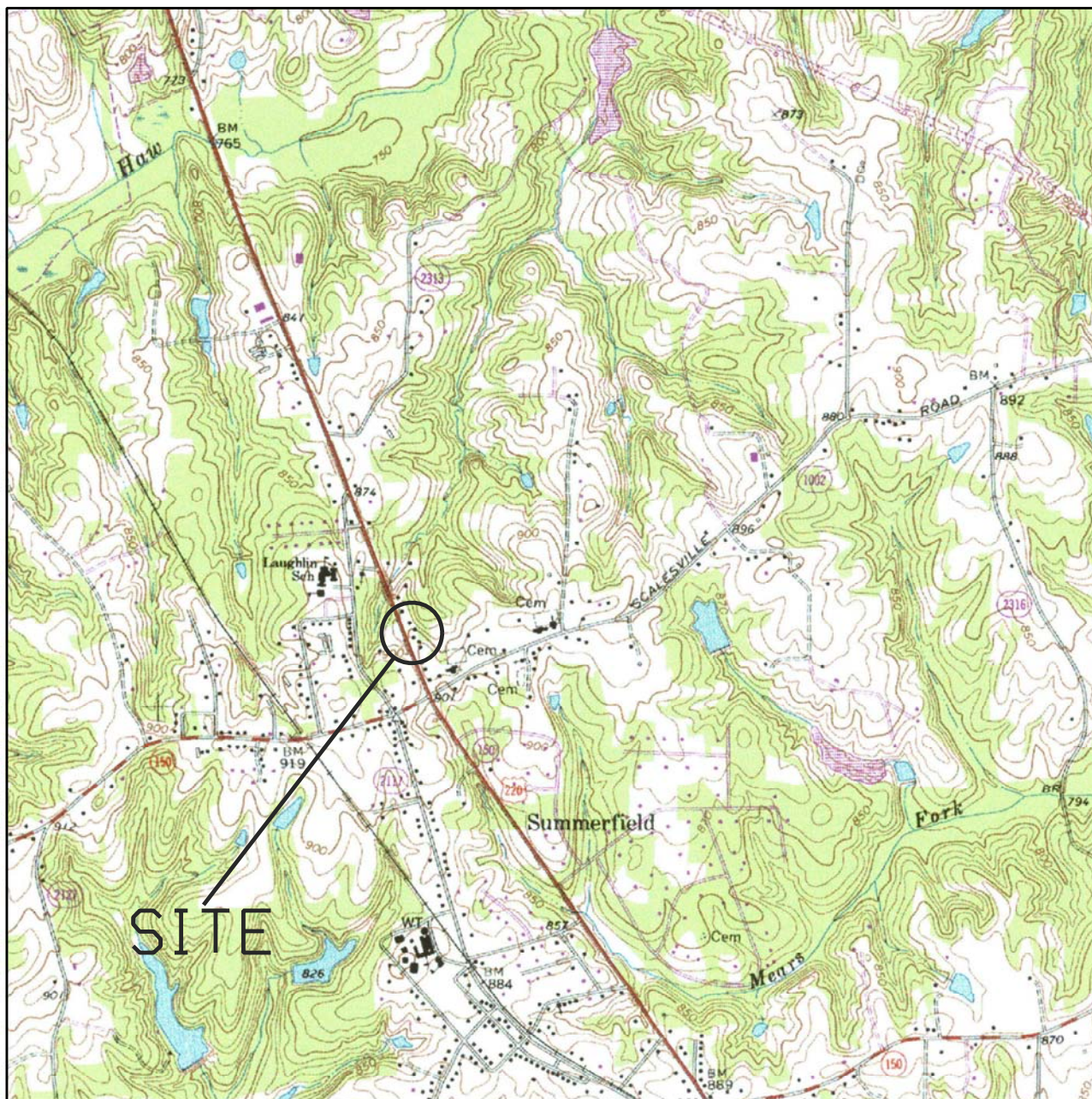
LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
SP-1	0 - 2	0.53			
	2 - 4	0.58			
	4 - 6	0.44			
	6 - 8	0.81			
	8 - 10	0.95	SP-1	DRO (BQL) GRO (BQL)	10 10
	10 - 12	0.6			
SP-2	12 - 14	0.53			
	0 - 2	0.53			
	2 - 4	0.53			
	4 - 6	0.77			
	6 - 8	1.59			
	8 - 10	5.26			
SP-3	10 - 12	3.12			
	12 - 14	11.67	SP-2	DRO (9.65) GRO (BQL)	10 10
	0 - 2	0.52			
	2 - 4	0.58			
	4 - 6	0.83			
	6 - 8	1.11			
SP-4	8 - 10	5.09			
	10 - 12	3.4			
	12 - 14	9.86	SP-3	DRO (BQL) GRO (BQL)	10 10
	0 - 2	0.51			
	2 - 4	0.55			
	4 - 6	0.48			
SP-5	6 - 8	0.56	SP-4	DRO (BQL) GRO (BQL)	10 10
	8 - 10	0.42			
	10 - 12	0.41			
	12 - 14	0.38			
	0 - 2	0.35			
	2 - 4	0.4			
BS-6	4 - 6	0.51	SP-5	DRO (BQL) GRO (BQL)	10 10
	6 - 8	0.38			
	8 - 10	0.29			
	10 - 12	0.33			
	12 - 14	0.29			
	0 - 2	0.26			
SP-6	2 - 4	0.34			
	4 - 6	0.46			
	6 - 8	0.48	SP-6	DRO (BQL) GRO (BQL)	10 10
	8 - 10	0.34			
	10 - 12	0.32			
	12 - 14	0.31			

Soil samples were collected on January 13, 2010.

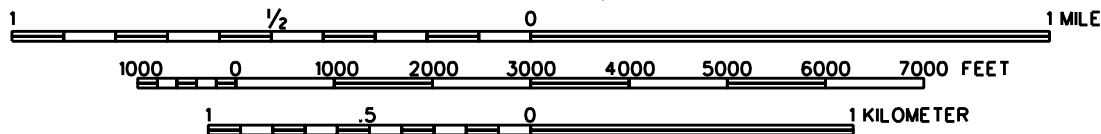
DRO - Diesel range organics.
 GRO - Gasoline range organics.
 BQL - Below quantitation limit.
 ppm - parts per million.
 mg/kg - milligrams per kilogram.



FIGURES



SCALE 1:24,000



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

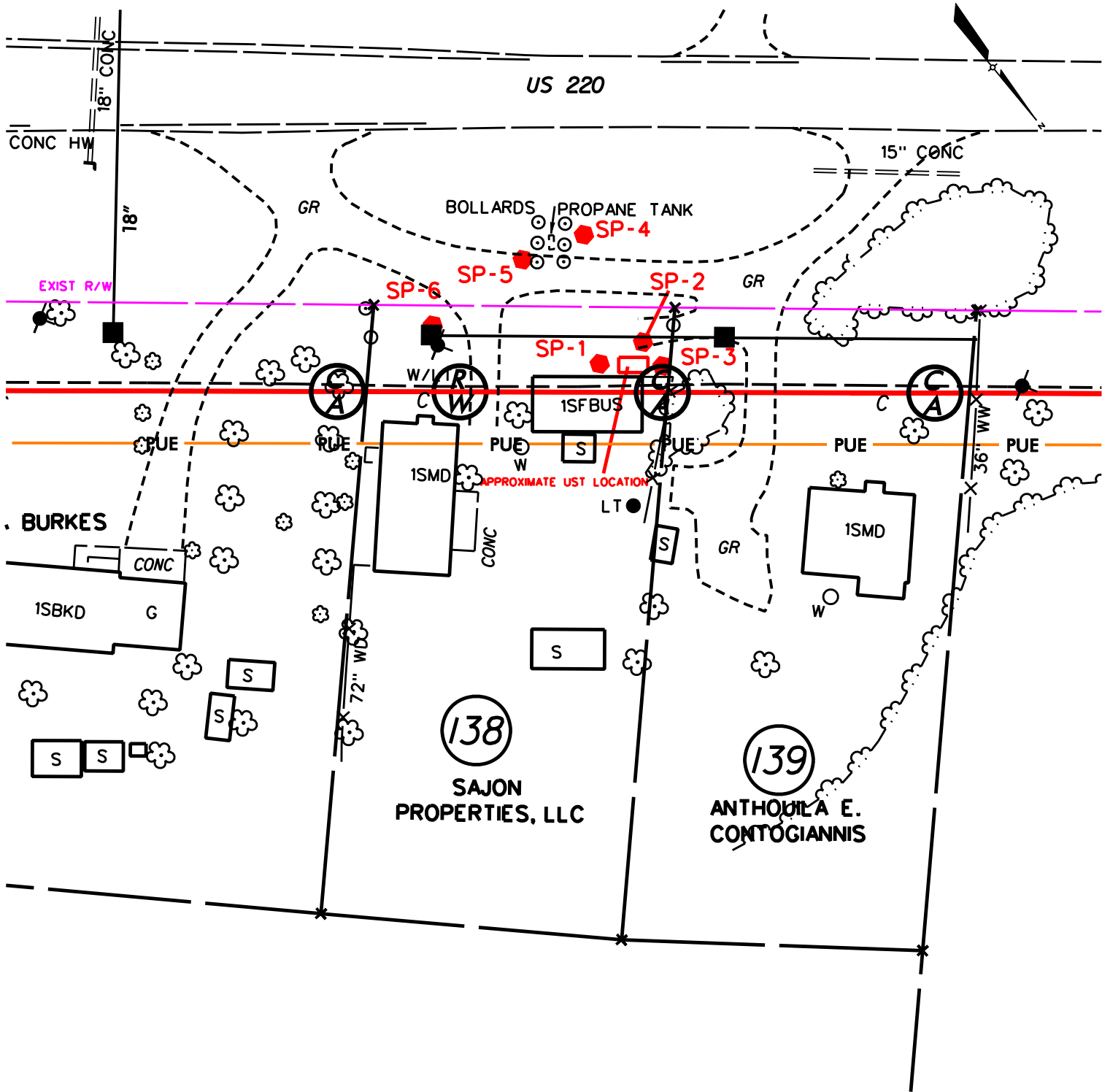


FIGURE 1
VICINITY MAP

SAJON PROPERTIES, LLC PROPERTY (PARCEL #138)
GUILFORD COUNTY NORTH CAROLINA

JANUARY 2010

60144352



LEGEND

SP-1



SOIL SAMPLE LOCATION AND IDENTIFICATION



**FIGURE 2
SITE MAP**

SAJON PROPERTIES LLC PROPERTY (PARCEL 138)
GUILFORD COUNTY, NORTH CAROLINA

JANUARY 2010

60144352

ATTACHMENT A

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

**SAJON PROPERTIES, LLC SITE – PARCEL 138
Summerfield, North Carolina**

January 13, 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**

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

AECOM Environment
GEOPHYSICAL INVESTIGATION REPORT
SAJON PROPERTIES, LLC SITE – PARCEL 138
Summerfield, North Carolina

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1.0 INTRODUCTION	1
2.0 FIELD METHODOLOGY	1
3.0 DISCUSSION OF RESULTS	2
4.0 SUMMARY & CONCLUSIONS	3
5.0 LIMITATIONS	4

FIGURES

- | | |
|----------|--|
| Figure 1 | Geophysical Equipment & Site Photographs |
| Figure 2 | EM61 Metal Detection Results |
| Figure 3 | GPR Images Across Probable USTs |

1.0 INTRODUCTION

Pyramid Environmental conducted geophysical investigations for AECOM Environment across the proposed Right-of-Way (ROW) portion of the Sajon Properties, LLC site (Parcel 138) located at 5020 US Highway 220 in Summerfield, North Carolina. The property contains two abandoned houses in the eastern portion of the property and open grass and gravel terrain across the western half of the site.

The geophysical investigation was conducted on December 30, 2009 and January 5, 2010 to determine if unknown, metallic underground storage tanks (USTs) were present beneath the proposed ROW area. AECOM Environment representative Mr. Michael Branson, PG identified the geophysical survey area to Pyramid Environmental personnel and provided site maps showing the proposed ROW (geophysical survey) area two weeks prior to conducting the investigation. The geophysical survey area had a maximum length and width of 140 feet and 110 feet respectively. Photographs of the geophysical equipment used in this investigation and the geophysical survey area at Parcel 138 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 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 December 30, 2009 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 January 5, 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 6 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 **Figure 2**. 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 138 were emailed to Mr. Branson during the week of January 4, 2010.

3.0 DISCUSSION OF RESULTS

The EM61 bottom coil anomalies centered near grid coordinates X=100 Y=130 and X=115 Y=80 are probably in response to the fences, building and/or adjacent water well. The bottom coil anomaly centered near grid coordinates X=95 Y=147 is probably in response to buried, metallic, miscellaneous debris or small object. GPR data suggest the larger bottom coil anomalies centered

near grid coordinates X=56 Y=75 are probably in response to the parked vehicle that was present during the geophysical investigation and the metal bollards.

GPR data acquired across the EM61 differential anomaly centered near X=95 Y=110 detected two probable metallic USTs buried approximately 2.2 feet deep and oriented in a northerly-southerly direction. Vent ports for each of the probable USTs are visible and located along the southern edge of the USTs. The western most UST (centered near grid coordinates X=95 Y=110) has an approximate length and width of 12.0 feet and 3.0 feet, respectively. The probable UST lying closed to the building and centered near grid coordinates X=98 Y=109, has an approximate length and width of 6.0 feet and 3.0 feet, respectively.

The yellow-colored polygons in Figure 2 represent the approximate foot prints of the two probable metallic USTs. Images of GPR data obtained across the probable USTs are presented in **Figure 3** along with a photograph showing the locations of the probable USTs. The locations of the two probable USTs detected by the geophysical investigation were marked in the field using orange spray paint and pin flags.

The geophysical investigation suggests that the remaining portion of the survey area at Parcel 138 does not contain buried metallic USTs.

4.0 SUMMARY & CONCLUSIONS

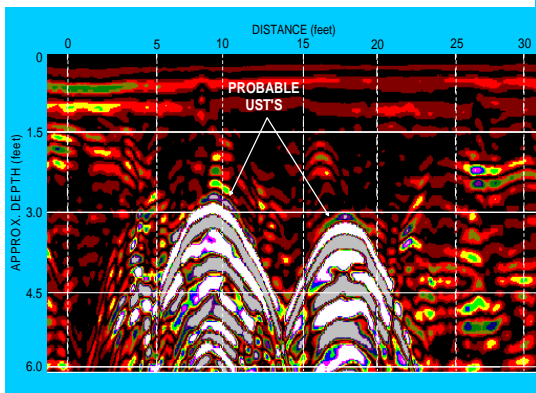
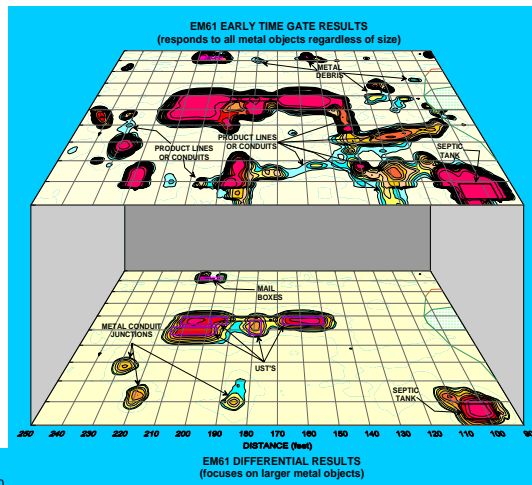
Our evaluation of the EM61 and GPR data collected across the proposed ROW and at the Sajon Properties, LLC site (Parcel 138) located in Summerfield, North Carolina, provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the surveyed portion of the site.

- GPR data suggests the larger bottom coil anomalies centered near grid coordinates X=56 Y=75 are probably in response to the parked vehicle that was present during the geophysical investigation and the metal bollards.
- GPR data acquired across the EM61 differential anomaly centered near X=95 Y=110 detected two probable metallic USTs buried approximately 2.2 feet deep and oriented in a northerly-southerly direction. Vent ports for each of the probable USTs are visible and located along the southern edge of the USTs.
- The remaining EM61 anomalies are probably in response to known surface objects or buried miscellaneous metal debris.

5.0 LIMITATIONS

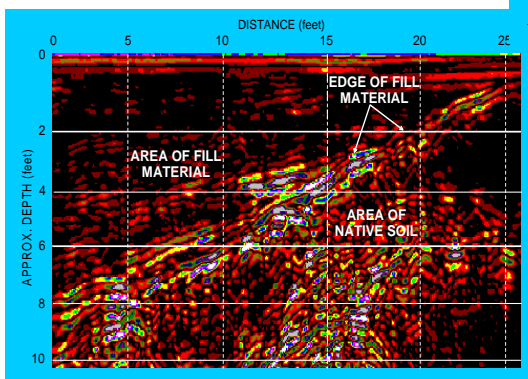
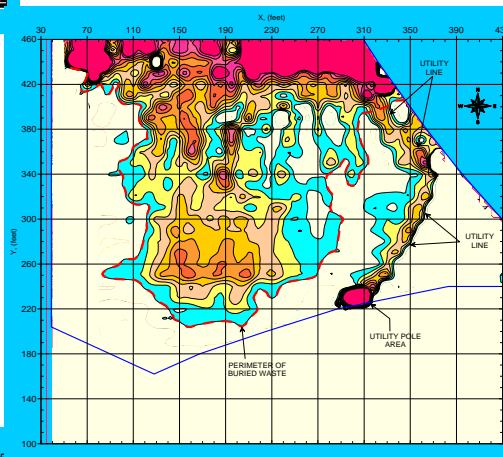
EM61 and GPR surveys have been performed and this report prepared for AECOM Environment in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained for this project may not have detected all of the probable or possible USTs within the survey area but that the investigation did detect two probable metallic USTs within the proposed ROW area of the site.



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 proposed Right-of-Way portion of Parcel 138 on December 30, 2009.



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 138 on January 5, 2010.



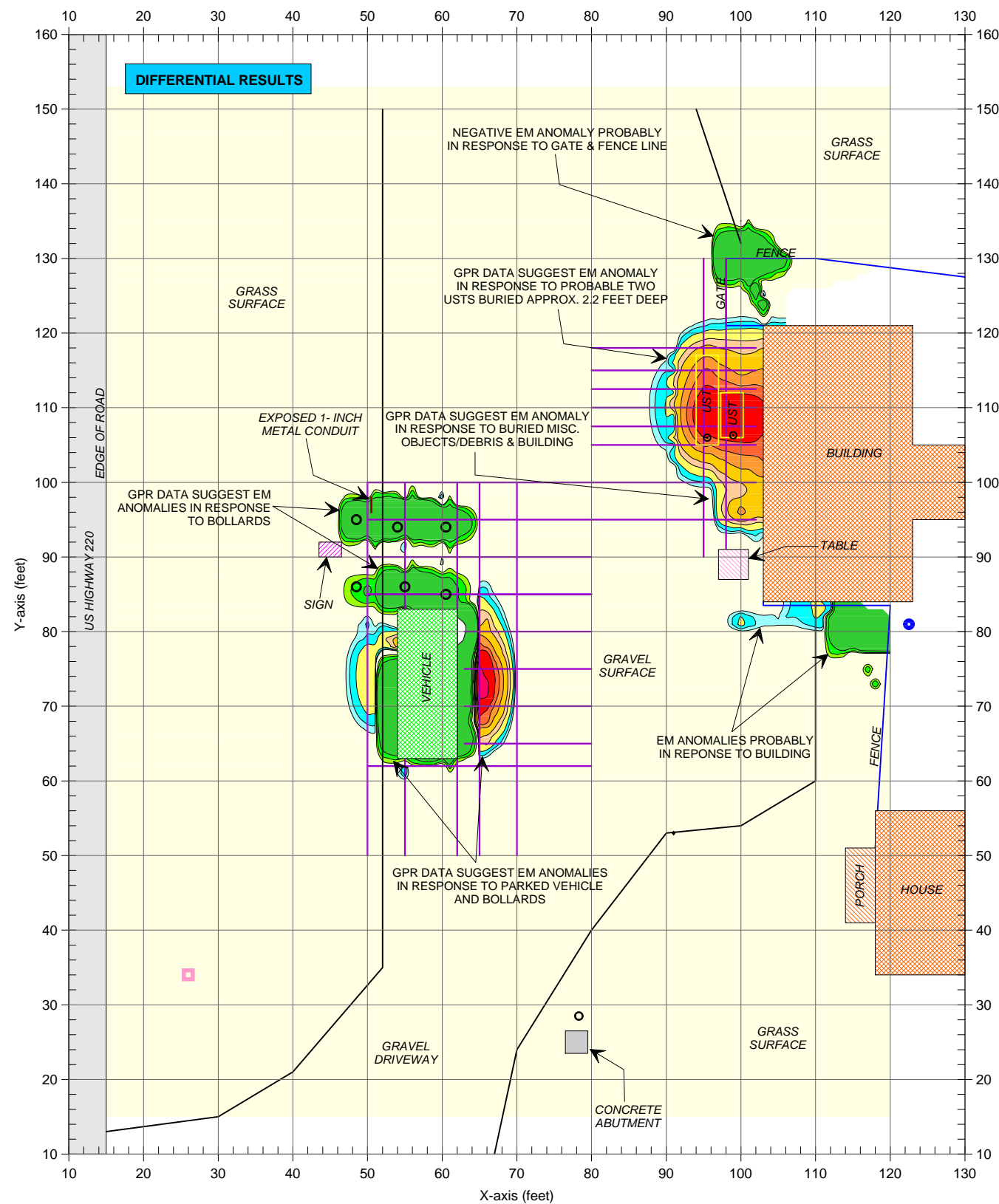
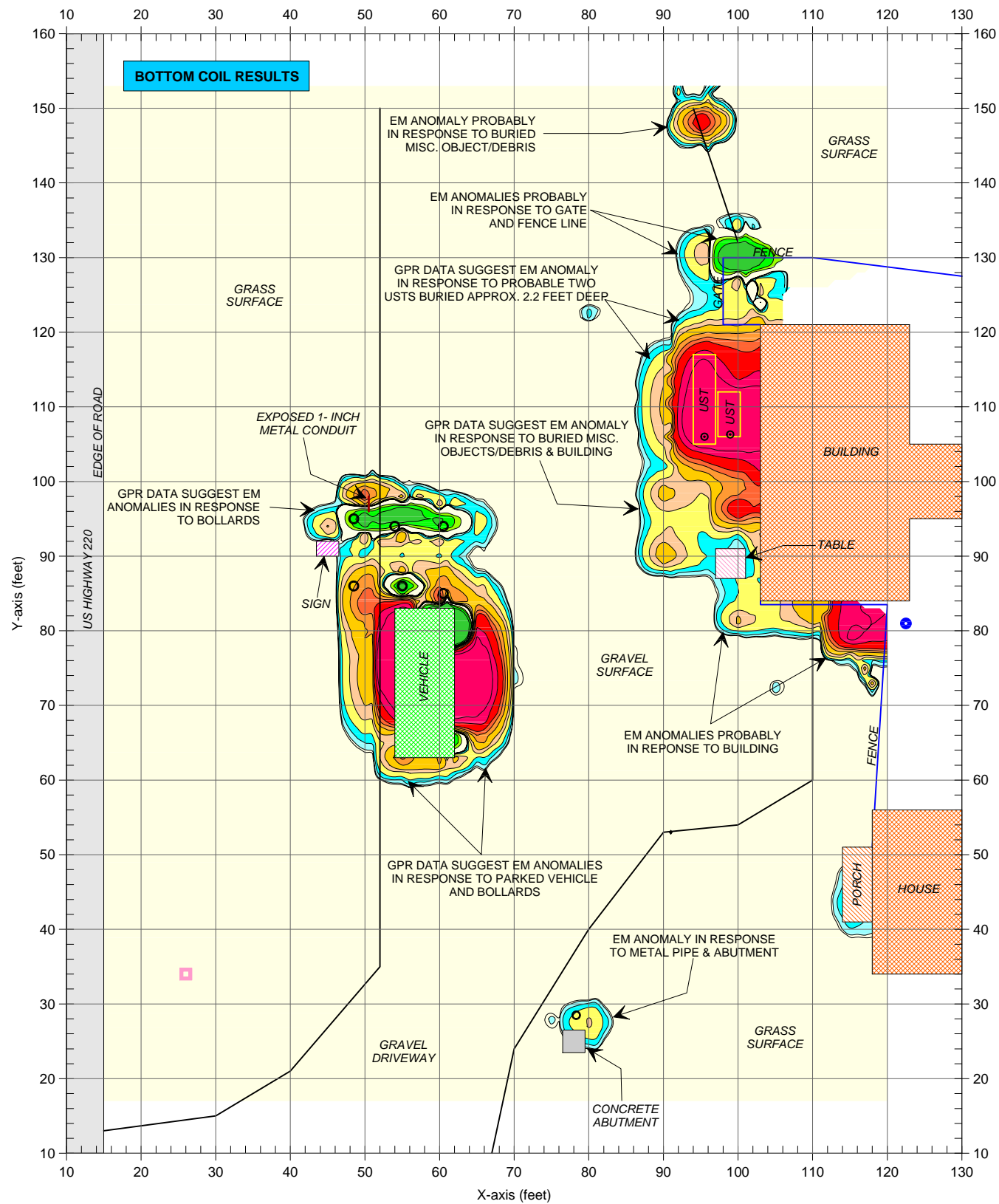
The photograph shows the Sajon Properties, LLC site (Parcel 138) located on the east side of US Highway 220 in Summerfield, North Carolina. The photograph is viewed in a northeasterly direction.



CLIENT	AECOM ENVIRONMENT		DATE	01/12/10	BY	MJD
SITE	SAJON PROPERTIES, LLC SITE - PARCEL 138		LAY		OPND	
CITY	SUMMERFIELD	STATE	NORTH CAROLINA	ENGR		
TITLE	GEOPHYSICAL RESULTS		NO.	2009-328	PROJ#	

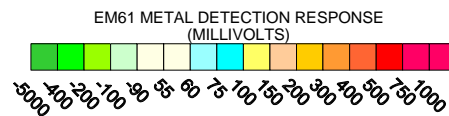
GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS

FIGURE 1



LEGEND

SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS TRENDING LINES SPACED 5 FEET APART	WATER WELL
BUILDING	UST VENT PORT
ASPHALT ROAD	PARKED VEHICLE
BOLLARD OR LARGE DIAMETER PIPE	GPR SURVEY LINE
MAILBOX	PROBABLE UST, AS SUGGESTED BY GPR DATA



Note: The contour plot shows the bottom coil (most sensitive) response and the differential response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 survey was conducted on December 30, 2009 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired across selected EM61 anomalies on January 5, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

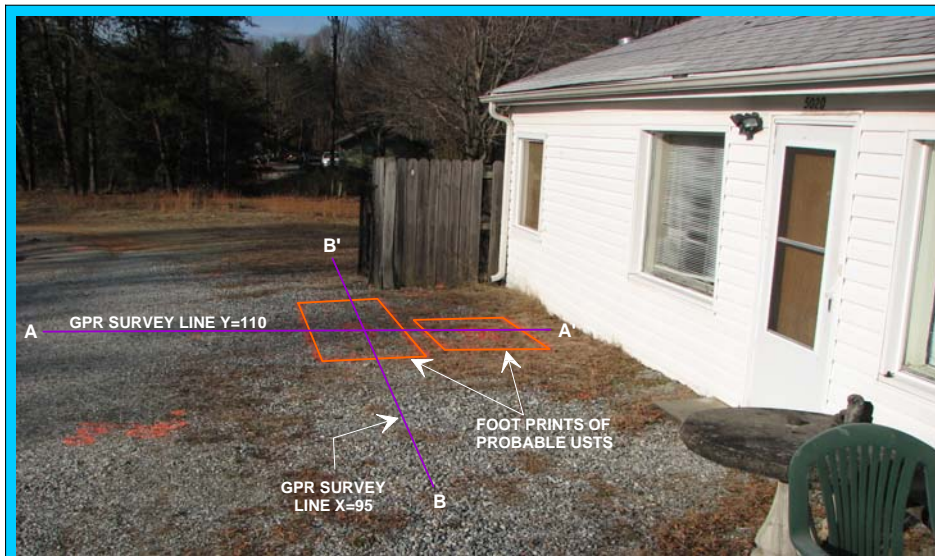
The geophysical investigation detected the probable presence of two metallic USTs located along the west side of the building.

EM61 METAL DETECTION RESULTS

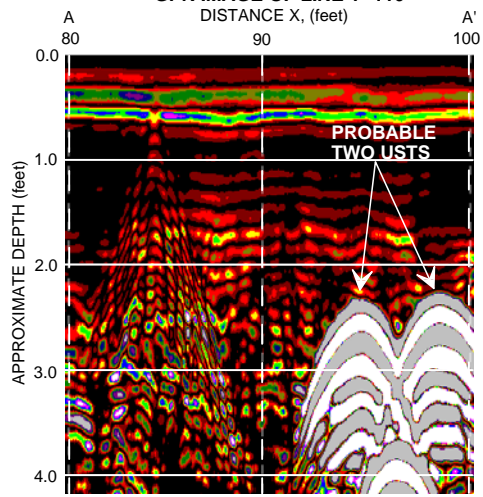
FIGURE 2

CLIENT	AECOM ENVIRONMENT	DATE	01/06/10	DRAWN	MJD	FIGURE	2009-328
SITE	SAJON PROPERTIES, LLC SITE - PARCEL 138	LAT		CHKD			
CITY	SUMMERFIELD	DWG					
STATE	NORTH CAROLINA	J.NC.					
TITLE	GEOPHYSICAL RESULTS						

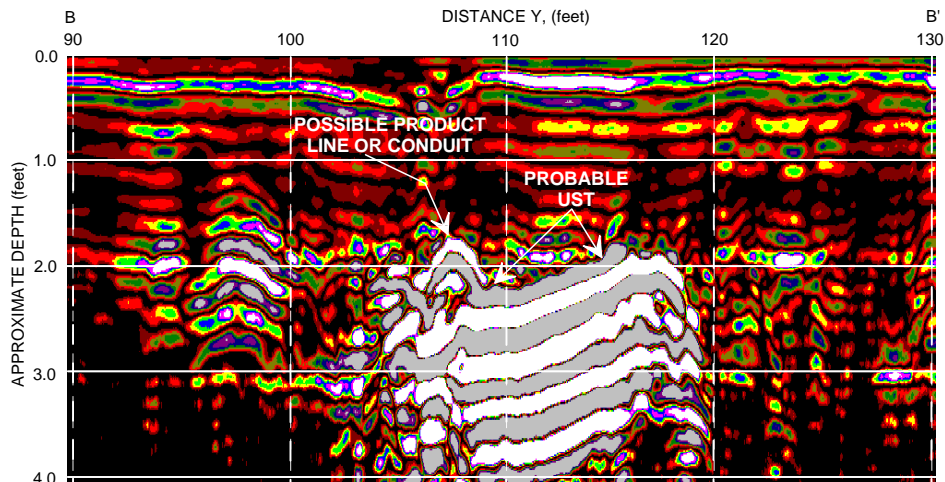
PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.



GPR IMAGE OF LINE Y=110



GPR IMAGE OF LINE X=95



The image of GPR survey line Y=110 recorded high-amplitude hyperbolic reflections from distance X=94 to X=100 that are probably in response to two metallic USTs buried approximately 2.2 feet below surface. The high amplitude reflection shown in the GPR image obtained along survey line X=95 is probably in response to the probable UST located farthest from the house and defines the approximate length of the UST. Viewed in a northerly direction, the photograph shows the approximate locations of the GPR survey lines and the probable USTs.



CLIENT	AECOM ENVIRONMENT		DATE	01/12/10	DRWN	MJD
SITE	SAJON PROPERTIES, LLC SITE - PARCEL 138		LAY		DATE	
CITY	SUMMERFIELD	STATE	NORTH CAROLINA		DWG	
TITLE	GEOPHYSICAL RESULTS		PLNO	2009-328	SCALE	

GPR IMAGES ACROSS
PROBABLE USTs

ATTACHMENT B

TEST BORING REPORT

PROJECT SAJON PROPERTIES, LLC (PARCEL #138) CLIENT NCDOT PROJECT NUMBER 60144352 (WBS 34418.1.1) CONTRACTOR REGIONAL PROBING EQUIPMENT GEOPROBE	BORING NUMBER SP-1 PAGE 1 ELEVATION DATE 1/13/10 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			0.53		MEDIUM TO REDDISH BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.58		AS ABOVE, DRY, NO ODOR.
			0.44		AS ABOVE, DRY, NO ODOR.
10.0			0.81		MOTTLED LIGHT BROWN/WHITE SILT/SAND SAPROLITE, DRY, NO ODOR.
			0.95		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			0.6		AS ABOVE, DRY, NO ODOR.
15.0			0.53		AS ABOVE, DRY, NO ODOR.
					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT SAJON PROPERTIES, LLC (PARCEL #138) CLIENT NCDOT PROJECT NUMBER 60144352 (WBS 34418.1.1) CONTRACTOR REGIONAL PROBING EQUIPMENT GEOPROBE	BORING NUMBER SP-2 PAGE 1 ELEVATION DATE 1/13/10 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			0.53		MEDIUM TO REDDISH BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.53		AS ABOVE, DRY, NO ODOR.
			0.77		AS ABOVE, DRY, NO ODOR.
10.0			1.59		MOTTLED LIGHT BROWN/WHITE SILT/SAND SAPROLITE, DRY, NO ODOR.
			5.26		AS ABOVE, DRY, NO ODOR.
			3.12		AS ABOVE, DRY, NO ODOR.
15.0			11.67		AS ABOVE, DRY, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT SAJON PROPERTIES, LLC (PARCEL #138) CLIENT NCDOT PROJECT NUMBER 60144352 (WBS 34418.1.1) CONTRACTOR REGIONAL PROBING EQUIPMENT GEOPROBE	BORING NUMBER SP-3 PAGE 1 ELEVATION DATE 1/13/10 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			0.52		MEDIUM TO REDDISH BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.58		AS ABOVE, DRY, NO ODOR.
			0.83		AS ABOVE, DRY, NO ODOR.
10.0			1.11		MOTTLED LIGHT BROWN/WHITE SILT/SAND SAPROLITE, DRY, NO ODOR.
			5.09		AS ABOVE, DRY, NO ODOR.
			3.40		AS ABOVE, DRY, NO ODOR.
15.0			9.86		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
20.0					

TEST BORING REPORT

PROJECT SAJON PROPERTIES, LLC (PARCEL #138) CLIENT NCDOT PROJECT NUMBER 60144352 (WBS 34418.1.1) CONTRACTOR REGIONAL PROBING EQUIPMENT GEOPROBE	BORING NUMBER SP-4 PAGE 1 ELEVATION DATE 1/13/10 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			0.51		MEDIUM TO REDDISH BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.55		AS ABOVE, DRY, NO ODOR.
10.0			0.48		AS ABOVE TO 5 FEET, BECOMES MOTTLED MEDIUM BROWN/WHITE SILT/CLAY SAPROLITE, DRY, NO ODOR.
			0.56		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
15.0			0.42		AS ABOVE, DRY, NO ODOR.
			0.41		AS ABOVE, DRY, NO ODOR.
20.0			0.38		AS ABOVE, DRY, NO ODOR.
					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.

TEST BORING REPORT

PROJECT SAJON PROPERTIES, LLC (PARCEL #138) CLIENT NCDOT PROJECT NUMBER 60144352 (WBS 34418.1.1) CONTRACTOR REGIONAL PROBING EQUIPMENT GEOPROBE	BORING NUMBER SP-5 PAGE 1 ELEVATION DATE 1/13/10 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			0.35		MEDIUM TO REDDISH BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.40		AS ABOVE, DRY, NO ODOR.
			0.51		AS ABOVE TO 5 FEET, BECOMES MOTTLED MEDIUM BROWN/WHITE SILT/CLAY SAPROLITE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			0.38		AS ABOVE, DRY, NO ODOR.
			0.29		AS ABOVE, DRY, NO ODOR.
			0.33		AS ABOVE, DRY, NO ODOR.
15.0			0.29		AS ABOVE, DRY, NO ODOR.
					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT SAJON PROPERTIES, LLC (PARCEL #138)	BORING NUMBER SP-6
CLIENT NCDOT	PAGE 1
PROJECT NUMBER 60144352 (WBS 34418.1.1)	ELEVATION
CONTRACTOR REGIONAL PROBING	DATE 1/13/10
EQUIPMENT 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
5.0			0.26		MEDIUM TO REDDISH BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.34		AS ABOVE, DRY, NO ODOR.
10.0			0.46		AS ABOVE, DRY, NO ODOR.
			0.48		MOTTLED LIGHT BROWN/WHITE SILT/SAND SAPROLITE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
15.0			0.34		AS ABOVE, DRY, NO ODOR.
			0.32		AS ABOVE, DRY, NO ODOR.
20.0			0.31		AS ABOVE, DRY, NO ODOR.
					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.

ATTACHMENT C

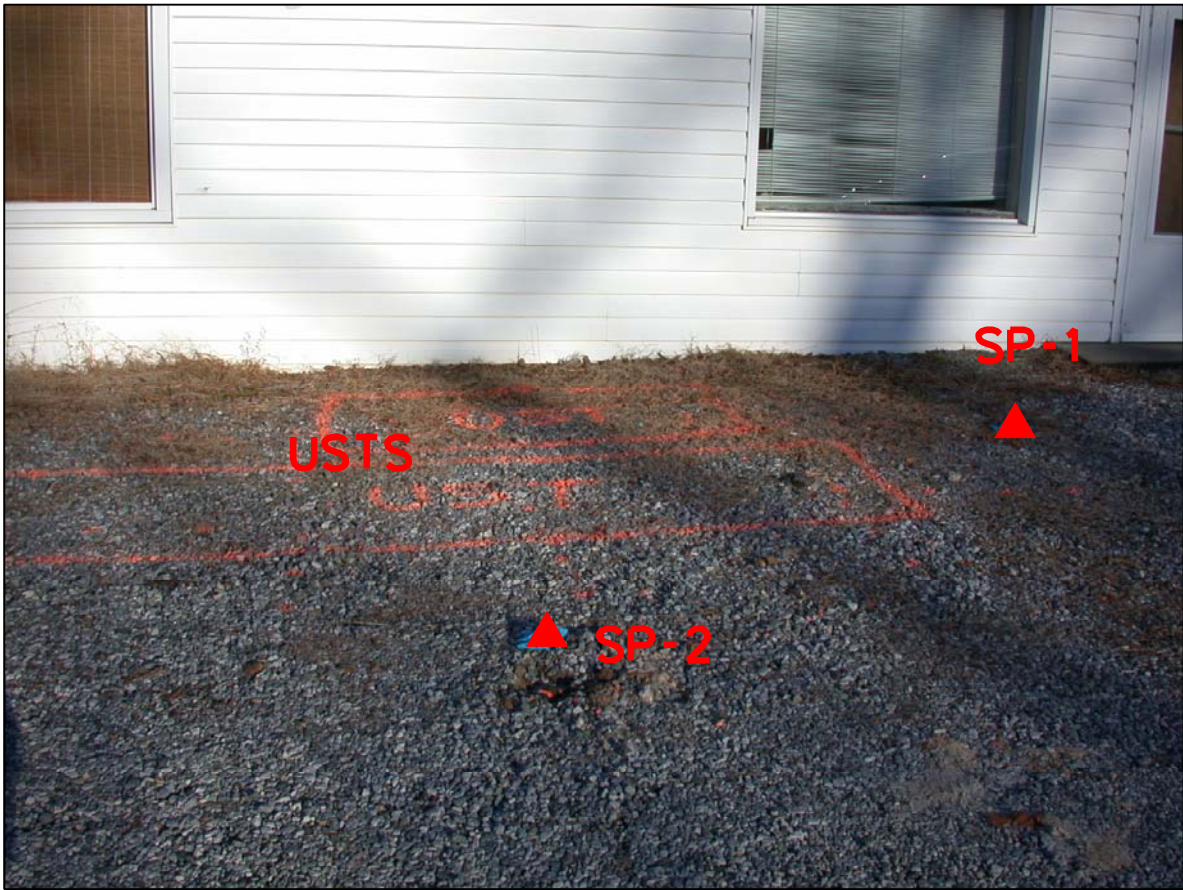


PHOTO 1 - BORINGS AT PROBABLE USTS LOOKING EAST



PHOTO 2 - BORINGS AT PROBABLE USTS LOOKING EAST



PHOTO 3 - BORINGS AT PROBABLE USTS LOOKING EAST



PHOTO 4 - BORING WITHIN PROPOSED R/W LOOKING SOUTHEAST



PHOTO 5 - BORINGS WITHIN PROPOSED R/W LOOKING EAST



PHOTO 6 - BORING AT PROPOSED DROP INLET LOOKING EAST

ATTACHMENT D



Mike Branson
AECOM
701 Corporate Center Drive
Raleigh, NC 27607

Report Number: G1037-48

Client Project: NCDOT-SAJON

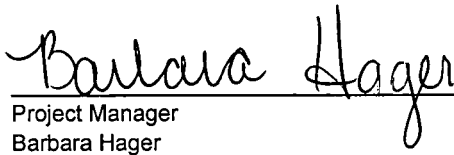
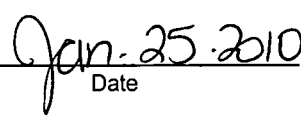
Dear Mike Branson,

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.

 
Project Manager Date
Barbara Hager

SGS North America, Inc.
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

% solids = 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.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: SP-1
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-1A
 Lab Project ID: G1037-48
 Report Basis: Dry Weight

Analyzed By: BAO
 Date Collected: 1/13/2010 14:00
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 84.03

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.21	mg/Kg	1	01/20/10 23:15

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	102.0	102.0		70-130

Comments:

Batch Information

Analytical Batch: VP012010
 Analytical Method: 8015
 Instrument ID: GC4
 Analyst: BAO

Prep Method: 5035
 Initial Wt/Vol: 5.75 g
 Final Volume: 5 mL

Analyst: BAO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: SP-2
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-2A
 Lab Project ID: G1037-48
 Report Basis: Dry Weight

Analyzed By: BAO
 Date Collected: 1/13/2010 14:15
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 87.16

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.17	mg/Kg	1	01/20/10 23:42

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	102.0	102.0		70-130

Comments:

Batch Information

Analytical Batch: VP012010
 Analytical Method: 8015
 Instrument ID: GC4
 Analyst: BAO

Prep Method: 5035
 Initial Wt/Vol: 4.8 g
 Final Volume: 5 mL

Analyst: BAO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: SP-3
Client Project ID: NCDOT-SAJON
Lab Sample ID: G1037-48-3A
Lab Project ID: G1037-48
Report Basis: Dry Weight

Analyzed By: BAO
Date Collected: 1/13/2010 14:30
Date Received: 1/18/2010
Matrix: Soil
Solids 83.93

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.66	mg/Kg	1	01/21/10 00:09

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	102.0	102.0		70-130

Comments:

Batch Information

Analytical Batch: VP012010
Analytical Method: 8015
Instrument ID: GC4
Analyst: BAO

Prep Method: 5035
Initial Wt/Vol: 5.37 g
Final Volume: 5 mL

Analyst: BAO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: SP-4
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-4A
 Lab Project ID: G1037-48
 Report Basis: Dry Weight

Analyzed By: BAO
 Date Collected: 1/13/2010 14:50
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 89.71

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.26	mg/Kg	1	01/21/10 00:36

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	99.2	99.2		70-130

Comments:

Batch Information

Analytical Batch: VP012010
 Analytical Method: 8015
 Instrument ID: GC4
 Analyst: BAO

Prep Method: 5035
 Initial Wt/Vol: 5.34 g
 Final Volume: 5 mL

Analyst: BAO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: SP-5
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-5A
 Lab Project ID: G1037-48
 Report Basis: Dry Weight

Analyzed By: BAO
 Date Collected: 1/13/2010 15:10
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 87.11

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.58	mg/Kg	1	01/21/10 01:03

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	102.0	102.0		70-130

Comments:

Batch Information

Analytical Batch: VP012010
 Analytical Method: 8015
 Instrument ID: GC4
 Analyst: BAO

Prep Method: 5035
 Initial Wt/Vol: 5.23 g
 Final Volume: 5 mL

Analyst: BAO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: SP-6
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-6A
 Lab Project ID: G1037-48
 Report Basis: Dry Weight

Analyzed By: BAO
 Date Collected: 1/13/2010 15:30
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 85.45

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.43	mg/Kg	1	01/21/10 01:30

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	101.0	101.0		70-130

Comments:

Batch Information

Analytical Batch: VP012010
 Analytical Method: 8015
 Instrument ID: GC4
 Analyst: BAO

Prep Method: 5035
 Initial Wt/Vol: 5.46 g
 Final Volume: 5 mL

Analyst: BAO

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: Method Blank
 Client Project ID:
 Lab Sample ID: VBLK4012010B
 Lab Project ID:
 Report Basis: Dry Weight

Analyzed By: BAO
 Date Collected:
 Date Received:
 Matrix: Soil
 Solids 100.00

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.00	mg/kg	1	01/20/10 22:21

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	104.0	104.0		70-130

Comments:

Batch Information

Analytical Batch: VP012010
 Analytical Method: 8015
 Instrument ID: GC4
 Analyst: BAO

Prep Method: 5030
 Initial Wt/Vol: 5 g
 Final Volume: 5 mL

Analyst: BAO

QC Results for Total Petroleum Hydrocarbons
by GC/FID

Client Sample ID: Batch QC

Lab Sample ID: G1037-47-2a

LCS ID: LCS4012010B / VP012010

Analyzed By: BAO

Matrix: Soil

Solids 72.56

MS/MSD

Analyte	Sample MG/KG	Spiked MG/KG	MS MG/KG	REC		Spiked MG/KG	MSD MG/KG	REC		RPD	
				%	#			%	#	%	#
				(70-130%)						(30%)	
GRO	BQL	16.6	16	96.4		16.6	15.6	94		2.52	

LCS

Analyte	Spiked MG/KG	Result MG/KG	REC		LIMITS	
			%	#	Lower	Upper
GRO	16	15.2	95		70	130

Comments:

Reviewed By: DVU

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: SP-1
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-1D
 Lab Project ID: G1037-48

Date Collected: 1/13/2010 14:00
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 84.03
 Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.42	mg/Kg	1	01/23/10 00:46
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	31	77.4

Comments:

Batch Information

Analytical Batch: EP012210
 Analytical Method: 8015
 Instrument: GC6
 Analyst: DTF

Prep batch: 15918
 Prep Method: 3541
 Prep Date: 01/19/10
 Initial Prep Wt/Vol: 32.06 G
 Prep Final Vol: 10 mL

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

Client Sample ID: SP-2
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-2D
 Lab Project ID: G1037-48

Date Collected: 1/13/2010 14:15
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 87.16
 Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	9.65	7.14	mg/Kg	1	01/23/10 01:14
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	30.4	75.9

Comments:

Batch Information

Analytical Batch: EP012210
 Analytical Method: 8015
 Instrument: GC6
 Analyst: DTF

Prep batch: 15918
 Prep Method: 3541
 Prep Date: 01/19/10
 Initial Prep Wt/Vol: 32.14 G
 Prep Final Vol: 10 mL

Analyst: FD

NC Certification #481

Reviewed By: [Signature]
 DRO.XLS

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

Client Sample ID: SP-3
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-3D
 Lab Project ID: G1037-48

Date Collected: 1/13/2010 14:30
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 83.93
 Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.40	mg/Kg	1	01/23/10 02:39
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	26.9	67.2

Comments:

Batch Information

Analytical Batch: EP012210
 Analytical Method: 8015
 Instrument: GC6
 Analyst: DTF

Prep batch: 15918
 Prep Method: 3541
 Prep Date: 01/19/10
 Initial Prep Wt/Vol: 32.2 G
 Prep Final Vol: 10 mL

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

Client Sample ID: SP-4
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-4D
 Lab Project ID: G1037-48

Date Collected: 1/13/2010 14:50
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 89.71
 Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.89	mg/Kg	1	01/23/10 03:07
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	28.9	72.1

Comments:

Batch Information

Analytical Batch: EP012210
 Analytical Method: 8015
 Instrument: GC6
 Analyst: DTF

Prep batch: 15918
 Prep Method: 3541
 Prep Date: 01/19/10
 Initial Prep Wt/Vol: 32.34 G
 Prep Final Vol: 10 mL

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: SP-5
Client Project ID: NCDOT-SAJON
Lab Sample ID: G1037-48-5D
Lab Project ID: G1037-48

Date Collected: 1/13/2010 15:10
Date Received: 1/18/2010
Matrix: Soil
Solids 87.11
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.13	mg/Kg	1	01/23/10 03:35
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	32	80

Comments:

Batch Information

Analytical Batch: EP012210
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 15918
Prep Method: 3541
Prep Date: 01/19/10
Initial Prep Wt/Vol: 32.18 G
Prep Final Vol: 10 mL

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

Client Sample ID: SP-6
 Client Project ID: NCDOT-SAJON
 Lab Sample ID: G1037-48-6D
 Lab Project ID: G1037-48

Date Collected: 1/13/2010 15:30
 Date Received: 1/18/2010
 Matrix: Soil
 Solids 85.45
 Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.30	mg/Kg	1	01/23/10 04:03
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	29.3	73.2

Comments:

Batch Information

Analytical Batch: EP012210
 Analytical Method: 8015
 Instrument: GC6
 Analyst: DTF

Prep batch: 15918
 Prep Method: 3541
 Prep Date: 01/19/10
 Initial Prep Wt/Vol: 32.07 G
 Prep Final Vol: 10 mL

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB15918
Lab Project ID:

Date Collected:
Date Received:
Matrix: SOIL
Solids 100.00
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.25	mg/Kg	1	01/22/10 23:50
Surrogate Spike Results		Spike Added	Control Limits	Spike Result	Percent Recovery
OTP		40	40-140	33.8	84.5

Comments:


Batch Information

Analytical Batch: EP012210
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 15918
Prep Method: 3541
Prep Date: 01/19/10
Initial Prep Wt/Vol: 32 G
Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

Reviewed By: 
DRO.XLS

QC Results for Total Petroleum Hydrocarbons
by GC/FID

Client Sample ID: Batch QC
Lab Sample ID: G1037-48-6D
Batch ID: 15918

Analyzed By: DTF
Matrix: Soil
Solids 85.45

MS/MSD

Analyte	Sample MG/KG	Spiked MG/KG	MS MG/KG	REC		Spiked MG/KG	MSD MG/KG	REC		RPD %
				%	#			%	#	
DRO	BQL	73.1	51.6	70.6	73	51.7	70.8	0.283		

LCS

Analyte	Spiked MG/KG	Result MG/KG	REC		LIMITS	
			%	#	Lower	Upper
DRO	62.5	48	76.8	55.3	137	

Reviewed By: 

