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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
Building Solutions Development, Inc. Property (Parcel #70)
4432 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 Building Solutions Development, Inc. Property (Parcel #70) is located at 4432 US 220 in Summerfield, Guilford County, North Carolina. The property is situated on the east side of US 220 at the intersection of US 220 and Crestfield Road (Figure 1). Based on information supplied by the NCDOT and the site visit, AECOM understands that the site is an active gas station/convenience store (Quickstops of Guilford Co) where four known underground storage tanks (USTs) are present. These USTs include three 8,000-gallon gasoline tanks and one 8,000-gallon diesel fuel tank. In addition, NCDENR records indicate that one 4,000-gallon diesel fuel and one 2,000-gallon kerosene UST were removed from the site in October 1992. No closure report for these closed tanks was reviewed. The structures on the property consist of one block building with an asphalt parking lot in front. Two of the USTs are located adjacent to the pump islands, one is adjacent to the building on the south side, and one is located on the south side of

the parking lot (Figure 2). The NCDOT has advised that the right-of-way/easement will not affect the buildings or tanks. Because of the proximity of the USTs and pump island, 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 Incident Number 7480 (WS-2899) 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. The operator and owner of the tanks are listed as follows:

Owner
Building Solutions Development, Inc.
4432 US 220N
Summerfield, NC 27358
(336) 681-7712

Operator
Quickstops of Guilford Co.
4432 US 220N
Summerfield, NC 27358
(336) 643-1796

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. All of these anomalies were attributed to buried utility lines or conduits, or vehicles. The survey concluded that no metallic USTs were present on the right-of-way/easement. 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).

Seven direct-push holes (BS-1 through BS-7) were advanced within the proposed right-of-way/easement to depths ranging from 12 to 14 feet as shown in Figure 2 and Attachment B. The borings were located to evaluate the entire right-of-way/easement on the property (Attachment C). The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 3 inches of asphalt/gravel or topsoil. Below the surface to a depth of about 8 feet was a medium brown silt/clay. Underlying this stratum was a saprolite consisting of either alternating layers of medium brown and medium gray silt/clay, or a mottled medium brown, tan, and white silt/clay. No bedrock was encountered in any of the borings. With the exception of boring BS-2, all the borings were terminated at a depth of 14 feet. Boring BS-2 was terminated at 12 feet after encountering groundwater. No groundwater was observed in the remainder 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 seven soil samples collected from the site (Figure 3). The soil sample from boring BS-3 contained a GRO concentration above the method quantitation limit. According to the North Carolina Underground Storage Tank Section's Underground Storage Tank Closure Policy dated August 24, 1998, the action level for TPH analyses is 10 milligrams per kilogram (mg/kg) for both gasoline and diesel fuel. However, that agency's "Guidelines for Assessment and Corrective Action," dated 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 GRO concentration in the soil sample from boring BS-3 (34.3 mg/kg) was present at a concentration above the 10 mg/kg assumed action level.

Conclusions and Recommendations

A Preliminary Site Assessment was conducted to evaluate the Building Solutions Development, Inc. Property (Parcel #70) located at 4432 US 220 in Summerfield, Guilford County, North Carolina. Seven soil borings were advanced to evaluate the soil conditions throughout the site. The laboratory reports of the soil samples from these borings suggest that a GRO concentration was present above the assumed action level in one of the seven 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 BS-3 contained a TPH concentration identified as GRO above the assumed action level. A review of the field screening readings (Table 1) and Figure 3 suggests that the thickness of the potentially contaminated soil is about 2 feet. After estimating the potential contamination geometry using field observations and experience with similar sites and geology, AECOM measured the affected area by using CADD software, which indicated a total footage of about 315 ft^2. Based on a 2-foot contamination thickness, this calculates to a volume of 23 cubic yards. This volume is estimated from TPH analytical data, which are no longer valid for remediation of sites reported after January 2, 1998. After this date, MADEP EPH/VPH and EPA Method 8260/8270 analyses will likely be required to confirm cleanup. However, these analyses do not correlate exactly with TPH data and, as a result, the actual volume of contaminated soil may be higher or lower.

AECOM appreciates the opportunity to work with the NCDOT on this project. Because compounds were detected above the applicable action levels in the soil samples, AECOM recommends that a copy of this report be submitted to the 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
BUILDING SOLUTIONS DEVELOPMENT, INC., PROPERTY (PARCEL #70)
SUMMERFIELD, GUILFORD COUNTY, NORTH CAROLINA
NCDOT PROJECT NO. R-2309AB
WBS ELEMENT 34418.1.1
AECOM PROJECT NO. 60144352

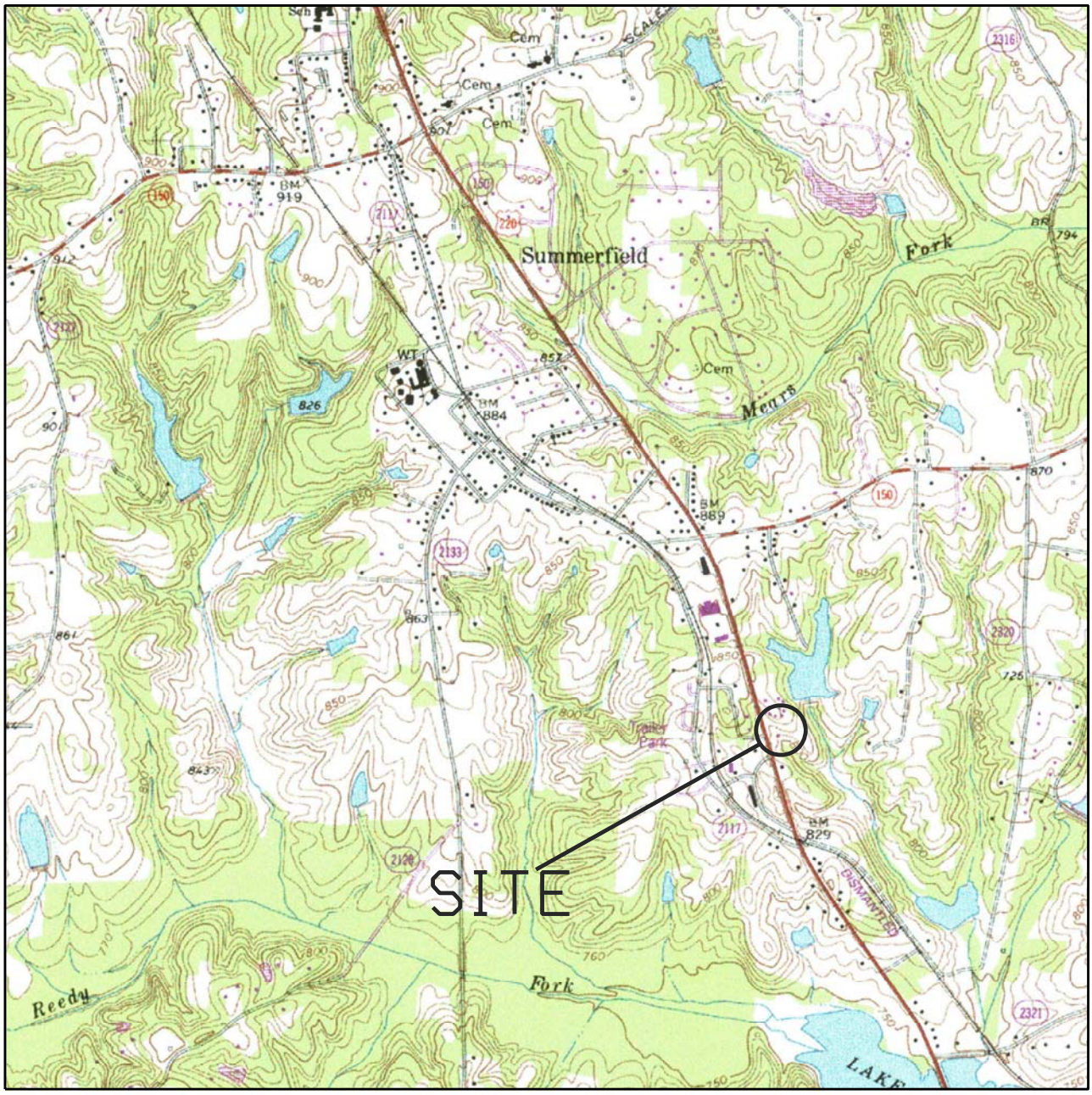
LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
BS-1	0 - 2	0.01			
	2 - 4	0.07			
	4 - 6	0.15			
	6 - 8	36			
	8 - 10	43	BS-1	DRO (BQL) GRO (BQL)	10 10
	10 - 12	18			
	12 - 14	0.2			
BS-2	0 - 2	3.71			
	2 - 4	0.17			
	4 - 6	4.22			
	6 - 8	29			
	8 - 10	15.03			
	10 - 12	86	BS-2	DRO (BQL) GRO (BQL)	10 10
BS-3	0 - 2	416	BS-3	DRO (BQL) **GRO (34.3)**	10 10
	2 - 4	11.92			
	4 - 6	4.52			
	6 - 8	2.87			
	8 - 10	3.95			
	10 - 12	4.66			
	12 - 14	43			
BS-4	0 - 2	0.04			
	2 - 4	0.87			
	4 - 6	0.05			
	6 - 8	0.17			
	8 - 10	4.37			
	10 - 12	25	BS-4	DRO (BQL) GRO (BQL)	10 10
	12 - 14	8.62			
BS-5	0 - 2	0.02			
	2 - 4	0.04			
	4 - 6	0.43			
	6 - 8	0.43			
	8 - 10	2.51	BS-5	DRO (BQL) GRO (BQL)	10 10
	10 - 12	0.90			
	12 - 14	1.59			
BS-6	0 - 2	0.01			
	2 - 4	0.21			
	4 - 6	0.18			
	6 - 8	0.18			
	8 - 10	0.17			
	10 - 12	0.34			
	12 - 14	0.39	BS-6	DRO (BQL) GRO (BQL)	10 10
BS-7	0 - 2	0.32			
	2 - 4	0.63			
	4 - 6	4.14			
	6 - 8	7.23	BS-7	DRO (BQL) GRO (BQL)	10 10
	8 - 10	1.02			
	10 - 12	2.11			
	12 - 14	1.23			

Soil samples were collected on January13, 2010.

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

AECOM

FIGURES



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

AECOM

FIGURE 1
VICINITY MAP

BUILDING SOLUTIONS DEVELOPMENT, INC., PROPERTY (PARCEL #70)
GUILFORD COUNTY NORTH CAROLINA

JANUARY 2010

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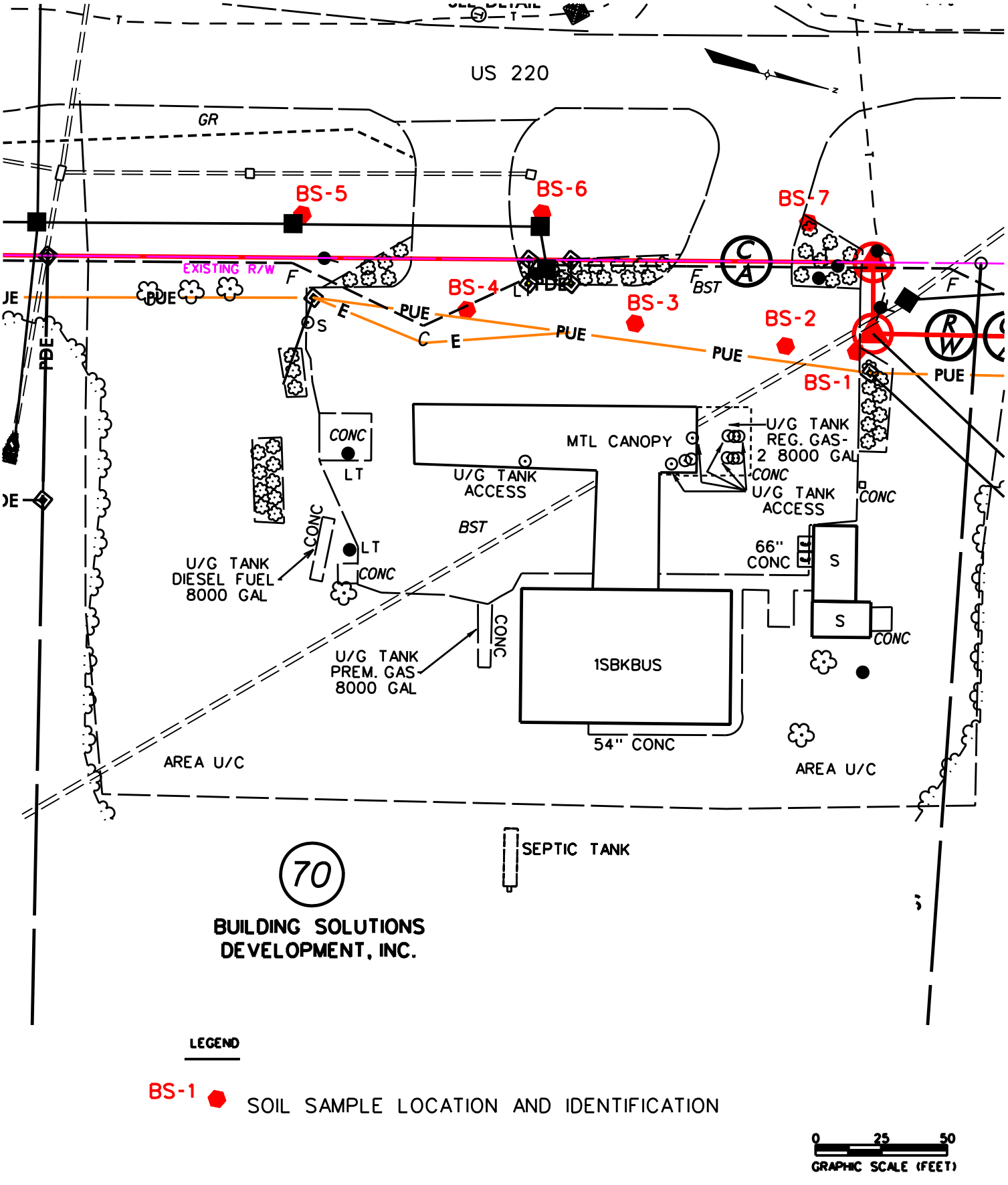

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FIGURE 2
SITE MAP
BUILDING SOLUTIONS DEVELOPMENT, INC., PROPERTY (PARCEL #70)
GUILFORD COUNTY, NORTH CAROLINA

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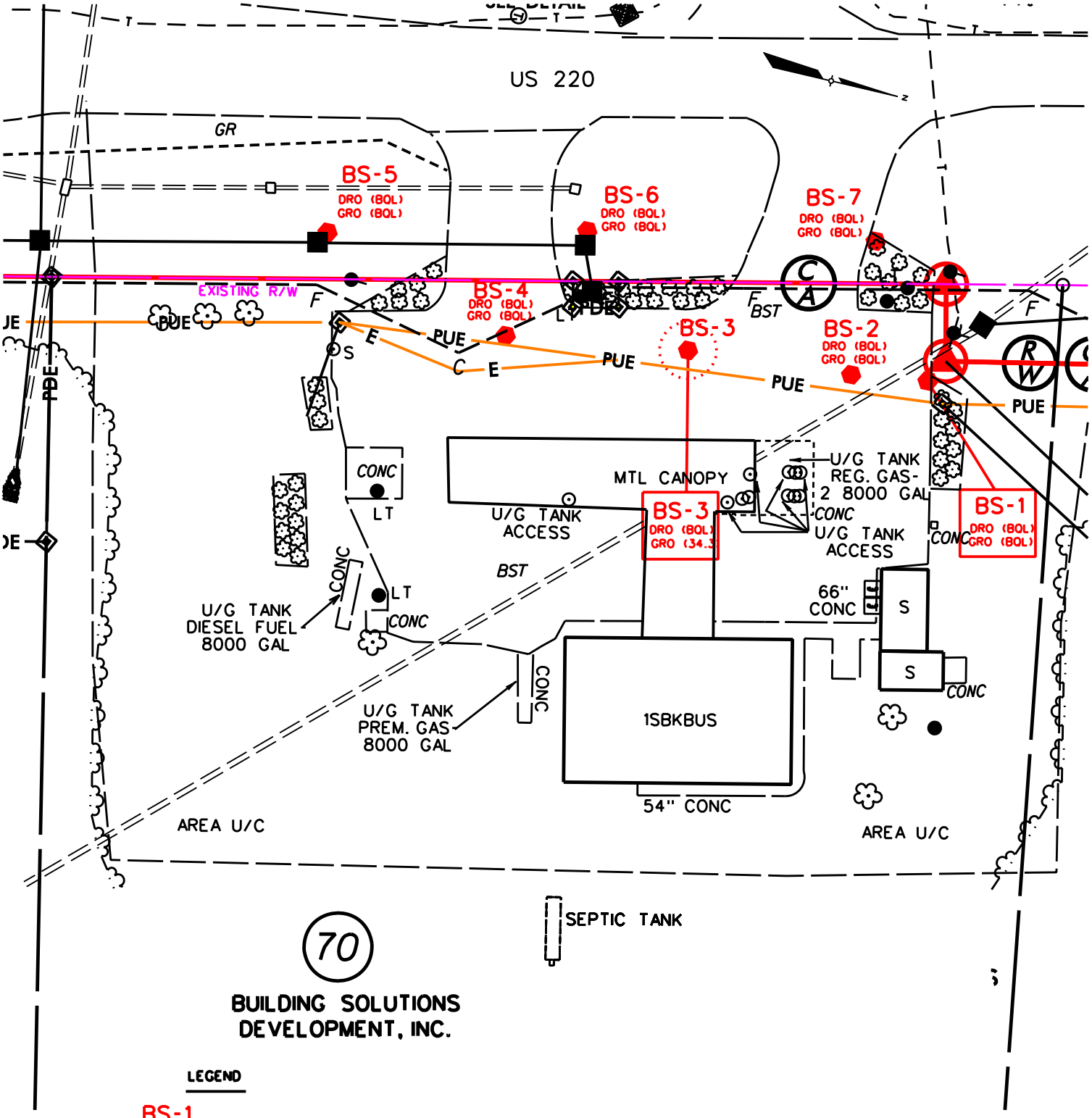

LEGEND

BS-1 ●	SOIL SAMPLE LOCATION AND IDENTIFICATION
DRO (123)	TPH AS DIESEL FUEL IN MG/KG
GRO (123)	TPH AS GASOLINE IN MG/KG
BQL	BELOW QUANTITATION LIMIT
10	TPH ISOCONCENTRATION CONTOUR IN MG/KG

0 25 50
GRAPHIC SCALE (FEET)

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FIGURE 3
SOIL SAMPLE ANALYTICAL RESULTS MAP
BUILDING SOLUTIONS DEVELOPMENT, INC., PROPERTY (PARCEL #70)
GUILFORD COUNTY, NORTH CAROLINA

JANUARY 2010 60144352

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ATTACHMENT A

Pyramid Project # 2009328

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS
BUILDING SOLUTIONS DEVELOPMENT INC. PROPERTY
(PARCEL 70)
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
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AECOM Environment
GEOPHYSICAL INVESTIGATION REPORT
BUILDING SOLUTIONS DEVELOPMENT INC. PROPERTY (PARCEL 70)
Summerfield, North Carolina

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FIGURES

1.0 INTRODUCTION

Pyramid Environmental conducted geophysical investigations for AECOM Environment across the proposed Right-of-Way (ROW) portion of the Building Solutions Development Inc. property (Parcel 70) located at 4432 US Highway 220 near Summerfield, North Carolina. The geophysical surveyed portion of the property consists of grass and asphalt areas along the western portion of the property, adjacent to US Highway 220. The geophysical survey area has a maximum length and width of 410 feet and 120 feet, respectively.

The geophysical investigation was conducted on December 29, 2009 and January 6, 2010 to determine if unknown, metallic 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 boundaries of the proposed survey area two weeks prior to conducting the investigation. Photographs of the geophysical equipment used in this investigation and the geophysical survey area at the Building Solutions Development Inc. property (Parcel 70) 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 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 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. All of the EM61 data were digitally collected on December 29, 2010 at 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 office using the Geonics DAT61W and Surfer for Windows Version 7.0 software programs.

GPR surveys were conducted on January 6, 2010 across a large, high amplitude EM61 differential anomaly 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 **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.

Preliminary geophysical results obtained from Parcel 70 were reported to Mr. Branson on January 8, 2010.

3.0 DISCUSSION OF RESULTS

The linear, EM61 bottom coil anomalies intersecting grid coordinates X=45 Y=160 and X=90 Y=380 are probably in response to the storm sewer lines that are identified by the visible concrete junction boxes and sewer grate. The linear, EM61 bottom coil anomalies intersecting grid coordinates X=80 Y=120 and X=85 Y=250 are probably in response to buried utility lines or conduits. GPR data suggest the large, high amplitude EM61 bottom coil anomaly centered near grid

coordinates X=120 Y=270 is in response to steel reinforced concrete lying beneath the asphalt payment. Visible cracks in the asphalt surface identify the approximate perimeter of the underlying concrete slab. The remaining EM61 bottom coil anomalies recorded within the proposed ROW area at Parcel 70 are probably in response to known cultural features or buried miscellaneous metallic objects/debris.

All of the differential EM61 anomalies are negative anomalies in response to surface objects and suggest that the proposed ROW area of Parcel 70 (surveyed portion of the site) does not contain buried metallic USTs.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 data collected across the western portion (proposed ROW area) of the Building Solutions Development Inc. property (Parcel 70) located at 4432 US Highway 220 near 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.

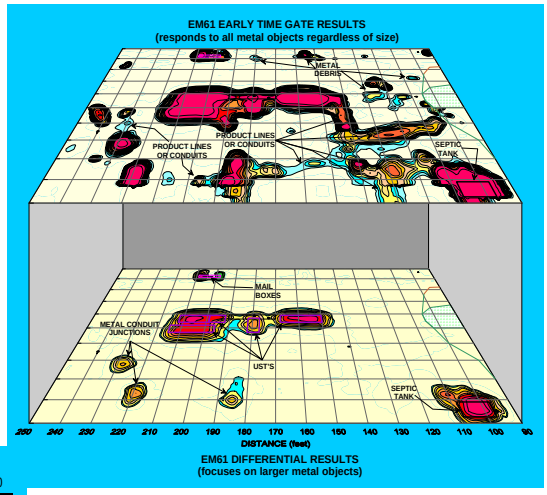
- The linear, EM61 bottom coil anomalies intersecting grid coordinates X=45 Y=160 and X=90 Y=380 are probably in response to the storm sewer lines. The linear, EM61 bottom coil anomalies intersecting grid coordinates X=80 Y=120 and X=85 Y=250 are probably in response to buried utility lines or conduits

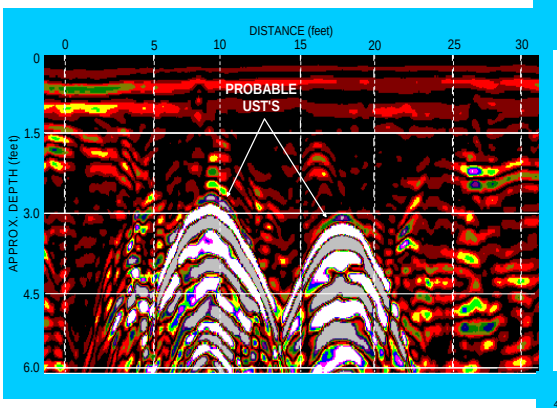
- GPR data suggest the large, high amplitude EM61 bottom coil anomaly centered near grid coordinates X=120 Y=270 is in response to steel reinforced concrete lying beneath the asphalt payment.

- The geophysical investigation suggests the proposed ROW area of Parcel 70 does not contain buried, metallic USTs.

5.0 LIMITATIONS

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





FIGURES

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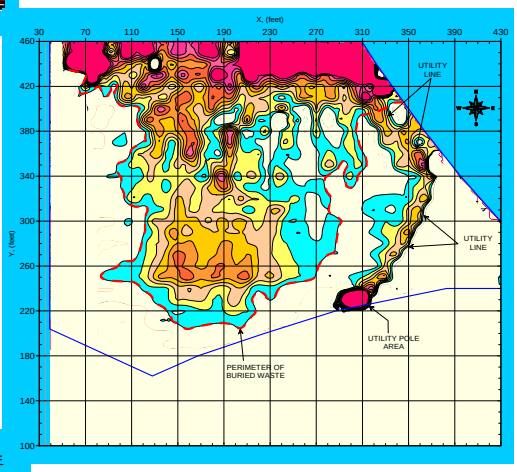
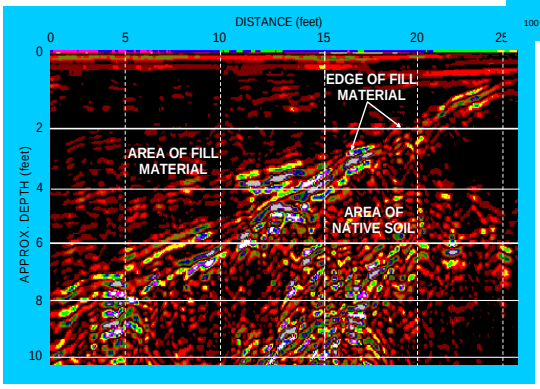
Figures shown on this page are for esthetic purposes only and are not related to the geophysical results discussed in this report





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 70 on December 29, 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 70 on January 6, 2010.

The photograph shows the Building Solutions Development Inc. property (Parcel 70) located on the east side of US Highway 220 near Summerfield, North Carolina. The photograph is viewed in a northerly direction.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

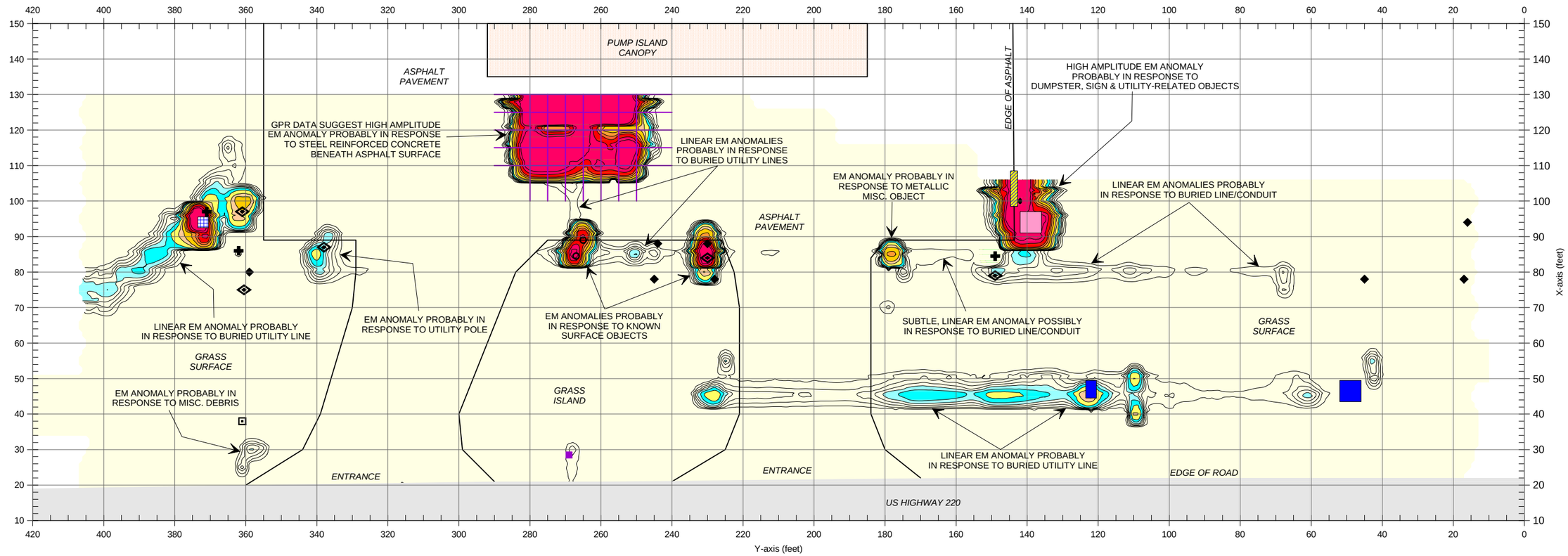
CLIENT	AECOM ENVIRONMENT	DATE	01/12/10	DRWN	MJD
SITE	BUILDING SOLUTIONS DEVELOPMENT INC. - PARCEL 70	LAY		CHKD	
CITY	SUMMERFIELD	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	JNO	2009-328	FIGURE	

GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS

FIGURE 1

EM61 METAL DETECTION
BOTTOM COIL RESULTS

FIGURE 2



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS TRENDING LINES SPACED 5 FEET APART
- PUMP ISLAND CANOPY
- STORE SIGN
- RIGHT-OF-WAY MARKER
- STORM SEWER JUNCTION BOX
- MAIL BOX
- STORM SEWER GRATE
- METALLIC PIPE
- DUMPSTER
- UTILITY POLE
- GUY WIRE
- FIBER OPTICS MARKER
- UTILITY POLE

APPROXIMATE NORTH

EM61 BOTTOM COIL RESPONSE (MILLIVOLTS)

-5000 -4000 -3000 -2500 -2000 -1500 -1000 -750 -500 -400 -300 -250 -200 -150 -100 -75 -50 -40 -30 -25 -20 -15 -10 -7.5 -5 -4 -3 -2.5 -2 -1.5 -1 -0.75 -0.5 -0.4 -0.3 -0.25 -0.2 -0.15 -0.1 -0.075 -0.05 -0.04 -0.03 -0.025 -0.02 -0.015 -0.01 -0.0075 -0.005 -0.004 -0.003 -0.0025 -0.002 -0.0015 -0.001 -0.00075 -0.0005 -0.0004 -0.0003 -0.00025 -0.0002 -0.00015 -0.0001 -0.000075 -0.00005 -0.00004 -0.00003 -0.000025 -0.00002 -0.000015 -0.00001 -0.0000075 -0.000005 -0.000004 -0.000003 -0.0000025 -0.000002 -0.0000015 -0.000001 -0.0000005 0 0.0000005 0.000001 0.0000015 0.000002 0.0000025 0.000003 0.000004 0.000005 0.0000075 0.00001 0.000015 0.00002 0.000025 0.00003 0.00004 0.00005 0.000075 0.0001 0.00015 0.0002 0.00025 0.0003 0.0004 0.0005 0.00075 0.001 0.0015 0.002 0.0025 0.003 0.004 0.005 0.0075 0.01 0.015 0.02 0.025 0.03 0.04 0.05 0.075 0.1 0.15 0.2 0.25 0.3 0.4 0.5 0.75 1 1.5 2 2.5 3 4 5 7.5 10 15 20 25 30 40 50 75 100 150 200 250 300 400 500 750 1000 1500 2000 2500 3000 4000 5000

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 December 29, 2009 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on January 6, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

The geophysical investigation suggests that the surveyed portion of the site does not contain buried, metallic USTs.

GRAPHIC SCALE IN FEET

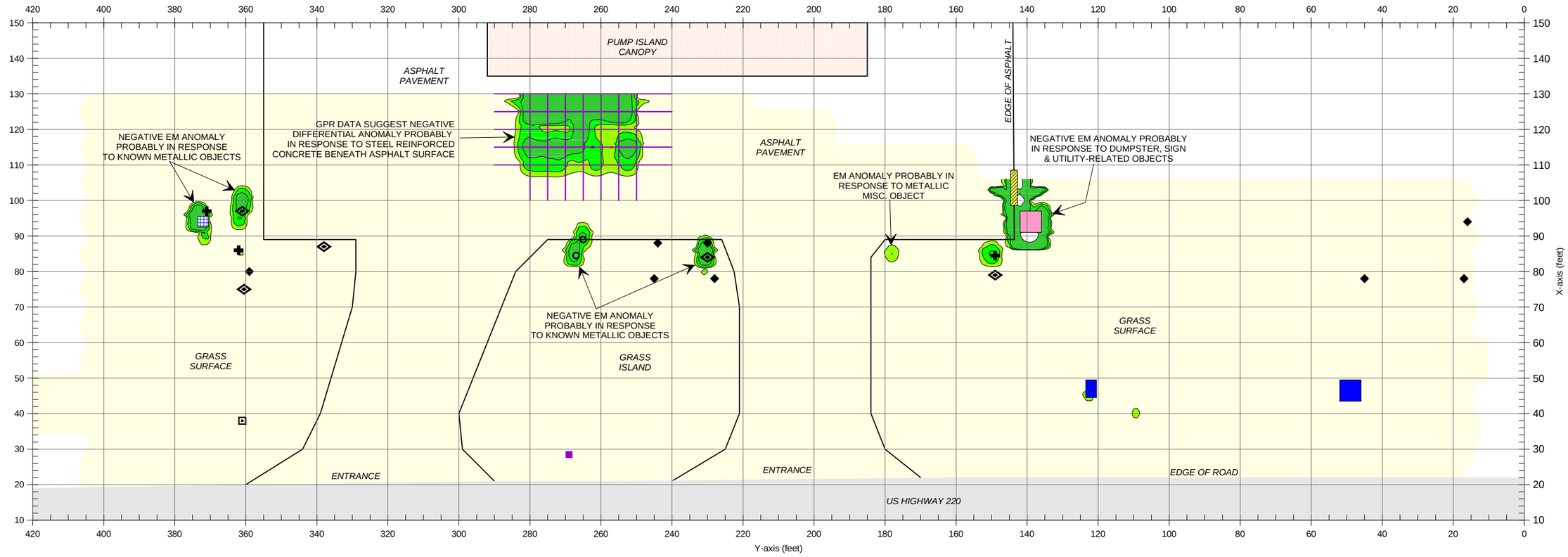
DRWN	CHKD		FIGURE
MJD			2009-328
DATE	LAY	DWG	J-NO.
01/12/10			

CLIENT	SITE	CITY	TITLE
AECOM ENVIRONMENT	BUILDING SOLUTIONS DEVELOPMENT INC. - PARCEL 70	SUMMERFIELD	NORTH CAROLINA
		STATE	GEOPHYSICAL RESULTS

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

EM61 METAL DETECTION DIFFERENTIAL RESULTS

FIGURE 3



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS TRENDING LINES SPACED 5 FEET APART
- PUMP ISLAND CANOPY
- STORE SIGN
- RIGHT-OF-WAY MARKER
- STORM SEWER JUNCTION BOX
- MAIL BOX
- STORM SEWER GRATE
- METALLIC PIPE
- DUMPSTER
- UTILITY POLE
- GUY WIRE
- FIBER OPTICS MARKER
- UTILITY POLE
- GPR SURVEY LINE

APPROXIMATE NORTH

EM61 DIFFERENTIAL RESPONSE (MILLIVOLTS)

-5000 -400 -200 -100 -90 -45 60 75 100 150 200 300 400 500 750 1000

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 misc., buried, metal debris. The EM61 data were collected on December 29, 2009 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data (shown as purple lines) were acquired on January 6, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

The geophysical investigation suggests that the surveyed portion of the site does not contain buried, metallic USTs.

GRAPHIC SCALE IN FEET

DRWN	CHKD		FIGURE
MJD			
DATE	LAY	DWG	J-NO.
01/12/10		2009-328	

CLIENT: AECOM ENVIRONMENT

SITE: BUILDING SOLUTIONS DEVELOPMENT INC. - PARCEL 70

CITY: SUMMERFIELD

STATE: NORTH CAROLINA

TITLE: GEOPHYSICAL RESULTS

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.

ATTACHMENT B

TEST BORING REPORT

PROJECT BUILDING SOLUTIONS DEVELOPMENT (PARCEL #70)
CLIENT NCDOT
PROJECT NUMBER 60144352 (WBS 34418.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER BS-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
			0.01		3" TOPSOIL; MEDIUM BROWN SILT/CLAY, DRY, NO ODOR.
			0.07		AS ABOVE, DRY, NO ODOR.
			0.15		AS ABOVE, DRY, NO ODOR.
5.0					
			36		AS ABOVE, DRY, NO ODOR.
			43		OLIVE GRAY SILT/CLAY, SOFT, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			18		AS ABOVE, DRY, NO ODOR.
			0.20		MEDIUM BROWN SILT/CLAY, DRY, NO ODOR.
15.0					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT BUILDING SOLUTIONS DEVELOPMENT (PARCEL #70)
CLIENT NCDOT
PROJECT NUMBER 60144352 (WBS 34418.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER BS-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
			3.71		3" ASPHALT AND GRAVEL; MEDIUM BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.17		AS ABOVE, DRY, NO ODOR.
			4.22		AS ABOVE, DRY, NO ODOR.
5.0					
			29		AS ABOVE, DRY, NO ODOR.
			15.03		ALTERNATING LAYERS (APP 1 FOOT THICK) OF MEDIUM BROWN SILT CLAY AND MEDIUM GRAY SILT/CLAY, DRY, SLIGHT ODOR.
10.0					
			86		AS ABOVE, WET AT 12 FEET, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
					BORING TERMINATED AT 12 FEET. GROUNDWATER AT 12 FEET.
15.0					
20.0					

TEST BORING REPORT

PROJECT BUILDING SOLUTIONS DEVELOPMENT (PARCEL #70)
CLIENT NCDOT
PROJECT NUMBER 60144352 (WBS 34418.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER BS-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
			416		3" ASPHALT AND GRAVEL; MEDIUM BROWN, STIFF, SILT/CLAY, DRY, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			11.92		AS ABOVE, DRY, NO ODOR.
			4.52		AS ABOVE, DRY, NO ODOR.
5.0					
			2.87		AS ABOVE, DRY, NO ODOR.
			3.95		ALTERNATING LAYERS (APP 1 FOOT THICK) OF MEDIUM BROWN SILT CLAY AND MEDIUM GRAY SILT/CLAY, DRY, SLIGHT ODOR.
10.0					
			4.66		AS ABOVE, DRY, NO ODOR.
			43		MEDIUM TO OLIVE GRAY CLAY/SAND, MOIST, NO ODOR.
					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.
15.0					
20.0					

TEST BORING REPORT

PROJECT BUILDING SOLUTIONS DEVELOPMENT (PARCEL #70)
CLIENT NCDOT
PROJECT NUMBER 60144352 (WBS 34418.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER BS-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
			0.04		3" ASPHALT AND GRAVEL; MEDIUM BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.87		AS ABOVE, DRY, NO ODOR.
			0.05		AS ABOVE, DRY, NO ODOR.
5.0					
			0.17		AS ABOVE, DRY, NO ODOR.
			4.37		AS ABOVE, DRY, NO ODOR.
10.0			25		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			8.62		MEDIUM TO OLIVE GRAY CLAY/SAND, MOIST, NO ODOR.
					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.
15.0					
20.0					

TEST BORING REPORT

PROJECT BUILDING SOLUTIONS DEVELOPMENT (PARCEL #70)
CLIENT NCDOT
PROJECT NUMBER 60144352 (WBS 34418.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER BS-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
			0.02		3" TOPSOIL; MEDIUM BROWN SILT/CLAY, DRY, NO ODOR.
			0.04		AS ABOVE, DRY, NO ODOR.
			0.43		AS ABOVE, DRY, NO ODOR.
5.0					
			0.43		AS ABOVE, DRY, NO ODOR.
			2.51		MOTTLED MEDIUM BROWN/TAN/WHITE SILT/CLAY SAPROLITE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0					
			0.9		AS ABOVE, DRY, NO ODOR.
			1.59		AS ABOVE, DRY, NO ODOR.
					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.
15.0					
20.0					

TEST BORING REPORT

PROJECT BUILDING SOLUTIONS DEVELOPMENT (PARCEL #70)
CLIENT NCDOT
PROJECT NUMBER 60144352 (WBS 34418.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER BS-6
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
			0.01		3" ASPHALT AND GRAVEL; MEDIUM BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.21		AS ABOVE, DRY, NO ODOR.
5.0			0.18		AS ABOVE, DRY, NO ODOR.
			0.18		AS ABOVE, DRY, NO ODOR.
			0.17		MOTTLED MEDIUM BROWN/TAN/WHITE SILT/CLAY SAPROLITE, DRY, NO ODOR.
10.0			0.34		AS ABOVE, DRY, NO ODOR.
			0.39		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
15.0					
20.0					

TEST BORING REPORT

PROJECT BUILDING SOLUTIONS DEVELOPMENT (PARCEL #70)
CLIENT NCDOT
PROJECT NUMBER 60144352 (WBS 34418.1.1)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER BS-7
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
			0.32		3" TOPSOIL; MEDIUM BROWN, STIFF, SILT/CLAY, DRY, NO ODOR.
			0.63		AS ABOVE, DRY, NO ODOR.
			4.143		AS ABOVE, DRY, NO ODOR.
5.0					
			7.23		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			1.02		MOTTLED MEDIUM BROWN/TAN/WHITE SILT/CLAY SAPROLITE, DRY, NO ODOR.
10.0					
			2.11		AS ABOVE, DRY, NO ODOR.
			1.23		AS ABOVE, DRY, NO ODOR.
15.0					TERMINATE BORING AT 14 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

ATTACHMENT C

PHOTO 1 - BORING IN PROPOSED R/W LOOKING EAST

PHOTO 2 - BORING IN PROPOSED R/W LOOKING EAST

PHOTO 3 - BORING WITHIN PROPOSED R/W LOOKING EAST

PHOTO 4 - BORING WITHIN PROPOSED R/W LOOKING EAST

PHOTO 5 - BORING WITHIN PROPOSED R/W AT PROPOSED DROP INLET LOOKING NORTHEAST

PHOTO 6 - BORING WITHIN PROPOSED R/W AT PROPOSED DROP INLET LOOKING EAST

PHOTO 7 - BORING WITHIN PROPOSED R/W LOOKING EAST

ATTACHMENT D

SGS

Mike Branson
AECOM
701 Corporate Center Drive
Raleigh, NC 27607

Report Number: G1037-47

Client Project: NCDOT-Building Solutions

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 Jan. 25. 2010

Project Manager
Barbara Hager

Date

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.

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

Client Sample ID: BS-1
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-1A
Lab Project ID: G1037-47
Report Basis: Dry Weight

Analyzed By: BAO
Date Collected: 1/13/2010 9:50
Date Received: 1/18/2010
Matrix: Soil
Solids 75.31

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.90	mg/Kg	1	01/21/10 01:57

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: 6.75 g
Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By: CH

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

Client Sample ID: BS-2
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-2A
Lab Project ID: G1037-47
Report Basis: Dry Weight

Analyzed By: BAO
Date Collected: 1/13/2010 10:30
Date Received: 1/18/2010
Matrix: Soil
Solids 72.56

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	6.23	mg/Kg	1	01/21/10 02:24

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: 6.64 g
Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By:

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

Client Sample ID: BS-3
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-3A
Lab Project ID: G1037-47
Report Basis: Dry Weight

Analyzed By: BAO
Date Collected: 1/13/2010 10:45
Date Received: 1/18/2010
Matrix: Soil
Solids 81.08

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	**34.3**	5.31	mg/Kg	1	01/21/10 02:51

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	105.0	105.0		70-130

Comments:

Batch Information

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

Prep Method: 5035
Initial Wt/Vol: 6.97 g
Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By:

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

Client Sample ID: BS-4
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-4A
Lab Project ID: G1037-47
Report Basis: Dry Weight

Analyzed By: BAO
Date Collected: 1/13/2010 11:00
Date Received: 1/18/2010
Matrix: Soil
Solids 87.64

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	4.59	mg/Kg	1	01/21/10 03:18

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: 5035
Initial Wt/Vol: 7.46 g
Final Volume: 5 mL

Analyst: BAC

NC Certification #481

Reviewed By: GRO.XLS

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

Client Sample ID: BS-5
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-5A
Lab Project ID: G1037-47
Report Basis: Dry Weight

Analyzed By: BAO
Date Collected: 1/13/2010 11:30
Date Received: 1/18/2010
Matrix: Soil
Solids 86.58

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.54	mg/Kg	1	01/21/10 03:44

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	103.0	103.0		70-130

Comments:

Batch Information

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

Prep Method: 5035
Initial Wt/Vol: 6.26 g
Final Volume: 5 mL

Analyst: BAV

NC Certification #481

Reviewed By: [signature]

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

Client Sample ID: BS-6
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-6A
Lab Project ID: G1037-47
Report Basis: Dry Weight

Analyzed By: BAO
Date Collected: 1/13/2010 12:00
Date Received: 1/18/2010
Matrix: Soil
Solids 90.81

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.85	mg/Kg	1	01/21/10 04:11

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	103.0	103.0		70-130

Comments:

Batch Information

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

Prep Method: 5035
Initial Wt/Vol: 5.65 g
Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By:

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

Client Sample ID: BS-7
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-7A
Lab Project ID: G1037-47
Report Basis: Dry Weight

Analyzed By: BAO
Date Collected: 1/13/2010 12:15
Date Received: 1/18/2010
Matrix: Soil
Solids 79.84

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.28	mg/Kg	1	01/21/10 04:38

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: 7.11 g
Final Volume: 5 mL

Analyst: BAO

NC Certification #481

Reviewed By:

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%)			(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: DVD

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

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

Client Sample ID: BS-1
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-1D
Lab Project ID: G1037-47

Date Collected: 1/13/2010 9:50
Date Received: 1/18/2010
Matrix: Soil
Solids 75.31
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	8.27	mg/Kg	1	01/22/10 19:35

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	26.3	65.8

Comments:

Batch Information

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

Prep batch: 15917
Prep Method: 3541
Prep Date: 01/19/10
Initial Prep Wt/Vol: 32.13 G
Prep Final Vol: 10 mL

Analyst: _____ NC Certification #481 Reviewed By: _____

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

Client Sample ID: BS-2
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-2D
Lab Project ID: G1037-47

Date Collected: 1/13/2010 10:30
Date Received: 1/18/2010
Matrix: Soil
Solids 72.56
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	8.60	mg/Kg	1	01/22/10 20:04

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	27.6	69.1

Comments:

Batch Information

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

Prep batch: 15917
Prep Method: 3541
Prep Date: 01/19/10
Initial Prep Wt/Vol: 32.05 G
Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

Reviewed By: DRO XLS

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

Client Sample ID: BS-3
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-3D
Lab Project ID: G1037-47

Date Collected: 1/13/2010 10:45
Date Received: 1/18/2010
Matrix: Soil
Solids 81.08
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.61	mg/Kg	1	01/22/10 20:32

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	29.4	73.6

Comments:

Batch Information

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

Prep batch: 15917
Prep Method: 3541
Prep Date: 01/19/10
Initial Prep Wt/Vol: 32.41 G
Prep Final Vol: 10 mL

Analyst: FL

NC Certification #481

Reviewed By: DRO XLS

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

Client Sample ID: BS-4
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-4D
Lab Project ID: G1037-47

Date Collected: 1/13/2010 11:00
Date Received: 1/18/2010
Matrix: Soil
Solids 87.64
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.02	mg/Kg	1	01/22/10 21:00

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	29.7	74.3

Comments:

Batch Information

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

Prep batch: 15917
Prep Method: 3541
Prep Date: 01/19/10
Initial Prep Wt/Vol: 32.53 G
Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

Reviewed By: DRO XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: BS-5
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-5D
Lab Project ID: G1037-47

Date Collected: 1/13/2010 11:30
Date Received: 1/18/2010
Matrix: Soil
Solids 86.58
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.21	mg/Kg	1	01/22/10 21:28

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	27.8	69.4

Comments:

Batch Information

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

Prep batch: 15917
Prep Method: 3541
Prep Date: 01/19/10
Initial Prep Wt/Vol: 32.06 G
Prep Final Vol: 10 mL

Analyst: FM

NC Certification #481

Reviewed By: DRO.XLS

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

Client Sample ID: BS-6
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-6D
Lab Project ID: G1037-47

Date Collected: 1/13/2010 12:00
Date Received: 1/18/2010
Matrix: Soil
Solids 90.81
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.87	mg/Kg	1	01/22/10 21:57

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	30.9	77.2

Comments:

Batch Information

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

Prep batch: 15917
Prep Method: 3541
Prep Date: 01/19/10
Initial Prep Wt/Vol: 32.06 G
Prep Final Vol: 10 mL

Analyst: FA

NC Certification #481

Reviewed By:

DRO.XLS

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

Client Sample ID: BS-7
Client Project ID: NCDOT-Building Solutions
Lab Sample ID: G1037-47-7D
Lab Project ID: G1037-47

Date Collected: 1/13/2010 12:15
Date Received: 1/18/2010
Matrix: Soil
Solids 79.84
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	7.78	mg/Kg	1	01/22/10 22:25

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	27	67.4

Comments:

Batch Information

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

Prep batch: 15917
Prep Method: 3541
Prep Date: 01/19/10
Initial Prep Wt/Vol: 32.18 G
Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

Reviewed By: DRO XLS

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

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB15917
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	01/21/10 23:52

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	33.2	83

Comments:

Batch Information

Analytical Batch: EP012110
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 15917
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: G1037-47-7D
Batch ID: 15917

Analyzed By: DTF
Matrix: Soil
Solids 79.84

MS/MSD

Analyte	Sample MG/KG	Spiked MG/KG	MS MG/KG	REC %	#	Spiked MG/KG	MSD MG/KG	REC %	#	RPD %
DRO	BQL	78.1	54.9	70.3		77.6	57.4	74		5.13

LCS

Analyte	Spiked MG/KG	Result MG/KG	REC %	#	LIMITS Lower	Upper
DRO	62.5	49.4	79		55.3	137

Reviewed By: _____

SGS Environmental Services Inc.
CHAIN OF CUSTODY RECORD

Locations Nationwide
- Alaska
- Maryland
- New Jersey
- New York
- North Carolina
- Ohio
- West Virginia

www.us.sgs.com

(1)
CLIENT: AECOM
CONTACT: Mike BRANSON PHONE NO: 919-854-6238
PROJECT: NCDOT - Building Solutions SITE/PWSID# :
REPORTS TO: Mike BRANSON EMAIL: MIKE.BRANSON@AECOM.COM
AECOM
701 Corporate Center Dr, Suite 475, Raleigh NC
INVOICE TO: NCDOT QUOTE #:
P.O. # WBS 34418.1.1

SGS Reference #: G1037-47

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(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples	Preservatives Used	—	MeOH								REMARKS/ LOC ID
							Analysis Required (3)	DRO	GRO								
	BS-1	1/13/10	0950	SOIL	3	C		✓	✓								
	BS-2	1/13/10	1030	SOIL	3	C		✓	✓								
	BS-3	1/13/10	1045	SOIL	3	C		✓	✓								
	BS-4	1/13/10	1100	SOIL	3	C		✓	✓								
	BS-5	1/13/10	1130	SOIL	3	C		✓	✓								
	BS-6	1/13/10	1200	SOIL	3	C		✓	✓								
	BS-7	1/13/10	1215	SOIL	3	C		✓	✓								

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
MBranson	1/15/10	1000	
Relinquished By: (2)	Date	Time	Received By:
	1/18/10	0800	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)
DOD Project? YES (NO)
Cooler ID _____
Special Deliverable Requirements:

Requested Turnaround Time and-or Special Instructions:
STANDARD

Samples Received Cold? (YES) NO
Cooler TB
Temperature °C: 2.5 · _____

Chain of Custody Seal: (Circle)
INTACT BROKEN (ABSENT)

SGS North America, Inc.

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