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March 20, 2012

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

Reference: Preliminary Site Assessment
DEW Construction Co. Property (Parcel #150)
1305 US 19E
Spruce Pine, Mitchell County, North Carolina
NCDOT Tip No. R-2519B
WBS Element 35609.1.1
AECOM Project No. 60241470

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 January 12, 2012, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated January 18, 2012. 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 DEW Construction Co. Property (Parcel #150) is located at 1305 US 19E in Spruce Pine, Mitchell County, North Carolina. The property is situated on the north side of US 19E in the northeast quadrant of the intersection of US 19E and Burleson Circle (Figure 1). Based on information supplied by the NCDOT and the site visit, AECOM understands that the site is a former gas station (Exxon) where an unknown number and size of underground storage tanks (USTs) were operated. According to the current landowner, the USTs were removed in the late 1980's and were located at the left front of the building. As of the date of this report, the structure on the site houses a construction company and consists of a two-story wood frame building with a gravel driveway in front and on the sides (Figure 2). The NCDOT has advised that the proposed right-of-way will not affect the building, but will affect the driveway just outside the former UST locations. The presence of potential USTs immediately adjacent to the right-of-way created an area of potential environmental concern and 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 existing right-of-way with respect to the presence of known and unknown USTs and assess where contamination may exist on the right-of-way. If present, an estimate of the quantity of impacted soil was to be provided.

AECOM reviewed the on-line NCDENR Incident Management database and no Incident Number has been assigned to the property. AECOM also examined the UST registration database to obtain UST ownership information. No registration records were available for this property.

Geophysical Survey

Prior to AECOM's mobilization to the site, Pyramid Environmental conducted a geophysical survey as part of this project to evaluate if USTs were present on the right-of-way/easement. The geophysical survey consisted of an electromagnetic survey using a Geonics EM61 time-domain electromagnetic induction meter to locate buried metallic objects, specifically USTs. Pyramid laid out a survey grid at the property with the X-axis oriented approximately parallel to US 19E and the Y-axis oriented approximately perpendicular to US 19E. The grid was located to cover the accessible portions of the right-of-way. The survey lines were spaced 5 feet apart. A data logger collected magnetic data continuously along each survey line. After collection, the data was reviewed in the field with graphical computer software. Following the electromagnetic survey, a ground penetrating radar (GPR) survey was conducted where needed to further evaluate any significant metallic anomalies.

Access was available to all areas of the proposed right-of-way and the geophysical survey detected several anomalies. Data interpretation attributed all but one of these anomalies to buried utility lines, conduits, or miscellaneous metallic debris. One anomaly was identified at the right-of-way line in front of the building's porch. According to the geophysical report, the anomaly is about 2.5 feet wide and 2.5 feet long. While the anomaly appears too small for a UST, the potential presence of a UST could not be totally discounted. As a result, the anomaly has a low confidence of being a UST. Attachment A presents a detailed report of findings and interpretations.

Site Assessment Activities

On February 21, 2012, AECOM mobilized to the site to conduct a Geoprobe® direct push investigation to evaluate soil conditions within the proposed right-of-way. 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 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 Pace Analytical in Asheville, 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 (DW-1 through DW-6) were advanced within the proposed right-of-way to a depth of 15 feet as shown in Figure 2 and Attachment B. Boring DW-1 was located to evaluate the conditions on the east side of the site; borings DW-2 and DW-3 were placed to assess the soil conditions at the geophysical anomaly; boring DW-4 was situated to observe soil conditions near the former UST locations; and borings DW-5 and DW-6 were located to assess the soil conditions along the proposed storm sewer line (Attachment C). The lithology encountered by the direct-push samples generally was consistent throughout the site. About 2 inches of topsoil or gravel covered the ground surface. Below the surface to a depth of about 15 feet was a medium brown, micaceous, silt/sand with quartz fragments common and occasional woody debris. These observations suggest that some or all of the soil in the front portion of the site may be fill. None of the borings encountered bedrock.

The "Geologic Map of North Carolina" dated 1985 indicates that the Alligator Formation underlies the site. This formation consists of amphibolites and gneiss. The amphibolite is described as equigranular, massive to well foliated, metamorphosed intrusive and extrusive mafic rock. The gneiss is a finely laminated to thinly layered and locally contains massive gneiss and micaceous granule conglomerate. In addition to these rock types, quartz diorite intrusions are common in the area. The soil observed at the site is consistent with these parent rocks. The borings were terminated at a depth of 15 feet. No groundwater was observed in any of the borings. Based on field screening, soil samples were submitted for laboratory analyses, which are summarized in Table 1. Following completion, each boring was backfilled in accordance with 15A NCAC 2C.

Analytical Results

Based on the soil laboratory reports, summarized in Table 1 and presented in Attachment D, no petroleum hydrocarbon compounds identified as DRO and/or GRO were detected in any of the six soil samples collected from the site on February 21, 2012. Consequently, no soil concentrations are present above applicable action levels.

Conclusions and Recommendations

A Preliminary Site Assessment was conducted to evaluate the DEW Construction Co. Property (Parcel 150) located at 1305 US 19E in Spruce Pine, Mitchell County, North Carolina. A geophysical investigation was conducted to evaluate the site for unknown USTs. The investigation found an anomaly that is classified as a low to no confidence UST. No other

evidence of metallic USTs was observed within the proposed right-of-way. Six soil borings were advanced to evaluate the soil conditions throughout the proposed right-of-way. The laboratory reports of the soil samples from these borings suggest that no DRO or GRO concentrations were detected. Consequently, no soil concentrations are above applicable action levels.

AECOM appreciates the opportunity to work with the NCDOT on this project. Because laboratory analysis detected no compounds above the applicable action levels in the soil samples, no NCDENR notification is required. 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

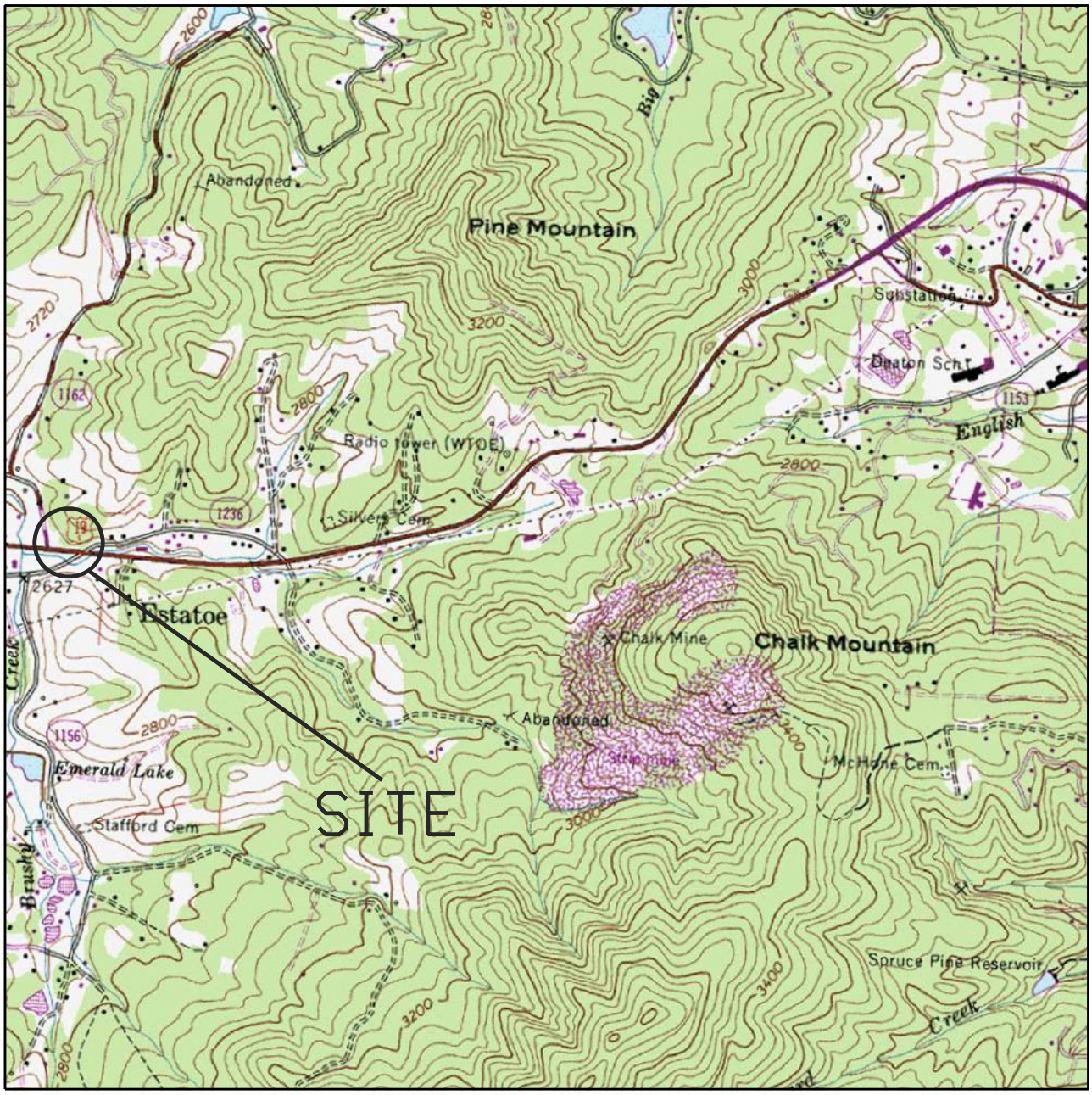
SOIL FIELD SCREENING AND ANALYTICAL RESULTS
DEW CONSTRUCTION CO. PROPERTY (PARCEL #150)
SPRUCE PINE, MITCHELL COUNTY, NORTH CAROLINA
NCDOT PROJECT NO. R-2519B
WBS ELEMENT 35609.1.1
AECOM PROJECT NO. 60241470

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
DW-1	0 - 2	0.01			
	2 - 4	0.01			
	4 - 6	0.17			
	6 - 8	0.31			
	8 - 10	0.79			
	10 - 12	1.81			
	12 - 14	0.72			
	14 - 15	5.65	DW-1	DRO (BQL) GRO (BQL)	10 10
DW-2	0 - 2	0.64			
	2 - 4	0.25			
	4 - 6	0.56			
	6 - 8	1.77			
	8 - 10	0.31			
	10 - 12	2.14			
	12 - 14	0.06			
	14 - 15	2.51	DW-2	DRO (BQL) GRO (BQL)	10 10
DW-3	0 - 2	0.37			
	2 - 4	0.07			
	4 - 6	0.01			
	6 - 8	0.55			
	8 - 10	0.35			
	10 - 12	10.85	DW-3	DRO (BQL) GRO (BQL)	10 10
	12 - 14	0.51			
	14 - 15	1.66			
DW-4	0 - 2	0.01			
	2 - 4	0.01			
	4 - 6	0.01			
	6 - 8	1.29			
	8 - 10	1.05			
	10 - 12	NR			
	12 - 14	1.35	DW-4	DRO (BQL) GRO (BQL)	10 10
	14 - 15	0.21			
DW-5	0 - 2	0.01			
	2 - 4	0.35			
	4 - 6	0.56			
	6 - 8	3.45	DW-5	DRO (BQL) GRO (BQL)	10 10
	8 - 10	2.03			
	10 - 12	0.48			
	12 - 14	0.72			
	14 - 15	0.48			
DW-6	0 - 2	0.01			
	2 - 4	0.47			
	4 - 6	2.81			
	6 - 8	5.63			
	8 - 10	5.49			
	10 - 12	15.91			
	12 - 14	10.17			
	14 - 15	18.13	DW-6	DRO (BQL) GRO (BQL)	10 10

Soil samples were collected on February 21, 2012.
DRO - Diesel range organics.
GRO - Gasoline range organics.
BQL - Below quantitation limit.
ppm - parts per million.
mg/kg - milligrams per kilogram.
NR - No recovery.

AECOM

FIGURES



SCALE 1:24,000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: SPRUCE PINE, NC

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FIGURE 1

VICINITY MAP

DEW CONSTRUCTION CO PROPERTY (PARCEL #150)
SPRUCE PINE, MITCHELL COUNTY NORTH CAROLINA

FEBRUARY 2012

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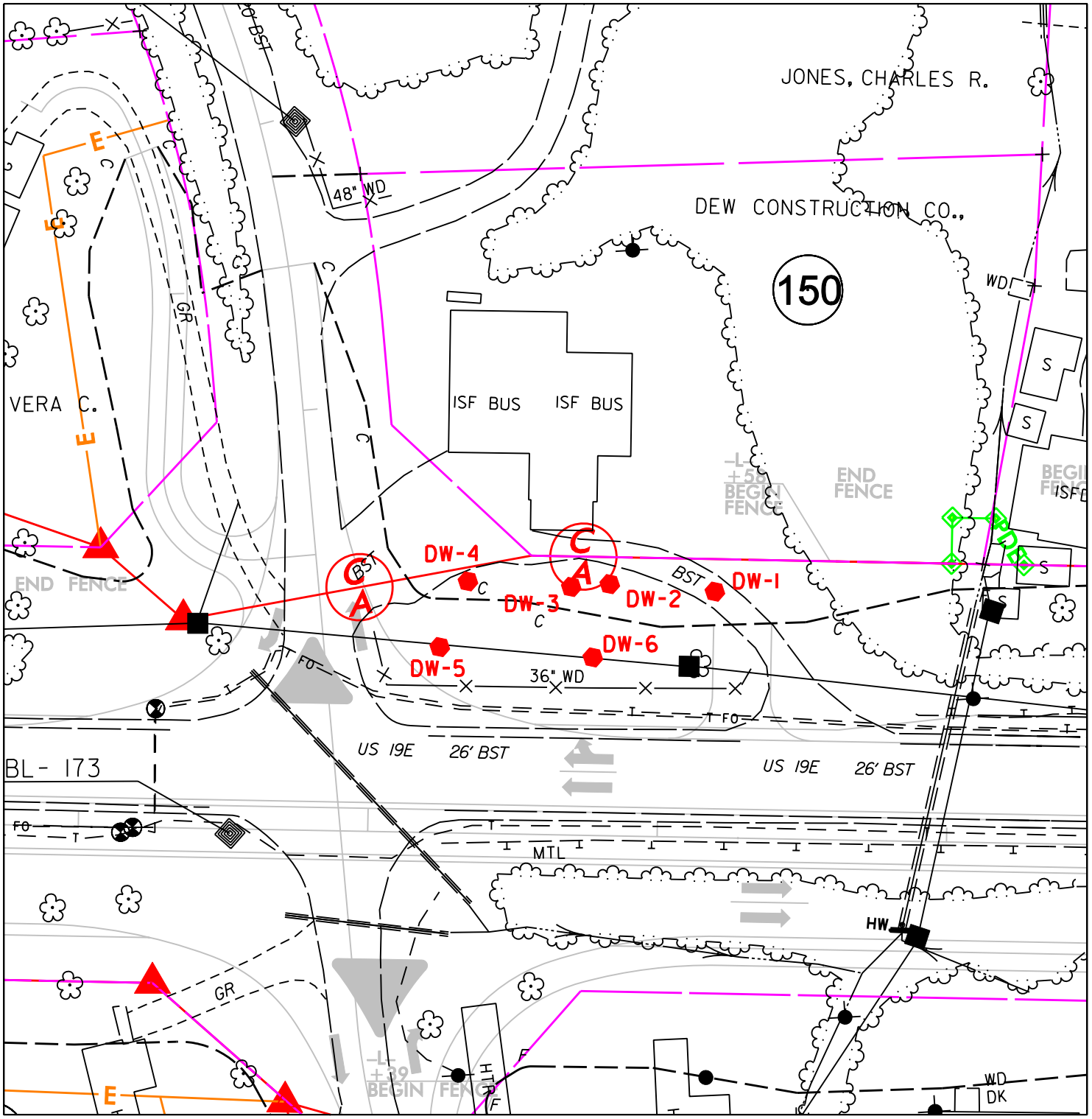

LEGEND

DW-1 SOIL SAMPLE LOCATION AND IDENTIFICATION

0 25 50
GRAPHIC SCALE (FEET)

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FIGURE 2
SITE MAP
DEW CONSTRUCTION CO. PROPERTY (PARCEL #150)
SPRUCE PINE, MITCHELL COUNTY, NORTH CAROLINA

FEBRUARY 2012 60241470

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ATTACHMENT A

Pyramid Project # 2012035

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

DEW CONSTRUCTION PROPERTY - PARCEL 150
1305 US Highway 19 East
Mitchell County, North Carolina

February 28, 2012

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

Prepared by: _____
Mark J. Denil, P.G.

Reviewed by: _____
Douglas Canavello, P.G.

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AECOM Environment
GEOPHYSICAL INVESTIGATION REPORT
DEW CONSTRUCTION PROPERTY - PARCEL 150
1305 US Highway 19 East
Mitchell County, North Carolina

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FIGURES

1.0 INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for AECOM Environmental across the proposed right-of way (ROW) area of the Dew Construction property (Parcel 150) located at 1305 US Highway 19 East in Mitchell County, North Carolina. Conducted on February 8 and 15, 2012, the geophysical investigation was performed as part of the North Carolina Department of Transportation (NCDOT) preliminary site assessment project to determine if unknown, metallic underground storage tanks (USTs) were present beneath the proposed ROW area of the site.

The Dew Construction property consists of an office building surrounded by flat-lying, grass-covered yards. A brush-covered slope and Burleson Circle are located along the eastern and western perimeters of the property, respectively. The proposed ROW area is located along the southern portion of the property located between US Highway 19 East and the office building. The geophysical survey area had a maximum length and width of 160 feet and 65 feet, respectively

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 prior to conducting the investigation. Photographs of the geophysical equipment used in this investigation and the southern portion of the property 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 accessible portions of the geophysical survey area using measuring tapes and water-based marking paint. These grid marks were used as X-Y coordinates for location control when collecting the geophysical data 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 February 8, 2012 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 easterly-westerly trending, 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 data were acquired on February 15, 2012 across selected EM61 differential anomalies using a GSSI SIR-2000 unit equipped with a 400 MHz antenna. GPR data were viewed in real time 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 viewed down to a maximum depth of approximately 5 feet, based on an estimated two-way travel time of 8 nanoseconds per foot.

Preliminary geophysical results obtained from the site were emailed to Mr. Branson during the week of February 20, 2012.

3.0 DISCUSSION OF RESULTS

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.

The low amplitude EM61 bottom coil anomalies centered near grid coordinates X=35 Y=15, X=69 Y=25 and X=87 Y=60 are probably in response to buried, insignificant, miscellaneous, metal objects

or debris. The high amplitude EM61 anomaly centered near grid coordinates X=115 Y=85 is probably in response to a truck.

GPR scans performed across the EM61 differential anomaly centered near grid coordinates X=109 Y=51 detected a possible metallic plate/object or a small, "very low confidence" UST buried approximately 0.5 feet below the grass surface. Based on the GPR data, the possible buried plate or object is approximately 2.75 feet long and 2.75 feet wide. The GPR image obtained along a portion of survey line Y=51, which crosses the possible plate, object or UST and a photograph showing the location of the possible buried object, are presented in **Figure 3.** The foot print of the possible buried object was marked in the field using orange spray paint and pin flags.

Excluding the possible buried object or "very low confidence" UST located at grid coordinates X=109 Y=51, the geophysical investigation suggests that the remaining portion of the proposed ROW area does not contain metallic USTs.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected across the proposed ROW area at the Dew Construction property located at 1305 US Highway 19 East in Mitchell County, North Carolina, provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the geophysical survey area.

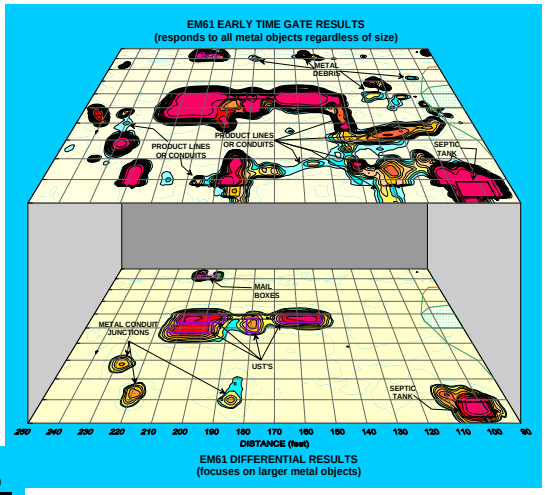
- The high amplitude EM61 anomaly centered near grid coordinates X=115 Y=85 is probably in response to a truck.

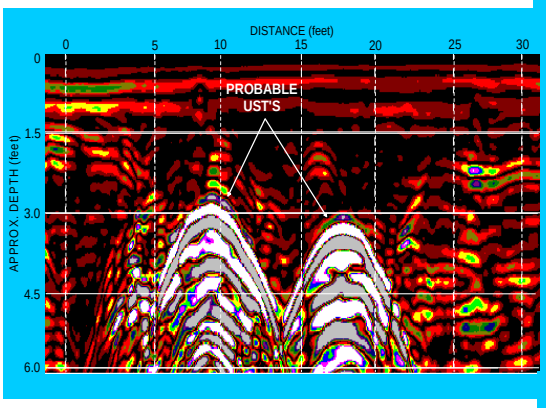
- GPR data detected a possible metallic plate, object or a small, "very low confidence" UST centered near grid coordinates X=109 Y=51. The possible buried plate or object is approximately 2.75 feet long and 2.75 feet wide and buried 0.5 feet below present grade.

- Excluding the possible buried object or "very low confidence" UST located at grid coordinates X=109 Y=51, the geophysical investigation suggests that the remaining portion of the proposed ROW area does not contain metallic USTs.

5.0 LIMITATIONS

EM61 and GPR surveys have been performed and this report prepared for AECOM Environmental in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR are non-unique and may not represent actual subsurface conditions. Excluding the detected object or very low confidence UST, the EM61 and GPR results obtained for this project have not conclusively determined that the remaining portion of the proposed ROW area does not contain buried metallic USTs but that none were detected.

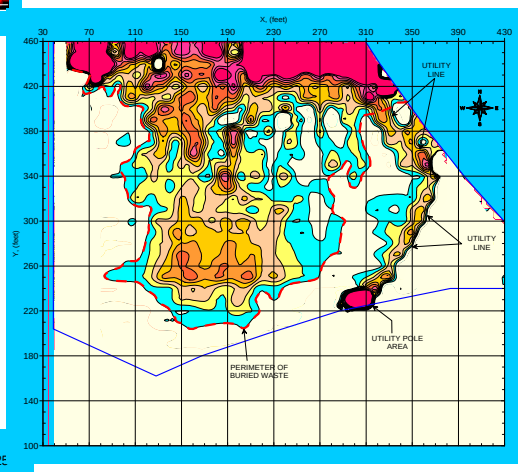


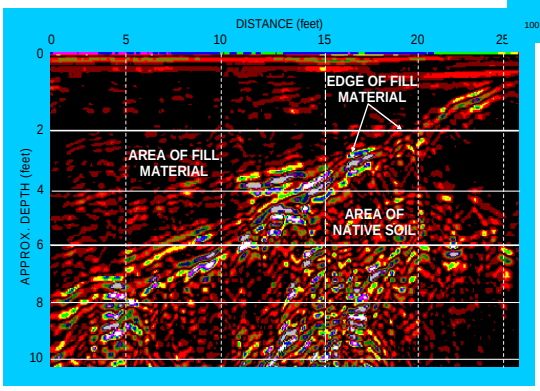


FIGURES

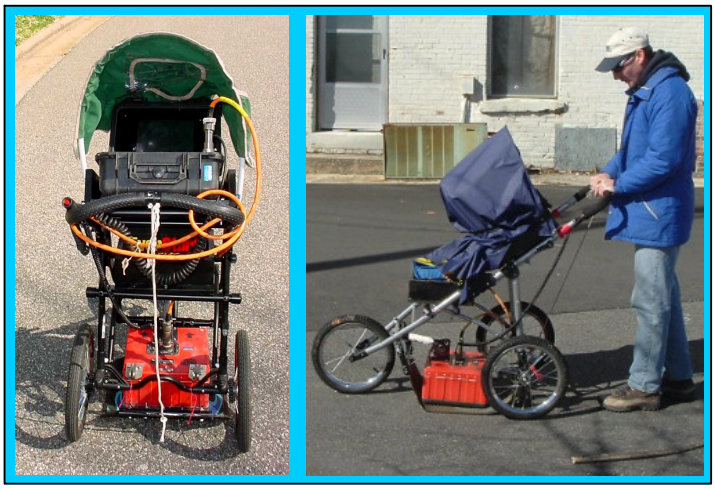
(on the following pages)

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





The photograph shows the Geonics EM61 metal detector that was used to conduct the metal detection survey across the southern portion of the Dew Construction (proposed ROW area) on February 8, 2012.



The photographs show the SIR-2000 GPR system equipped with a 400 MHz antenna that were used to conduct the ground penetrating radar investigation at the Dew property on February 15, 2012.

The photograph shows the southern portion (geophysical survey area) of the Dew Construction property (Parcel 150) located at 1305 US 19E in Mitchell County, North Carolina. The photograph is viewed in an easterly direction.

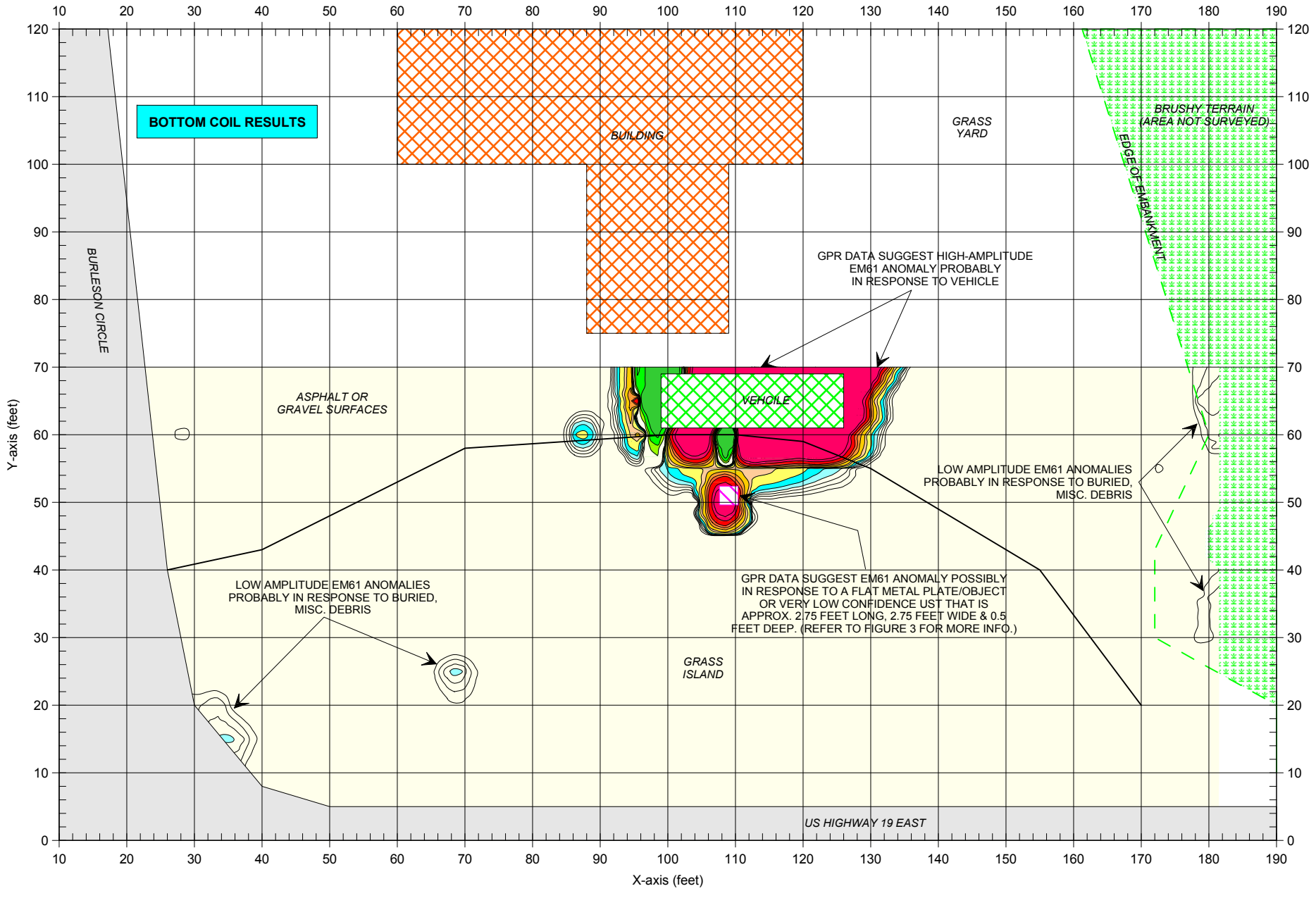
PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	AECOM ENVIRONMENT	DATE	02/28/12	DRWN	MJD
SITE	DEW CONSTRUCTION PROPERTY - PARCEL 150	LAY		CHKD	
CITY	MITCHELL COUNTY	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	JNO	2012-035	FIGURE	

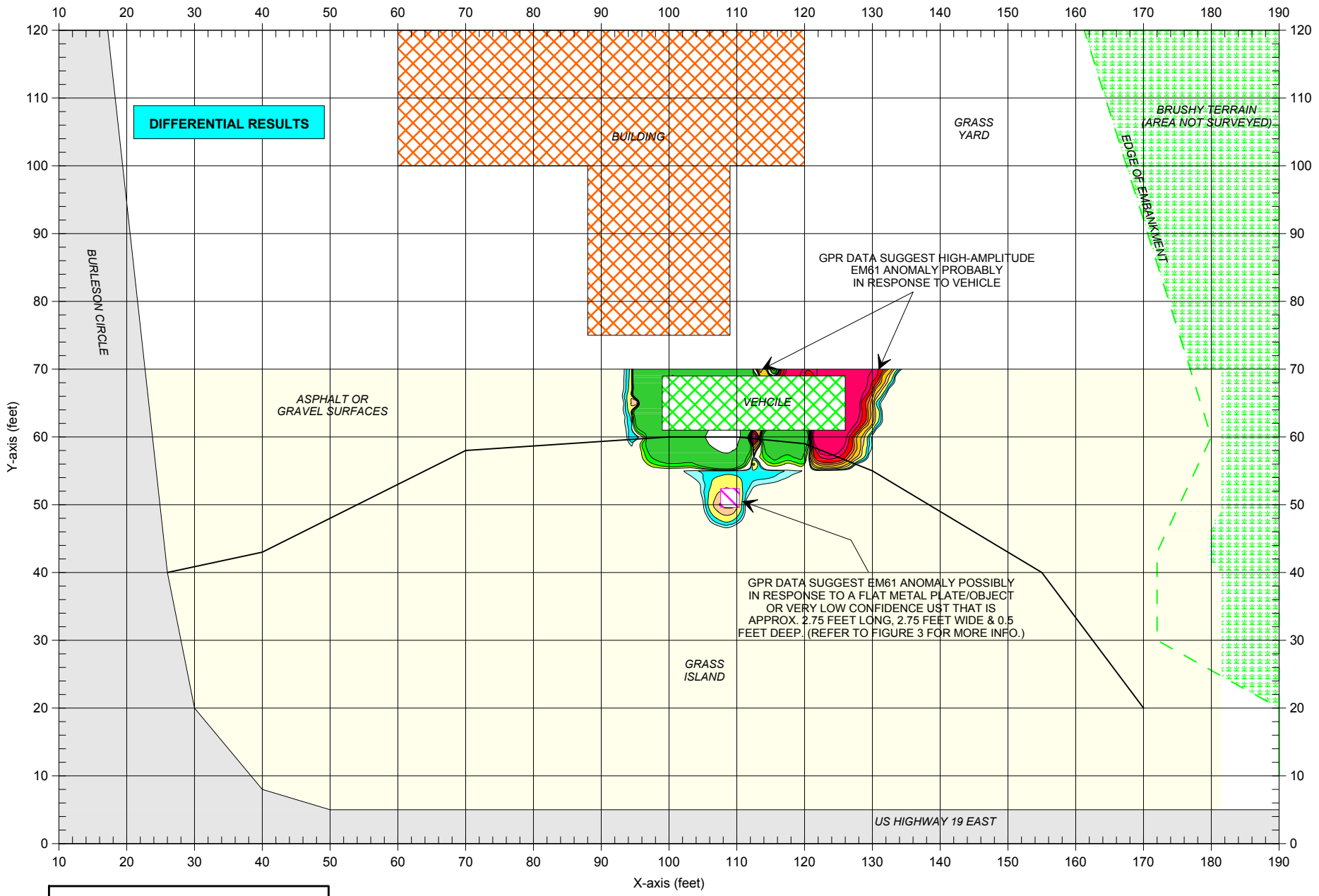
GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS

FIGURE 1

BOTTOM COIL RESULTS



DIFFERENTIAL RESULTS



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING OR STRUCTURE
- VEHICLE
- BRUSH-COVERED TERRAIN
- POSSIBLE METALLIC PLATE/OBJECT OR VERY LOW CONFIDENCE UST, AS SUGGESTED BY GPR RESULTS

EM61 METAL DETECTION RESPONSE (MILLIVOLTS)

-5000 -400 -200 -100 -50 -30 -20 -10 -5 -2 2 5 10 20 30 40 50 60 75 100 150 200 300 400 500 750 1000

APPROXIMATE NORTH

The contour plot shows the bottom coil (most sensitive) and differential results 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 data were collected on February 8, 2012 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired across selected EM61 anomalies on February 15, 2012 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

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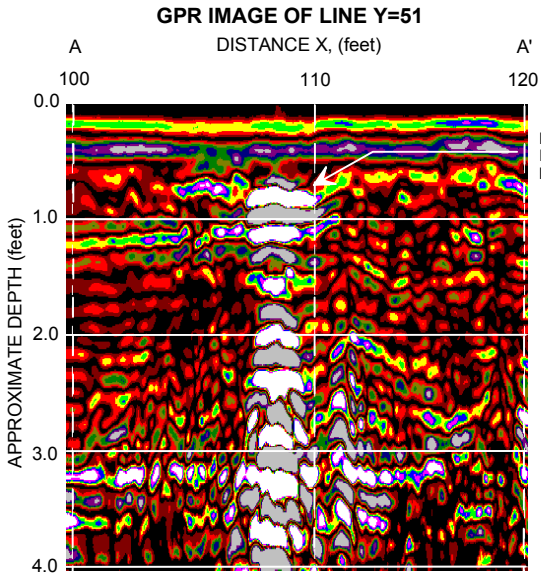
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	AECOM ENVIRONMENT	DATE	02/28/12	DRWN	MJD
SITE	DEW CONSTRUCTION PROPERTY - PARCEL 150	LAY		CHKD	
CITY	MITCHELL COUNTY	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	J-NO.	2012-035	FIGURE	

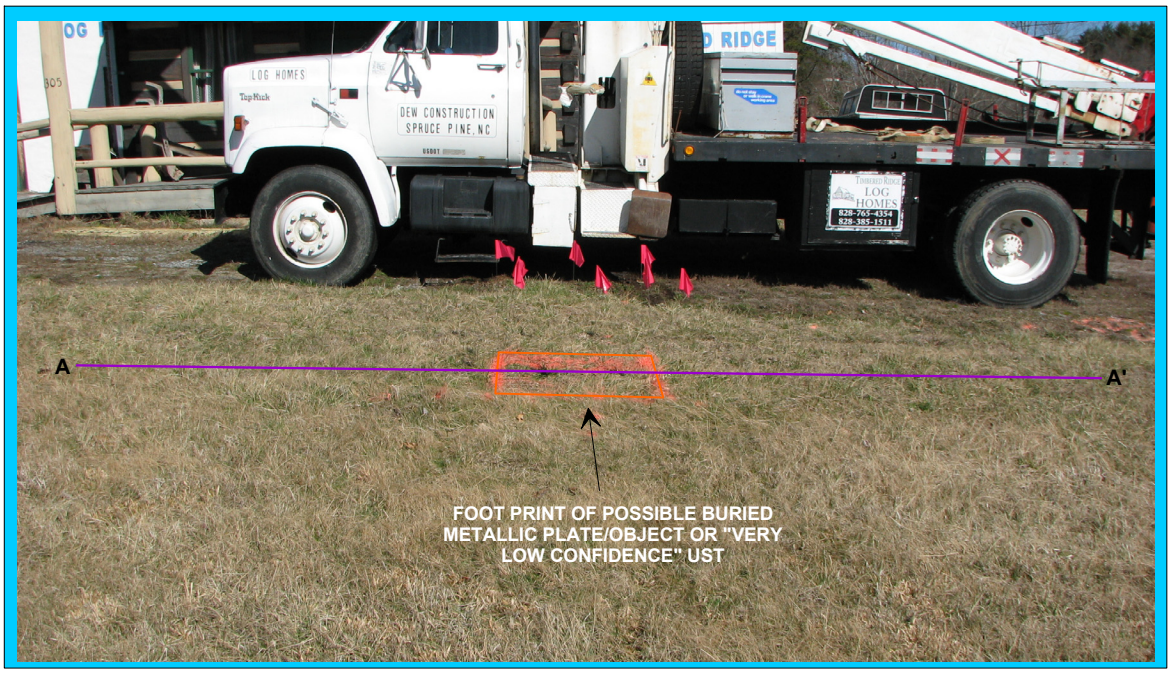
GRAPHIC SCALE IN FEET

EM61 METAL DETECTION RESULTS

FIGURE 2



The GPR image obtained along a portion of survey line Y=51 recorded a flat-lying, high amplitude anomaly (GPR reflection shaded in white) that is possibly in response to a buried, metallic plate or object or a "very low confidence" UST. The solid purple line labeled AA' in the photograph below shows the location of the GPR image.



The orange rectangle in the photograph represents the approximate perimeter of a possible, metallic plate/object or "very low confidence" UST, as suggested by the GPR data. Centered near grid coordinates X=109 Y=51, the possible metallic object is 2.75 feet by 2.75 feet in size and buried 0.5 feet below present grade. The solid purple line in the photograph represents the approximate location of the GPR image shown above. The photograph is viewed in a northerly direction.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	AECOM ENVIRONMENT		DATE	02/28/12	DRWN MJD
SITE	DEW CONSTRUCTION PROPERTY - PARCEL 150		LAY		CHKD
CITY	MITCHELL COUNTY	STATE NORTH CAROLINA	DWG		
TITLE	GEOPHYSICAL RESULTS		JOB NO.	2012-035	FIGURE

GPR IMAGE ACROSS POSSIBLE BURIED OBJECT

FIGURE 3

ATTACHMENT B

TEST BORING REPORT

PROJECT DEW CONSTRUCTION PROPERTY (PARCEL #150)
CLIENT NCDOT R-2519B
PROJECT NUMBER 60241470
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER DW-1
PAGE 1
ELEVATION
DATE 2/21/12
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		MEDIUM BROWN, MICACEOUS, SILT/CLAY/SAND, CLAY INCREASES DOWN. DRY, NO ODORS.
			0.01		AS ABOVE. DRY. NO ODORS.
5.0			0.17		AS ABOVE. DRY. NO ODORS.
			0.31		AS ABOVE. DRY. NO ODORS.
			0.79		AS ABOVE. DRY. NO ODORS.
10.0			1.81		AS ABOVE. DRY. NO ODORS.
			0.72		AS ABOVE. DRY. NO ODORS.
15.0			5.65		AS ABOVE. DRY. NO ODORS. SUBMIT TO LABORATORY ANALYSIS.
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

AECOM

TEST BORING REPORT

PROJECT DEW CONSTRUCTION PROPERTY (PARCEL #150)
CLIENT NCDOT R-2519B
PROJECT NUMBER 60241470
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER DW-2
PAGE 1
ELEVATION
DATE 2/21/12
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.64		2" TOPSOIL, MEDIUM BROWN, MICACEOUS, SILT/CLAY/SAND, CLAY INCREASES DOWN. DRY, NO ODORS.
			0.25		AS ABOVE. DRY. NO ODORS.
			0.56		AS ABOVE. DRY. NO ODORS.
5.0					
			1.77		AS ABOVE. DRY. NO ODORS.
			0.31		AS ABOVE. DRY. NO ODORS.
10.0					
			2.14		AS ABOVE. DRY. NO ODORS.
			0.06		AS ABOVE. DRY. NO ODORS.
			2.51		AS ABOVE. DRY. NO ODORS. SUBMIT TO LABORATORY ANALYSIS.
15.0					
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

AECOM

TEST BORING REPORT

PROJECT DEW CONSTRUCTION PROPERTY (PARCEL #150)
CLIENT NCDOT R-2519B
PROJECT NUMBER 60241470
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER DW-3
PAGE 1
ELEVATION
DATE 2/21/12
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.37		2" TOPSOIL, MEDIUM BROWN, MICACEOUS, SILT/CLAY/SAND, CLAY INCREASES DOWN. DRY, NO ODORS.
			0.07		AS ABOVE. DRY. NO ODORS.
			0.01		AS ABOVE. DRY. NO ODORS.
5.0					
			0.55		AS ABOVE. DRY. NO ODORS.
			0.35		AS ABOVE. DRY. NO ODORS.
10.0			10.85		AS ABOVE. DRY. NO ODORS.
			0.51		AS ABOVE. DRY. NO ODORS.
			1.66		AS ABOVE. DRY. NO ODORS. SUBMIT TO LABORATORY ANALYSIS.
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

AECOM

TEST BORING REPORT

PROJECT DEW CONSTRUCTION PROPERTY (PARCEL #150)
CLIENT NCDOT R-2519B
PROJECT NUMBER 60241470
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER DW-4
PAGE 1
ELEVATION
DATE 2/21/12
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		2" TOPSOIL, MEDIUM BROWN, MICACEOUS, SILT/CLAY/SAND, CLAY INCREASES DOWN, QUARTZ FRAGMENTS COMMON. DRY, NO ODORS.
			0.01		AS ABOVE. DRY. NO ODORS.
			0.01		AS ABOVE. DRY. NO ODORS.
5.0					
			1.29		AS ABOVE. DRY. NO ODORS.
			1.05		AS ABOVE. DRY. NO ODORS.
10.0					NO RECOVERY
			1.35		AS ABOVE. DRY. NO ODORS.
			0.21		AS ABOVE. DRY. NO ODORS.
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

AECOM

TEST BORING REPORT

PROJECT DEW CONSTRUCTION PROPERTY (PARCEL #150)
CLIENT NCDOT R-2519B
PROJECT NUMBER 60241470
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER DW-5
PAGE 1
ELEVATION
DATE 2/21/12
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		2" TOPSOIL, MEDIUM BROWN, MICACEOUS, SILT/SAND, QUARTZ FRAGMENTS COMMON, OCCASIONAL WOODY DEBRIS. DRY, NO ODORS.
			0.35		AS ABOVE. DRY. NO ODORS.
			0.56		AS ABOVE. DRY. NO ODORS.
5.0					
			3.45		AS ABOVE. DRY. NO ODORS. SUBMIT TO LABORATORY FOR ANALYSIS.
			2.03		AS ABOVE. DRY. NO ODORS.
10.0					
			0.48		AS ABOVE. DRY. NO ODORS.
			0.72		AS ABOVE. DRY. NO ODORS.
			0.48		AS ABOVE. DRY. NO ODORS.
15.0					
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

AECOM

TEST BORING REPORT

PROJECT DEW CONSTRUCTION PROPERTY (PARCEL #150)
CLIENT NCDOT R-2519B
PROJECT NUMBER 60241470
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER DW-6
PAGE 1
ELEVATION
DATE 2/21/12
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		2" TOPSOIL, MEDIUM BROWN, MICACEOUS, SILT/CLAY/SAND, CLAY INCREASES DOWN, OCCASIONAL QUARTZ FRAGMENTS. DRY, NO ODORS.
			0.47		AS ABOVE. DRY. NO ODORS.
			2.81		AS ABOVE. DRY. NO ODORS.
5.0					
			5.63		AS ABOVE. DRY. NO ODORS.
			5.49		AS ABOVE. DRY. NO ODORS.
10.0			15.91		AS ABOVE. DRY. NO ODORS.
			10.17		AS ABOVE. DRY. NO ODORS.
			18.13		AS ABOVE. DRY. NO ODORS. SUBMIT TO LABORATORY ANALYSIS.
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

AECOM

ATTACHMENT C

PHOTO 1- BORING IN RIGHT-OF-WAY LOOKING NORTHWEST

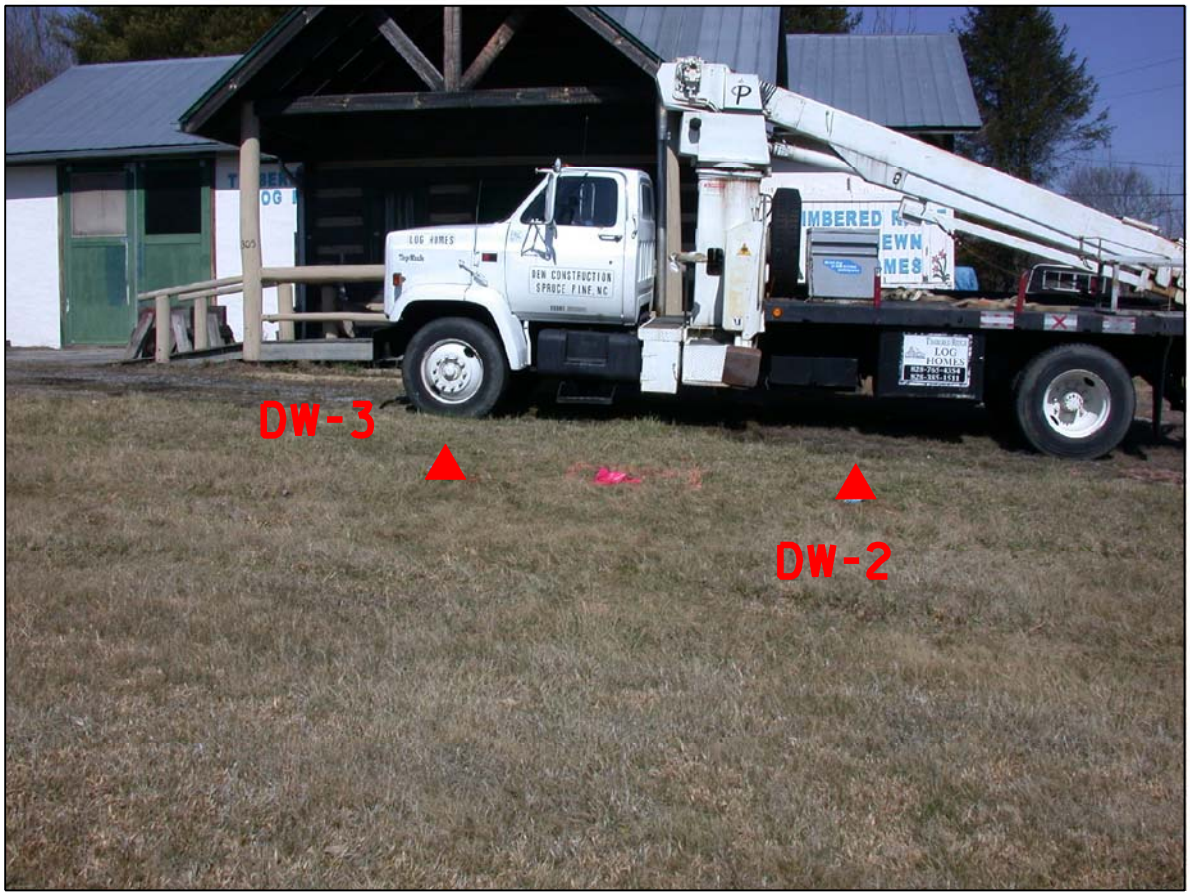


PHOTO 2 - BORINGS IN RIGHT-OF-WAY AT ANOMALY LOOKING NORTH

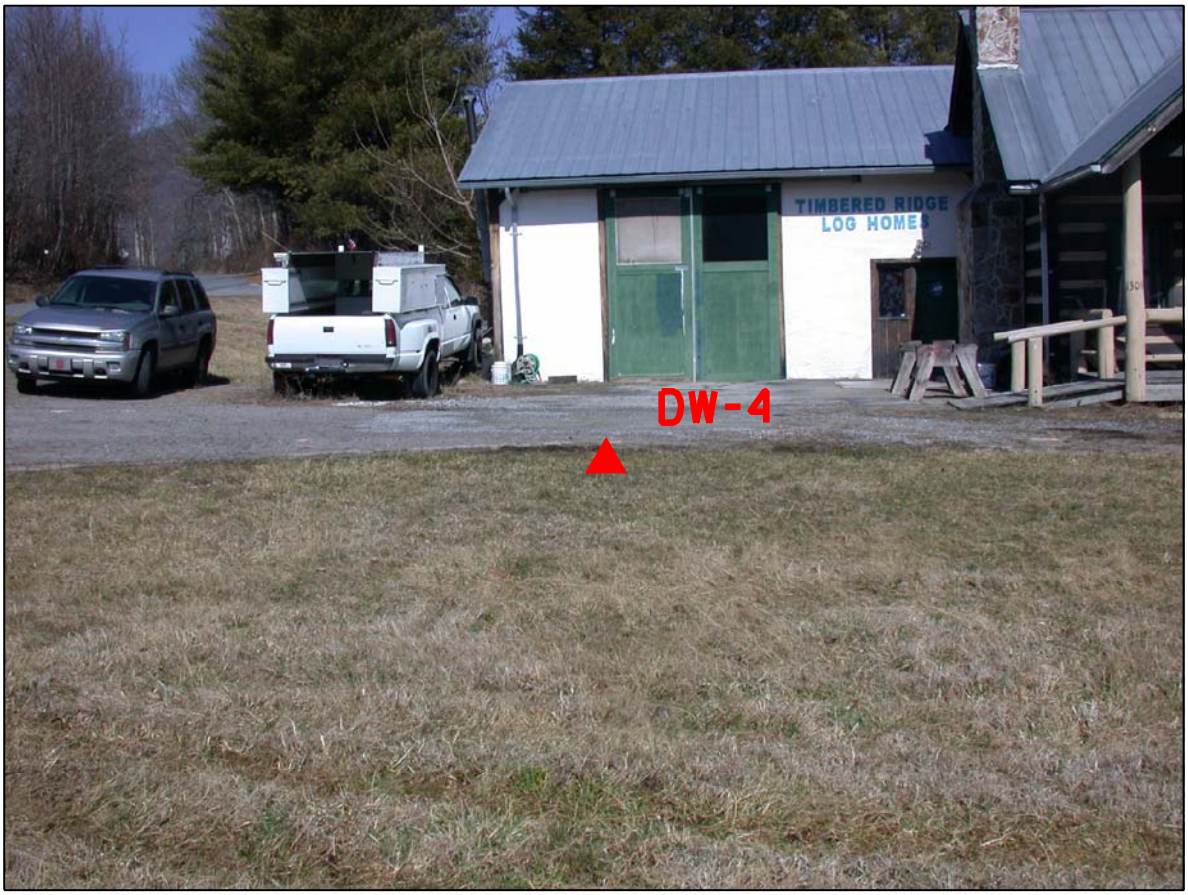


PHOTO 3 - BORING ON SOUTH SIDE OF BUILDING LOOKING NORTH

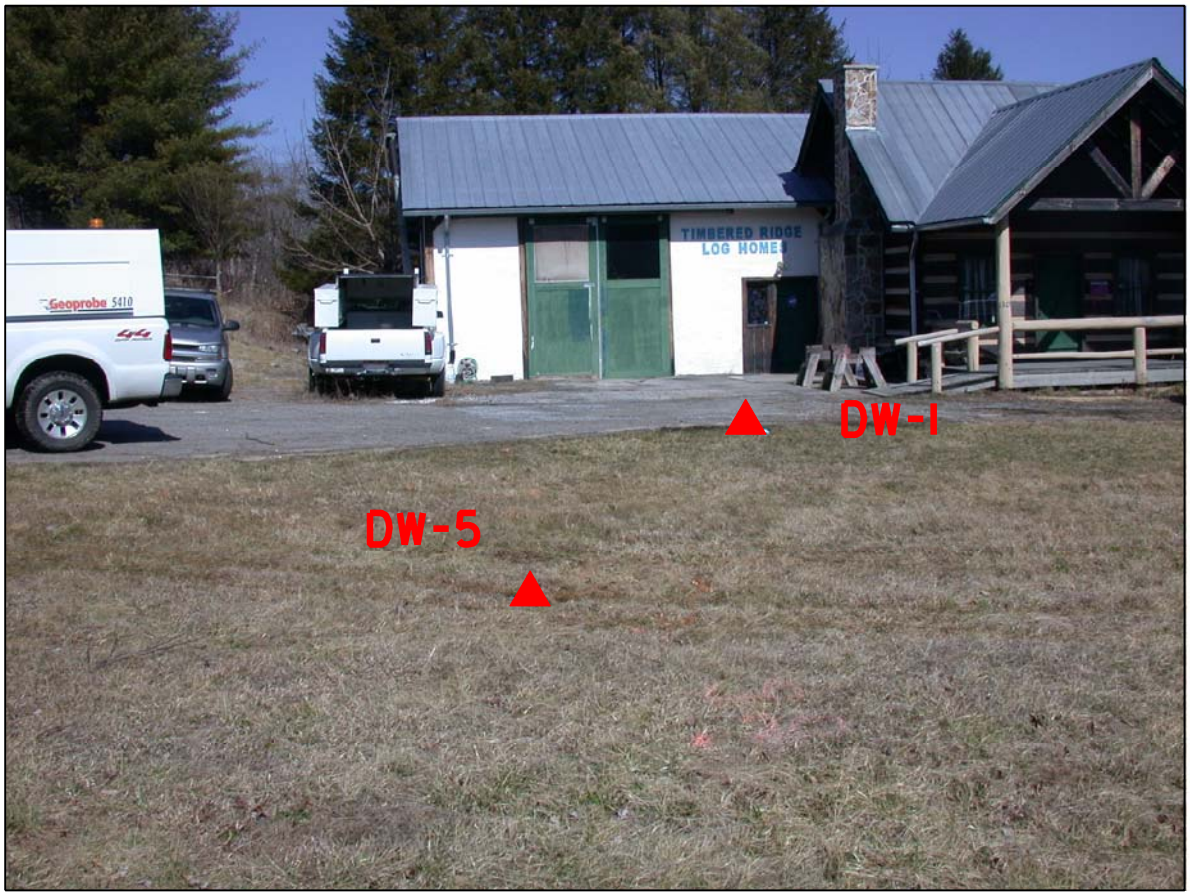


PHOTO 4 - BORINGS IN RIGHT-OF-WAY LOOKING NORTH

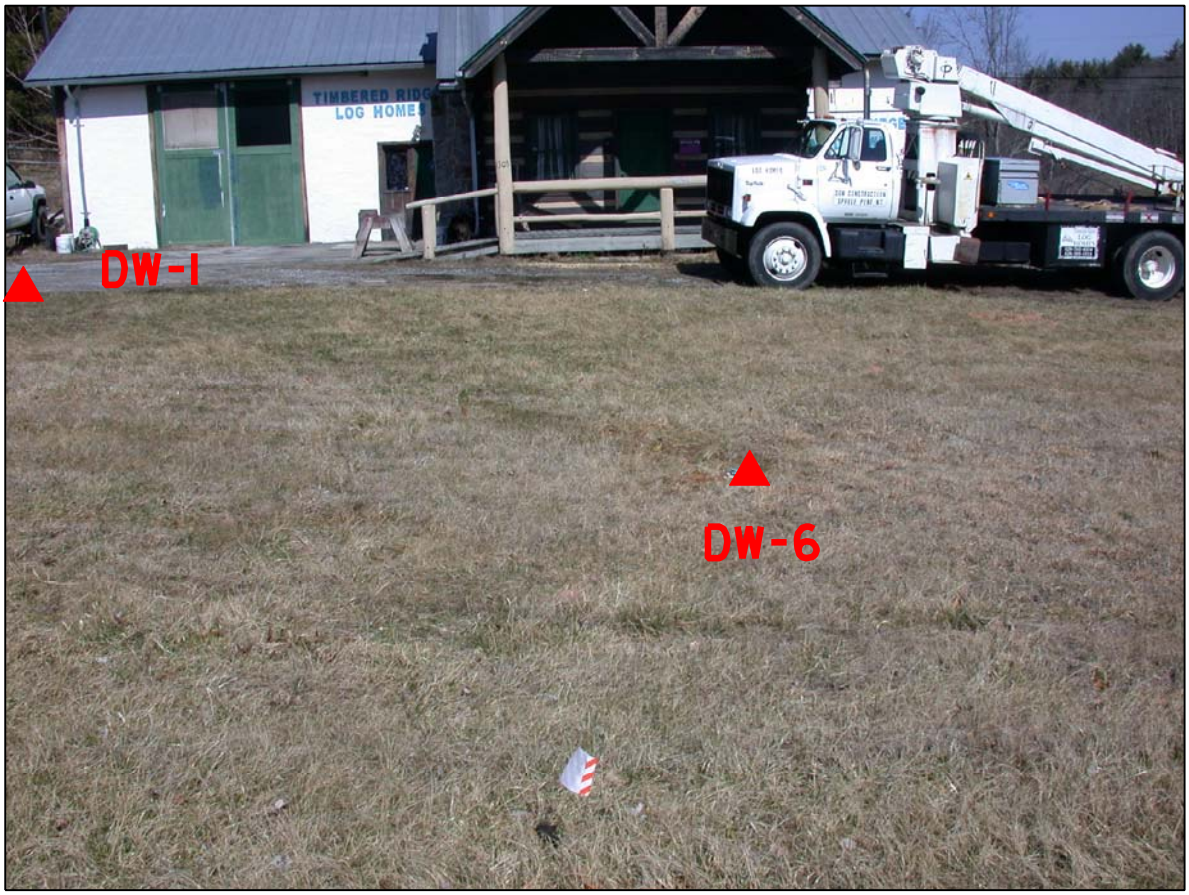


PHOTO 5 - BORINGS IN RIGHT-OF-WAY LOOKING NORTHWEST

ATTACHMENT D

Pace Analytical Services, Inc.
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March 01, 2012

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on February 23, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lorri Patton

Lorri Patton

lorri.patton@pacelabs.com
Project Manager

Enclosures

cc: Mr. Mike Branson, AECOM

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CERTIFICATIONS

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Virginia Drinking Water Certification #: 00213
Connecticut Certification #: PH-0104
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DHH Drinking Water # LA 100031
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460144

Pace Analytical
www.pacelabs.com

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SAMPLE ANALYTE COUNT

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92112768001	**DW-1**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92112768002	**DW-2**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92112768003	**DW-3**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92112768004	**DW-4**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92112768005	**DW-5**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92112768006	**DW-6**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C

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ANALYTICAL RESULTS

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Sample: DW-1 **Lab ID: 92112768001** Collected: 02/21/12 10:00 Received: 02/23/12 11:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	ND	mg/kg	6.6	1	02/24/12 10:35	02/26/12 00:19	68334-30-5	
Surrogates								
n-Pentacosane (S)	66	%	41-119	1	02/24/12 10:35	02/26/12 00:19	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	6.6	1	02/28/12 14:07	02/28/12 21:12	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	86	%	70-167	1	02/28/12 14:07	02/28/12 21:12	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**25.1**	%	0.10	1		02/24/12 14:47		

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ANALYTICAL RESULTS

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Sample: DW-2 **Lab ID: 92112768002** Collected: 02/21/12 10:30 Received: 02/23/12 11:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	ND	mg/kg	6.7	1	02/24/12 10:35	02/26/12 00:49	68334-30-5	
Surrogates								
n-Pentacosane (S)	85	%	41-119	1	02/24/12 10:35	02/26/12 00:49	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	6.5	1	02/28/12 17:35	02/29/12 08:57	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	92	%	70-167	1	02/28/12 17:35	02/29/12 08:57	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**25.5**	%	0.10	1		02/24/12 14:47		

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ANALYTICAL RESULTS

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Sample: DW-3 **Lab ID: 92112768003** Collected: 02/21/12 10:45 Received: 02/23/12 11:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	ND	mg/kg	6.9	1	02/24/12 10:35	02/26/12 00:49	68334-30-5	
Surrogates								
n-Pentacosane (S)	73	%	41-119	1	02/24/12 10:35	02/26/12 00:49	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	6.6	1	02/28/12 17:35	02/29/12 00:27	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	91	%	70-167	1	02/28/12 17:35	02/29/12 00:27	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**27.9**	%	0.10	1		02/24/12 14:48		

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ANALYTICAL RESULTS

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Sample: DW-4 **Lab ID: 92112768004** Collected: 02/21/12 11:00 Received: 02/23/12 11:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	ND	mg/kg	6.7	1	02/24/12 10:35	02/26/12 01:18	68334-30-5	
Surrogates								
n-Pentacosane (S)	85	%	41-119	1	02/24/12 10:35	02/26/12 01:18	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	6.5	1	02/28/12 17:35	02/29/12 01:40	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	86	%	70-167	1	02/28/12 17:35	02/29/12 01:40	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**26.3**	%	0.10	1		02/24/12 14:48		

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ANALYTICAL RESULTS

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Sample: DW-5 **Lab ID: 92112768005** Collected: 02/21/12 11:30 Received: 02/23/12 11:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	ND	mg/kg	6.7	1	02/24/12 10:35	02/26/12 01:18	68334-30-5	
Surrogates								
n-Pentacosane (S)	77	%	41-119	1	02/24/12 10:35	02/26/12 01:18	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	6.4	1	02/28/12 17:35	02/29/12 02:04	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	88	%	70-167	1	02/28/12 17:35	02/29/12 02:04	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**26.8**	%	0.10	1		02/24/12 14:48		

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ANALYTICAL RESULTS

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Sample: DW-6 **Lab ID: 92112768006** Collected: 02/21/12 11:45 Received: 02/23/12 11:55 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546							
Diesel Components	ND	mg/kg	6.5	1	02/24/12 10:35	02/26/12 01:48	68334-30-5	
Surrogates								
n-Pentacosane (S)	81	%	41-119	1	02/24/12 10:35	02/26/12 01:48	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B							
Gasoline Range Organics	ND	mg/kg	6.0	1	02/28/12 17:35	02/29/12 02:28	8006-61-9	
Surrogates								
4-Bromofluorobenzene (S)	89	%	70-167	1	02/28/12 17:35	02/29/12 02:28	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**24.6**	%	0.10	1		02/24/12 14:25		

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QUALITY CONTROL DATA

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

QC Batch: GCV/5775
QC Batch Method: EPA 5035A/5030B
Analysis Method: EPA 8015 Modified
Analysis Description: Gasoline Range Organics
Associated Lab Samples: 92112768001

METHOD BLANK: 728172 Matrix: Solid
Associated Lab Samples: 92112768001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.8	02/28/12 12:13	
4-Bromofluorobenzene (S)	%	94	70-167	02/28/12 12:13	

LABORATORY CONTROL SAMPLE: 728173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	24.3	23.3	96	70-165	
4-Bromofluorobenzene (S)	%			96	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 728174 728175

Parameter	Units	92112765010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Gasoline Range Organics	mg/kg	ND	22.2	22.2	26.7	26.3	117	115	47-187	1	
4-Bromofluorobenzene (S)	%						99	97	70-167		

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QUALITY CONTROL DATA

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

QC Batch: GCV/5777 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 92112768002, 92112768003, 92112768004, 92112768005, 92112768006

METHOD BLANK: 728539 Matrix: Solid
Associated Lab Samples: 92112768002, 92112768003, 92112768004, 92112768005, 92112768006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.9	02/29/12 00:02	
4-Bromofluorobenzene (S)	%	88	70-167	02/29/12 00:02	

LABORATORY CONTROL SAMPLE: 728540

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	24.5	24.0	98	70-165	
4-Bromofluorobenzene (S)	%			89	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 728541 728542

Parameter	Units	92112768003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Gasoline Range Organics	mg/kg	ND	27.6	27.6	32.1	32.4	116	117	47-187	1	
4-Bromofluorobenzene (S)	%						91	89	70-167		

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QUALITY CONTROL DATA

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

QC Batch: OEXT/16538 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92112768001, 92112768002, 92112768003, 92112768004, 92112768005, 92112768006

METHOD BLANK: 726961 Matrix: Solid
Associated Lab Samples: 92112768001, 92112768002, 92112768003, 92112768004, 92112768005, 92112768006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Components	mg/kg	ND	5.0	02/25/12 21:22	
n-Pentacosane (S)	%	88	41-119	02/25/12 21:22	

LABORATORY CONTROL SAMPLE: 726962

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Components	mg/kg	66.7	47.9	72	49-113	
n-Pentacosane (S)	%			77	41-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 726963 726964

Parameter	Units	92112766005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Diesel Components	mg/kg	ND	75.2	74.7	47.2	56.0	62	74	10-146	17	
n-Pentacosane (S)	%						71	86	41-119		

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

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2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

QC Batch: PMST/4517 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92112768001, 92112768002, 92112768003, 92112768004, 92112768005

SAMPLE DUPLICATE: 726836

Parameter	Units	92112765010 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	15.2	15.7	3	

SAMPLE DUPLICATE: 726837

Parameter	Units	92112768005 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	26.8	25.6	4	

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QUALITY CONTROL DATA

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

QC Batch: PMST/4518
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92112768006

SAMPLE DUPLICATE: 726838

Parameter	Units	92112768006 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	24.6	25.2	3	

SAMPLE DUPLICATE: 726839

Parameter	Units	92112772009 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	16.9	16.7	1	

QUALIFIERS

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
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(828)254-7176

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Dew WBS#35609.1.1
Pace Project No.: 92112768

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92112768001	**DW-1**	EPA 3546	OEXT/16538	EPA 8015 Modified	GCSV/11447
92112768002	**DW-2**	EPA 3546	OEXT/16538	EPA 8015 Modified	GCSV/11447
92112768003	**DW-3**	EPA 3546	OEXT/16538	EPA 8015 Modified	GCSV/11447
92112768004	**DW-4**	EPA 3546	OEXT/16538	EPA 8015 Modified	GCSV/11447
92112768005	**DW-5**	EPA 3546	OEXT/16538	EPA 8015 Modified	GCSV/11447
92112768006	**DW-6**	EPA 3546	OEXT/16538	EPA 8015 Modified	GCSV/11447
92112768001	**DW-1**	EPA 5035A/5030B	GCV/5775	EPA 8015 Modified	GCV/5776
92112768002	**DW-2**	EPA 5035A/5030B	GCV/5777	EPA 8015 Modified	GCV/5778
92112768003	**DW-3**	EPA 5035A/5030B	GCV/5777	EPA 8015 Modified	GCV/5778
92112768004	**DW-4**	EPA 5035A/5030B	GCV/5777	EPA 8015 Modified	GCV/5778
92112768005	**DW-5**	EPA 5035A/5030B	GCV/5777	EPA 8015 Modified	GCV/5778
92112768006	**DW-6**	EPA 5035A/5030B	GCV/5777	EPA 8015 Modified	GCV/5778
92112768001	**DW-1**	ASTM D2974-87	PMST/4517		
92112768002	**DW-2**	ASTM D2974-87	PMST/4517		
92112768003	**DW-3**	ASTM D2974-87	PMST/4517		
92112768004	**DW-4**	ASTM D2974-87	PMST/4517		
92112768005	**DW-5**	ASTM D2974-87	PMST/4517		
92112768006	**DW-6**	ASTM D2974-87	PMST/4518		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1551766

Section A — **Required** Client Information:

Company:	AECOM
Address:	701 Corporate Center Dr. Raleigh, NC 27607
Email To:	MIKE.BRANSON@AECOM.com
Phone:	919 8546238
Fax:	919 8546259
Requested Due Date/TAT:	2 week

Section B — **Required** Project Information:

Report To:	MIKE BRANSON
Copy To:	NCDOT
Purchase Order No.:	WBS 35609.1.1
Project Name:	DEQ
Project Number:	60241470

Section C — Invoice Information:

Attention:	
Company Name:	NCDOT
Address:	
Pace Quote Reference:	BLANKET PO
Pace Project Manager:	
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NC

Section D — **Required** Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes — MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COLLECTED: COMPOSITE START TIME	COLLECTED: COMPOSITE END/GRAB DATE	COLLECTED: COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Preservatives: NaOH	Preservatives: $Na_2S_2O_3$	Preservatives: Methanol	Preservatives: Other	Analysis Test Y/N: DRO	Analysis Test Y/N: GRO	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	DW-1	SL		2/20/12	1080				4	2						2		✓	✓		92112768-001
2	DW-2	SL		2/21/12	1030				4	2						2		✓	✓		-002
3	DW-3	SL		2/21/12	1045				4	2						2		✓	✓		-003
4	DW-4	SL		2/21/12	1100				4	2						2		✓	✓		-004
5	DW-5	SL		2/21/12	1130				4	2						2		✓	✓		-005
6	DW-6	SL		2/21/12	1145				4	2						2		✓	✓		-006
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	M Branson / AECOM	2/23/12	1100		2.23.12	1100				
		2.23.12	1150		2/23/12	11:55	3.2	X	~	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: M Branson

SIGNATURE of SAMPLER: M Branson — DATE Signed (MM/DD/YY):

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical www.pacelabs.com	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: October 19, 2011 Page 1 of 2
	Document No.: F-ASV-CS-003-rev.07	Issuing Authorities: Pace Asheville Quality Office

Client Name: AEcom Project # 92127668

Where Received: ☐ Huntersville ☑ Asheville ☐ Eden

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other ____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other ____

Circle Thermometer Used: IR Gun#2 -80344039 **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

IR Gun Back Up- 111565135

Temp Correction Factor: Add / (Subtract) 0.2 C

Corrected Cooler Temp.: 3.2 C **Biological Tissue is Frozen:** Yes No N/A

Date and Initials of person examining contents: LA 2/23/12

Temp should be above freezing to 6°C **Comments:**

Chain of Custody Present:	☑Yes	☐No	☐N/A
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A
Rush Turn Around Time Requested:	☑Yes	☐No	☐N/A
Sufficient Volume:	☑Yes	☐No	☐N/A
Correct Containers Used:	☑Yes	☐No	☐N/A
-Pace Containers Used:	☑Yes	☐No	☐N/A
Containers Intact:	☑Yes	☐No	☐N/A
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A
Sample Labels match COC:	☑Yes	☐No	☐N/A
-Includes date/time/ID/Analysis Matrix: SL			
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No	
Samples checked for dechlorination:	☐Yes	☐No	☑N/A
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A
Trip Blank Present:	☐Yes	☐No	☑N/A
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A
Pace Trip Blank Lot # (if purchased):			

1.	
2.	
3.	
4.	
5.	
6.	
7.	2 week
8.	
9.	
10.	
11.	
12.	
13.	
LA Initial when completed	
14.	
15.	
16.	

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: LP Date: 2/24/12 **SRF Review:** LP Date: 2/24/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)