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September 14, 2010

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

Reference: Preliminary Site Assessment
McCauley and McDonald, Inc., Property
300 Murchison Road
Spring Lake, Cumberland County, North Carolina
NCDOT Tip No. U-4444B
WBS Element 36492.1.2
AECOM Project No. 60158550

Dear Mr. Caldwell:

AECOM Technical Services of North Carolina, Inc., (AECOM) has completed the Preliminary Site Assessment conducted at the above-referenced property. The work was performed in accordance with the Technical and Cost proposal dated July 6, 2010, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated July 7, 2010. Activities associated with the assessment consisted of conducting a geophysical investigation, collecting soil samples for laboratory analysis, and reviewing applicable North Carolina Department of Environment and Natural Resources (NCDENR) records. The purpose of this report is to document the field activities, present the laboratory analyses, and provide recommendations regarding the property.

Location and Description

The McCauley and McDonald, Inc., Property is located at 300 Murchison Road in Spring Lake, Cumberland County, North Carolina. The property is situated on the west side of Murchison Road at the intersection of Murchison Road and Bragg Boulevard (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 (Pantry 3029 DBA Quick Stop) where three 10,000-gallon gasoline underground storage tanks (USTs) are present. The structures on the site consist of a block building with an asphalt parking lot and a pump island canopy in front. The USTs are located on the north side of the pump islands (Figure 2). The NCDOT has advised that the proposed right-of-way/easement will affect the entire property (Figure 2). Because of the presence of potential contamination, 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 proposed right-of-way with respect to the presence of known and unknown USTs and assess

where contamination may exist on the right-of-way. If present, an estimate of the quantity of impacted soil was to be provided.

AECOM reviewed the on-line NCDENR Incident Management database and Groundwater Incident Numbers 29026 and 29436 have been assigned to the property. According to the database, Incident Number 29026 was assigned in 2000 and the available information states "LSA submitted subsequent to property transfer. Minor GW impact less than 10x 2L reported. Incident is low risk." The database also indicates that Incident Number 29436 was assigned in 2007 resulting when a "release [was] discovered subsequent to failed line test. Soil Contamination beneath the dispenser." No further information was available in the database for either incident.

AECOM also examined the UST registration database to obtain UST ownership information. Three USTs are operated on the site under Facility ID 0-011303. The operator and owner of the tanks are listed as follows:

Owner
The Pantry, Inc.
PO Box 1410/1801 Douglas Drive
Sanford, NC 27330-1410
(919) 474-6700

Operator
Pantry 3029 DBA Quick Stop
300 Murchison Road
Spring Lake, NC 28390
(919) 436-4132

Geophysical Survey

Prior to AECOM's mobilization to the site, Pyramid Environmental conducted a geophysical survey as part of this project to evaluate if unknown 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 Murchison Road and the Y-axis oriented approximately perpendicular to Murchison Road. The grid was located to cover the accessible portions of the proposed right-of-way. The survey lines were spaced 5 feet apart. Magnetic data was collected continuously along each survey line with a data logger. After collection, the data was reviewed in the field with graphical computer software. Following the electromagnetic survey, a ground penetrating radar (GPR) survey was conducted where needed to further evaluate any significant metallic anomalies.

Access was available to all areas of the property and several anomalies were detected with the geophysical survey. With the exception of the known USTs and pump islands, all of these anomalies were attributed to buried utility lines or conduits, or vehicles. The survey concluded that no metallic USTs, other than the known tanks, were present on the property. A detailed report of findings and interpretations is presented in Attachment A.

Site Assessment Activities

On August 9, 2010, AECOM mobilized to the site to conduct a Geoprobe® direct push investigation to evaluate soil conditions within the proposed right-of-way/easement. Continuous sampling using direct push technology (Regional Probing of Wake Forest, North Carolina) resulted in generally good recovery of soil samples from the direct-push holes. Soil samples were collected and contained in acetate sleeves inside the direct push sampler. Each of these sleeves was divided into 2-foot long sections for soil sample screening. Each 2-foot interval was placed in a resealable plastic bag and the bag was set aside for a sufficient amount of time to allow volatilization of organic compounds from the soil to the bag headspace. The probe of a flame ionization detector/photo ionization detector (FID/PID) was inserted into the bag and the reading was recorded. After terminating the sample hole, the soil sample from the depth interval with the highest FID/PID reading was submitted for analysis to SGS North America in Wilmington, North Carolina, using standard chain-of-custody procedures. The laboratory analyzed the soil samples for total petroleum hydrocarbons (TPH) in the diesel range organics (DRO) and gasoline range organics (GRO).

Ten direct-push holes (MM-1 through MM-10) were advanced within the property to a depth of 10 to 15 feet as shown in Figure 2 and Attachment B. Borings MM-1 through MM-3 were located to evaluate the existing UST area on the property. Borings MM-4 through MM-7 were placed to assess conditions at the existing pump island area and borings MM-8 through MM-10 were located to evaluate the horizontal extent of potential contamination (Attachment C). The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 2 to 3 inches of asphalt/gravel or topsoil. Below the surface to a depth of 15 feet was a medium to dark brown silty, medium-grained sand. No bedrock was encountered in any of the borings. The "Geologic Map of North Carolina" dated 1985 indicates that the site is underlain by the Middendorf and Cape Fear Formations, each of which consists predominantly of sand and mudstone. The soil observed at the site is consistent with this parent rock. With the exception of boring MM-10, all the borings were terminated at a depth of 15 feet. Boring MM-10 was terminated at a depth of 10 feet. No groundwater was observed in any of the borings. Based on field screening, soil samples were submitted for laboratory analyses, which are summarized in Table 1. Following completion, each boring was backfilled in accordance with 15A NCAC 2C.

Analytical Results

Based on the laboratory reports, summarized in Table 1 and presented in Attachment D, petroleum hydrocarbon compounds identified as DRO and/or GRO were detected in all ten of the soil samples collected from the site. Detected DRO concentrations ranged from 6.9 mg/kg to 236 mg/kg. Detected GRO concentrations ranged from 6.99 mg/kg to 2,100 mg/kg. 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 December 2008, does not allow for use of TPH analyses for confirmation of the extent of petroleum contamination or its cleanup. As a result, while TPH concentrations are no longer applicable in determining if soil contamination is present, this analysis is a legitimate screening tool. Based on the TPH action level for UST closures, the assumed action level for this report is 10 mg/kg. The DRO concentrations detected in samples MM-2, MM-4, MM-7, MM-8, and MM-10 and the GRO concentrations detected in samples MM-3, MM-7, and MM-8 were present at concentrations above the 10 mg/kg assumed action level.

Conclusions and Recommendations

A Preliminary Site Assessment was conducted to evaluate the McCauley and McDonald, Inc., Property located at 300 Murchison Road in Spring Lake, Cumberland County, North Carolina. A geophysical investigation was conducted to evaluate the site for unknown USTs. The investigation indicated that no metallic USTs, other than the registered USTs on-site, were present within the proposed right-of-way. Ten soil borings were advanced to evaluate the soil conditions throughout the property. The laboratory reports of the soil samples from these borings suggest that DRO and GRO concentrations were present above the assumed action level.

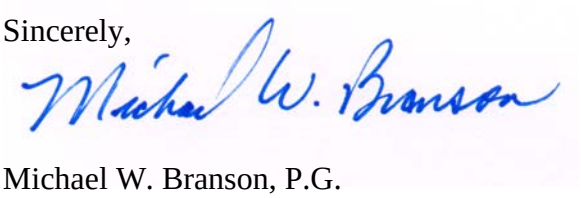
To evaluate the volume of soil requiring possible remediation, the soil samples with TPH concentrations above 10 mg/kg were considered. The analytical results of the soil samples suggest that the soil from borings MM-2 (11.8 mg/kg), MM-4 (18 mg/kg), MM-7 (236 mg/kg), MM-8 (27.9 mg/kg), and MM-10 (13.5 mg/kg) contained TPH concentrations identified as DRO above the assumed action level. The analytical results of the soil samples suggest that the soil from borings MM-3 (30.2 mg/kg), MM-7 (948 mg/kg), and MM-8 (2,100 mg/kg) contained TPH concentrations identified as GRO above the assumed action level. These borings represent two areas of contamination (Figure 3). A review of the field screening readings (Table 1) suggests that the average thickness of the potentially contaminated soil is about 6 feet in the larger area of contamination, and 2 feet at boring MM-10. After estimating the potential contamination geometry using field observations and experience with similar sites and geology, AECOM measured the affected section by using CADD software, which indicated an area of about 18, 575 ft^2 at the larger contamination area, and about 78 ft^2 at boring MM-10. Based on a 6-foot contamination thickness, the larger area calculates to a volume of 4,127 cubic yards. Based on a 2-foot thickness, the MM-10 area calculates to a volume of 6 cubic yards. The total volume calculated for the property is 4,133 cubic yards. This volume is estimated from TPH analytical data, which are no longer valid for remediation of sites reported after January 2, 2008. 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.

According to the NCDOT plan sheets, both potential contamination areas are within fill sections for road improvements. However, the potential contamination at borings MM-7 and MM-8 is at

a depth less than 10 feet and installation of drainage features or utilities may result in contact with potential contamination.

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 Fayetteville Regional Office UST Section. 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
MCCAULEY & MCDONALD INVESTMENTS PROPERTY
SPRING LAKE, CUMBERLAND COUNTY, NORTH CAROLINA
NCDOT PROJECT NO. U-4444B
WBS ELEMENT 36492.1.2
AECOM PROJECT NO. 60158550

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
MM-1	0 - 2	1.01			
	2 - 4	4.07			
	4 - 6	21			
	6 - 8	429	MM-1	DRO (6.99) GRO (BQL)	10 10
	8 - 10	NS			
	10 - 12	NS			
	12 - 14	37			
	14 - 15	105			
MM-2	0 - 2	104			
	2 - 4	4,684	MM-2	**DRO (11.8)** GRO (BQL)	10 10
	4 - 6	373			
	6 - 8	592			
	8 - 10	667			
	10 - 12	819			
	12 - 14	208			
	14 - 15	98			
MM-3	0 - 2	243			
	2 - 4	315,000	MM-3	DRO (BQL) **GRO (30.2)**	10 10
	4 - 6	9,815			
	6 - 8	1,802			
	8 - 10	212			
	10 - 12	281			
	12 - 14	NS			
	14 - 15	NS			
MM-4	0 - 2	26			
	2 - 4	236			
	4 - 6	547			
	6 - 8	553	MM-4	**DRO (18)** GRO (BQL)	10 10
	8 - 10	209			
	10 - 12	8.73			
	12 - 14	9.47			
	14 - 15	36			
MM-5	0 - 2	14.12			
	2 - 4	103			
	4 - 6	207			
	6 - 8	860	MM-5	DRO (8.39) GRO (6.99)	10 10
	8 - 10	28			
	10 - 12	77			
	12 - 14	86			
	14 - 15	32			
MM-6	0 - 2	106			
	2 - 4	315,000			
	4 - 6	315,000	MM-6	DRO (8.36) GRO (BQL)	10 10
	6 - 8	73,400			
	8 - 10	723			
	10 - 12	3,287			
	12 - 14	485			
	14 - 15	241			

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TABLE 1 (cont)

SOIL FIELD SCREENING AND ANALYTICAL RESULTS
MCCAULEY & MCDONALD INVESTMENTS PROPERTY
SPRING LAKE, CUMBERLAND COUNTY, NORTH CAROLINA
NCDOT PROJECT NO. U-4444B
WBS ELEMENT 36492.1.2
AECOM PROJECT NO. 60158550

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
MM-7	0 - 2	289			
	2 - 4	315,000	MM-7	**DRO (236)** **GRO (948)**	10 10
	4 - 6	11,500			
	6 - 8	16,600			
	8 - 10	928			
	10 - 12	14,200			
	12 - 14	210			
	14 - 15	238			
MM-8	0 - 2	41			
	2 - 4	76			
	4 - 6	2,615			
	6 - 8	315,000	MM-8	**DRO (27.9)** **GRO (2,100)**	10 10
	8 - 10	49			
	10 - 12	52			
	12 - 14	33			
	14 - 15	125			
MM-9	0 - 2	62			
	2 - 4	386			
	4 - 6	98			
	6 - 8	958	MM-9	DRO (6.9) GRO (6.9)	10 10
	8 - 10	224			
	10 - 12	216			
	12 - 14	529			
	14 - 15	521			
MM-10	0 - 2	0.01			
	2 - 4	204	MM-10	**DRO (13.5)** GRO (BQL)	10 10
	4 - 6	130			
	6 - 8	7.38			
	8 - 10	23			

Soil samples were collected on August 9, 2010.
NS - Not sampled.
DRO - Diesel range organics.
GRO - Gasoline range organics.
BQL - Below quantitation limit.
ppm - parts per million.
mg/kg - milligrams per kilogram.
BOLD values are present above the assumed action level.

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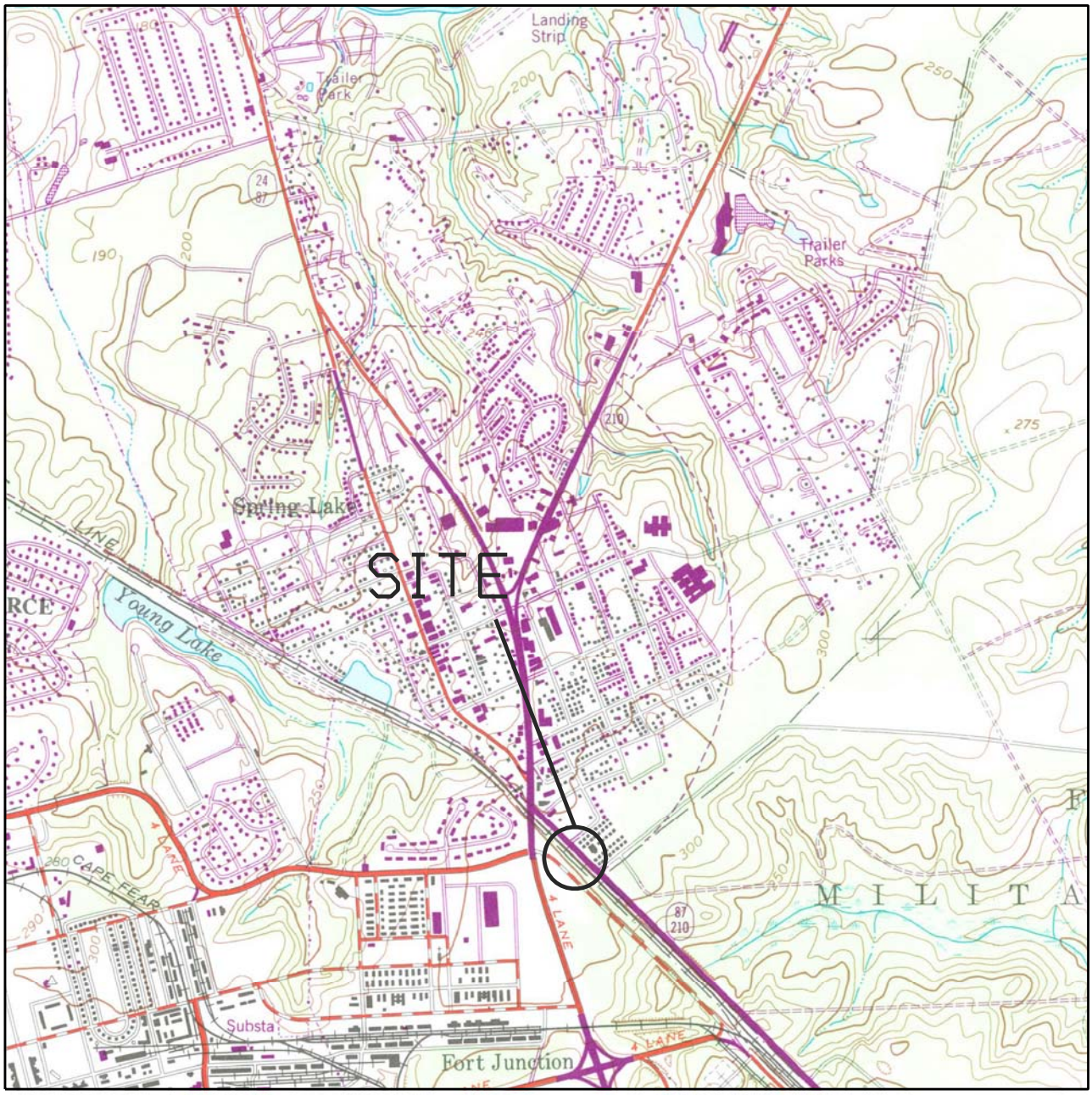
FIGURES



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: MANCHESTER, NC (REV 1987)

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FIGURE 1
VICINITY MAP
MCCAULEY & MCDONALD INVESTMENTS PROPERTY
SPRING LAKE, CUMBERLAND COUNTY NORTH CAROLINA

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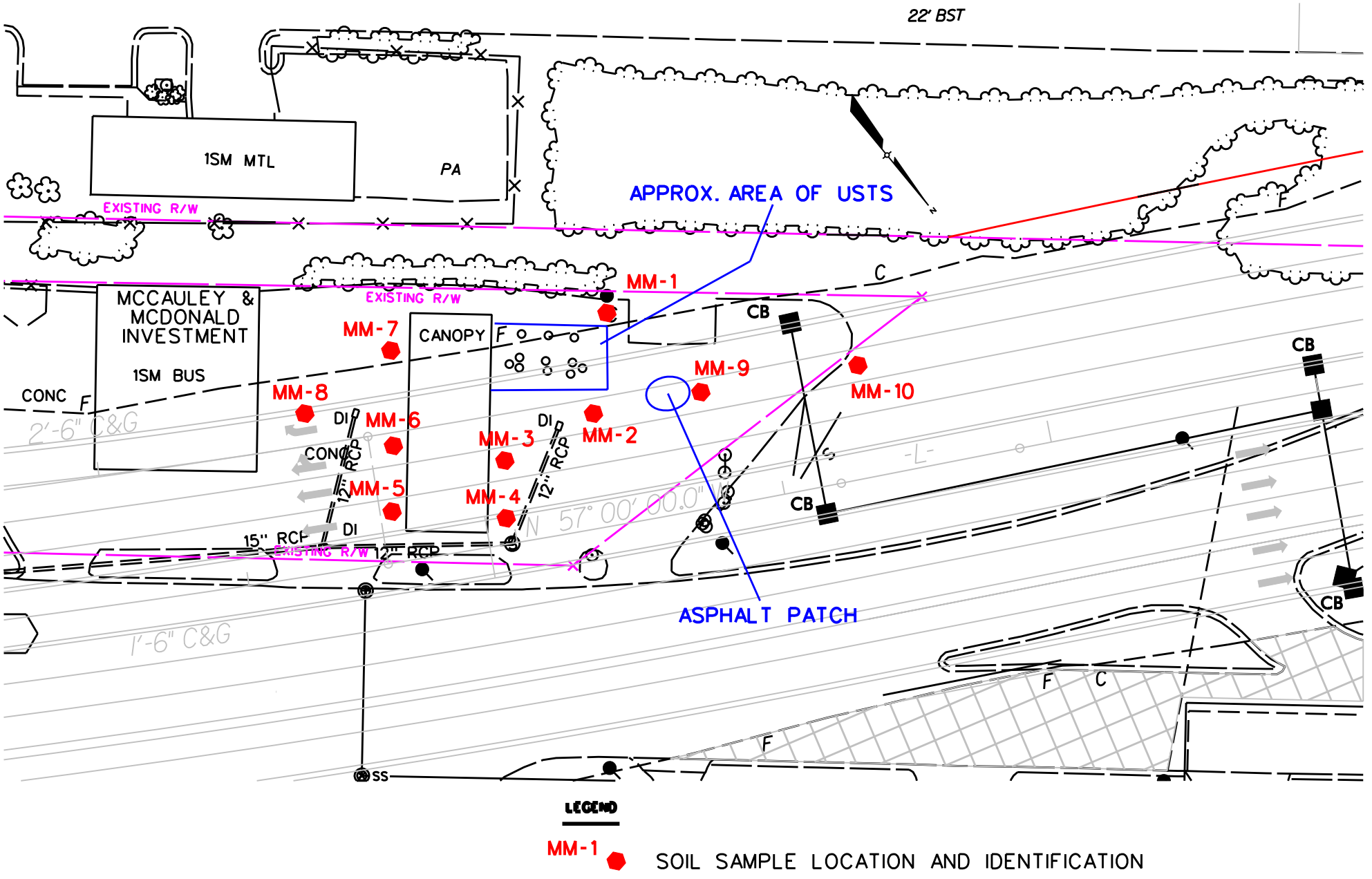

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FIGURE 2
SITE MAP
MCCAULEY & MCDONALD INVESTMENTS PROPERTY
SPRING LAKE, CUMBERLAND COUNTY, NORTH CAROLINA

AUGUST 2010 60158550

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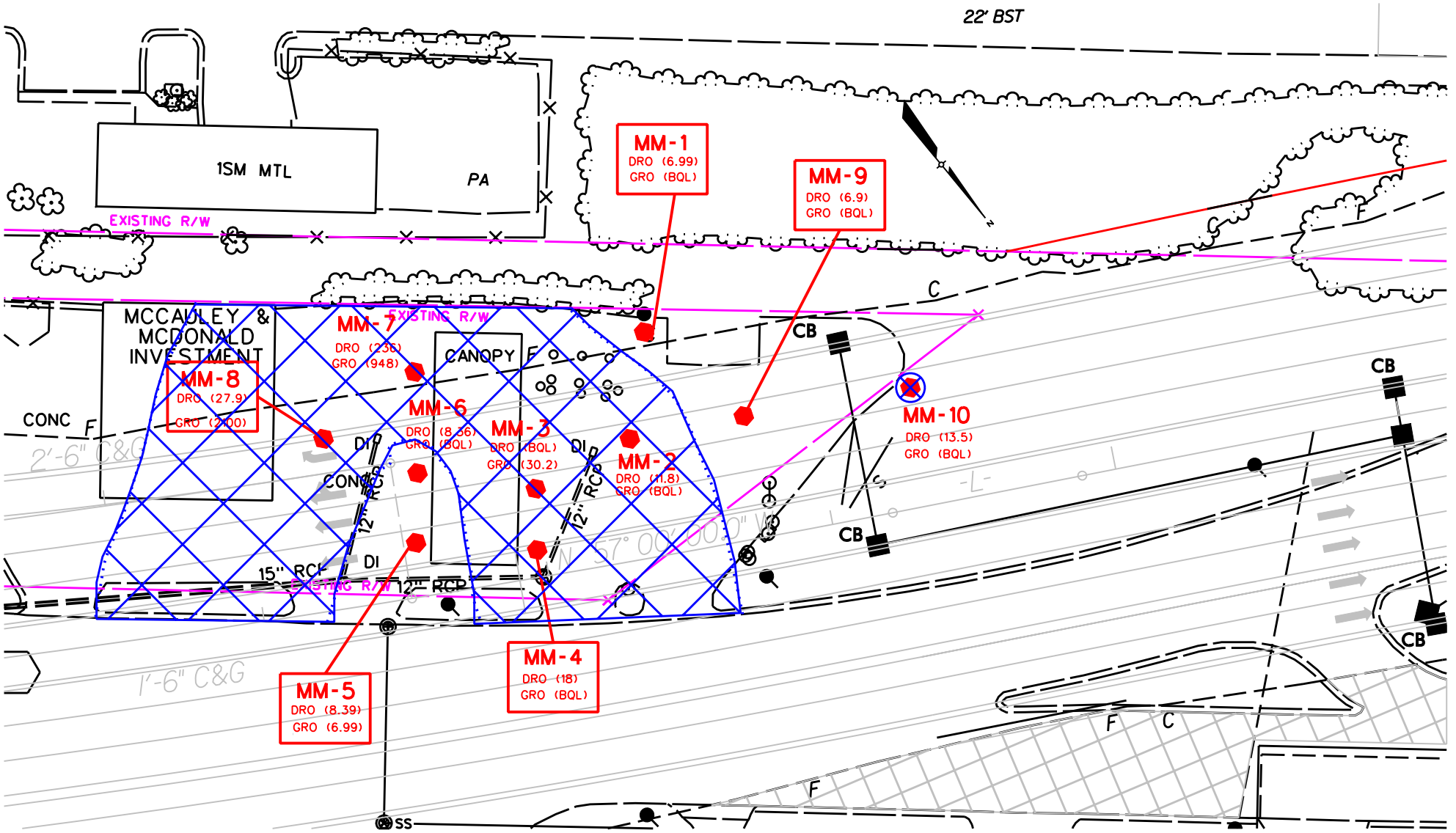

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FIGURE 3

SOIL ANALYTICAL RESULTS MAP

MCCAULEY & MCDONALD INVESTMENTS PROPERTY

SPRING LAKE, CUMBERLAND COUNTY, NORTH CAROLINA

AUGUST 2010

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ATTACHMENT A

Pyramid Project # 2010176

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

McCAULEY & McDONALD INVESTMENT PROPERTY
Murchison Road
Spring Lake, North Carolina

August 25, 2010

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

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

Reviewed by: _____
Douglas Canavello, P.G.

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
P.O. Box 16265
GREENSBORO, NC 27416-0265
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AECOM Environment
GEOPHYSICAL INVESTIGATION REPORT
McCAULEY & McDONALD INVESTMENT PROPERTY
Spring Lake, North Carolina

TABLE OF CONTENTS PAGE

FIGURES

1.0 INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for AECOM Environmental across the McCauley & McDonald Investment property located along the southwest side of Murchison Road, approximately 0.25 miles southeast of Butner Road in Spring Lake, North Carolina. Conducted on July 26 and August 4, 2010, the geophysical investigation was performed as part of the North Carolina Department of Transportation (NCDOT) preliminary site assessment project to determine if unknown, metallic underground storage tanks (USTs) were present beneath the proposed Right-of-Way (ROW) area of the site.

The McCauley & McDonald Investment property consists of an active Kangaroo Express gas station and store facility and the geophysical survey area covered the entire property which had a maximum length and width of 590 feet and 130 feet, respectively. Grass covers the northwestern half of the site and concrete pavement covers much of the pump island and store areas located in the southeastern half of the survey 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 prior to conducting the investigation. Photographs of the geophysical equipment used in this investigation and a portion of the McCauley & McDonald Investment property 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 (property) using measuring tapes, pin flags and water-based marking paint. These grid marks were used as X-Y coordinates for location control when collecting the geophysical data and establishing base maps for the geophysical results.

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection surveys and ground penetrating radar (GPR) surveys. The EM survey was performed on July 26, 2010 using a Geonics EM61-MK1 metal detection instrument. According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. Smaller objects (1-foot or less in size) can be detected to a maximum depth of 4 to 5 feet. All of the EM61 data were digitally collected at approximately 0.8 foot intervals along northerly-southerly, or easterly-westerly, parallel survey lines spaced five feet apart. All of the data were downloaded to a computer and reviewed in the field and office using the Geonics DAT61W and Surfer for Windows Version 7.0 software programs.

GPR surveys were conducted on August 4, 2010 across selected EM61 differential anomalies and areas containing steel reinforced concrete using a GSSI SIR-2000 unit equipped with a 400 MHz antenna. Data were digitally collected in a continuous mode along X-axis and/or Y-axis survey lines, spaced 2.5 to 5.0 feet apart using a vertical scan of 512 samples, at a rate of 48 scans per second. A 70 MHz high pass filter and an 800 MHz low pass filter were used during data acquisition with the 400 MHz antenna. GPR data were collected down to a maximum depth of approximately 5 feet, based on an estimated two-way travel time of 8 nanoseconds per foot. All of the GPR data were downloaded to a field computer and reviewed in the field and office using Radprint software.

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 drum and UST-size objects and ignore the smaller insignificant metal objects.

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

3.0 DISCUSSION OF RESULTS

The linear EM61 bottom coil anomalies intersecting grid coordinates X=400 Y=120, X=480 Y=65, and X=490 Y=135 are probably in response to buried utility lines or conduits. Similarly, GPR data suggest the linear EM61 bottom coil anomalies intersecting grid coordinates X=80 Y=45, X=460 Y=110 and X=470 Y=50 are probably in response to utility lines or conduits. GPR data suggest the large EM61 anomalies centered near grid coordinates X=430 Y=90 are in response to steel reinforced concrete, the three pump islands and/or buried conduits/lines.

The EM61 anomalies centered near grid coordinates X=310 Y=50 and X=350 Y=50 are in response to parked vehicles. GPR data collected around and in between the parked vehicles did not detect unknown buried USTs. However the areas directly beneath the vehicles could not be investigated.

GPR data collected across the active UST pad centered near grid coordinates X=395 Y=60 confirmed the presence of three metallic USTs buried 2.5 to 2.75 feet below the reinforced concrete pavement. The axes of the USTs are oriented in a northeasterly-southwesterly direction and the perimeter of the USTs, based on the GPR data, was marked in the field using orange marking paint. The image of GPR survey line Y=63 which crosses the three active USTs and a photograph showing the location of the UST pad are presented in **Figure 4**.

The remaining EM61 anomalies shown in Figures 2 and 3 are probably in response to known surface objects, structures or equipment. Excluding the known and active three metallic USTs centered near grid coordinates X=395 Y=60, the geophysical investigation suggests the surveyed portion of the McCauley & McDonald Investment property does not contain unknown, metallic USTs.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected across the McCauley & McDonald Investment property located along Murchison Road in Spring Lake, North Carolina, provides the following summary and conclusions:

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

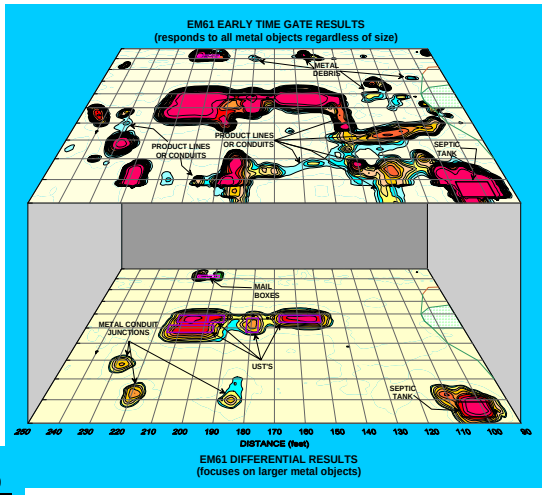
- The linear EM61 bottom coil anomalies intersecting grid coordinates X=400 Y=120, X=480 Y=65, and X=490 Y=135 are probably in response to buried utility lines or conduits. Similarly, GPR data suggest the linear EM61 bottom coil anomalies intersecting grid coordinates X=80 Y=45, X=460 Y=110 and X=470 Y=50 are probably in response to utility lines or conduits.

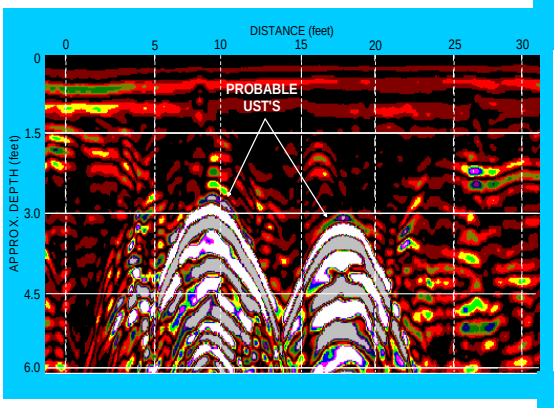
- GPR data collected across the active UST pad centered near grid coordinates X=395 Y=60 confirmed the presence of three metallic USTs buried 2.5 to 2.75 feet below the reinforced concrete pavement. The axes of the USTs are oriented in a northeasterly-southwesterly direction.

- Excluding the known and active three metallic USTs centered near grid coordinates X=395 Y=60, the geophysical investigation suggests the surveyed portion of the McCauley & McDonald Investment property does not contain unknown, 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 three active (known) USTs, the EM61 and GPR results obtained for this project have not conclusively determined that the site does not contain unknown, buried metallic USTs, but that none were detected.





FIGURES

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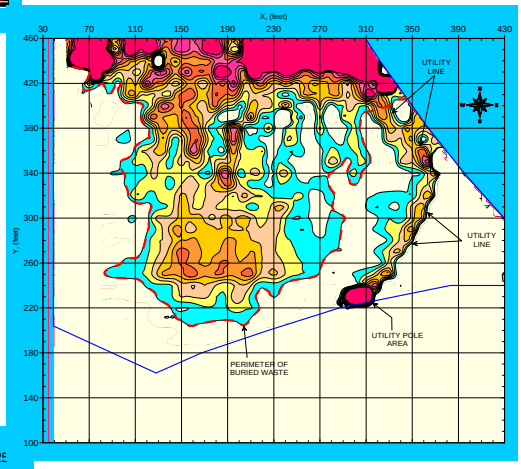
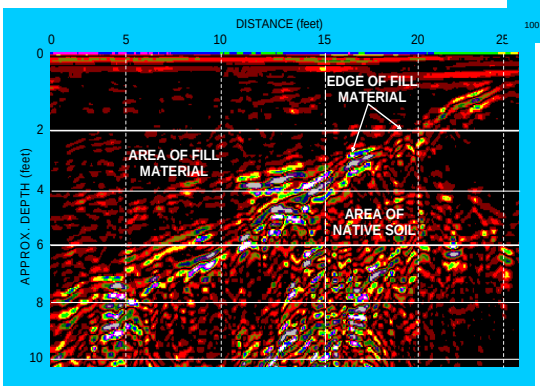
Figures shown on this page are for esthetic purposes only and are not related to the geophysical results discussed in this report.





The photograph shows the Geonics EM61 metal detector that was used to conduct the metal detection survey across the McCauley & McDonald Investment site on July 26, 2010.

The photographs show the SIR-2000 GPR system equipped with a 400 MHz antenna that were used to conduct the ground penetrating radar investigation at the McCauley & McDonald Investment site on August 4, 2010.

The photograph shows the McCauley & McDonald Investment property located along the southerly side of Murchinson Road in Spring Lake, North Carolina. The photograph is viewed in a southeasterly direction.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

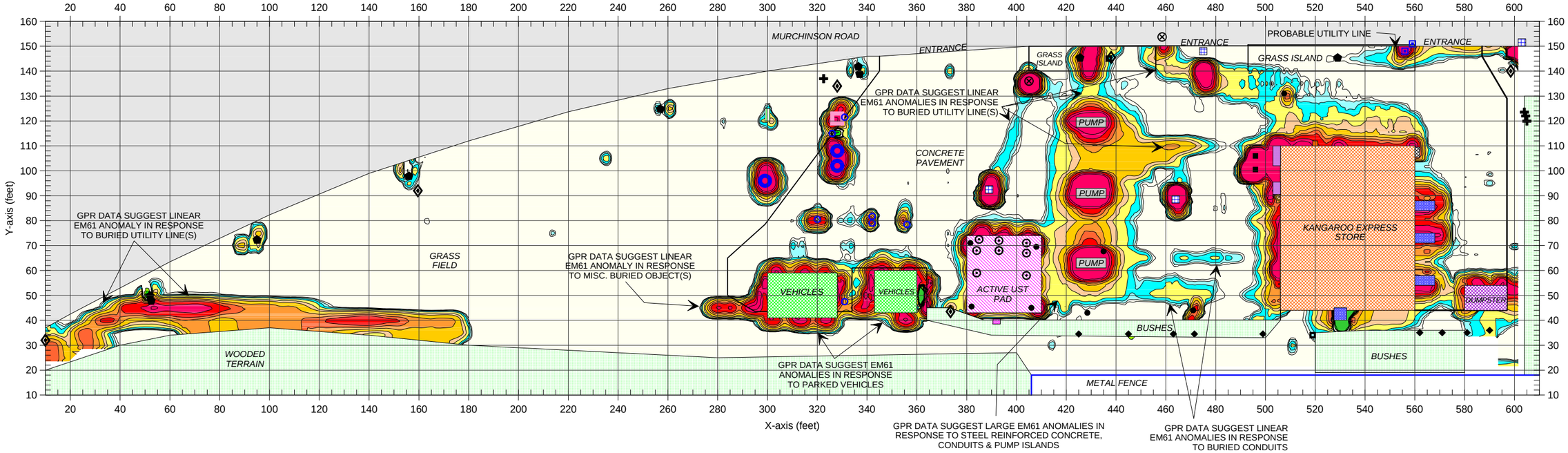
CLIENT	AECOM ENVIRONMENT	DATE	08/23/10	DRWN	MJD
SITE	McCAULEY & McDONALD INVESTMENT PROPERTY	LAY		CHKD	
CITY	SPRING LAKE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	JNO	2010-176	FIGURE	

GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS

FIGURE 1

EM61 METAL DETECTION (BOTTOM COIL RESULTS)

FIGURE 2



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING OR STRUCTURE
- BOLLARD
- METAL SIGN FRAME
- CONCRETE CURBING
- DUMPSTER
- METAL FENCE LINE
- GUY WIRE
- 2-FOOT METAL COVERS
- MANHOLE COVER
- ELECTRICAL OUTLET
- ROAD SIGN
- MONITORING WELL
- WATER METER COVER
- UTILITY LINE BOX
- UST VALVE COVER
- TELEPHONE
- METAL SIGN POLE
- STORM SEWER GRATE
- UTILITY OR LAMP POLE
- UST VENT PIPES
- AIR CONDITIONING UNIT
- AIR/VAC UNIT
- ELECTRICAL BOX
- METAL FENCE POST

APPROXIMATE NORTH

EM61 BOTTOM COIL RESPONSE (MILLIVOLTS): 1000, 750, 500, 400, 300, 200, 150, 100, 75, 60, 50, -90, -100, -200, -400, -5000

The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on July 26, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on August 4, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

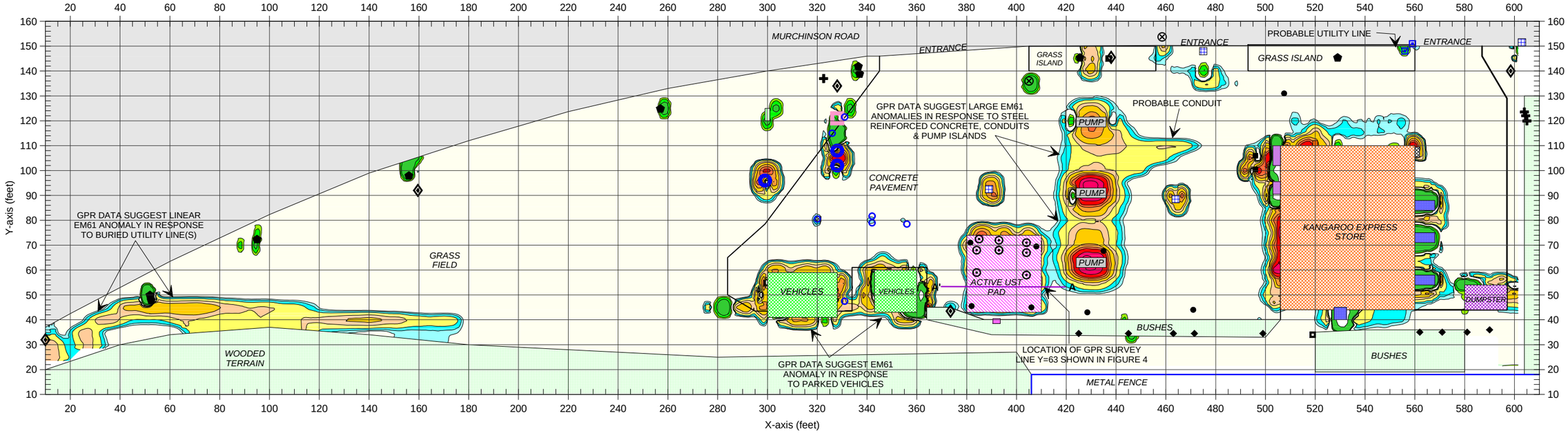
Excluding the three active (known) USTs centered near grid coordinates X=395 Y=60, the geophysical investigation suggests the surveyed portion of the site does not contain unknown, metallic USTs.

GRAPHIC SCALE IN FEET

DRWN	CHKD		FIGURE
MJD			
DATE	LAY	DWG	J.NO.
08/23/10			2010-176

CLIENT: AECOM ENVIRONMENT
SITE: McCAULEY & McDONALD INVESTMENT PROPERTY
CITY: SPRING LAKE
STATE: NORTH CAROLINA
TITLE: GEOPHYSICAL RESULTS

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING OR STRUCTURE
- BOLLARD
- METAL SIGN FRAME
- CONCRETE CURBING
- DUMPSTER
- METAL FENCE LINE
- GUY WIRE
- 2-FOOT METAL COVERS
- MANHOLE COVER
- ELECTRICAL OUTLET
- ROAD SIGN
- MONITORING WELL
- WATER METER COVER
- UTILITY LINE BOX
- UST VALVE COVER
- TELEPHONE
- METAL SIGN POLE
- STORM SEWER GRATE
- UTILITY OR LAMP POLE
- UST VENT PIPES
- AIR CONDITIONING UNIT
- AIR/VAC UNIT
- ELECTRICAL BOX
- METAL FENCE POST

APPROXIMATE NORTH

EM61 DIFFERENTIAL RESPONSE (MILLIVOLTS)

1000 750 500 400 300 200 150 100 75 60 50 -90 -100 -200 -400 -5000

Note: The contour plot shows the differential response between the bottom and top coils of the EM61 instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 data were collected on July 26, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on August 4, 2010 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

Excluding the three active (known) USTs centered near grid coordinates X=395 Y=60, the geophysical investigation suggests the surveyed portion of the site does not contain unknown, metallic USTs.

EM61 METAL DETECTION (DIFFERENTIAL RESULTS)

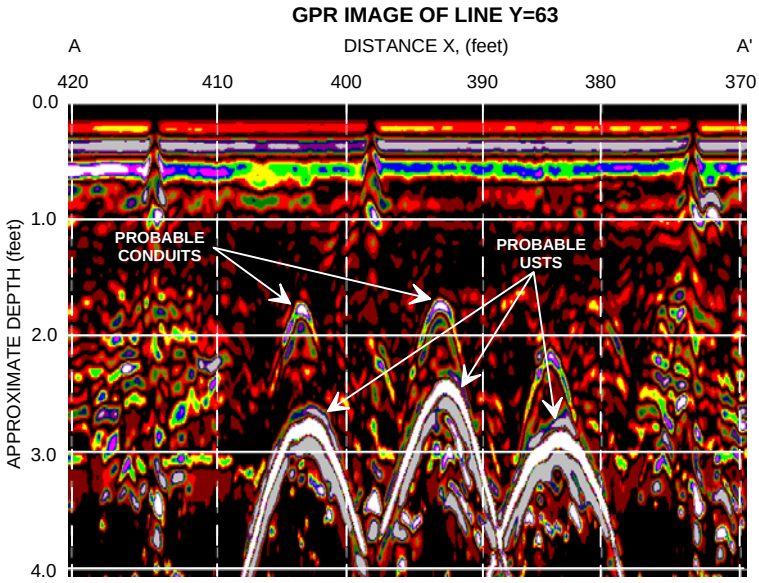
FIGURE 3

GRAPHIC SCALE IN FEET

DRWN	MJD		FIGURE
CHK'D			
DATE	08/23/10		J.-NO. 2010-176
LAY			
DWG			

CLIENT: AECOM ENVIRONMENT
SITE: McCAULEY & McDONALD INVESTMENT PROPERTY
CITY: SPRING LAKE
STATE: NORTH CAROLINA
TITLE: GEOPHYSICAL RESULTS

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.



The GPR image obtained along a portion of survey line Y=63 recorded three high amplitude anomalies that are probably in response to the three active, metallic USTs buried approx. 2.5 feet to 2.75 feet below the concrete surface. The solid purple line labeled AA' in the photograph below and in Figure 3 shows the location of the GPR image.

The orange rectangle in the photograph represents the approximate perimeter of the three active metallic USTs, as suggested by the GPR data, centered near grid coordinates X=395 Y=60. The solid purple line in the photograph represents the approximate location of the GPR image shown above. The photograph is viewed in a southwesterly direction.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	AECOM ENVIRONMENT		DATE	08/23/10	DRWN MJD
SITE	McCAULEY & McDONALD INVESTMENT PROPERTY		LAY		CHKD
CITY	SPRING LAKE	STATE NORTH CAROLINA	DWG		
TITLE	GEOPHYSICAL RESULTS		J.NO.	2010-176	FIGURE

GPR IMAGE ACROSS ACTIVE USTS

FIGURE 4

ATTACHMENT B

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-1
PAGE 1
ELEVATION
DATE 8/9/2010
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			1.01		4" CONCRETE, MEDIUM TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, NO ODOR.
			4.07		AS ABOVE, DRY, NO ODOR.
			21		AS ABOVE, DRY, NO ODOR.
5.0					
			429		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			NS		NO RECOVERY
10.0			NS		NO RECOVERY
			37		AS ABOVE, DRY, NO ODOR.
			105		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED
20.0					

AECOM

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-2
PAGE 1
ELEVATION
DATE 8/9/2010
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			104		4" CONCRETE, MEDIUM TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, NO ODOR.
			4684		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			373		AS ABOVE, DRY, NO ODOR.
5.0					
			592		AS ABOVE, DRY, NO ODOR.
			667		AS ABOVE, DRY, NO ODOR.
10.0					
			819		AS ABOVE, DRY, NO ODOR.
			208		AS ABOVE, DRY, STRONG ODOR.
			98		AS ABOVE, DRY, NO ODOR.
15.0					
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED
20.0					

AECOM

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-3
PAGE 1
ELEVATION
DATE 8/9/2010
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			243		4" CONCRETE, MEDIUM TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, SLIGHT ODOR.
			315,000		AS ABOVE, DRY, STRONG ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			9815		AS ABOVE, DRY, SLIGHT ODOR.
5.0					
			1802		AS ABOVE, DRY, SLIGHT ODOR.
			212		AS ABOVE, DRY, SLIGHT ODOR.
10.0			281		AS ABOVE, DRY, SLIGHT ODOR.
			NS		NO RECOVERY
			NS		NO RCOVERY
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED
20.0					

AECOM

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-4
PAGE 1
ELEVATION
DATE 8/9/2010
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			26		4" CONCRETE, MEDIUM TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, NO ODOR.
			236		AS ABOVE, DRY, SLIGHT ODOR.
			547		AS ABOVE, DRY, SLIGHT ODOR.
5.0					
			553		AS ABOVE, DRY, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			209		AS ABOVE, DRY, SLIGHT ODOR.
10.0			8.73		AS ABOVE, DRY, NO ODOR.
			9.47		AS ABOVE, DRY, NO ODOR.
			36		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED
20.0					

AECOM

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-5
PAGE 1
ELEVATION
DATE 8/9/2010
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			14.12		4" CONCRETE, MEDIUM TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, NO ODOR.
			103		AS ABOVE, DRY, NO ODOR.
			207		AS ABOVE, DRY, NO ODOR.
5.0					
			860		AS ABOVE, DRY, SLIGHT ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			28		AS ABOVE, DRY, NO ODOR.
10.0			77		AS ABOVE, DRY, NO ODOR.
			86		AS ABOVE, DRY, NO ODOR.
			32		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED
20.0					

AECOM

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-6
PAGE 1
ELEVATION
DATE 8/9/2010
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			106		4" CONCRETE, MEDIUM TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, SLIGHT ODOR.
			315,000		AS ABOVE, DRY, STRONG ODOR.
			315,000		AS ABOVE, DRY, STRONG ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
5.0					
			73,400		AS ABOVE, DRY, STRONG ODOR.
			723		AS ABOVE, DRY, STRONG ODOR.
10.0			3,287		AS ABOVE, DRY, MODERATE ODOR.
			485		AS ABOVE, DRY, MODERATE ODOR.
			241		AS ABOVE, DRY, STRONG ODOR.
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED
20.0					

AECOM

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-7
PAGE 1
ELEVATION
DATE 8/9/2010
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			289		4" CONCRETE, MEDIUM TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, SLIGHT ODOR.
			315,000		AS ABOVE, DRY, STRONG ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			11,500		AS ABOVE, DRY, STRONG ODOR.
5.0					
			16,600		AS ABOVE, DRY, STRONG ODOR.
			928		AS ABOVE, DRY, STRONG ODOR.
10.0					
			14,200		AS ABOVE, DRY, STRONG ODOR.
			210		AS ABOVE, DRY, SLIGHT ODOR.
			238		AS ABOVE, DRY, SLIGHT ODOR.
15.0					
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED
20.0					

AECOM

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-8
PAGE 1
ELEVATION
DATE 8/9/2010
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			41		4" CONCRETE, MEDIUM TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, SLIGHT ODOR.
			76		AS ABOVE, DRY, SLIGHT ODOR.
			2,615		AS ABOVE, DRY, MODERATE ODOR.
5.0					
			315,000		AS ABOVE, DRY, MODERATE ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			49		AS ABOVE, DRY, MODERATE ODOR.
10.0			52		AS ABOVE, DRY, MODERATE ODOR.
			33		AS ABOVE, DRY, NO ODOR.
			125		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED
20.0					

AECOM

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-9
PAGE 1
ELEVATION
DATE 8/9/2010
DRILLER OPPER
PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			62		4" CONCRETE, MEDIUM TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, NO ODOR.
			386		AS ABOVE, DRY, NO ODOR.
			98		AS ABOVE, DRY, NO ODOR.
5.0					
			958		AS ABOVE, DRY, MODERATE ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			224		AS ABOVE, DRY, SLIGHT ODOR.
10.0			216		AS ABOVE, DRY, SLIGHT ODOR.
			529		AS ABOVE, DRY, SLIGHT ODOR.
			521		AS ABOVE, DRY, SLIGHT ODOR.
15.0					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED
20.0					

AECOM

TEST BORING REPORT

PROJECT MCCAULEY & MCDONALD INVESTMENTS PROPERTY
CLIENT NCDOT
PROJECT NUMBER 60158550 (WBS 36492.1.2)
CONTRACTOR REGIONAL PROBING
EQUIPMENT GEOPROBE

BORING NUMBER MM-10
PAGE 1
ELEVATION
DATE 8/9/2010
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 TO DARK BROWN SILTY SAND, MEDIUM-GRAINED, DRY, NO ODOR.
			204		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			130		AS ABOVE, DRY, NO ODOR.
5.0					
			7.38		AS ABOVE, DRY, NO ODOR.
			23		AS ABOVE, DRY, NO ODOR.
10.0					BORING TERMINATED AT 10 FEET. NO GROUNDWATER ENCOUNTERED
15.0					
20.0					

AECOM

ATTACHMENT C

PHOTO 1 - BORING IN PROPOSED R/W LOOKING SOUTHEAST

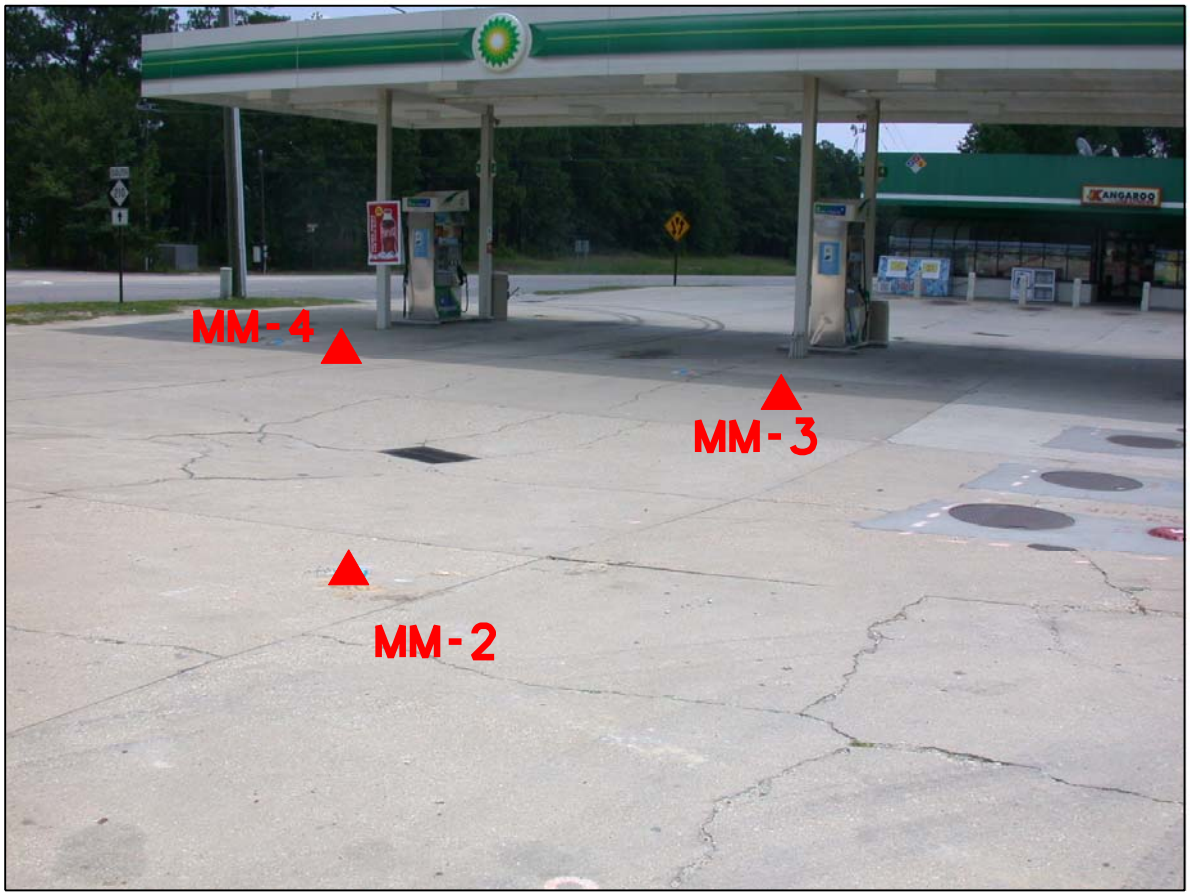


PHOTO 2 - BORINGS IN PROPOSED R/W LOOKING SOUTHEAST

PHOTO 3 - BORING WITHIN PROPOSED R/W LOOKING SOUTHEAST

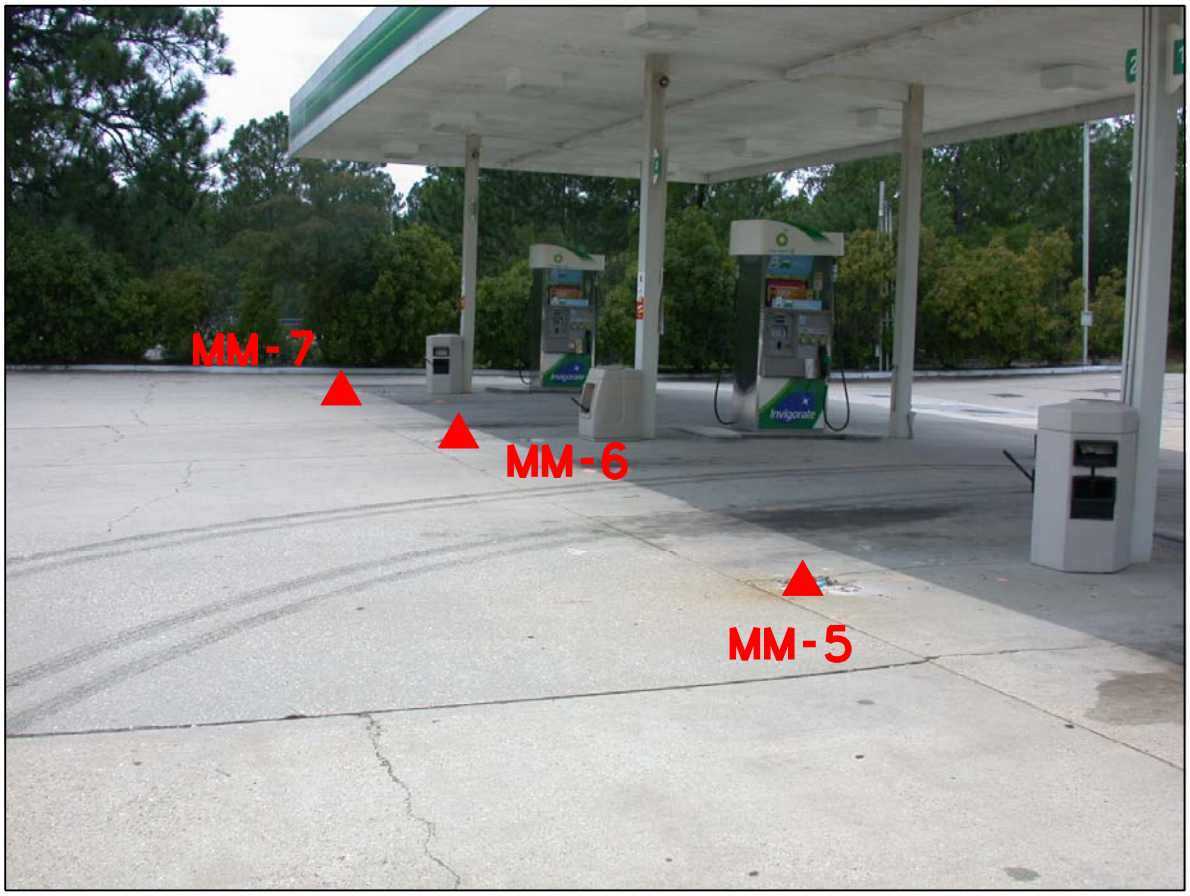


PHOTO 4 - BORINGS WITHIN PROPOSED R/W LOOKING SOUTHWEST

PHOTO 5 - BORING WITHIN PROPOSED R/W LOOKING SOUTH

PHOTO 6 - BORING WITHIN PROPOSED R/W LOOKING SOUTH

PHOTO 7 - BORING WITHIN PROPOSED R/W LOOKING EAST

ATTACHMENT D

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

Report Number: G1037-91

Client Project: NCDOT

Dear Mike Branson,

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

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

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

Sincerely,
SGS North America, Inc.

Barbara Hager Aug 18.2010
Project Manager Date
Barbara Hager

List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

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

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

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

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

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

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

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

% Rec = Percent Recovery

% soilds = Percent Solids

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

MI34.021808.4

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

Client Sample ID: MM-1
Client Project ID: NCDOT
Lab Sample ID: G1037-91-1A
Lab Project ID: G1037-91
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 8/9/2010 9:00
Date Received: 8/11/2010
Matrix: Soil
Solids 91.22

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.24	mg/Kg	1	08/16/10 19:02

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	94.5	94.5		70-130

Comments:

Batch Information

Analytical Batch: VP081610
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 6.28 g
Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By: GRO.XLS

Results for Total Petroleum Hydrocarbons

by **GC/FID 8015**

Client Sample ID: MM-2
Client Project ID: NCDOT
Lab Sample ID: G1037-91-2A
Lab Project ID: G1037-91
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 8/9/2010 9:30
Date Received: 8/11/2010
Matrix: Soil
Solids 89.75

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.34	mg/Kg	1	08/16/10 19:29

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	95.0	95.0		70-130

Comments:

Batch Information

Analytical Batch: VP081610
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

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

Analyst: _____

NC Certification #481

Reviewed By: _____
GRO.XLS

Results for Total Petroleum Hydrocarbons

by **GC/FID 8015**

Client Sample ID:	MM-3	Analyzed By:	LMC
Client Project ID:	NCDOT	Date Collected:	8/9/2010 10:00
Lab Sample ID:	G1037-91-3A	Date Received:	8/11/2010
Lab Project ID:	G1037-91	Matrix:	Soil
Report Basis:	Dry Weight	Solids	90.87

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	**30.2**	5.30	mg/Kg	1	08/16/10 19:56

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	95.4	95.4		70-130

Comments:

Batch Information

Analytical Batch:	VP081610	Prep Method:	5035
Analytical Method:	8015	Initial Wt/Vol:	6.23 g
Instrument ID:	GC4	Final Volume:	5 mL
Analyst:	LMC		

Analyst: LMC

NC Certification #481

Reviewed By: GRO.XLS

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

Client Sample ID:	MM-4	Analyzed By:	LMC
Client Project ID:	NCDOT	Date Collected:	8/9/2010 10:20
Lab Sample ID:	G1037-91-4A	Date Received:	8/11/2010
Lab Project ID:	G1037-91	Matrix:	Soil
Report Basis:	Dry Weight	Solids	89.19

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	4.60	mg/Kg	1	08/16/10 20:23

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	95.6	95.6		70-130

Comments:

Batch Information

Analytical Batch:	VP081610	Prep Method:	5035
Analytical Method:	8015	Initial Wt/Vol:	7.32 g
Instrument ID:	GC4	Final Volume:	5 mL
Analyst:	LMC		

Analyst: _____ Reviewed By: _____

NC Certification #481

GRO.XLS

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

Client Sample ID:	MM-5	Analyzed By:	LMC
Client Project ID:	NCDOT	Date Collected:	8/9/2010 10:50
Lab Sample ID:	G1037-91-5A	Date Received:	8/11/2010
Lab Project ID:	G1037-91	Matrix:	Soil
Report Basis:	Dry Weight	Solids	91.87

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	**6.99**	4.77	mg/Kg	1	08/16/10 20:50

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	97.2	97.2		70-130

Comments:

Batch Information

Analytical Batch:	VP081610	Prep Method:	5035
Analytical Method:	8015	Initial Wt/Vol:	6.84 g
Instrument ID:	GC4	Final Volume:	5 mL
Analyst:	LMC		

Analyst: _____

NC Certification #481

Reviewed By: _____
GRO.XLS

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

Client Sample ID: MM-6
Client Project ID: NCDOT
Lab Sample ID: G1037-91-6A
Lab Project ID: G1037-91
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 8/9/2010 11:15
Date Received: 8/11/2010
Matrix: Soil
Solids 90.59

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	1030	mg/Kg	250	08/17/10 11:40

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	94.9	94.9		70-130

Comments:

Batch Information

Analytical Batch: VP081710
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 5.36 g
Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By: GRO.XLS

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

Client Sample ID: MM-7
Client Project ID: NCDOT
Lab Sample ID: G1037-91-7A
Lab Project ID: G1037-91
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 8/9/2010 11:45
Date Received: 8/11/2010
Matrix: Soil
Solids 92.81

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	**948**	185	mg/Kg	50	08/16/10 21:45

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	96.3	96.3		70-130

Comments:

Batch Information

Analytical Batch: VP081610
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 5.81 g
Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By:

GRO.XLS

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

Client Sample ID: MM-8
Client Project ID: NCDOT
Lab Sample ID: G1037-91-8A
Lab Project ID: G1037-91
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 8/9/2010 12:15
Date Received: 8/11/2010
Matrix: Soil
Solids 90.91

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	**2100**	360	mg/Kg	125	08/16/10 22:12

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	95.5	95.5		70-130

Comments:

Batch Information

Analytical Batch: VP081610
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 7.63 g
Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By: CBH

GRO.XLS

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

Client Sample ID: MM-9
Client Project ID: NCDOT
Lab Sample ID: G1037-91-9A
Lab Project ID: G1037-91
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 8/9/2010 12:40
Date Received: 8/11/2010
Matrix: Soil
Solids 90.73

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	4.47	mg/Kg	1	08/16/10 22:39

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	95.2	95.2		70-130

Comments:

Batch Information

Analytical Batch: VP081610
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 7.39 g
Final Volume: 5 mL

Analyst: _____

NC Certification #481

Reviewed By: _____
GRO.XLS

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

Client Sample ID: MM-10
Client Project ID: NCDOT
Lab Sample ID: G1037-91-10A
Lab Project ID: G1037-91
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 8/9/2010 13:00
Date Received: 8/11/2010
Matrix: Soil
Solids 91.81

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.36	mg/Kg	1	08/16/10 23:06

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	94.8	94.8		70-130

Comments:

Batch Information

Analytical Batch: VP081610
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 6.1 g
Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By: GRO.XLS

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

Client Sample ID: MM-1
Client Project ID: NCDOT
Lab Sample ID: G1037-91-1D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 9:00
Date Received: 8/11/2010
Matrix: Soil
Solids 91.22
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**6.99**	6.54	mg/Kg	1	08/16/10 19:55

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	29.6	74

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 33.5 G
Prep Final Vol: 10 mL

Analyst: _____

NC Certification #481

Reviewed By: _____

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

Client Sample ID: MM-2
Client Project ID: NCDOT
Lab Sample ID: G1037-91-2D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 9:30
Date Received: 8/11/2010
Matrix: Soil
Solids 89.75
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**11.8**	6.85	mg/Kg	1	08/16/10 20:23

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	27.7	69.4

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 32.51 G
Prep Final Vol: 10 mL

Analyst: FM

NC Certification #481

Reviewed By: NM

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

Client Sample ID: MM-3
Client Project ID: NCDOT
Lab Sample ID: G1037-91-3D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 10:00
Date Received: 8/11/2010
Matrix: Soil
Solids 90.87
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.60	mg/Kg	1	08/16/10 20:52

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	31.4	78.6

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 33.36 G
Prep Final Vol: 10 mL

Analyst: FM

NC Certification #481

Reviewed By: [signature]

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

Client Sample ID: MM-4
Client Project ID: NCDOT
Lab Sample ID: G1037-91-4D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 10:20
Date Received: 8/11/2010
Matrix: Soil
Solids 89.19
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**18.0**	6.90	mg/Kg	1	08/16/10 21:20

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	26.5	66.2

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 32.48 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: MM-5
Client Project ID: NCDOT
Lab Sample ID: G1037-91-5D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 10:50
Date Received: 8/11/2010
Matrix: Soil
Solids 91.87
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**8.39**	6.60	mg/Kg	1	08/16/10 21:48

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	31.6	79.1

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 32.98 G
Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

Reviewed By: _____

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

Client Sample ID: MM-6
Client Project ID: NCDOT
Lab Sample ID: G1037-91-6D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 11:15
Date Received: 8/11/2010
Matrix: Soil
Solids 90.59
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**8.36**	6.88	mg/Kg	1	08/16/10 22:16

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	28.8	72

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 32.07 G
Prep Final Vol: 10 mL

Analyst: FR

NC Certification #481

Reviewed By: DRO.XLS

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

Client Sample ID: MM-7
Client Project ID: NCDOT
Lab Sample ID: G1037-91-7D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 11:45
Date Received: 8/11/2010
Matrix: Soil
Solids 92.81
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**236**	6.64	mg/Kg	1	08/16/10 22:44

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	30	75.1

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 32.47 G
Prep Final Vol: 10 mL

Analyst: _____

NC Certification #481

Reviewed By: _____

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

Client Sample ID: MM-8
Client Project ID: NCDOT
Lab Sample ID: G1037-91-8D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 12:15
Date Received: 8/11/2010
Matrix: Soil
Solids 90.91
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**27.9**	6.40	mg/Kg	1	08/16/10 23:13

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	22.7	56.7

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 34.37 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: MM-9
Client Project ID: NCDOT
Lab Sample ID: G1037-91-9D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 12:40
Date Received: 8/11/2010
Matrix: Soil
Solids 90.73
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**6.90**	6.32	mg/Kg	1	08/16/10 23:42

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	29.5	73.7

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 34.9 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: MM-10
Client Project ID: NCDOT
Lab Sample ID: G1037-91-10D
Lab Project ID: G1037-91

Date Collected: 8/9/2010 13:00
Date Received: 8/11/2010
Matrix: Soil
Solids 91.81
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	**13.5**	6.72	mg/Kg	1	08/17/10 00:10

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	28.4	70.9

Comments:

Batch Information

Analytical Batch: EP081610
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17205
Prep Method: 3541
Prep Date: 08/13/10
Initial Prep Wt/Vol: 32.4 G
Prep Final Vol: 10 mL

Analyst: EX

NC Certification #481

Reviewed By: DRO.XLS

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(1)
CLIENT: AECOM
CONTACT: MIKE BRANSON PHONE NO: (919) 8546238
PROJECT: NCDOT SITE/PWSID#: McCauley / McDowell
REPORTS TO: ABOVE
FAX NO.: (919) 8546259
INVOICE TO: NCDOT QUOTE #:
P.O. NUMBER: WBS 36492.1.2

SGS Reference: G1037-91

PAGE 1 OF 1

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP, G=GRAB)	Preservatives Used: Meoh	—	Analysis Required (3): GRO	DRO	REMARKS
	MM-1	8/9/10	0900	SOIL	3	C			✓	✓	
	MM-2	8/9/10	0930	SOIL	3	C			✓	✓	
	MM-3	8/9/10	1000	SOIL	3	C			✓	✓	
	MM-4	8/9/10	1020	SOIL	3	C			✓	✓	
	MM-5	8/9/10	1050	SOIL	3	C			✓	✓	
	MM-6	8/9/10	1115	SOIL	3	C			✓	✓	
	MM-7	8/9/10	1145	SOIL	3	C			✓	✓	
	MM-8	8/9/10	1215	SOIL	3	C			✓	✓	
	MM-9	8/9/10	1240	SOIL	3	C			✓	✓	
	MM-10	8/9/10	1300	SOIL	3	C			✓	✓	

(5)

	Date	Time	Received By:
Collected/Relinquished By:(1) MM Branson	8/10/10	1730	
Relinquished By: (2)			
Relinquished By: (3)			
Relinquished By: (4)	8/11/10	1000	

(4)

Shipping Carrier: Fed Ex
Shipping Ticket No:
Samples Received Cold? (Circle) YES NO
Temperature °C: 5.9°C.
Special Deliverable Requirements:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Special Instructions:
Requested Turnaround Time: ☐ RUSH _____ Date Needed ☒ STD

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client