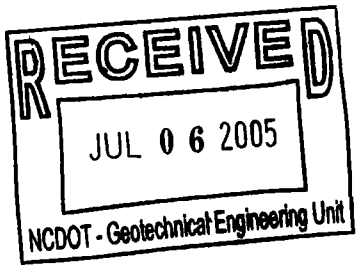
EarthTech
A tyco International Ltd. Company

701 Corporate Center Drive
Suite 475
Raleigh, NC 27607

P 919.854.6200
F 919.854.6259
earthtech.com

July 6, 2005



Mr. Greg Smith
North Carolina Department of Transportation
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment
Palmer Management LLC Property (Parcel #58)
800 South Main Street
King, Forsyth County, North Carolina
NCDOT Project R-2201
WBS Element 34380.1.1
Earth Tech Project No. 85238

Dear Mr. Smith:

Earth Tech of North Carolina, Inc., (Earth Tech) 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 April 7, 2005, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated April 12, 2005. 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 Palmer Management LLC Property (Parcel #58) is located at 800 South Main Street in King, North Carolina. The property is situated on the north side of South Main Street at the southwestern quadrant of the intersection of South Main Street and US Highway 52 (Figure 1). Based on information supplied by the NCDOT and the site visit, Earth Tech understands that the site is a combination active gas station/convenience store (KJS Express) and Bojangles restaurant where four underground storage tanks (USTs) are present. The USTs include one 15,000-gallon and one 10,000-gallon gasoline, one 8,000-gallon diesel fuel and one 4,000-gallon kerosene tank. The property consists of a single-story building with a canopied pump island on the southeast side of the building. The USTs are located on the south side of the pump islands (Figure 2). According to the store manager, the businesses at the site are abut 3.5 years old and the property was undeveloped farmland prior to building the gas station. Based on the NCDOT roadway

plans, part of the pump islands will be affected. Because of the presence of existing USTs, the NCDOT requested a Preliminary Site Assessment to evaluate the soils within the property.

Earth Tech reviewed the North Carolina Department of Environment and Natural Resources (NCDENR) Incident Management database, and no incident number was listed for this location. Earth Tech also reviewed the on-site UST permit and UST registration database to obtain UST ownership information. The USTs on the property are operated under Facility Number 0-036461. The operator and owner of the tanks are listed as follows:

Owner	Operator
Eden Oil Company	KJS Express
124 Fieldcrest Road	800 South Main Street
Eden, North Carolina 27288-3946	King, North Carolina 27021-9010
(336) 349-8228	(336) 983-0086

Geophysical Survey

Prior to Earth Tech's mobilization to the site, Pyramid Environmental conducted a geophysical survey to evaluate if additional USTs, other than the ones in use, were present on the property. 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 South Main Street and the Y-axis oriented approximately perpendicular to South Main Street. The grid was located to cover all accessible portions of the proposed right-of-way. The survey lines were spaced 1.5 meters (5 feet) apart. Magnetic data was collected continuously along each survey line with a data logger. After collection, the data was reviewed in the field with graphical computer software. Following the electromagnetic survey, a ground penetrating radar (GPR) survey was conducted to further evaluate any observed anomalies.

Several anomalies were detected in the geophysical survey. One anomaly was located on the north side of the property away from the known USTs. The anomaly was not detected by the EM61, but was detected during the GPR survey. The anomaly signature suggested a wide-diameter conduit or two small USTs buried lengthwise. Based on a depth of 2.28 meters (7.5 feet) and absence of a metallic response, the anomaly is likely not a UST. The remaining anomalies were generally attributed to buildings, known USTs, steel-reinforced concrete, pump islands, vehicles, and buried utility lines or conduits. The survey concluded that, with the exception of the known USTs, no metallic USTs were present on the property. A detailed report of findings and interpretations is presented in Attachment A.

Site Assessment Activities

On May 9, 2005, Earth Tech mobilized to the site to conduct a Geoprobe® direct push investigation to evaluate soil conditions within the proposed corridor. Continuous sampling using

direct push technology (Probe Technology of Concord, North Carolina) resulted in generally good recovery of soil samples from the direct-push holes. Soil samples were collected and contained in 1.2-meter (4-foot) long acetate sleeves inside the direct push sampler. Each of these sleeves was divided in half for soil sample screening. Each 0.6-meter (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 photo ionization detector (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 PID reading was submitted to Paradigm Analytical Laboratories, Inc., in Wilmington, North Carolina, using standard chain-of-custody procedures. The laboratory analyzed the soil samples for total petroleum hydrocarbons (TPH) using extraction methods 3550 (diesel fuel/fuel oil) and 5030 (gasoline).

Ten direct-push holes (58-1 through 58-10) were advanced within the proposed right-of-way at the site to a depth of 4.8 meters (16 feet) as shown in Figure 2 and Attachment B. The borings were located within the proposed right-of-way to evaluate the UST, dispenser island, and geophysical anomaly areas (Attachment C). Borings 57-1 and 57-2 were placed to provide an assessment of the known UST area. Borings 58-3 through 58-8 were located to evaluate soil conditions in front and to the north of the dispenser islands. Borings 58-9 and 58-10 were located to assess the area of the geophysical anomaly. The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 0.15 meters (6 inches) of asphalt and gravel, concrete, or topsoil. Below the surface treatment to a depth of about 1.8 to 2.4 meters (6 to 8 feet) was a medium to reddish brown sandy clay. Below this soil to a depth of 4.8 meters (16 feet) was a mottled medium brown, reddish brown, yellow, and black fine- to medium-grained sand to clay. No groundwater was encountered in any of the borings. Based on field screening, soil samples were submitted for laboratory analysis, which are summarized in Table 1.

Analytical Results

Based on the laboratory reports, summarized in Table 1 and presented in Attachment D, no petroleum hydrocarbon compounds were detected in any of the 10 soil samples collected from the site (Figure 3). 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 mg/kg for both gasoline and diesel fuel. However, that agency's "Guidelines for Assessment and Corrective Action," dated April 2001, does not allow for use of TPH analyses for confirmation of the extent of petroleum contamination or its cleanup. As a result, while TPH concentrations are no longer applicable in determining if soil contamination is present, this analysis is a legitimate screening tool. Based on the TPH action level for UST closures, the assumed action level for this report is 10 mg/kg. None of the soil samples collected from the site contained a TPH concentration above the 10 mg/kg assumed action level.

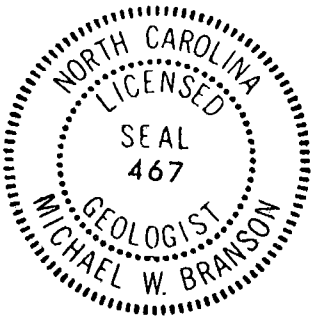
Conclusions and Recommendations

A Preliminary Site Assessment was conducted to evaluate the Palmer Management LLC Property (Parcel #58) located at 800 South Main Street in King, Forsyth County, North Carolina. Ten soil borings were advanced to evaluate the soil conditions on the property. The laboratory reports of the soil samples from these borings suggest that no TPH concentrations are present above the assumed action levels. No groundwater was encountered and, as such, no groundwater sample was collected for analysis.

Earth Tech appreciates the opportunity to work with the NCDOT on this project. Because no hydrocarbon concentrations were detected in the soil, no report must be made to the North Carolina Department of Environment and Natural Resources. 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

FIELD SCREENING AND ANALYTICAL RESULTS
PALMER MANAGEMENT PROPERTY (PARCEL #58)
KING, NORTH CAROLINA
NCDOT PROJECT NO. R-2201
WBS ELEMENT 34380.1.1
EARTH TECH PROJECT NO. 85328

LOCATION	DEPTH (m)	PID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
58-1	0 - 0.6	0			
	0.6 - 1.2	1.2	58-1-2-4	DRO (BQL) GRO (BQL)	10 10
	1.2 - 1.8	0.7			
	1.8 - 2.4	0.5			
	2.4 - 3.0	0			
	3.0 - 3.6	0.1			
	3.6 - 4.2	0			
	4.2 - 4.8	0.5			
58-2	0 - 0.6	0			
	0.6 - 1.2	0			
	1.2 - 1.8	0.7			
	1.8 - 2.4	1.8			
	2.4 - 3.0	2.5	58-2-8-10	DRO (BQL) GRO (BQL)	10 10
	3.0 - 3.6	2			
	3.6 - 4.2	2.4			
	4.2 - 4.8	1.7			
58-3	0 - 0.6	0.9			
	0.6 - 1.2	1.2			
	1.2 - 1.8	0.7			
	1.8 - 2.4	1.4			
	2.4 - 3.0	1.7	58-3-8-10	DRO (BQL) GRO (BQL)	10 10
	3.0 - 3.6	1.5			
	3.6 - 4.2	0.7			
	4.2 - 4.8	0.3			
58-4	0 - 0.6	0			
	0.6 - 1.2	0.4			
	1.2 - 1.8	0.8			
	1.8 - 2.4	0.6			
	2.4 - 3.0	1	58-4-8-10	DRO (BQL) GRO (BQL)	10 10
	3.0 - 3.6	0.5			
	3.6 - 4.2	0			
	4.2 - 4.8	0.3			
58-5	0 - 0.6	0.2			
	0.6 - 1.2	0.6			
	1.2 - 1.8	1			
	1.8 - 2.4	2			
	2.4 - 3.0	2.8	58-5-8-10	DRO (BQL) GRO (BQL)	10 10
	3.0 - 3.6	1.4			
	3.6 - 4.2	1.1			
	4.2 - 4.8	1.8			
58-6	0 - 0.6	0.7			
	0.6 - 1.2	1.8			
	1.2 - 1.8	1.5			
	1.8 - 2.4	2	58-6-6-8	DRO (BQL) GRO (BQL)	10 10
	2.4 - 3.0	1.8			
	3.0 - 3.6	1.5			
	3.6 - 4.2	1.4			
	4.2 - 4.8	1.2			

TABLE 1 (continued)

FIELD SCREENING AND ANALYTICAL RESULTS
PALMER MANAGEMENT PROPERTY (PARCEL #58)
KING, NORTH CAROLINA
NCDOT PROJECT NO. R-2201
WBS ELEMENT 34380.1.1
EARTH TECH PROJECT NO. 85328

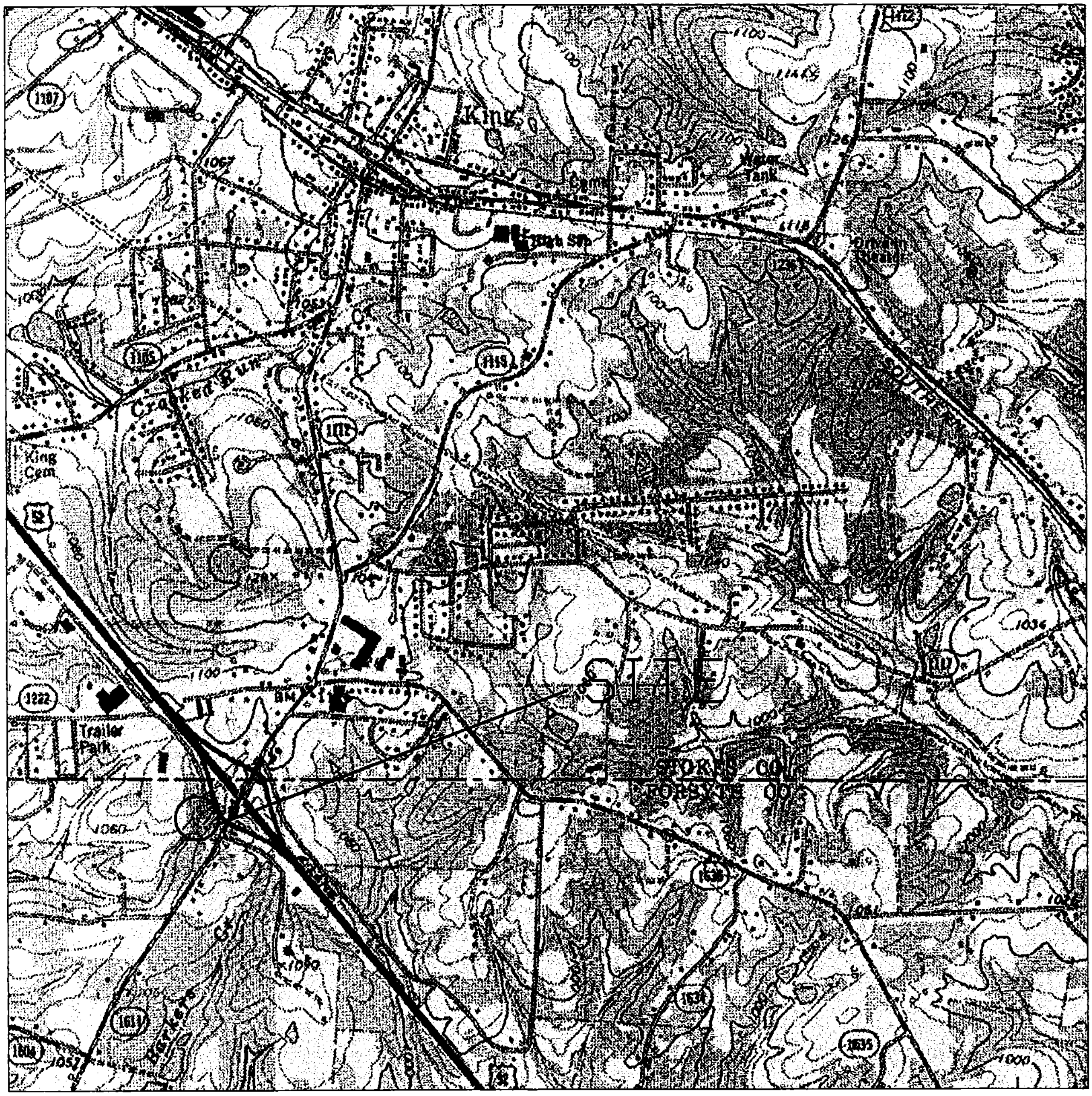
LOCATION	DEPTH (m)	PID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
58-7	0 - 0.6	0.1			
	0.6 - 1.2	0.4			
	1.2 - 1.8	0.8			
	1.8 - 2.4	0.5			
	2.4 - 3.0	1	58-7-8-10	DRO (BQL) GRO (BQL)	10 10
	3.0 - 3.6	0.5			
	3.6 - 4.2	0.5			
	4.2 - 4.8	0.7			
58-8	0 - 0.6	1.2			
	0.6 - 1.2	0.8			
	1.2 - 1.8	1			
	1.8 - 2.4	1			
	2.4 - 3.0	0.8			
	3.0 - 3.6	0.7			
	3.6 - 4.2	1.3	58-8-12-14	DRO (BQL) GRO (BQL)	10 10
	4.2 - 4.8	0.7			
58-9	0 - 0.6	0.8			
	0.6 - 1.2	0.9	58-9-2-4	DRO (BQL) GRO (BQL)	10 10
	1.2 - 1.8	0.7			
	1.8 - 2.4	0.6			
	2.4 - 3.0	0.5			
	3.0 - 3.6	0.6			
	3.6 - 4.2	0.6			
	4.2 - 4.8	0.6			
58-10	0 - 0.6	0.2			
	0.6 - 1.2	0.6			
	1.2 - 1.8	0.9			
	1.8 - 2.4	1.1	58-10-6-8	DRO (BQL) GRO (BQL)	10 10
	2.4 - 3.0	0.9			
	3.0 - 3.6	0.8			
	3.6 - 4.2	0.8			
	4.2 - 4.8	0.8			

DRO - Diesel range organics.
GRO - Gasoline range organics.

ppm - parts per million.
mg/kg - milligrams per kilogram.

FIGURES

N



SCALE 1:24,000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

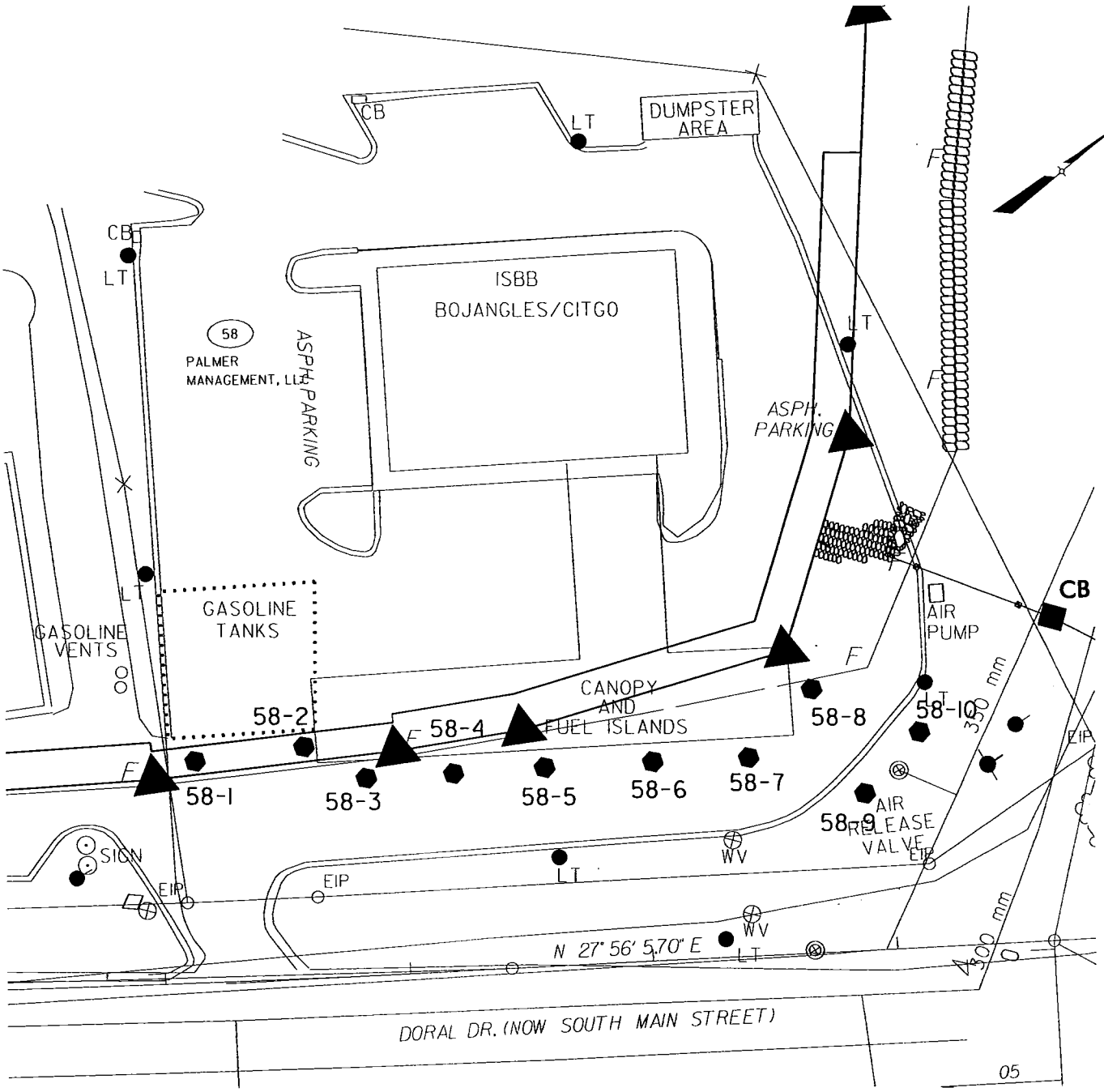
SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: KING, NC (REV 1983)

EARTH TECH

FIGURE 1
VICINITY MAP
PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
KING, NORTH CAROLINA

MAY 2005

85238



LEGEND

58-1 ● SOIL BORING LOCATION AND IDENTIFICATION

▯ UST LOCATION

0 10 20

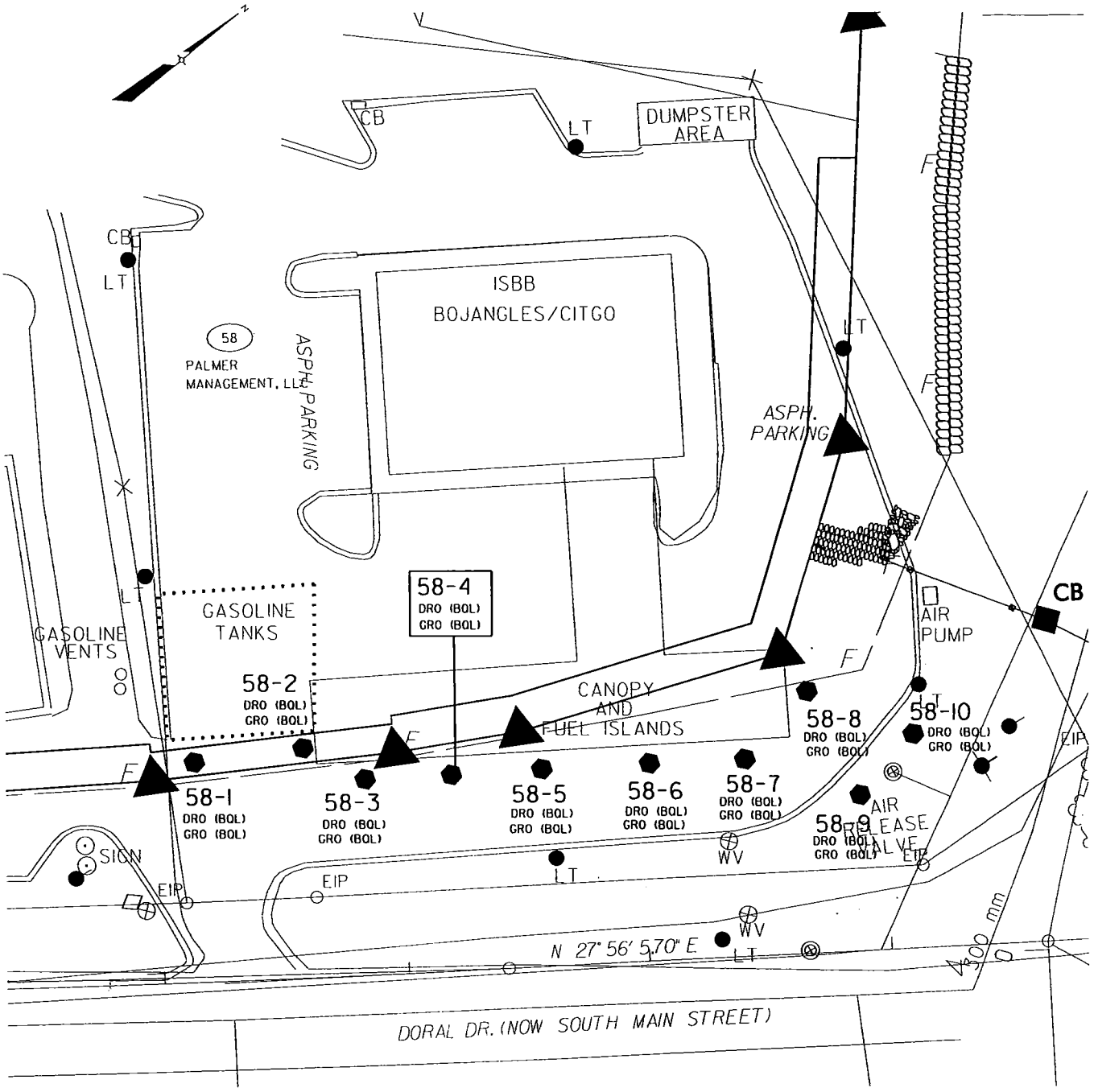
GRAPHIC SCALE (meters)

E A R T H T E C H

FIGURE 2
SITE MAP
PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
KING, NORTH CAROLINA

MAY 2005 85238

G:\85238\r2201\r2201_ps7.psh 07/06/2005 01:54:22 PM



LEGEND

⬢	SOIL SAMPLE LOCATION
DRO (123)	TPH AS DIESEL FUEL IN MG/KG
GRO (123)	TPH AS GASOLINE IN MG/KG
BQL	BELOW QUANTITATION LIMIT

0 10 20

GRAPHIC SCALE (meters)

EARTH TECH

FIGURE 3

ANALYTICAL RESULTS MAP

PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)

KING, NORTH CAROLINA

MAY 2005 85238

G:\85238\r2201\r2201_ps7.psh 07/06/2005 01:54:32 PM

ATTACHMENT A

Pyramid Project # 2005100

GEOPHYSICAL INVESTIGATION REPORT

EM-61 & GPR SURVEYS

King-Tobaccoville Road (Main Street) Sites

King, North Carolina

May 13, 2005

Report prepared for: **Mike Branson**
EarthTech, Inc.
701 Corporate Center Drive, Suite 475
Raleigh, North Carolina 27607

Prepared by: _____
Douglas Canavello, PG

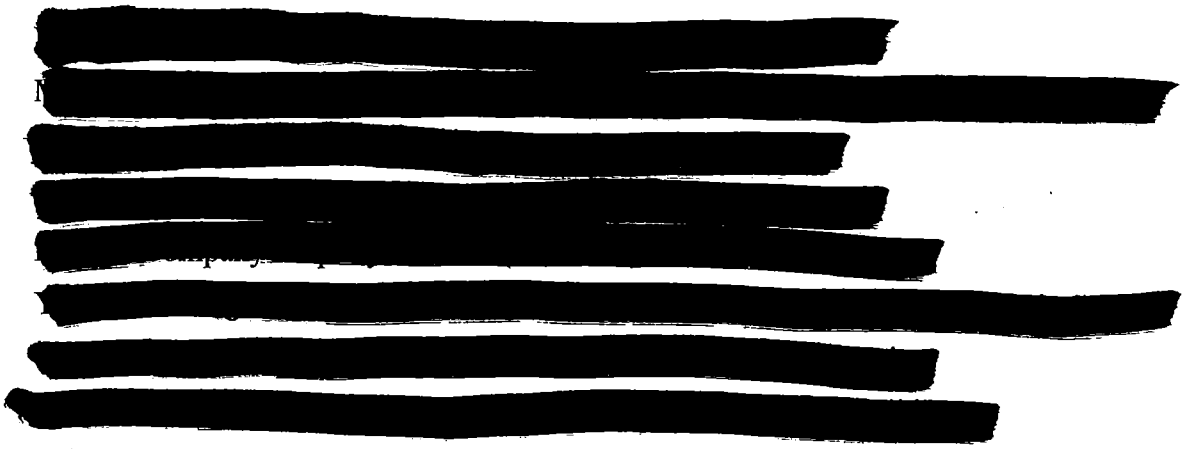
Reviewed by: _____
Jeremy DeVore

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
700 NORTH EUGENE ST.
GREENSBORO, NC 27401
(336) 335-3489

1.0 INTRODUCTION

Pyramid Environmental conducted geophysical investigations for Earth Tech of North Carolina, Inc. during the period of April 13 to May 2, 2005, within the proposed Right-of-Way (ROW) and easement areas at nine sites in King, North Carolina. The work was done as part of the North Carolina Department of Transportation (NCDOT) road widening project. The sites are located along the both sides of King-Tobaccoville Road (Main Street) from 0.25 miles west of US 52 to Meadowbrook Road. The geophysical surveys were conducted to determine if unknown metallic underground storage tanks (UST's) were present beneath the proposed ROW and easement areas of each site.

Earth Tech's representative Mr. Michael Branson, PG, provided maps that outlined the geophysical survey areas of each site and visited the sites with Pyramid Environmental's representative Mr. Douglas Canavello, PG during the week of March 28, 2005. Geophysical surveys were conducted at the following nine sites:



Palmer Management Property (Parcel 58) Citgo Station/Bojangles

2.0 FIELD METHODOLOGY

Prior to conducting the geophysical investigations, a 10-foot by 10-foot survey grid was established across the proposed ROW and easement areas of eight of the nine sites using water-based marking paint. The exception was the William Oil Property (Parcel 6) where the entire site was gridded and surveyed. These 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 investigations consisted of electromagnetic (EM) induction-metal detection surveys and ground penetrating radar (GPR) surveys. The EM surveys were performed using a Geonics EM61-MK1 metal detection instrument. According to the manufacture's specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. The EM61 data were digitally collected at each site along parallel northerly-southerly or easterly-westerly trending survey lines spaced five feet apart. The data were downloaded to a computer and reviewed in the office using the Geonics DAT61W and Surfer for Windows Version 7.0 software programs.

Contour plots of the EM61 bottom coil results and the EM61 differential results for each site are included in this report. The bottom coil results represent the most sensitive component of the EM61 instrument and detect metal objects regardless of size. The bottom coil response can be used to delineate metal conduits or utility lines, small, isolated metal objects, and areas containing insignificant metal debris.

The differential results are obtained from the difference between the top and bottom coils of the EM61 instrument. The differential results focus on the larger metal objects such as drums and UST's and ignore the smaller insignificant metal objects.

GPR surveys were conducted across selected EM61 differential anomalies, and steel-reinforced concrete using a GSSI SIR-2000 unit equipped with a 400 MHz antenna. Surveys were also performed across several areas where parked vehicles that obstructed the EM61 survey had since been removed. GPR data were digitally collected in a continuous mode along X and/or Y survey lines, spaced two to five feet apart using a vertical scan of 512 samples, at a rate of 24 scans per second. A 110 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 eight feet, based on an estimated two-way travel time of 6 nanoseconds per foot.

The GPR data were downloaded to a field computer and later reviewed in the office using Radprint software. Photos of the EM61 and GPR instruments are shown in Figure 1. The perimeters of possible UST's , based on the geophysical results, were marked and labeled in the field using orange, water-based marking paint.

During the weeks of April 25 and May 2 2005, preliminary contour plots of the EM61 bottom coil and the differential results were emailed to Mr. Branson.

3.0 DISCUSSION OF RESULTS

[redacted]

[redacted]

3.9 Palmer Management Property (Parcel 58)

The Palmer Management property is located immediately west of the US 52 South off-ramp and Main Street intersection. The property consists of a Citgo Station and Bojangles Restaurant and grass or concrete surfaces cover the proposed ROW and easement areas. A northerly dipping grassy slope lies in the northern portion of the property that contains sections of thick brush. Areas containing thick brush could not be investigated and were not included in the survey area. The area containing the active UST's is centered near grid coordinates X=7 Y=24, and lies just beyond the easement. A site map showing the locations of the EM61 and GPR survey lines is presented in Figure 26.

The EM61 bottom coil results and the differential results are presented in Figures 27 and 28, respectively. Many of the EM anomalies are probably in response to know cultural features such as signs, pump islands, manhole covers, utility poles, etc. The repeated pattern of EM anomalies

centered near grid coordinates X=61.5 Y=51, is probably in response to "stray voltage" that may be occurring from a nearby buried electrical line.

GPR surveys suggest the probable presence of a wide diameter (greater than 12 inches) conduit or possibly two UST's (aligned head to foot) centered near grid coordinates X=72 Y=24. The probable conduit or possible UST's appear to be buried approximately 2.28 meters below surface. Please note that the EM61 instrument did not detect this buried feature. Secondly, the axis of this buried object is orientated in the general direction of a storm sewer cistern located approximately 10 meters away. This orientation supports the theory that the object is a section of a sewer line. The image of GPR line Y=27.48 showing the anomaly in response to the probable conduit is presented in Figure 29.

Excluding the area containing the active UST's, the geophysical results did not detect any metallic UST's within the surveyed portions of the proposed ROW and easement areas at Parcel 58.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected across the proposed ROW and easement areas at the nine sites in King, North Carolina provides the following summary and conclusions:

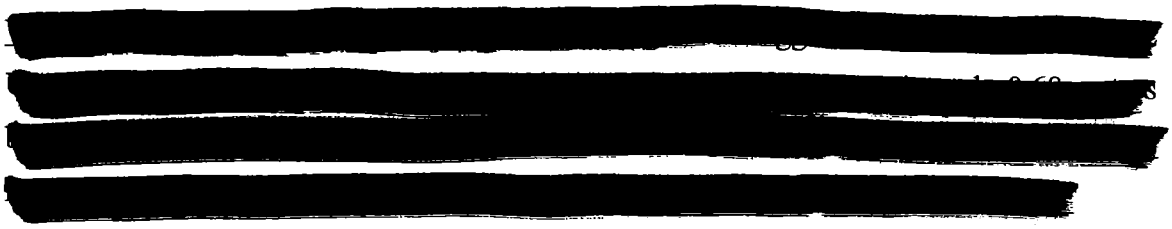
- The EM61 and GPR surveys provided reliable results for the detection of metallic UST's within the surveyed portions of the proposed ROW and easement areas of each site.

- GPR surveys were conducted across selected EM61 differential anomalies, areas containing steel reinforced concrete, and at several areas where parked vehicles had obstructed the EM61 surveys.

- Linear EM61 anomalies at the nine sites are probably in response to buried utility lines and/or conduits. The majority of non-linear anomalies are probably in response to known cultural features.

- Excluding the areas containing active and known UST's, the geophysical results did not detect the presence of unknown metallic UST's within the surveyed portions of the proposed ROW and easement areas at the following sites:

[redacted]

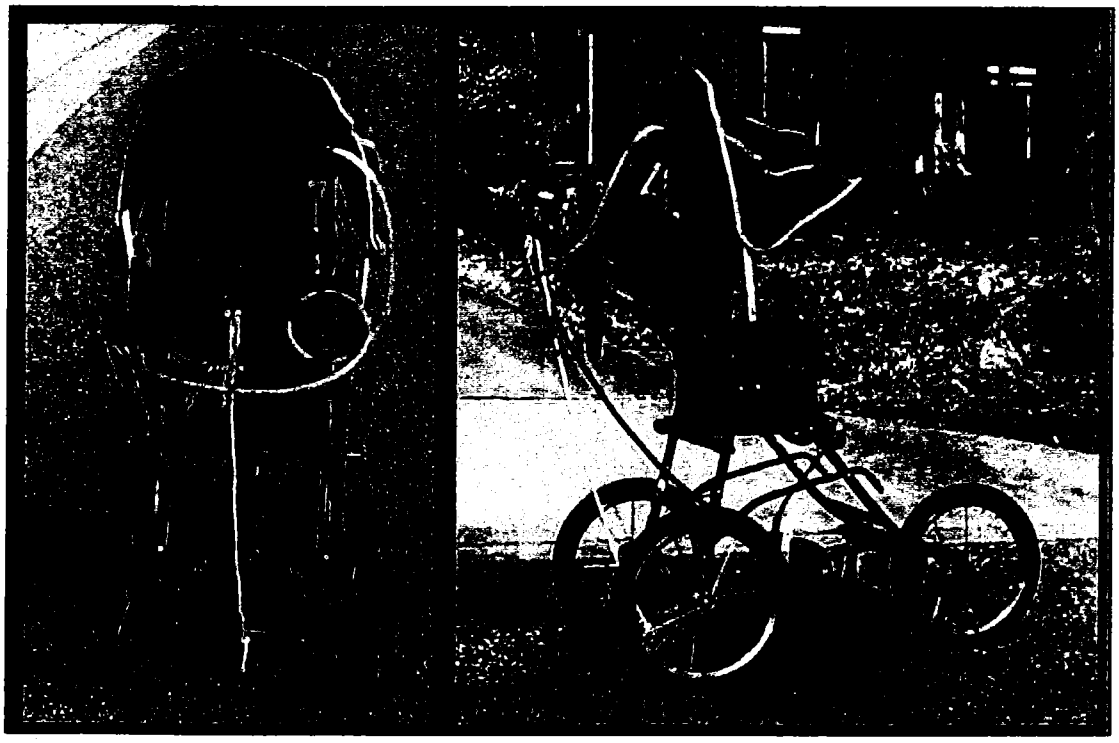


- Palmer Management Property(Parcel 58): GPR surveys suggest the probable presence of a wide diameter (greater than 12 inches) conduit or possibly two UST's (aligned head to foot) centered near grid coordinates X=72 Y=24. The probable conduit or possible UST's appear to be buried approximately 2.28 meters below surface.

5.0 LIMITATIONS

EM61 and GPR surveys have been performed and this report prepared for Earth Tech of North Carolina, Inc. in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained for this project do not conclusively define the locations of all metallic UST's but only suggest where some of the metallic UST's may be present. The EM61 and GPR anomalies, interpreted as possible UST's or tanks, may be attributed to other surface or subsurface conditions or cultural interference.

The Geonics EM61 metal detector was used to conduct the metal detection surveys at the King-Tobaccoville Road sites in April 2005.



The SIR-2000 GPR system equipped with a 400 MHz antenna that was used at the King-Tobacco Road sites in April and May 2005.

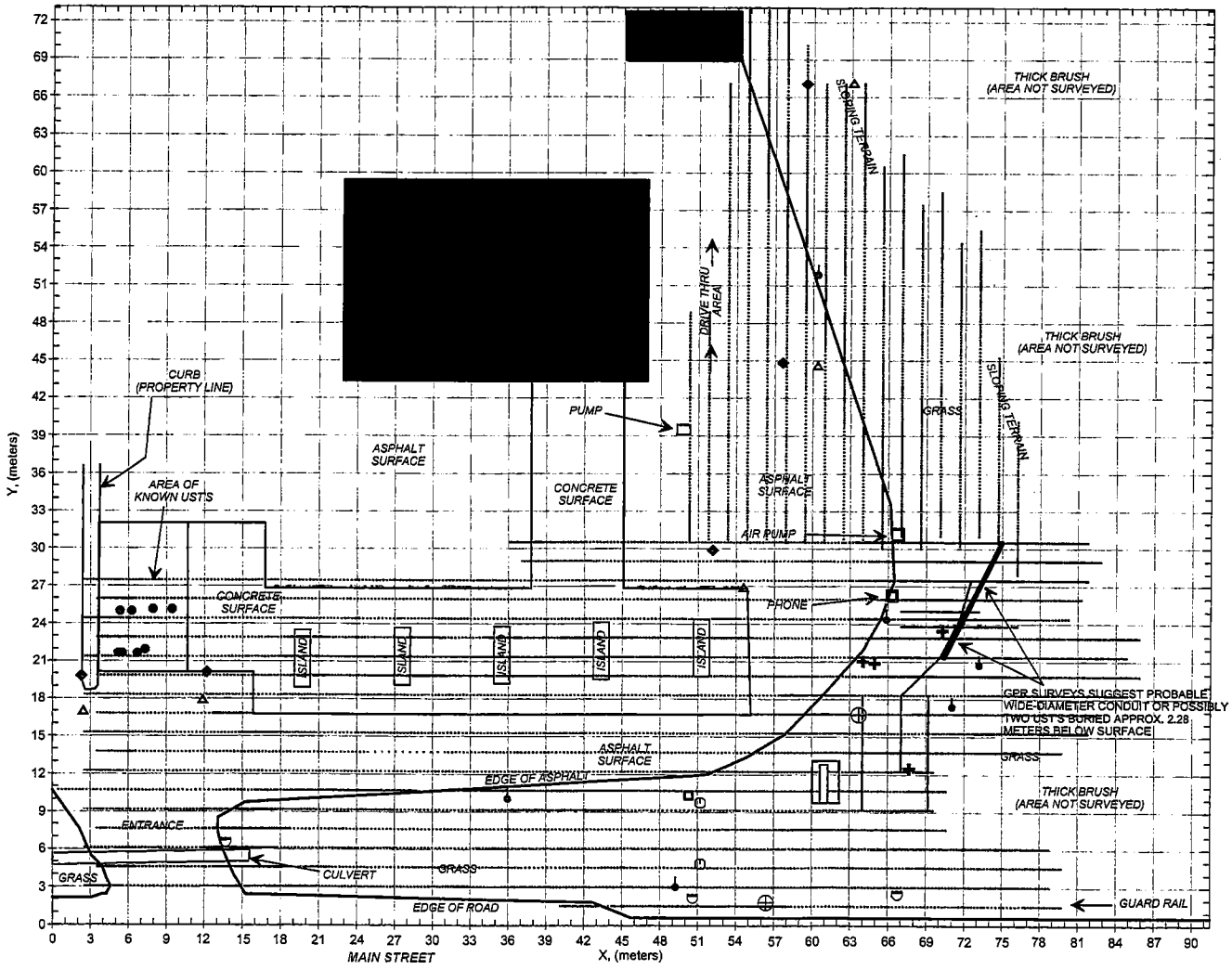
PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	EARTH TECH OF NORTH CAROLINA, INC.	DATE	5/11/05	DRWN	
SITE	KING-TOBACCOVILLE ROAD (MAIN STREET) SITES	LAY		CHKD	
CITY	KING	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	J-NO	2005-100	REVNO	

GRAPHIC SCALE IN METERS

GEOPHYSICAL EQUIPMENT

FIGURE 1



APPROXIMATE NORTH

LEGEND

- EM61 SURVEY AREA: EM DATA ACQUIRED ALONG NORTHERLY-SOUTHERLY OR EASTERLY-WESTERLY TRENDING LINES SPACED 1.5 METERS APART
- BUILDING
- UTILITY POLE
- WATER METER OR VALVE COVER
- GUY WIRE
- MANHOLE COVER
- UST COVERS
- STORM SEWER GRATE
- TRAFFIC SIGN
- STORE SIGN
- RIGHT-OF-WAY MARKER
- EASEMENT MARKER
- INDIVIDUAL EM61 SURVEY LINE
- INDIVIDUAL GPR SURVEY LINE

Note: The plot shows the EM61 and GPR survey line locations in red dots and purple lines, respectively. The EM metal detection data were collected on April 18 & 28, 2005 using a Geonics EM61 instrument Ground penetrating radar (GPR) data were acquired on May 2, 2005 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

GEOPHYSICAL SURVEY AREA

FIGURE 26

DRAWING SCALE IN METERS

DRAWN	CHKD		REVISION
DATE 5/12/05	LAY	DWG 2005-100	PROJECT

CLIENT EARTH TECH OF NORTH CAROLINA, INC.

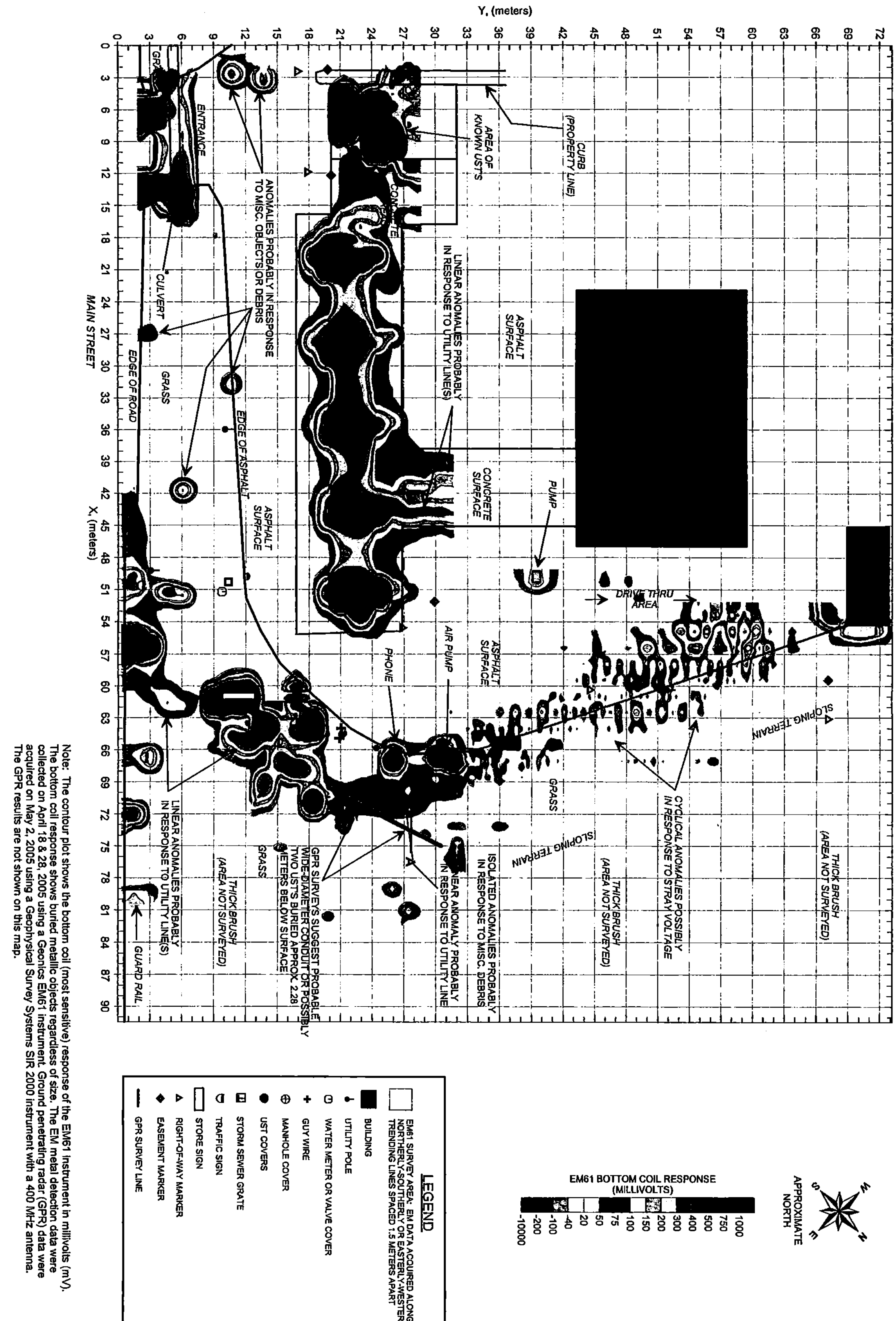
SITE PALMER MANAGEMENT PROPERTY (PARCEL 58)

CITY KING

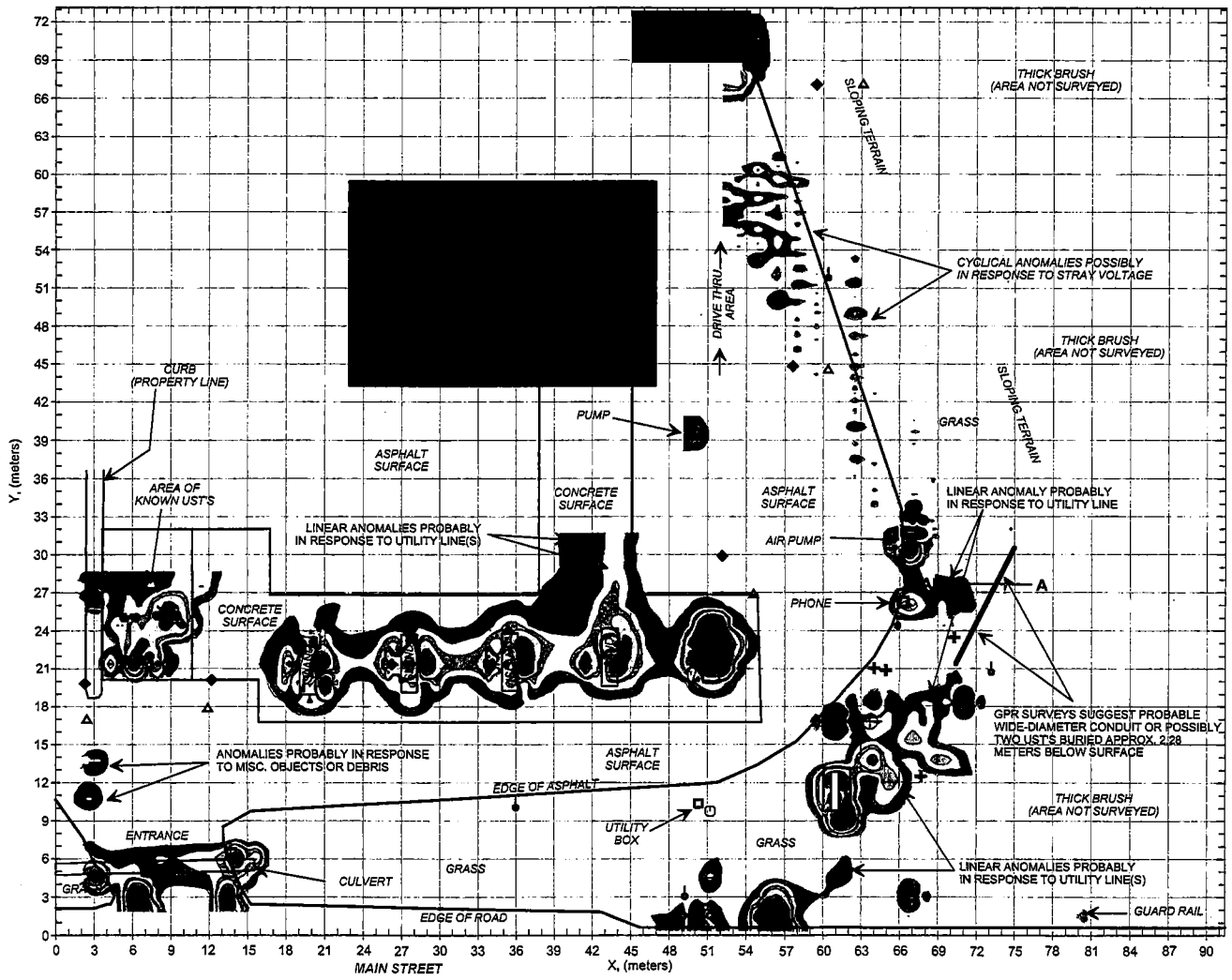
STATE NORTH CAROLINA

TITLE GEOPHYSICAL RESULTS

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.


Y, (meters)
X, (meters)
MAIN STREET
CURB (PROPERTY LINE)
AREA OF KNOWN USTS
CONCRETE
ENTRANCE
ANOMALIES PROBABLY IN RESPONSE TO MISC. OBJECTS OR DEBRIS
LINEAR ANOMALIES PROBABLY IN RESPONSE TO UTILITY LINE(S)
ASPHALT SURFACE
CULVERT
EDGE OF ROAD
GRASS
EDGE OF ASPHALT
CONCRETE SURFACE
PUMP
DRIVE THRU AREA
AIR PUMP
PHONE
SLOPING TERRAIN
CYCLICAL ANOMALIES POSSIBLY IN RESPONSE TO STRAY VOLTAGE
THICK BRUSH (AREA NOT SURVEYED)
ISOLATED ANOMALIES PROBABLY IN RESPONSE TO MISC. DEBRIS
LINEAR ANOMALY PROBABLY IN RESPONSE TO UTILITY LINE
GPR SURVEYS SUGGEST PROBABLE WIDE-DIAMETER CONDUIT OR POSSIBLY TWO USTS BURIED APPROX. 2.28 METERS BELOW SURFACE
GUARD RAIL
APPROXIMATE NORTH
EM61 BOTTOM COIL RESPONSE (MILLIVOLTS)
1000
750
500
400
300
200
150
100
75
50
20
-40
-100
-200
-10000
LEGEND
EM61 SURVEY AREA: EM DATA ACQUIRED ALONG NORTHERLY-SOUTHERLY OR EASTERLY-WESTERLY TRENDING LINES SPACED 1.5 METERS APART
BUILDING
UTILITY POLE
WATER METER OR VALVE COVER
GUY WIRE
MANHOLE COVER
UST COVERS
STORM SEWER GRATE
TRAFFIC SIGN
STORE SIGN
RIGHT-OF-WAY MARKER
EASEMENT MARKER
GPR SURVEY LINE
Note: The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on April 18 & 28, 2005 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on May 2, 2005 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna. The GPR results are not shown on this map.

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.	EARTH TECH OF NORTH CAROLINA, INC. — 5/12/05	EM61 BOTTOM COIL RESULTS
	PALMER MANAGEMENT PROPERTY (PARCEL 58)	
	KING — NORTH CAROLINA	
	EM61 GEOPHYSICAL RESULTS — 2005-100	FIGURE 27



APPROXIMATE NORTH

EM61 DIFFERENTIAL RESPONSE (MILLIVOLTS)

1000
750
500
400
300
200
150
100
75
50
20
-40
-100
-200
-10000

LEGEND

- EM61 SURVEY AREA: EM DATA ACQUIRED ALONG NORTHERLY-SOUTHERLY OR EASTERLY-WESTERLY TRENDING LINES SPACED 1.5 METERS APART
- BUILDING
- UTILITY POLE
- WATER METER OR VALVE COVER
- GUY WIRE
- MANHOLE COVER
- UST COVERS
- STORM SEWER GRATE
- TRAFFIC SIGN
- STORE SIGN
- RIGHT-OF-WAY MARKER
- EASEMENT MARKER
- GPR SURVEY LINE SHOWN IN FIGURE 28

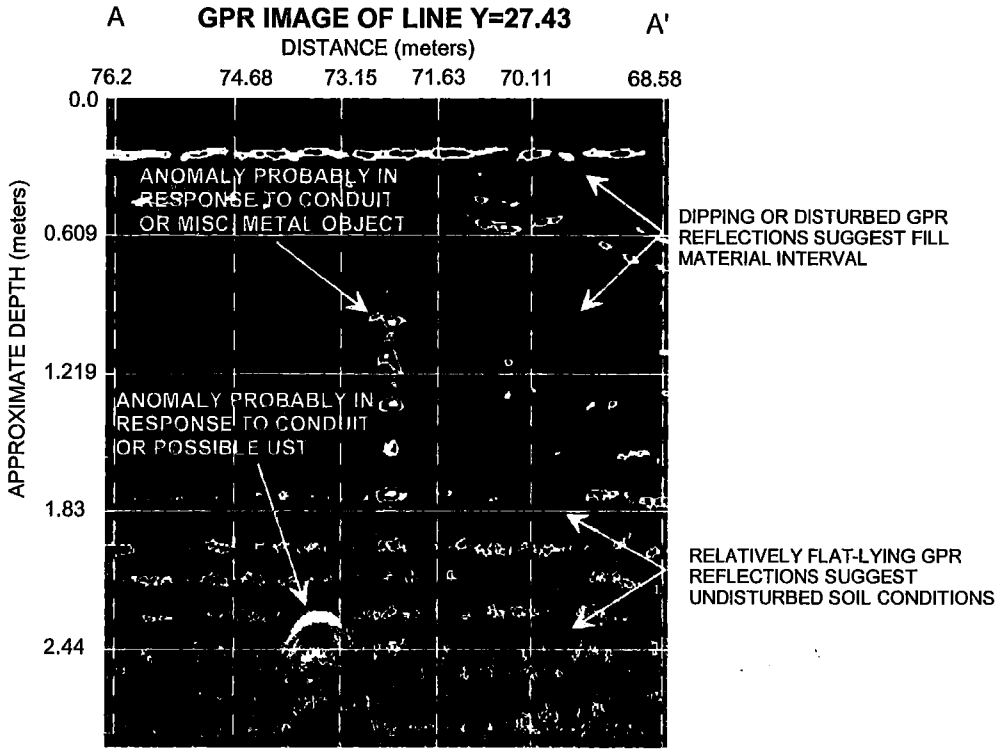
Note: The contour plot shows the differential response between the bottom and top coils of the EM61 instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and UST's and ignores smaller miscellaneous, buried, metal debris. The EM61 data were collected on April 18 & 28, 2005 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on May 2, 2005 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna. GPR results are not shown on this map.

EM61 DIFFERENTIAL RESULTS

FIGURE 28

CLIENT	EARTH TECH OF NORTH CAROLINA, INC.
SITE	PALMER MANAGEMENT PROPERTY (PARCEL 58)
CITY	KING
STATE	NORTH CAROLINA
TITLE	EM61 GEOPHYSICAL RESULTS
DRAWN	
CHKD	
DATE	5/01/05
DRWG	2005-100

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.



GPR image of Line Y=27.48 shows an anomaly that is probably in response to a wide-diameter conduit (greater than 12 inches) or possibly a small diameter UST buried approximately 2.28 meters below surface. GPR surveys were conducted across the survey area on May 2, 2005 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	EARTH TECH OF NORTH CAROLINA, INC.		DATE	5/12/05	DRWN
SITE	PALMER MANAGEMENT PROPERTY (PARCEL 58)		LAT		CHKD
CITY	KING	STATE NORTH CAROLINA	LONG		
TITLE	GEOPHYSICAL RESULTS		JOB NO.	2005-100	FIGURE

GRAPHIC SCALE IN METERS

GPR IMAGE

FIGURE 29

ATTACHMENT B

TEST BORING REPORT

PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

BORING NUMBER 58-1
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0		6" ASPHALT/GRAVEL, REDDISH BROWN SANDY CLAY, DRY, NO ODOR.
			1.2		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
5.0			0.7		AS ABOVE, DRY, NO ODOR.
			0.5		AS ABOVE, DRY, NO ODOR.
			0		REDDISH BROWN CLAY WITH OCCASIONAL QUARTZ VEIN, DRY, NO ODOR.
10.0			0.1		AS ABOVE, DRY, NO ODOR.
			0		YELLOW BROWN SANDY CLAY, DRY, NO ODOR.
15.0			0.5		AS ABOVE, DRY, NO ODOR.
					BORING TERMINATED AT 16 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

BORING NUMBER 58-2
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0		6" ASPHALT/GRAVEL, MEDIUM TO REDDISH BROWN CLAY, DRY, NO ODOR.
			0		AS ABOVE, DRY, NO ODOR.
			0.7		AS ABOVE, DRY, NO ODOR.
5.0					
			1.8		REDDISH BROWN SANDY CLAY WITH OCCASIONAL MEDIUM-GRAINED SAND LAYERS, DRY, NO ODOR.
			2.5		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0					
			2		AS ABOVE, DRY, NO ODOR.
			2.4		MOTTLED MEDIUM BROWN, REDDISH BROWN, YELLOW, AND BLACK SAND, DRY, NO ODOR.
			1.7		AS ABOVE, DRY, NO ODOR.
15.0					
					BORING TERMINATED AT 16 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

BORING NUMBER 58-3
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.9		6" ASPHALT/GRAVEL, REDDISH BROWN SANDY CLAY, DRY, NO ODOR.
			1.2		AS ABOVE, DRY, NO ODOR.
			0.7		AS ABOVE, DRY, NO ODOR.
5.0					
			1.4		MOTTLED YELLOW-BROWN AND BLACK, FINE- TO MEDIUM-GRAINED SAND, DRY, NO ODOR.
			1.7		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0					
			1.5		AS ABOVE, DRY, NO ODOR.
			0.7		AS ABOVE, DRY, NO ODOR.
			0.3		AS ABOVE, DRY, NO ODOR.
15.0					
					BORING TERMINATED AT 16 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

BORING NUMBER 58-4
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0		6" ASPHALT/GRAVEL, REDDISH BROWN SANDY CLAY, DRY, NO ODOR.
			0.4		AS ABOVE, DRY, NO ODOR.
			0.8		AS ABOVE, DRY, NO ODOR.
5.0			0.6		LIGHT BROWN TO TAN FINE-GRAINED SAND, DRY, NO ODOR.
			1		INTERLAYERD REDDISH BROWN CLAY AND MOTTLED YELLOW-BROWN AND BLACK, MEDIUM-GRAINED SAND, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0			0.5		AS ABOVE, DRY, NO ODOR.
			0		AS ABOVE, DRY, NO ODOR.
			0.3		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 16 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

BORING NUMBER 58-5
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.2		6" ASPHALT/GRAVEL, REDDISH BROWN SANDY CLAY, DRY, NO ODOR.
			0.6		AS ABOVE, DRY, NO ODOR.
			1		AS ABOVE, DRY, NO ODOR.
5.0					
			2		AS ABOVE, DRY, NO ODOR.
			2.8		MOTTLED MEDIUM BROWN, YELLOW-BROWN, AND BLACK CLAYEY SAND, DRY, NO ODOR. SUBMIT TO LABORATORY ANALYSIS.
10.0			1.4		AS ABOVE, DRY, NO ODOR.
			1.1		AS ABOVE, DRY, NO ODOR.
			1.8		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 16 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

BORING NUMBER 58-6
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.7		6" ASPHALT/GRAVEL, REDDISH BROWN SANDY CLAY, DRY, NO ODOR.
			1.8		AS ABOVE, DRY, NO ODOR.
			1.5		AS ABOVE, DRY, NO ODOR.
5.0					
			2		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			1.8		YELLOW-BROWN, FINE-GRAINED SAND WITH SOME CLAY, DRY, NO ODOR.
10.0					
			1.5		AS ABOVE, DRY, NO ODOR.
			1.4		AS ABOVE, DRY, NO ODOR.
			1.2		AS ABOVE, DRY, NO ODOR.
15.0					
					BORING TERMINATED AT 16 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

BORING NUMBER 58-7
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.1		6" ASPHALT/GRAVEL, REDDISH BROWN CLAY, DRY, NO ODOR.
			0.4		AS ABOVE, DRY, NO ODOR.
			0.8		AS ABOVE, DRY, NO ODOR.
5.0					
			0.5		AS ABOVE, DRY, NO ODOR.
			1		YELLOW-BROWN, FINE-GRAINED SAND WITH SOME CLAY, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0					
			0.5		AS ABOVE, DRY, NO ODOR.
			0.5		AS ABOVE, DRY, NO ODOR.
			0.7		AS ABOVE, DRY, NO ODOR. REFUSAL AT 15 FEET.
15.0					
					BORING TERMINATED AT 15 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

BORING NUMBER 58-8
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			1.2		10" ASPHALT/GRAVEL, ORANGE TO REDDISH BROWN CLAY, DRY, NO ODOR.
			0.8		AS ABOVE, DRY, NO ODOR.
			1		AS ABOVE, DRY, NO ODOR.
5.0					
			1		AS ABOVE, DRY, NO ODOR.
			0.8		AS ABOVE, DRY, NO ODOR.
10.0					
			0.7		AS ABOVE, DRY, NO ODOR.
			1.3		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			0.7		AS ABOVE, DRY, NO ODOR.
15.0					
					BORING TERMINATED AT 16 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

TEST BORING REPORT

PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

BORING NUMBER 58-9
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.8		2" TOPSOIL, YELLOW-BROWN TO REDDISH BROWN CLAY, DRY, NO ODOR.
			0.9		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			0.7		AS ABOVE, DRY, NO ODOR.
5.0					
			0.6		AS ABOVE, DRY, NO ODOR.
			0.5		AS ABOVE, DRY, NO ODOR.
10.0			0.6		AS ABOVE, DRY, NO ODOR.
			0.6		MEDIUM GRAY, FINE-GRAINED SAND, DRY, NO ODOR.
			0.6		AS ABOVE, DRY, NO ODOR.
15.0					BORING TERMINATED AT 16 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

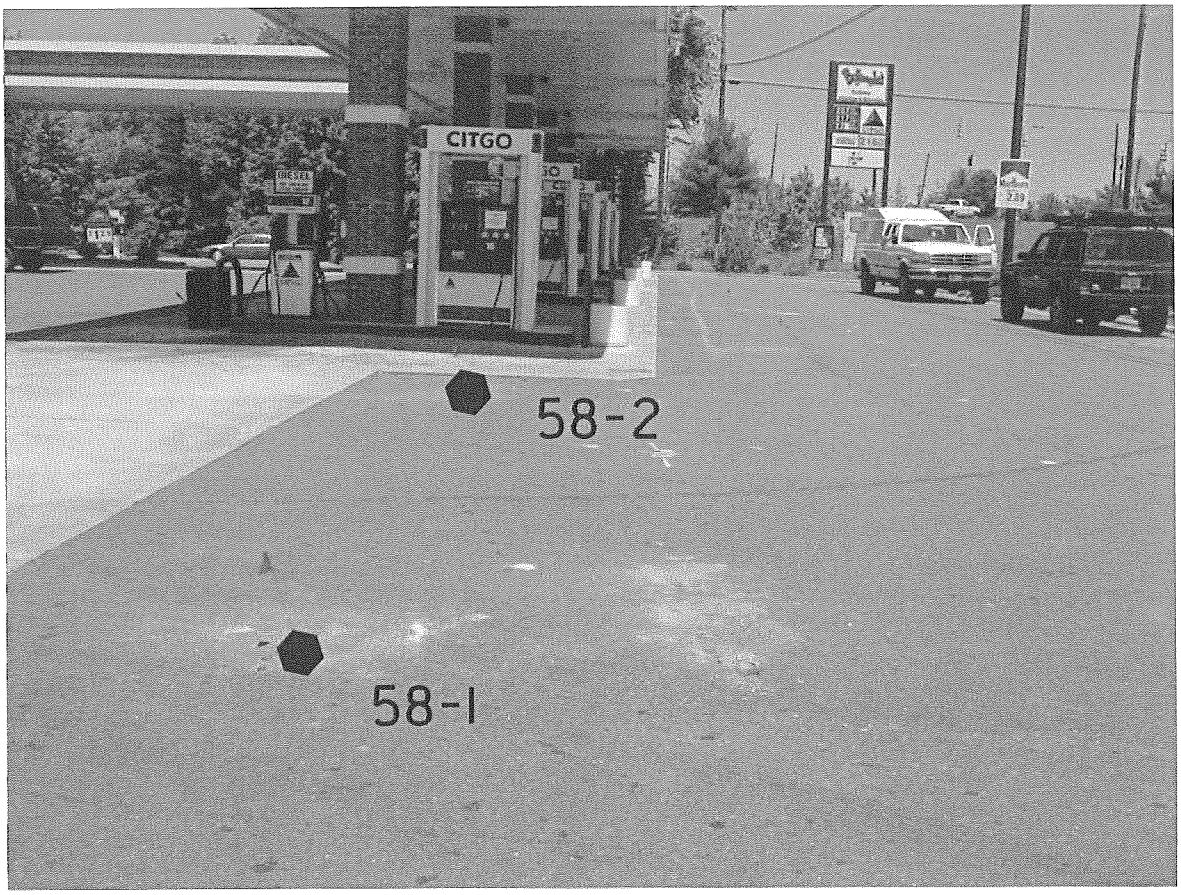
TEST BORING REPORT

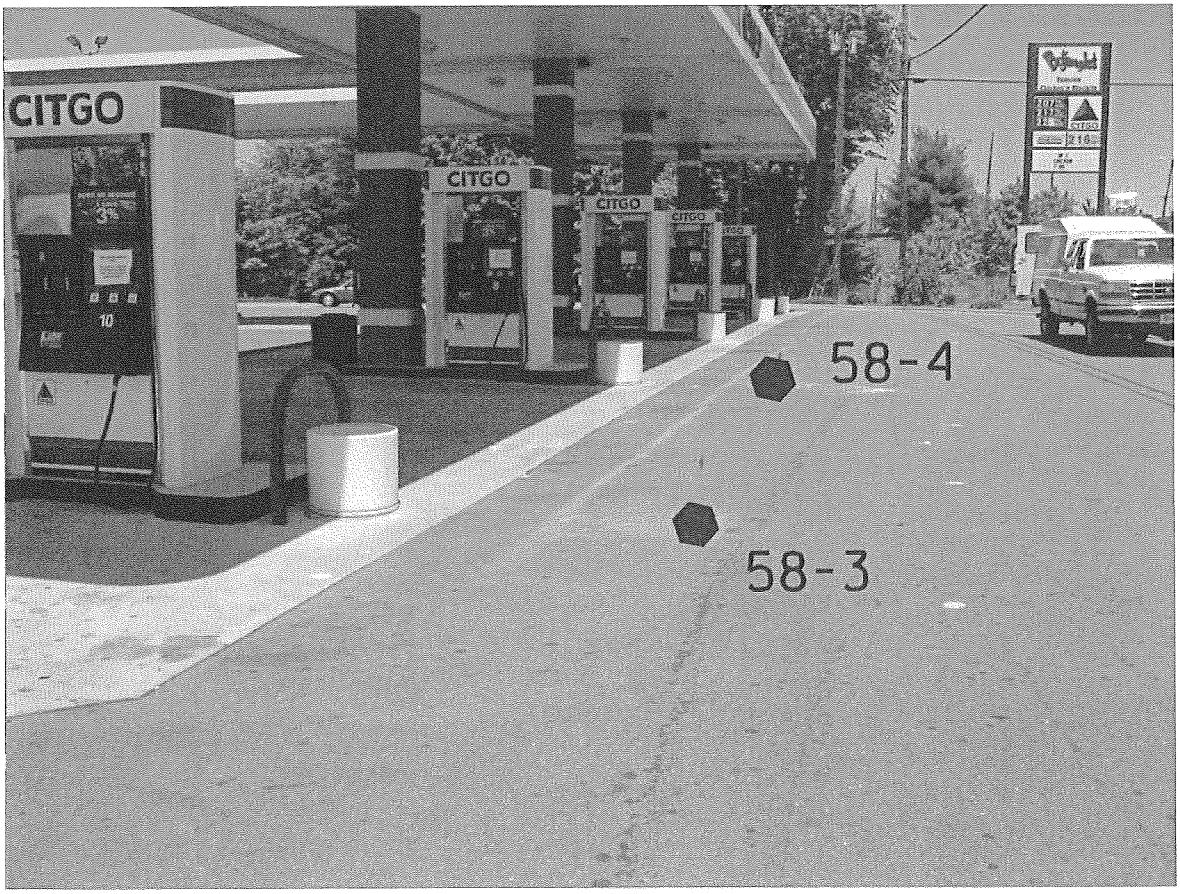
PROJECT PALMER MANAGEMENT LLC PROPERTY (PARCEL #58)
CLIENT NCDOT (R-2201)
PROJECT NUMBER 85238
CONTRACTOR PROBE TECHNOLOGY
EQUIPMENT GEOPROBE

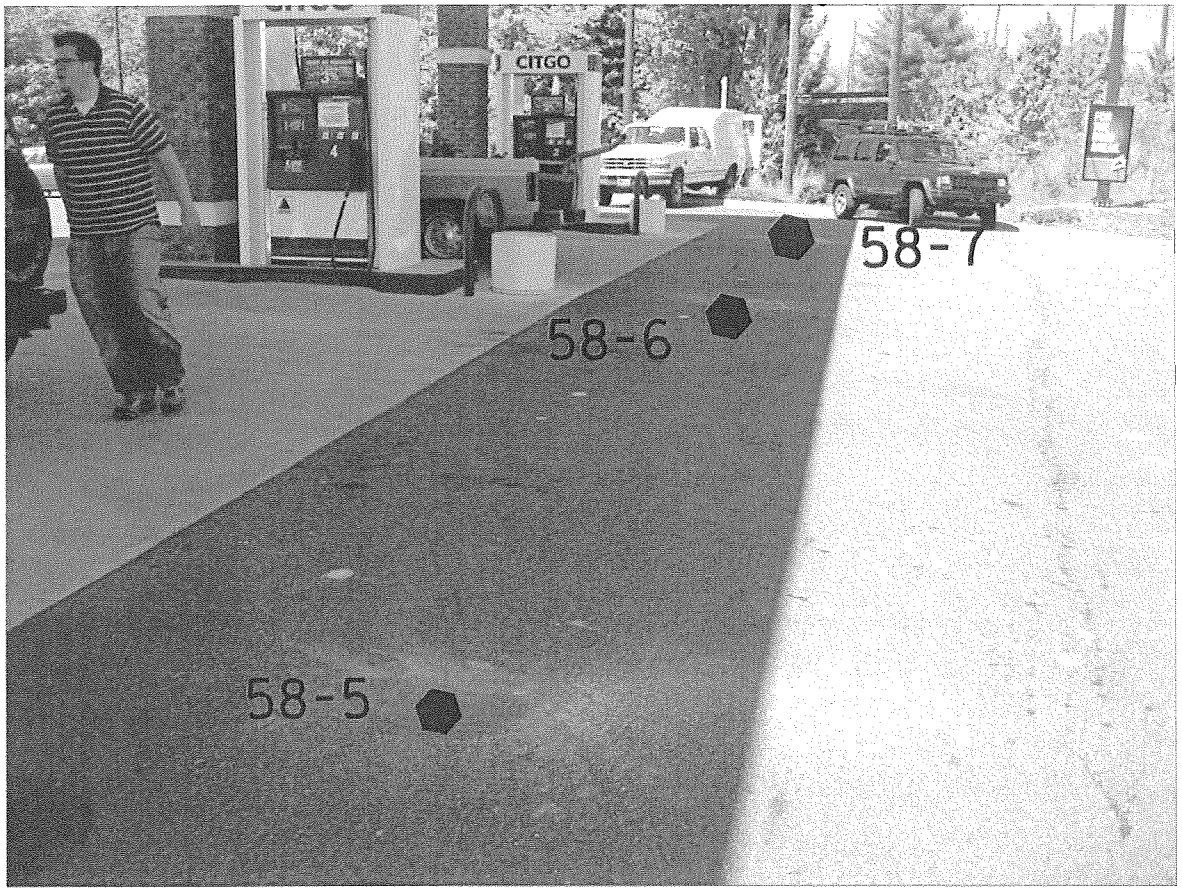
BORING NUMBER 58-10
PAGE 1
ELEVATION
DATE 5/9/05
DRILLER
PREPARED BY STEFFENS

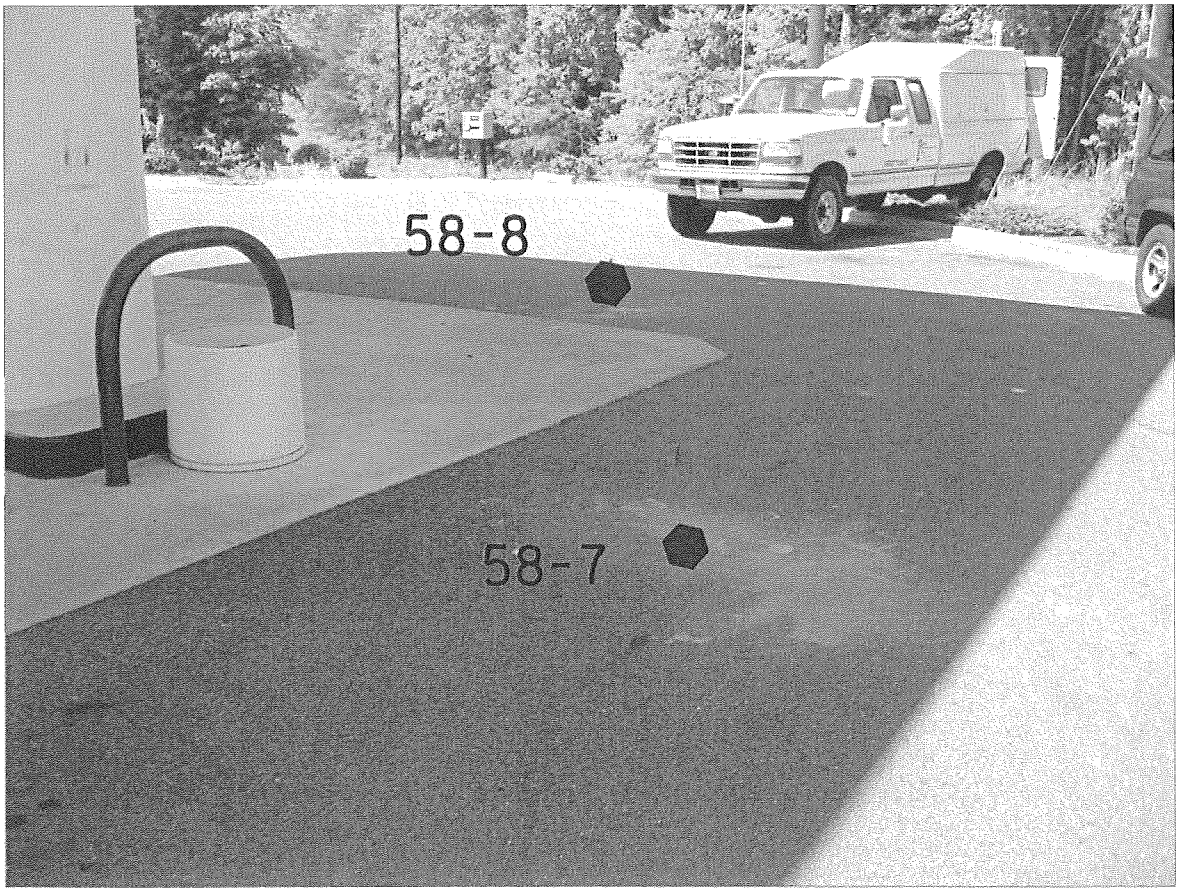
DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			0.2		2" TOPSOIL, YELLOW-BROWN TO REDDISH BROWN CLAY, DRY, NO ODOR.
			0.6		AS ABOVE, DRY, NO ODOR.
			0.9		AS ABOVE, DRY, NO ODOR.
5.0					
			1.1		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
			0.9		MOTTLED YELLOW-BROWN AND GRAY CLAYEY SAND WITH SAND INCREASING DOWNWARD, DRY, NO ODOR.
10.0					
			0.8		AS ABOVE, DRY, NO ODOR.
			0.8		AS ABOVE, DRY, NO ODOR.
			0.8		AS ABOVE, DRY, NO ODOR.
15.0					
					BORING TERMINATED AT 16 FEET. NO GROUNDWATER ENCOUNTERED.
20.0					

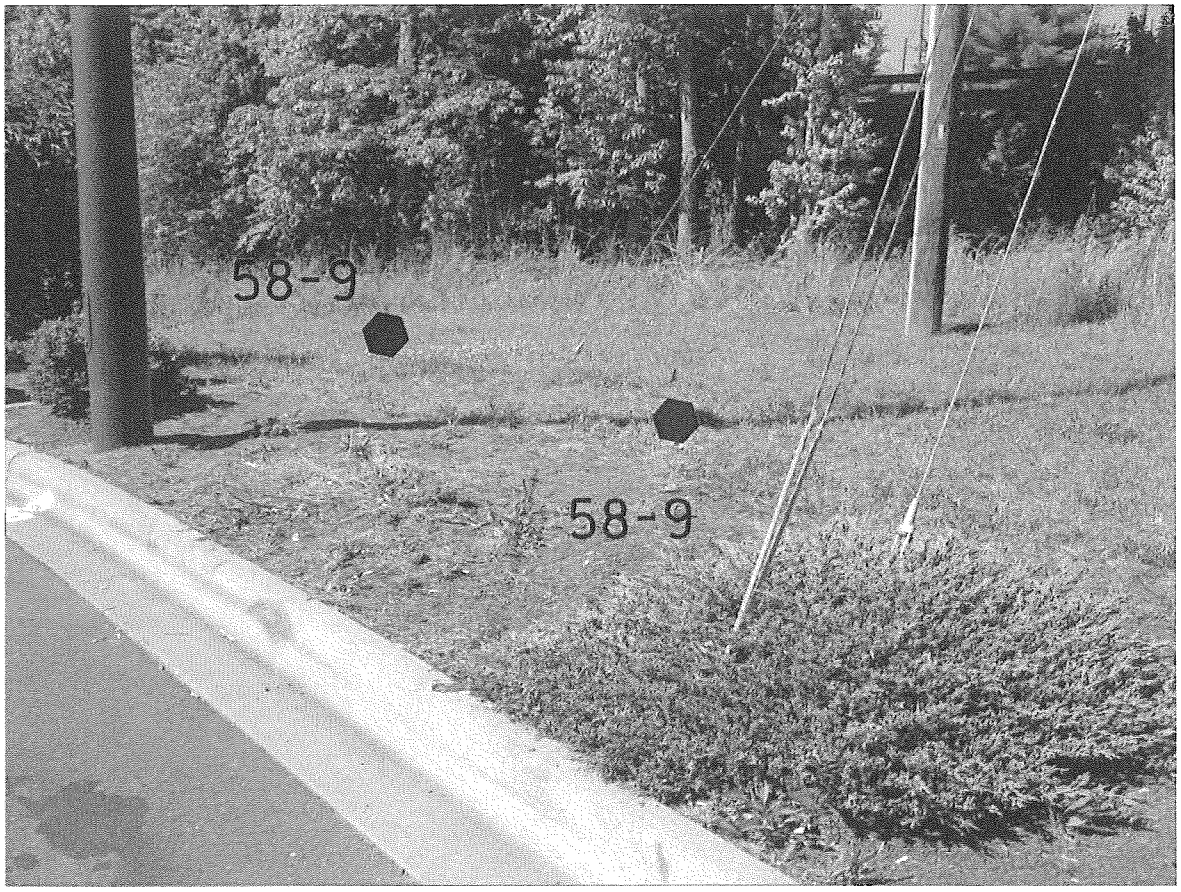
ATTACHMENT C


CITGO
58-2
58-1


CITGO
CITGO
CITGO
CITGO
58-4
58-3


CITGO
58-7
58-6
58-5


58-8
58-7


58-9
58-9

ATTACHMENT D

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive
Wilmington, North Carolina 28405
(910) 350-1903
Fax (910) 350-1557

Mr. Mike Branson
Earth Tech
701 Corporate Dr. Suite 475
Raleigh NC 27607

Report Number: G204-454

Client Project: King Parcel #58

Dear Mr. Branson:

Enclosed are the results of the analytical services performed under the referenced project. 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 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 the services performed during this project, please call Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,
Paradigm Analytical Laboratories, Inc.

5/23/05

Laboratory Director — Date
J. Patrick Weaver

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-1-2-4
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-1
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 12:00
Date Received: 5/11/05
Matrix: Soil
Solids 74.26

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.08	5030	1	05/18/05
Diesel Range Organics	BQL	8.19	3545	1	05/19/05

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-2-8-10
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-2
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 12:30
Date Received: 5/11/05
Matrix: Soil
Solids 80.06

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.49	5030	1	05/18/05
Diesel Range Organics	BQL	7.7	3545	1	05/19/05

Reviewed By: _____
TPH_LIMS_v1.71.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-3-8-10
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-3
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 13:00
Date Received: 5/11/05
Matrix: Soil
Solids 78.86

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.61	5030	1	05/18/05
Diesel Range Organics	BQL	7.56	3545	1	05/19/05

Reviewed By: _____
TPH_LIMS_v1.71.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-4-8-10
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-4
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 13:15
Date Received: 5/11/05
Matrix: Soil
Solids 76.25

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.87	5030	1	05/18/05
Diesel Range Organics	BQL	8.1	3545	1	05/19/05

Reviewed By: _____

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-5-6-8
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-5
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 14:00
Date Received: 5/11/05
Matrix: Soil
Solids 73.14

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.2	5030	1	05/18/05
Diesel Range Organics	BQL	8.51	3545	1	05/19/05

Reviewed By: _____
TPH_LIMS_v1.71.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-6-6-8
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-6
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 14:15
Date Received: 5/11/05
Matrix: Soil
Solids 82.56

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.27	5030	1	05/18/05
Diesel Range Organics	BQL	7.4	3545	1	05/19/05

Reviewed By: [signature]

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-7-8-10
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-7
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 14:45
Date Received: 5/11/05
Matrix: Soil
Solids 84.36

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.11	5030	1	05/18/05
Diesel Range Organics	BQL	7.32	3545	1	05/19/05

Reviewed By: BNV

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-8-12-14
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-8
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 15:15
Date Received: 5/11/05
Matrix: Soil
Solids 69.11

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	8.68	5030	1	05/18/05
Diesel Range Organics	BQL	9.02	3545	1	05/19/05

Reviewed By: _____
TPH_LIMS_v1 71 XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-9-2-4
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-9
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 15:45
Date Received: 5/11/05
Matrix: Soil
Solids 76.74

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.82	5030	1	05/18/05
Diesel Range Organics	BQL	8.14	3545	1	05/19/05

Reviewed By: _____
TPH_LIMS_v1.71.XLS

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 58-10-6-8
Client Project ID: King Parcel #58
Lab Sample ID: G204-454-10
Lab Project ID: G204-454
Report Basis: Dry Weight

Analyzed By: DCS
Date Collected: 5/9/05 16:15
Date Received: 5/11/05
Matrix: Soil
Solids 76.64

Analyte	Result MG/KG	Report Limit MG/KG	Prep Method	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	7.83	5030	1	05/18/05
Diesel Range Organics	BQL	8.11	3545	1	05/19/05

Reviewed By: _____

List of Reporting Abbreviations and Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantitation Limit

DF = Dilution Factor

Dup = Duplicate

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 = Reporting Limit

RPD = Relative Percent Difference

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.

PARADIGM ANALYTICAL LABORATORIES, INC.
5500 Business Drive, Wilmington, NC 28405
Phone: (910)-350-1903 FAX: (910)-350-1557

Chain-of Custody Record & Analytical Request

COC# 46781

Page 1 of 1

Client: EARTH TECH
Address: 701 Corp. Ctr. Dr. Ste 475
Address: RALEIGH, NC 27607
Quote #:

Project ID: KING-PARCEL #58
Contact: MIKE BRANSON
Phone: 919.854.6200
Fax: 919.854.6259

Date: 5.9.05
Turnaround: STD
Job Number: 85238
P.O. Number:

Report To: MIKE BRANSON
Invoice To: NCDOT WBS#34380.1.1

Sample ID	Date	Time	Matrix	Preservatives	Analyses: BTEX/GRO	Comments: Please specify any special reporting requirements
58-1-2-4	5.9.05	1200	SOIL		/	G204-454
58-2-8-10		1230			/	
58-3-8-10		1300			/	
58-4-8-10		1315			/	
58-5-6-8		1400			/	
58-6-6-8		1416			/	
58-7-8-10		1445			/	
58-8-12-14		1515			/	
58-9-2-4		1545			/	
58-10,-6-8		1615			/	

Relinquished By	Date	Time	Received By	Date	Time	Temperature	State Certification Requested
Beth Steffens	5.10.05	1730	Julie Johnson	5/11/05	1015	5.5°C	NC ✓ SC ____ Other ____
							SEE REVERSE FOR TERMS AND CONDITIONS

ORIGINAL

PARADIGM ANALYTICAL LABORATORIES, INC

N.C. Certification #481 S.C. Certification #99029