

PRELIMINARY SITE ASSESSMENT

**PARCEL #108, BOJANGLES PROPERTY
CHARLOTTE – US 74 (INDEPENDENCE BOULEVARD) FROM NC 24 - 27
(ALBEMARLE ROAD) TO IDELWILD ROAD
MECKLENBURG COUNTY, NORTH CAROLINA**

**NCDOT WBS ELEMENT 3479.1.1
STATE PROJECT U-0209B**

August 20, 2010

Prepared for:

**Ethan J. Caldwell, L.G., P. E.
North Carolina Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, North Carolina 27699-1589**

Prepared by:

**Kleinfelder Southeast, Inc.
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Kleinfelder Project No. 111989

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PROJECT FOR WHICH THIS REPORT WAS PREPARED.**



August 20, 2010
File No. 111989 | GSO10R157

Ethan J. Caldwell, L.G., P. E.
North Carolina Department of Transportation
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Reference: **Preliminary Site Assessment**
WBS Element No. 34749.1.1, State Project U-0209B
Parcel #108, Bojangles Property
Mecklenburg County, North Carolina

Dear Mr. Caldwell:

Please find enclosed a report summarizing the sampling activities for the preliminary site assessment conducted at the referenced site. Laboratory analysis of soil samples collected at the site did not detect petroleum hydrocarbons above the method detection limits of the laboratory methods. This report summarizes our field activities, results, laboratory report, and conclusions.

Should questions arise or additional information be required, please contact the undersigned.

Sincerely,

Kleinfelder Southeast, Inc.


Annamarie Blausen
Staff Professional I


John M. Stewart, P.G.
Senior Professional

AB/JMS:cas
Enclosure

PRELIMINARY SITE ASSESSMENT

Site Name and Location: Parcel #108, Bojangles Property
5525 E. Independence Boulevard
Charlotte, Mecklenburg County, North
Carolina

Latitude and Longitude: 35° 11' 4" N, 80° 45' 23" W

Facility ID Number: None Identified


NCDOT Project No.: NCDOT WBS Element 34749.1.1
State Project U-0209B

Date of Report: August 20, 2010

Consultant: Kleinfelder
313 Gallimore Dairy Road
Greensboro, North Carolina 27409
Attn: Mr. John M. Stewart
Phone: 336.668.0093 X115

Seal and Signature of Certifying Licensed Geologist

I, John M. Stewart, a Licensed Geologist for Kleinfelder Southeast, Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.



John M. Stewart P.G.
NC License No. 10461046

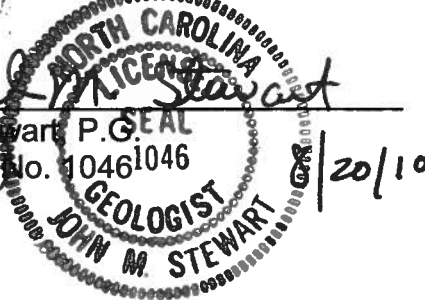


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C	Boring Logs
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1.0 INTRODUCTION

Kleinfelder Southeast, Inc. (Kleinfelder) has prepared this Preliminary Site Assessment (PSA) report documenting assessment activities performed at the Bojangles property (Parcel 108) located at 5525 East Independence Boulevard (US 74) in Charlotte, Mecklenburg County, North Carolina (Figure 1). This assessment was conducted on behalf of the North Carolina Department of Transportation (NCDOT) in accordance with Kleinfelder's June 15, 2010 proposal.

NCDOT is proposing to widen US 74 (Independence Boulevard) from NC 24-27 (Albemarle Road) to Idlewild Road and construct a bridge with on and off ramps accessing Idlewild Road. The proposed right-of-way encompasses the entire Bojangles Property (Figure 2); therefore, the NCDOT has determined that the entire property will be taken. There is concern that contaminated soils could be encountered during the construction activities at this site.

The purpose of this assessment was to determine the presence or absence of impacted soil at the subject property in proposed right-of-way construction areas related to the widening of US 74 (Independence Boulevard) from NC 24-27 (Albemarle Road) to Idlewild Road.

1.1 Site Description

The proposed right-of-way includes the property owned by FFCA/IPI 1984. At the time of our site reconnaissance, this parcel was occupied by Bojangles Restaurant. The Bojangles building was located in the center of the site with a drive through wrapping around the north and west sides. Site photographs are shown in Appendix A.

1.2 Site Location

The facility is located near the northeast quadrant of the Idlewild Road and East Independence Boulevard intersection. The property is bound to the north by a new automobile dealership, and to the east by a lot with empty box cars and semi-trailers. The property is bound to the south by a First Citizens Bank and to the west by East Independence Boulevard and beyond by a BP gas station.

1.3 Site History

Historical aerial photographs indicate that the site operated as a gas station in 1966. The duration of the gas station's operation is unknown. According to records on file with the North Carolina Department of Environment and Natural Resources (NCDENR) UST Section, there are no known USTs registered for the property or groundwater incidents associated with this site. Based on the location of the former service station, the USTs would have likely been located near the front (west) side of the property.

2.0 SITE ASSESSMENT

2.1 Geophysical Investigation

Pyramid Environmental & Engineering, P.C (Pyramid) conducted a geophysical investigation of the entire property on June 24, 2010. Pyramid utilized electromagnetic (EM) induction technology to identify potential geophysical anomalies and potential USTs at the site. A more detailed description of their scope of work is explained in their Geophysical Investigation Report included in Appendix B. Prior to drilling the soil borings, buried utilities were marked by NC One Call and Taylor Wiseman & Taylor (TWT).

2.2 Soil Sampling

To determine if contaminated soil may be encountered during the proposed construction activities, soil samples were collected along the drainage features in the proposed right-of-way (southwest side), and directly west of the building where former USTs may have been located. Kleinfelder met Probe Technology at the Bojangles property on July 19, 2010; Probe Technology advanced four soil borings (B-1 to B-4) by direct push technology (DPT). The approximate location of the borings is shown on Figure 3. Copies of the boring logs are included in Appendix C.

Soil borings were advanced to a depth of 10 feet below the ground surface (bgs). Soil samples were collected by driving a macrocore sampler in 5-foot intervals in each boring. Each 5-foot sample sleeve was divided in half and screened for volatile organic compounds in the field using a MiniRae 2000 photo-ionization detector (PID). In each boring, the soil interval with the highest PID reading was collected for laboratory

analysis. If no organic vapors were detected, the sample collected from the bottom of the boring was submitted for analysis. The PID readings are summarized in Table 1.

Prior to the initial boring and after each subsequent boring, the sampling equipment was decontaminated. The soil samples collected for laboratory analysis were analyzed for total petroleum hydrocarbons (TPH) similar to diesel and gasoline (DRO/GRO) using EPA Method 8015B following 3550 and 5035 preparation. All soil samples were placed into laboratory provided jars, labeled, and maintained on ice until delivered Prism, a NCDOT contract laboratory for chemical analysis.

3.0 RESULTS

3.1 Geophysical Investigation

Pyramid's results indicate the EM survey did not detect unknown metallic USTs within the survey area. Pyramid's report is included in Appendix B.

3.2 Soil Sample

Diesel range organics (DRO) and gasoline range organics (GRO) were not detected at concentrations above the method detection limits in the soil samples. The laboratory results are summarized in Table 2 and on Figure 3. The laboratory report and associated chain-of-custody document are included in Appendix D.

4.0 CONCLUSIONS

Based on results of the laboratory analysis and field observations, Kleinfelder has the following conclusions:

- ◆ Groundwater was not encountered in the soil borings.
- ◆ TPH was not detected in the soil samples at concentrations above the method detection limits in the soil samples.
- ◆ Petroleum contaminated soil is not expected to be encountered in the proposed right-of-way to a depth of 10 feet.

5.0 LIMITATIONS

Our work has been performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services were provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

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TABLES

TABLE 1: SOIL SAMPLE PID RESULTS

SAMPLE LOCATION	DEPTH (feet bgs)	PID READINGS
B-1	0.0 - 2.5	0.0
	2.5 - 5.0	0.0
	5.0 - 7.5	0.0
	7.5 - 10.0	0.0
B-2	0.0 - 2.5	0.0
	2.5 - 5.0	0.0
	5.0 - 7.5	0.0
	7.5 - 10.0	0.0
B-3	0.0 - 2.5	0.0
	2.5 - 5.0	0.0
	5.0 - 7.5	0.0
	7.5 - 10.0	0.0
B-4	0.0 - 2.5	0.0
	2.5 - 5.0	0.0
	5.0 - 7.5	0.0
	7.5 - 10.0	0.0

Notes:

Samples were collected on July 19, 2010.

Readings reported in parts per million

feet bgs = feet below ground surface

Bold = Selected for laboratory analysis

TABLE 2: SOIL SAMPLE ANALYTICAL SUMMARY

SAMPLE ID	COLLECTION DATE	DRO	GRO
B-1 (7.5-10ft)	7/19/2010	BRL	BRL
B-2 (7.5-10ft)	7/19/2010	BRL	BRL
B-3 (7.5-10ft)	7/19/2010	BRL	BRL
B-4 (7.5-10ft)	7/19/2010	BRL	BRL
State Action Level		10	10

Notes:

Sample collection depth is indicated in Sample ID, following sequential soil sample number

Results presented in milligrams per kilogram, analogous to parts per million

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

BRL = Below reporting limit

Bold denotes concentration exceeds the State Action Level

FIGURES

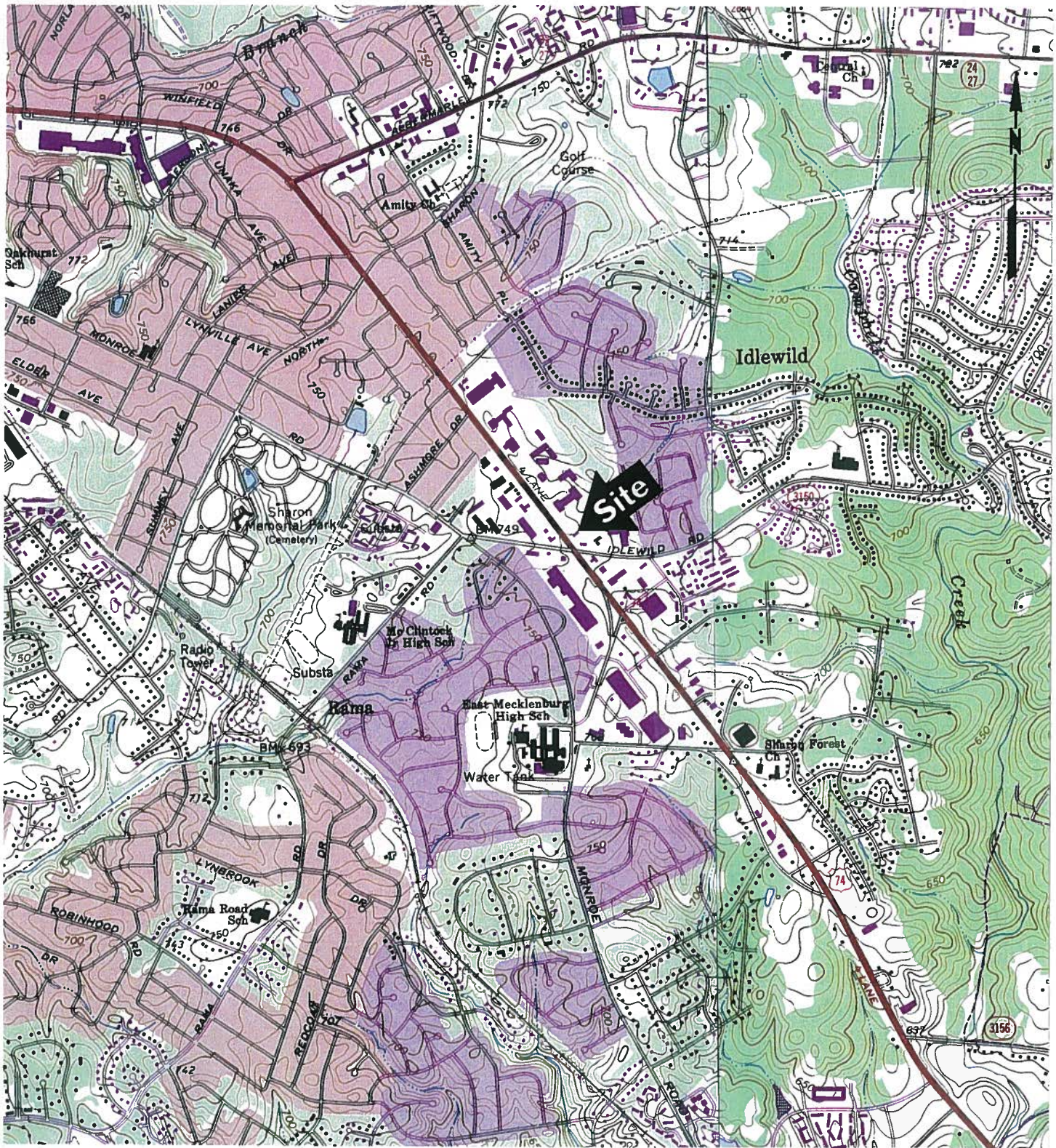
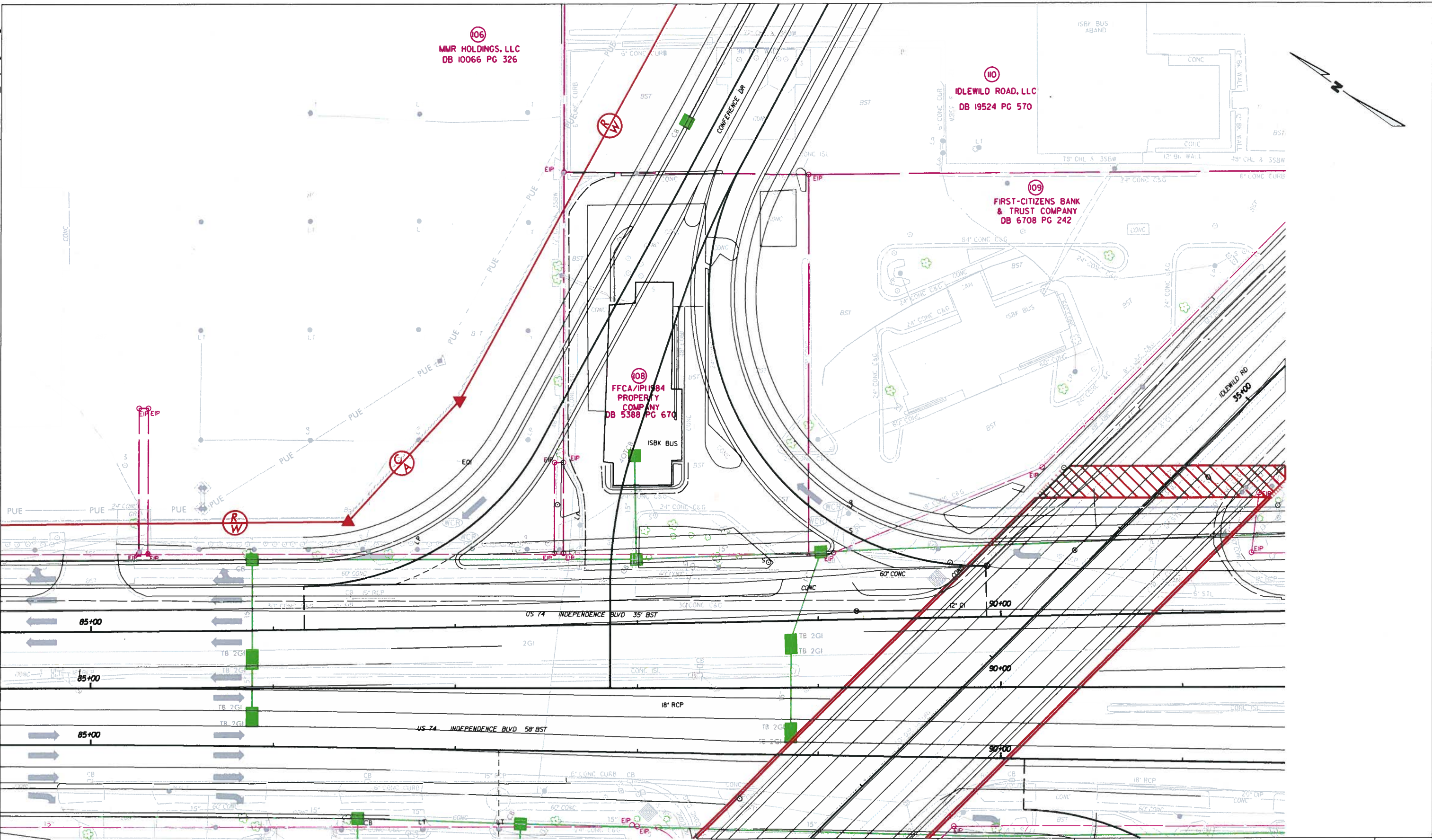


FIGURE 1 SITE LOCATION MAP		
PARCEL # 108 – BOJANGLES PROPERTY 5525 EAST INDEPENDENCE BOULEVARD MECKLENBURG COUNTY, NORTH CAROLINA		
DATE: July 26, 2010	APPROVED BY: <i>[Signature]</i>	SCALE: 1" to 2,000'
SOURCE: USGS 7.5' Topographic Map, Charlotte East Quadrangle		PROJECT NO. 111989

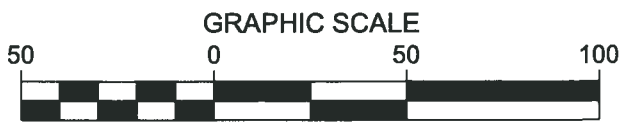
DRAWING NAME: parcel-108_Bojangles.dgn

KLEINFELDER JOB NUMBER: 111989

OFFICE LOCATION: GREENSBORO



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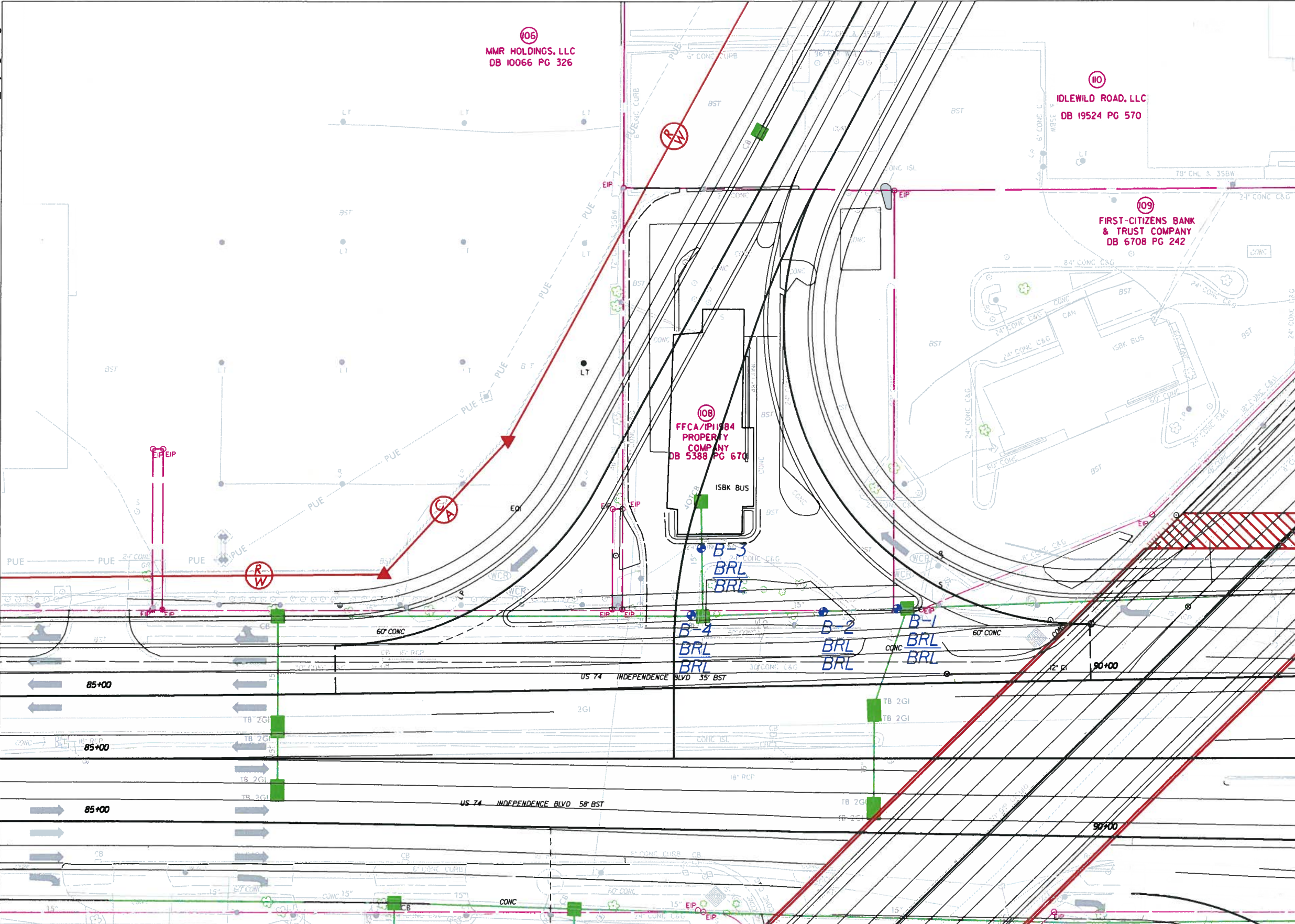
PROJECT NO.	111989	SITE MAP	
DRAWN:	08/06/2010	PARCEL #108	
DRAWN BY:	DJH	FFCA/IPI 1984 (BOJANGLES)	
CHECKED BY:	JMS	5525 E. INDEPENDENCE BLVD.	
SCALE:	1" = 50'	TIP NO.	U-0209B
		WBS ELEMENT NO.	34749.1.1
		MECKLENBURG COUNTY	
		NORTH CAROLINA	

FIGURE:
2

DRAWING NAME: parcel-108_Bojangles.dgn

KLEINFELDER JOB NUMBER: 111989

OFFICE LOCATION: GREENSBORO



EXPLANATION

- SOIL BORING
- B-1
- BRL
- GRO
- DRO
- IN PPM

**NOTE: BRL - BELOW REPORTING LIMIT
GRO - GASOLINE RANGE ORGANICS
DRO - DIESEL RANGE ORGANICS**

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PROJECT NO.	111989
DRAWN:	08/06/2010
DRAWN BY:	DJH
CHECKED BY:	JMS
SCALE:	1" = 50'

BORING LOCATION MAP	
PARCEL #108 FFCA/PI 1984 (BOJANGLES) 5525 E. INDEPENDENCE BLVD.	
TIP NO.	U-0209B
WBS ELEMENT NO.	34749.1.1
MECKLENBURG COUNTY NORTH CAROLINA	

FIGURE:
3

APPENDIX A

**SITE PHOTOGRAPHS
KLEINFELDER PROJECT NO. 111989
PARCEL NO. 108**



Photograph 1 – View of the Bojangle's property looking north.



Photograph 2 – View of the Bojangle's property looking northeast (left side of photograph) with an adjacent ATM and bank (right side of photograph).

APPENDIX B

Pyramid Project # 2010153

GEOPHYSICAL INVESTIGATION REPORT

EM61 SURVEYS

**FFCA/IPI PROPERTY
PARCEL 108
Charlotte, North Carolina**

August 10, 2010

**Report prepared for: John Stewart P.G.
Kleinfelder
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Prepared by: 
Mark J. Denil, P.G.

Reviewed by: 
Douglas Canavello, P.G.

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Kleinfelder
GEOPHYSICAL INVESTIGATION REPORT
FFCA/IPI PROPERTY
PARCEL 108
Charlotte, North Carolina

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Figure 2	EM61 Metal Detection – Bottom Coil Results
Figure 3	EM61 Metal Detection – Differential Results

1.0 INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Kleinfelder across the FFCA/IPI property (Parcel 108) located along the northeastern side of Independence Boulevard across the street from the BP gas station (Parcel 107). The property consists of an active Bojangles restaurant and the geophysical survey area covered the southern 2/3 of the property which had a maximum length and width of 235 feet and 150 feet, respectively. The site consists primarily of asphalt and concrete surfaces along with the restaurant building. Conducted on June 24, 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 (UST's) were present beneath the surveyed portion of the site.

Kleinfelder representative Mr. John Stewart, PE provided site maps during the week of June 1, 2010 that outlined the geophysical survey area of the FFCA/IPI property and Kleinfelder representative Mr. John Lindemann was on site the morning of June 23, 2010 and identified the perimeter of the geophysical survey area to Pyramid Environmental personnel. Photographs of the geophysical equipment used in this investigation and a portion of the FFCA/IPI property are shown in **Figure 1**.

2.0 FIELD METHODOLOGY

Prior to conducting the geophysical investigation, a 10-foot by 10-foot survey grid was established across the 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 June 24, 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.

Due to an absence of metal detection anomalies that may be in response to potential USTs, ground penetrating radar surveys were not conducted at this site. 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 geophysical results obtained from Parcel 108 were reported to Mr. Stewart on July 14, 2010.

3.0 DISCUSSION OF RESULTS

The linear EM61 bottom coil anomaly running along the edge of Independence Boulevard and intersecting grid coordinates X=50 Y=22 is probably in response to a buried utility line(s). Similarly, the linear, EM61 bottom coil anomalies intersecting grid coordinates X=77 Y=40 and X=120 Y=84 are probably in response to buried utility lines or conduits. The series of linear, northerly-southerly trending bottom coil anomalies intersecting grid coordinates X=120 Y=105 may be in response to a buried line or conduit.

The EM61 bottom coil anomalies (contours shaded in red) or negative EM61 differential anomalies (contours shaded in green) centered near grid coordinates X=30 Y=205, X=40 Y=225, X=45 Y=205, and X=55 Y=195 are probably in response to steel reinforced concrete, drive-through related

equipment, and/or sanitary sewer covers. The EM61 anomalies centered near grid coordinates X=100 Y=155 and X=140 Y=160 are probably in response to parked vehicles that were present during data acquisition. The remaining EM61 differential anomalies are probably in response to the building, utility poles and other known surface objects or equipment.

Due to the absence of additional EM61 differential anomalies that were not in response to known objects, ground penetrating radar surveys were not conducted at this site and the EM61 results suggest that the surveyed portion of the site does not contain metallic USTs.

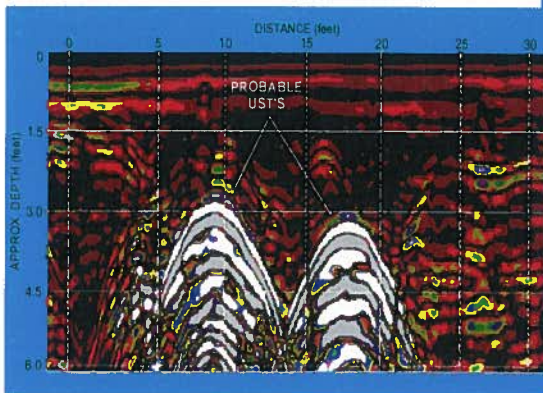
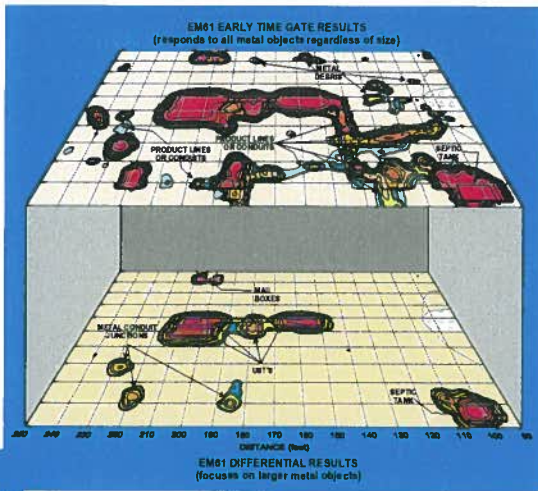
4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 data collected across the FFCA/IPI property (Parcel 108) located in Charlotte, North Carolina, provides the following summary and conclusions:

- The EM61 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=50 Y=22, X=77 Y=40, X=120 Y=84, and X=120 Y=105 are probably in response to buried utility lines or conduits.
- The EM61 bottom coil anomalies (contours shaded in red) or negative EM61 differential anomalies (contours shaded in green) centered near grid coordinates X=30 Y=205, X=40 Y=225, X=45 Y=205, and X=55 Y=195 are probably in response to steel reinforced concrete, drive-through related equipment, and/or sanitary sewer covers.
- The EM61 metal detection results suggest the survey portion of the FFCA/IPI property does not contain unknown, metallic USTs.

5.0 LIMITATIONS

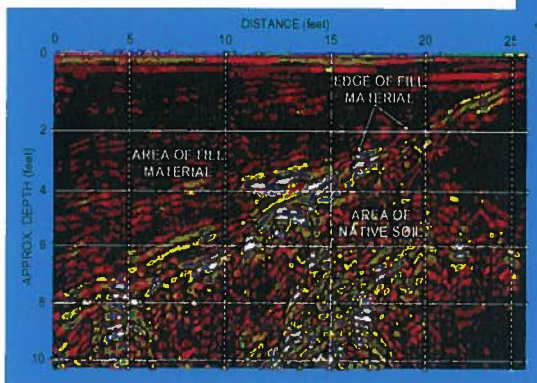
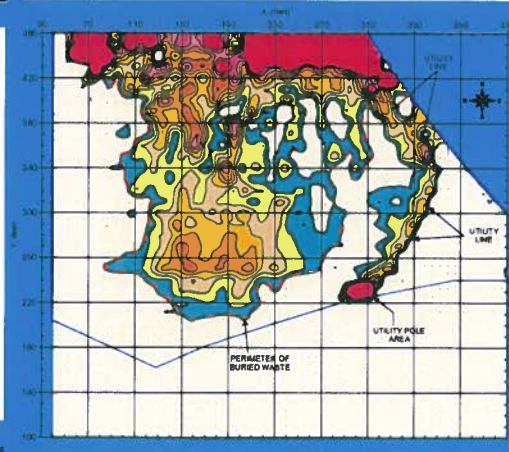
EM61 surveys have been performed and this report prepared for Kleinfelder in accordance with generally accepted guidelines for EM61 metal detection surveys. It is generally recognized that the results of the EM61 survey are non-unique and may not represent actual subsurface conditions. The EM61 results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



FIGURES

(on the following pages)

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





The photograph shows the Geonics EM61 metal detector that was used to conduct the metal detection survey across the FFCA/IPI property (Parcel 108) on June 24, 2010.

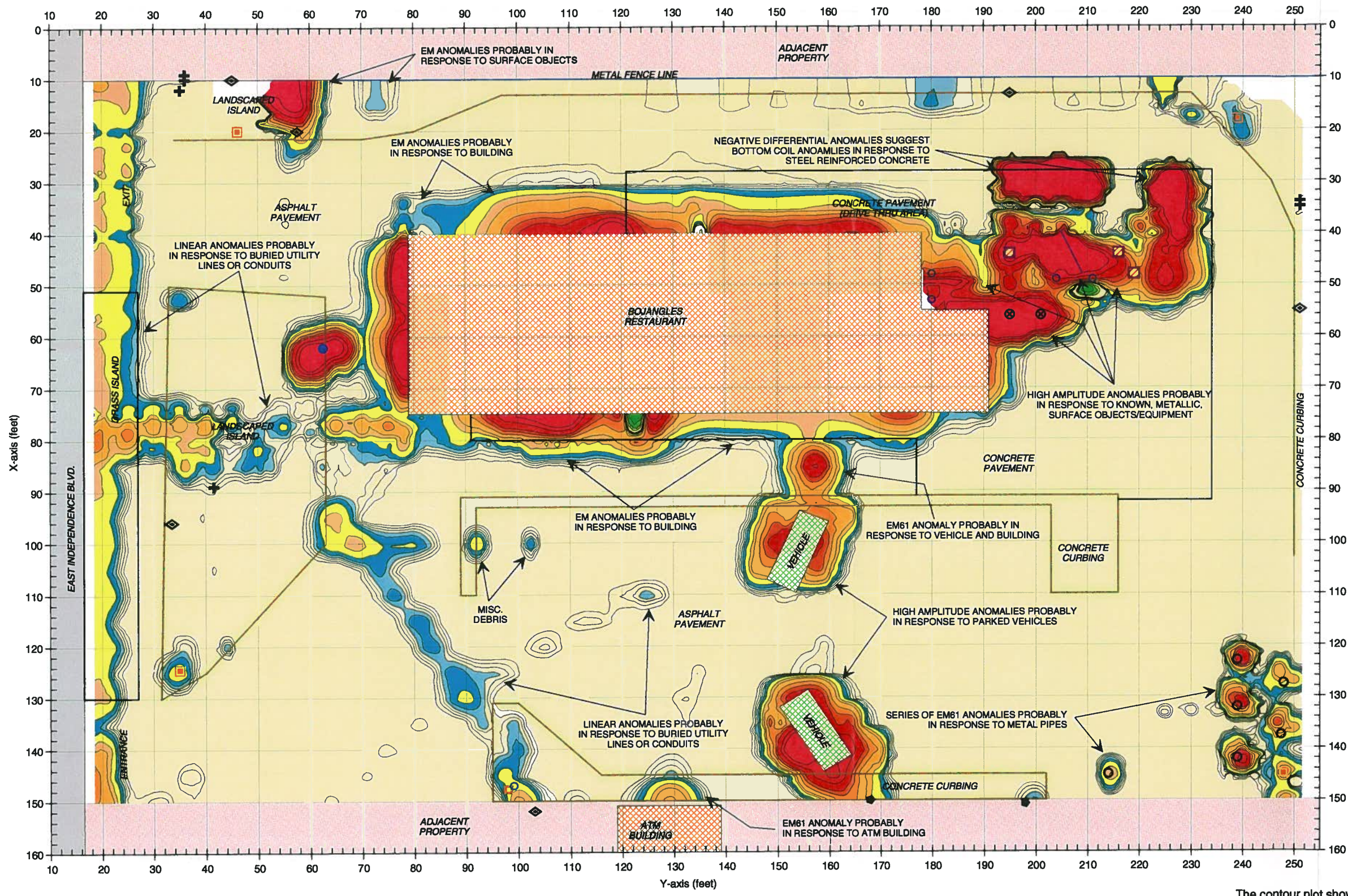


The photograph shows the back portion of the FFCA/IPI property located along the northerly side of Independence Boulevard in Charlotte, North Carolina. The photograph is viewed in a westerly direction.



CLIENT	KLEINFELDER	DATE	08/06/10	BY	MJD
PROJECT	FFCA/IPI PROPERTY (PARCEL 108)	SITE		NO.	
CITY	CHARLOTTE	STATE	NORTH CAROLINA	NO.	
TITLE	GEOPHYSICAL RESULTS	NO.	2010-153	NO.	

GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS



LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING OR STRUCTURE
- BOLLARD
- BUSINESS SIGN
- CONCRETE CURBING
- DUMPSTER
- METAL FENCE LINE
- GUY WIRE
- EXIT SIGN
- MANHOLE COVER
- ELECTRICAL OUTLET
- ROAD SIGN
- 4-INCH METAL PIPE
- UTILITY OR LAMP POLE

EM61 BOTTOM COIL RESPONSE (MILLIVOLTS)



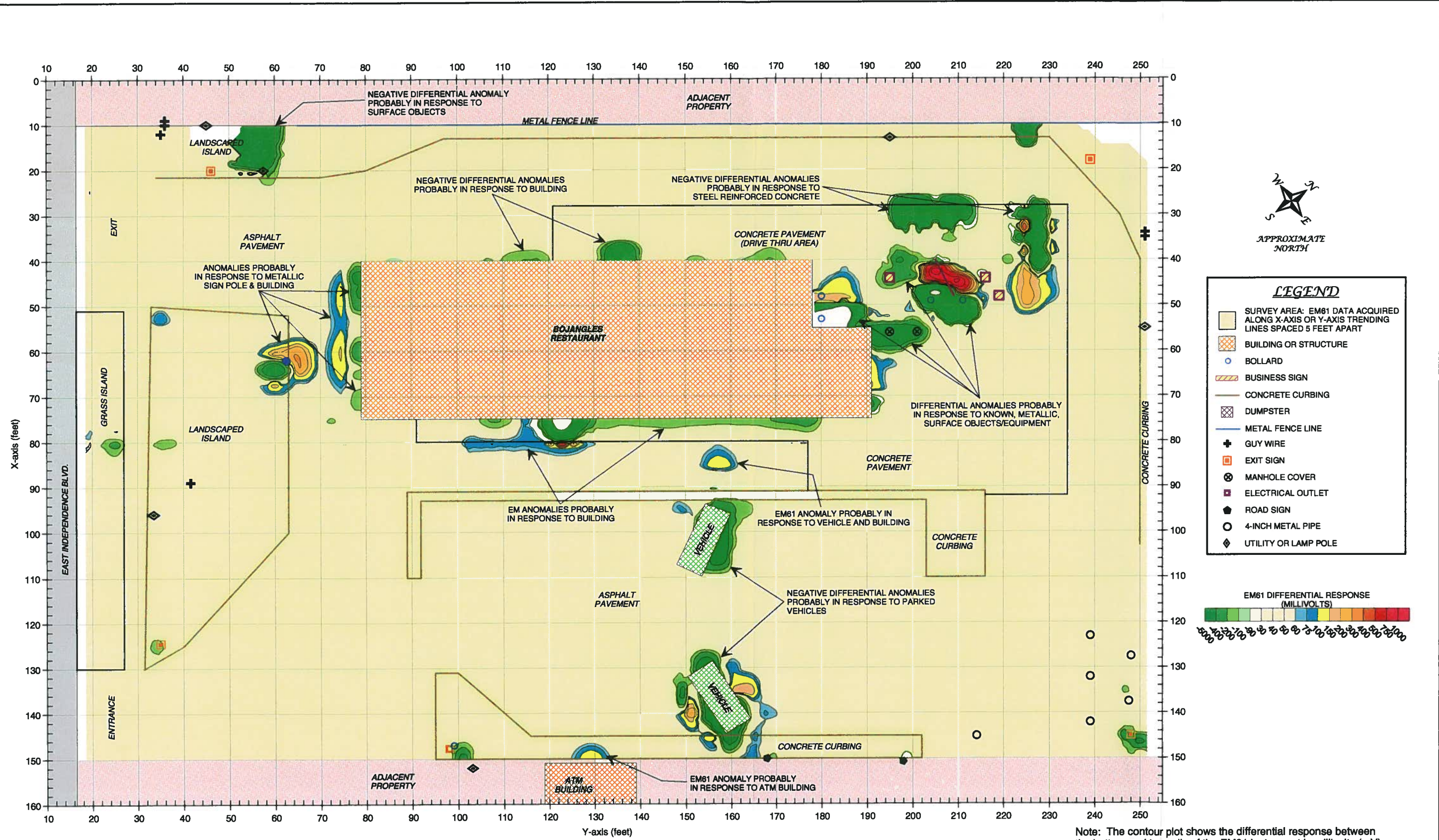
The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on June 24, 2010 using a Geonics EM61 instrument. Due to an absence of EM61 differential anomalies that could be in response to potential UST-size objects, ground penetrating radar (GPR) surveys were not conducted at this site.

The EM61 metal detection investigation suggests the survey area does not contain metallic USTs.

EM61 METAL DETECTION (BOTTOM COIL RESULTS)
FIGURE 2

GRAPHIC SCALE IN FEET	
08/07/10	MJD
DATE	NAME
FFCA/PI PROPERTY (PARCEL 108)	STATE
CHARLOTTE	NORTH CAROLINA
GEOPHYSICAL RESULTS	
KLEINFELDER	

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.



Note: The contour plot shows the differential response between the bottom and top coils of the EM61 instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller misc. buried, metal debris. The EM metal detection data were collected on June 24, 2010 using a Geonics EM61 instrument. Due to an absence of EM61 differential anomalies that could be in response to potential UST-size objects, ground penetrating radar (GPR) surveys were not conducted at this site

The EM61 metal detection investigation suggests the survey area does not contain metallic USTs.

EM61 METAL DETECTION
(DIFFERENTIAL RESULTS) FIGURE 3

GRAPHIC SCALE IN FEET	
DATE	PROJECT
08/7/10	FFCA/PI PROPERTY (PARCEL 108)
CLIENT	CITY
KLEINFELDER	NORTH CAROLINA
TITLE	
GEOPHYSICAL RESULTS	

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

APPENDIX C

Client NCDOT

Drill Contractor Probe Technology

LOG OF BORING B-1

SHEET 1 OF 1

Project Name U-0209B

Drill Method 2 inch Direct Push

Elevation --

Number 111989

Drilling Started 7/19/10 Ended 7/19/10

Total Depth 10.0

Location Parcel 108-Bojangles

Logged By T. Stewart

Depth To Water

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
0.0			0.0			Red Brown, Light Yellowish Brown, Lean CLAY, Hard, Dry, No Odor	0.0
5.0			0.0	CL			5.0
10.0	SS		0.0	CL		Red Brown, Light Yellowish Brown, Lean CLAY, Tacky, Dry, No Odor	10.0
Boring Terminated at 10 feet in RESIDUAL							

LOG A EWNN05 111989B.GPJ LOG A EWNN05.GDT 8/6/10



Kleinfelder
 313 Gallimore Dairy Road
 Greensboro, NC 27409
 Telephone: 336-668-0093
 Fax: 336-668-3868

Remarks Sample B-1 collected from 7.5-10 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.

Client NCDOT
 Project Name U-0209B
 Number 111989
 Location Parcel 108-Bojangles

Drill Contractor Probe Technology
 Drill Method 2 inch Direct Push
 Drilling Started 7/19/10 Ended 7/19/10
 Logged By T. Stewart

LOG OF BORING B-2
 SHEET 1 OF 1

Elevation --
 Total Depth 10.0
 Depth To Water

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
0.0			0.0			Red Brown, Yellowish Brown, Lean CLAY, Hard, Dry, No Odor	0.0
5.0			0.0	CL			5.0
10.0	SS		0.0	CL		Red Brown, Yellowish Brown, Lean CLAY, Tacky, Dry, No Odor	10.0
Boring Terminated at 10 feet in RESIDUAL							

LOG A EWNND05 111989B.GPJ LOG A EWNND05.GDT 8/6/10



Kleinfelder
 313 Gallimore Dairy Road
 Greensboro, NC 27409
 Telephone: 336-668-0093
 Fax: 336-668-3868

Remarks Sample B-2 collected from 7.5-10 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.

Client NCDOT
 Project Name U-0209B
 Number 111989
 Location Parcel 108-Bojangles

Drill Contractor Probe Techology
 Drill Method 2 inch Direct Push
 Drilling Started 7/19/10 Ended 7/19/10
 Logged By T. Stewart

LOG OF BORING B-3
 SHEET 1 OF 1

Elevation --
 Total Depth 10.0
 Depth To Water

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
0.0			0.0			Red Brown, Yellowish Brown, Lean CLAY, Hard, Dry, No Odor	0.0
5.0			0.0	CL			5.0
10.0	SS		0.0				10.0
Boring Terminated at 10 feet in RESIDUAL							

LOG A EWNN05 111989B.GPJ LOG A EWNN05.GDT 8/6/10



Kleinfelder
 313 Gallimore Dairy Road
 Greensboro, NC 27409
 Telephone: 336-668-0093
 Fax: 336-668-3868

Remarks Sample B-3 collected from 7.5-10 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.

LOG OF BORING B-4

SHEET 1 OF 1

Client NCDOT

Drill Contractor Probe Technology

Project Name U-0209B

Drill Method 2 inch Direct Push

Elevation --

Number 111989

Drilling Started 7/19/10 Ended 7/19/10

Total Depth 10.0

Location Parcel 108-Bojangles

Logged By T. Stewart

Depth To Water

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
0.0			0.0			Red Brown, Trace Yellowish Brown, Lean CLAY, Hard, Dry, No Odor	0.0
5.0			0.0	CL			5.0
7.5			0.0				7.5
10.0	SS		0.0				10.0
Boring Terminated at 10 feet in RESIDUAL							

LOG A EWNIN05 111989B.GPJ LOG A EWNIN05.GDT 8/6/10



Kleinfelder
 313 Gallimore Dairy Road
 Greensboro, NC 27409
 Telephone: 336-668-0093
 Fax: 336-668-3868

Remarks Sample B-4 collected from 7.5-10 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.



Full-Service Analytical &
Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert No. 37735

Case Narrative

07/29/2010

Kleinfelder SE, Inc. (NCDOT Project)
John Stewart
313 Gallimore Dairy Rd.
Greensboro, NC 27409

Project: NCDOT Parcel #108
Project No.: WBS# 34749.1.1
Lab Submittal Date: 07/19/2010
Prism Work Order: 0070513

This data package contains the analytical results for the project identified above and includes a Case Narrative, Sample Results and Chain of Custody. Unless otherwise noted, all samples were received in acceptable condition and processed according to the referenced methods.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative.

Please call if you have any questions relating to this analytical report.

Respectfully,

PRISM LABORATORIES, INC.

VP Laboratory Services

Reviewed By

Data Qualifiers Key Reference:

- A Surrogate recovery is above control limits. Analyte not detected. No further action taken.
- BRL Below Reporting Limit
- MDL Method Detection Limit
- RPD Relative Percent Difference
- * Results reported to the reporting limit. All other results are reported to the MDL with values between MDL and reporting limit indicated with a J.

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449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543
Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



Sample Receipt Summary

07/29/2010

Prism Work Order: 0070513

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received
B-1(7.5-10)	0070513-01	Soil	07/19/10	07/19/10
B-2(7.5-10)	0070513-02	Soil	07/19/10	07/19/10
B-3(7.5-10)	0070513-03	Soil	07/19/10	07/19/10
B-4(7.5-10)	0070513-04	Soil	07/19/10	07/19/10

Samples received in good condition at 3.2 degrees C unless otherwise noted.

APPENDIX D

Kleinfelder SE, Inc. (NCDOT Project)
Attn: John Stewart
313 Gallimore Dairy Rd.
Greensboro, NC 27409

Project: NCDOT Parcel #108
Project No.: WBS# 34749.1.1
Sample Matrix: Soil

Client Sample ID: B-1(7.5-10)
Prism Sample ID: 0070513-01
Prism Work Order: 0070513
Time Collected: 07/19/10 13:29
Time Submitted: 07/19/10 14:57

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	10	1.9	1	*8015C	7/28/10 3:19	GRR	P0G0529
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			89 %		49-124	
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	BRL	mg/kg dry	8.8	1.1	50	*8015C	7/23/10 20:36	HPE	P0G0492
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			95 %		55-129	
General Chemistry Parameters									
% Solids	58.6	% by Weight	0.100	0.100	1	*SM2540 G	7/26/10 12:18	JAB	P0G0505

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Kleinfelder SE, Inc. (NCDOT Project)
Attn: John Stewart
313 Gallimore Dairy Rd.
Greensboro, NC 27409

Project: NCDOT Parcel #108
Project No.: WBS# 34749.1.1
Sample Matrix: Soil

Client Sample ID: B-2(7.5-10)
Prism Sample ID: 0070513-02
Prism Work Order: 0070513
Time Collected: 07/19/10 13:49
Time Submitted: 07/19/10 14:57

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.2	1.7	1	*8015C	7/28/10 3:55	GRR	POG0529
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			81 %		49-124	
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	BRL	mg/kg dry	9.1	1.2	50	*8015C	7/23/10 21:08	HPE	POG0492
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			127 %		55-129	
General Chemistry Parameters									
% Solids	65.3	% by Weight	0.100	0.100	1	*SM2540 G	7/26/10 12:18	JAB	POG0505

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Kleinfelder SE, Inc. (NCDOT Project)
 Attn: John Stewart
 313 Gallimore Dairy Rd.
 Greensboro, NC 27409

Project: NCDOT Parcel #108
 Project No.: WBS# 34749.1.1
 Sample Matrix: Soil

Client Sample ID: B-3(7.5-10)
 Prism Sample ID: 0070513-03
 Prism Work Order: 0070513
 Time Collected: 07/19/10 14:20
 Time Submitted: 07/19/10 14:57

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.8	1.6	1	*8015C	7/27/10 19:03	GRR	P0G0529
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			93 %		49-124	
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	BRL	mg/kg dry	7.9	1.0	50	*8015C	7/23/10 21:39	HPE	P0G0492
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			140 %		55-129	A
General Chemistry Parameters									
% Solids	71.2	% by Weight	0.100	0.100	1	*SM2540 G	7/26/10 12:18	JAB	P0G0505

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Kleinfelder SE, Inc. (NCDOT Project)
 Attn: John Stewart
 313 Gallimore Dairy Rd.
 Greensboro, NC 27409

Project: NCDOT Parcel #108
 Project No.: WBS# 34749.1.1
 Sample Matrix: Soil

Client Sample ID: B-4(7.5-10)
 Prism Sample ID: 0070513-04
 Prism Work Order: 0070513
 Time Collected: 07/19/10 14:40
 Time Submitted: 07/19/10 14:57

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Diesel Range Organics by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.4	1.5	1	*8015C	7/28/10 4:30	GRR	POG0529
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			96 %		49-124	
Gasoline Range Organics by GC/FID									
Gasoline Range Organics	BRL	mg/kg dry	5.9	0.77	50	*8015C	7/23/10 22:10	HPE	POG0492
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			120 %		55-129	
General Chemistry Parameters									
% Solids	74.3	% by Weight	0.100	0.100	1	*SM2540 G	7/26/10 12:18	JAB	POG0505

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Kleinfelder SE, Inc. (NCDOT Project)
Attn: John Stewart
313 Gallimore Dairy Rd.
Greensboro, NC 27409

Project: NCDOT Parcel #108
Project No: WBS# 34749.1.1

Prism Work Order: 0070513
Time Submitted: 7/19/10 2:57:00PM

Gasoline Range Organics by GC/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0G0492 - 5035										
Blank (P0G0492-BLK1) Prepared & Analyzed: 07/23/10										
Gasoline Range Organics	BRL	5.0	mg/kg wet							
Surrogate: a,a,a-Trifluorotoluene	4.50		mg/kg wet	5.00		90	55-129			
LCS (P0G0492-BS1) Prepared & Analyzed: 07/23/10										
Gasoline Range Organics	41.5	5.0	mg/kg wet	50.0		83	67-116			
Surrogate: a,a,a-Trifluorotoluene	5.15		mg/kg wet	5.00		103	55-129			
LCS Dup (P0G0492-BSD1) Prepared & Analyzed: 07/23/10										
Gasoline Range Organics	44.4	5.0	mg/kg wet	50.0		89	67-116	7	200	
Surrogate: a,a,a-Trifluorotoluene	5.25		mg/kg wet	5.00		105	55-129			

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Kleinfelder SE, Inc. (NCDOT Project)
Attn: John Stewart
313 Gallimore Dairy Rd.
Greensboro, NC 27409

Project: NCDOT Parcel #108
Project No: WBS# 34749.1.1

Prism Work Order: 0070513
Time Submitted: 7/19/10 2:57:00PM

Diesel Range Organics by GC/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0G0529 - 3545A										
Blank (P0G0529-BLK1) Prepared: 07/26/10 Analyzed: 07/27/10										
Diesel Range Organics	BRL	7.0	mg/kg wet							
Surrogate: o-Terphenyl	1.37		mg/kg wet	1.60		86	49-124			
LCS (P0G0529-BS1) Prepared: 07/26/10 Analyzed: 07/27/10										
Diesel Range Organics	60.0	7.0	mg/kg wet	80.0		75	55-109			
Surrogate: o-Terphenyl	1.69		mg/kg wet	1.60		106	49-124			
LCS Dup (P0G0529-BSD1) Prepared: 07/26/10 Analyzed: 07/27/10										
Diesel Range Organics	60.5	7.0	mg/kg wet	79.9		76	55-109	0.9	200	
Surrogate: o-Terphenyl	1.68		mg/kg wet	1.60		105	49-124			
Matrix Spike (P0G0529-MS1) Source: 0070513-03 Prepared: 07/26/10 Analyzed: 07/27/10										
Diesel Range Organics	91.4	9.8	mg/kg dry	112	5.28	77	50-117			
Surrogate: o-Terphenyl	2.59		mg/kg dry	2.25		115	49-124			
Matrix Spike Dup (P0G0529-MSD1) Source: 0070513-03 Prepared: 07/26/10 Analyzed: 07/27/10										
Diesel Range Organics	84.1	9.8	mg/kg dry	112	5.28	70	50-117	8	24	
Surrogate: o-Terphenyl	2.66		mg/kg dry	2.25		118	49-124			

Sample Extraction Data

Prep Method: 3545A

Lab Number	Batch	Initial	Final	Date
0070513-01	P0G0529	25.02 g	1 mL	07/26/10
0070513-02	P0G0529	25.05 g	1 mL	07/26/10
0070513-03	P0G0529	25.1 g	1 mL	07/26/10
0070513-04	P0G0529	25.07 g	1 mL	07/26/10

Prep Method: 5035

Lab Number	Batch	Initial	Final	Date
0070513-01	P0G0492	4.87 g	5 mL	07/23/10
0070513-02	P0G0492	4.22 g	5 mL	07/23/10
0070513-03	P0G0492	4.47 g	5 mL	07/23/10
0070513-04	P0G0492	5.69 g	5 mL	07/23/10

NO PREP

Lab Number	Batch	Initial	Final	Date
0070513-01	P0G0505	30 g	30 mL	07/23/10
0070513-02	P0G0505	30 g	30 mL	07/23/10
0070513-03	P0G0505	30 g	30 mL	07/23/10
0070513-04	P0G0505	30 g	30 mL	07/23/10

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Full-Service Analytical & Environmental Solutions

448 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
 Phone: 704/529-6364 • Fax: 704/935-0409

Client Company Name: Kleinfield
 Report To/Contact Name: John Stewart
 Reporting Address: 313 Collins Drive Rd., Greensboro, NC 27409

Phone: 336-688-0893 Fax (Yes) (No)
 Email (Yes) (No) Email Address: John Stewart@Kleinfield.com
 EDD Type: PDF Excel Other Kleinfield.com
 Site Location Name: Parcel 108
 Site Location Physical Address: Charlotte, NC

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING:

Project Name: ACDOT- Parcel 108
 Short Hold Analysis: (Yes) (No) (Yes) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I III IV) provisions and/or GC Requirements
 Invoice To: John Stewart
 Address: Same

Purchase Order No./Billing Reference: 111989
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 "Working Days" Standard 10 days Pre-Approved
 Samples received after 15:00 will be processed next business day.
 Turnaround time is based on business days, excluding weekends and holidays.
 (SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY

Samples in Pack upon arrival? YES NO N/A
 Received ON WET ICE? Temp: 32
 PROPER PRESERVATIVES indicated?
 Received WITH IN HOLDING TIME?
 CUSTODY SEALS INTACT?
 VOLUMES rec'd W/OULT HEADSPACE?
 PROPER CONTAINERS used?
 YES NO N/A

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
 Certification: NELAC _____ USACE _____ FL _____ NC _____
 SC _____ OTHER _____ N/A _____
 Water Chlorinated: YES _____ NO X
 Sample Iced Upon Collection: YES _____ NO X

CLIENT DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER		PRESERVATIVES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO. SIZE				
B-1(7.5-10)	7-19-10	1329	SO	4		Midhard X			01
B-2(7.5-10)		1349	SO	4		X			02
B-3(7.5-10)		1420	SO	4		X			03
B-4(7.5-10)		1440	SO	4		X			04
Sampler's Signature: <u>[Signature]</u> Sampled By (Print Name): <u>Tina M. Stewart</u> Affiliation: <u>Kleinfield</u>									

PRESS DOWN FIRMLY - 3 COPIES

PRISM USE ONLY
 Site Arrival Time:
 Site Departure Time:
 Field Tech Fee:
 Mileage:

Additional Comments:
WBS# 74749.11

Date: 7/19/10 Military Hours: 1457
 Date: 7-19-10
 Date: 14:57
 COC Group No.: 0070513

Received By: (Signature) [Signature]
 Received By: (Signature) [Signature]
 Received For Prism Laboratories By: [Signature]

Method of Shipment: NOTE! ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC RECEIVED AT THE LABORATORY.
 Fed Ex UPS Hand-delivered Prism Field Service Other
 NPDES: NC SC NC SC NC SC NC SC NC SC
 DRINKING WATER: NC SC NC SC
 SOLID WASTE: NC SC NC SC
 RCRA: NC SC NC SC
 CERCLA: NC SC NC SC
 LANDFILL: NC SC NC SC
 OTHER: NC SC NC SC

SEE REVERSE FOR TERMS & CONDITIONS
 Page 9 of 9