PRELIMINARY SITE ASSESSMENT

PARCEL #142, STRICKLAND CITGO NO. 6
2425 LEGION ROAD, FAYETTEVILLE, NORTH CAROLINA

FAYETTEVILLE – SR 1132 (LEGION ROAD) FROM SR 1363 (ELK ROAD)
TO SR 1007 (OWEN ROAD)
CUMBERLAND COUNTY, NORTH CAROLINA

NCDOT WBS ELEMENT 34865.2.3
STATE PROJECT U-2809B

December 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.
313 Gallimore Dairy Road
Greensboro, North Carolina 27409

Kleinfelder Project No. 113754

KLEINFELDER
Bright People. Right Solutions.

December 20, 2010
File No. 113754 | GSO10R248

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. 34865.2.3, State Project U-2809B
Parcel # 142, Strickland Citgo No. 6
2425 Legion Road, Fayetteville
Cumberland 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 hydrocarbon concentrations 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.

Peter F. Pozzo, L.G.
Staff Professional II

John M. Stewart, L.G.
Senior Professional

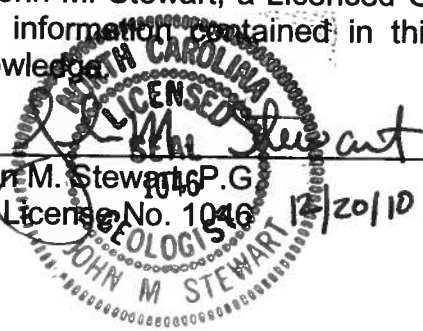
PFP/JMS:cas
Enclosure

PRELIMINARY SITE ASSESSMENT

Site Name and Location:	Parcel #142, Strickland Citgo No. 6 2425 Legion Road Fayetteville, Cumberland County, North Carolina
Latitude and Longitude:	35° 00' 50" N, 78° 54' 26" W
Facility ID Number:	0-012085
Land Owner	Donald Strickland 1894 Evans Dairy Road Fayetteville, North Carolina 28312
UST Owner	Donald Strickland 2425 Legion Road Fayetteville, North Carolina 28301
NCDOT Project No.:	NCDOT WBS Element 34865.2.3 State Project U-2809B
Date of Report:	December 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. 1046 12/20/10

TABLE OF CONTENTS

1.0 INTRODUCTION

Kleinfelder Southeast, Inc. (Kleinfelder) has prepared this Preliminary Site Assessment (PSA) report documenting the assessment activities performed at the Strickland Citgo No. 6 property (Parcel 142) located at 2425 Legion Road in Fayetteville, Cumberland County, North Carolina (Figure 1). This assessment was conducted on behalf of the North Carolina Department of Transportation (NCDOT) in accordance with Kleinfelder's October 7, 2010 proposal.

NCDOT is proposing to widen SR 1132 (Legion Road) from SR 1363 (Elk Road) to SR 1007 (Owen Road). The proposed right-of-way/easement is located along the west side of the Strickland Citgo No. 6 property (Figure 2). 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 SR 1132 (Legion Road) from SR 1363 (Elk Road) to SR 1007 (Owen Road).

1.1 Site Description

The proposed right-of-way/easement is located along west side of the property owned by Donald Strickland and at the time of our site reconnaissance, this parcel was occupied by Strickland Citgo No. 6. The building on the property was reportedly used as a convenience store and gas station. A building was located in the middle of the property. A canopy with two gasoline dispensers was located at the front of the property. A tank field containing three USTs was located between the store and canopy approximately 25 feet from the proposed easement. Site photographs are shown in Appendix A.

1.2 Site Location

The facility is located on the east side of Legion Road approximately 200 feet south of the intersection of Legion Road and West Mountain (SR 1154). The site is bound to the west by Legion Road then wooded undeveloped property. The site is bound to the north by a Mexican restaurant and to the south and east by a hospice care facility.

1.3 NCDENR File Review

Kleinfelder reviewed incident files at the North Carolina Department of Environment and Natural Resources (NDENR) Fayetteville Regional Office. The site is an active gasoline station which uses two USTs (one 10,000-gallon and one 4,000-gallon) to store gasoline and one UST (2,500-gallon) to store kerosene. Three gasoline USTs and one kerosene UST were reportedly removed in May 2006. No incidents were reported for the property.

2.0 SITE ASSESSMENT

2.1 Geophysical Investigation

Pyramid Environmental & Engineering, P.C (Pyramid) conducted a geophysical investigation of the proposed right-of-way/easement on the west side of the property on October 21, 2010. Pyramid utilized electromagnetic (EM) induction technology to identify potential geophysical anomalies and potential USTs at the site. On October 29, 2010, Pyramid conducted a ground penetrating radar (GPR) survey of several magnetic anomalies identified during the EM survey. 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 Northstate Utility Locating, Inc. (Northstate).

2.2 Soil Sampling

To determine if contaminated soil may be encountered during the proposed construction activities, soil samples were collected along the west side of the Strickland Citgo No. 6 property. A Kleinfelder geologist and direct push rig crew met at the property on November 17, 2010; Kleinfelder advanced seven soil borings

(SS-1 to SS-7) by direct push technology (DPT). The approximate location of the borings is shown on Figure 3.

Soil borings were advanced to a depth of eight feet below the ground surface (bgs). The borings were located along the proposed drainage features and near the corners of the existing pump island. Soil samples were collected by driving a macrocore sampler in 4-foot intervals in each boring. Each 4-foot sample sleeve was divided in half and screened for volatile organic compounds in the field using a MiniRae 2000 photoionization detectors (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. Copies of the boring logs are included in Appendix C.

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 to SGS, a NCDOT contract laboratory for chemical analysis.

3.0 RESULTS

3.1 Geophysical Investigation

Pyramid's results indicate that the GPR and EM investigation 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) hydrocarbons 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 encountered in the soil borings at a depth of 7 to 8 feet below land surface; and
- TPH was not detected in the soil samples at concentrations above the method detection limits.

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.

The information included on graphic representations in the report has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. These documents are not intended for use as a land survey product, nor are they designed or intended as a construction design document. The use or misuse of the information contained on these graphic representations is at the sole risk of the party using or misusing the information.

TABLES

TABLE 1: SOIL SAMPLE PID RESULTS

SAMPLE LOCATION	DEPTH (feet bgs)	PID READINGS
SS-1	1.5 - 2.0	4
	3.5 - 4.0	4.2
	5.5 - 6.0	**5.2**
	7.5 - 8.0	3.5
SS-2	1.5 - 2.0	3.1
	3.5 - 4.0	3.2
	5.5 - 6.0	**4.1**
	7.5 - 8.0	3.8
SS-3	1.5 - 2.0	4.6
	3.5 - 4.0	4.2
	5.5 - 6.0	**5.6**
	7.5 - 8.0	83.8
SS-4	1.5 - 2.0	2.3
	3.5 - 4.0	6.2
	5.5 - 6.0	**170**
	7.5 - 8.0	180
SS-5	1.5 - 2.0	3.6
	3.5 - 4.0	**4.2**
	5.5 - 6.0	1.4
	7.5 - 8.0	1.1
SS-6	1.5 - 2.0	1.4
	3.5 - 4.0	1.5
	5.5 - 6.0	**11.8**
	7.5 - 8.0	1.4
SS-7	1.5 - 2.0	3.0
	3.5 - 4.0	57.9
	5.5 - 6.0	**124.0**
	7.5 - 8.0	115.0

Notes:
Samples were collected on November 17, 2010.
Readings reported in parts per million
feet bgs = feet below ground surface
Bold = Selected for laboratory analysis

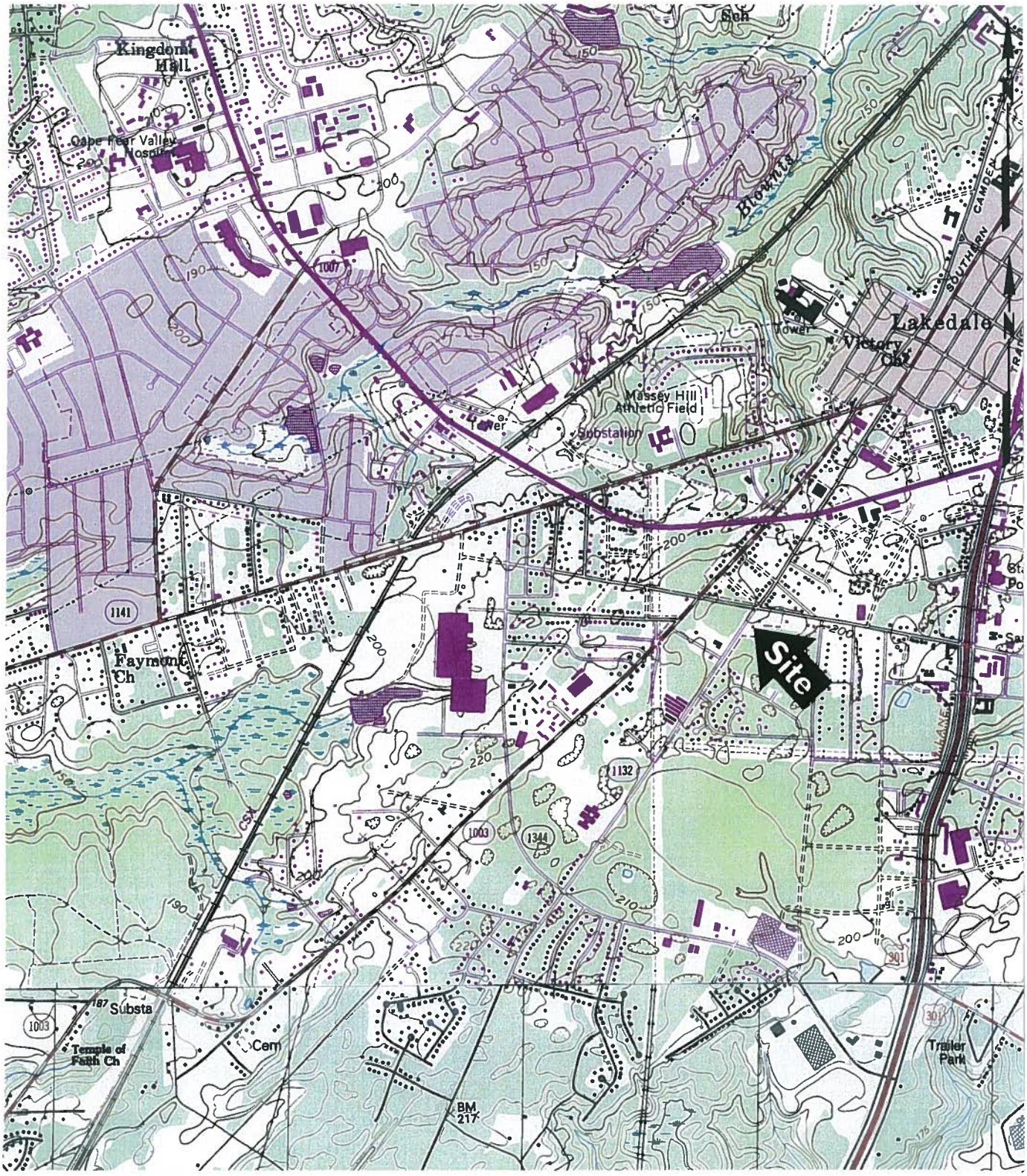
TABLE 2: SOIL SAMPLE ANALYTICAL SUMMARY

SAMPLE ID	COLLECTION DATE	DRO	GRO
SS-1 6.0 ft	11/17/2010	BQL	BQL
SS-2 6.0 ft	11/17/2010	BQL	BQL
SS-3 6.0 ft	11/17/2010	BQL	BQL
SS-4 6.0 ft	11/17/2010	BQL	BQL
SS-5 4.0 ft	11/17/2010	BQL	BQL
SS-6 6.0 ft	11/17/2010	BQL	BQL
SS-7 6.0 ft	11/17/2010	BQL	BQL
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
BQL = Below quantitation limit
Bold denotes concentration exceeds the State Action Level

FIGURES



KLEINFELDER
Bright People. Right Solutions.

www.kleinfelder.com

FIGURE 1
SITE LOCATION MAP

PARCEL # 142, STRICKLAND #6 CITCO
2462 LEGION ROAD
CUMBERLAND COUNTY, NORTH CAROLINA

DATE: December 17, 2010	APPROVED BY:	SCALE: 1" to 24,000'
SOURCE: USGS 7.5' Topographic Map, Fayetteville & Hope Mills Quadrangle		PROJECT NO. 113754

DRAWING NAME: Parcel-142_DonaldStrickland.dgr

KLEINFELDER JOB NUMBER: 113754

OFFICE LOCATION: GREENSBORO

NAD 83/2001

SR 1132 LEGION RD 29.5' BST

SR 1154 WEST MOUNTAIN 21.5' BST

BLOWOUT FORCE PIPE

MTL CANOPY

CONC 2 GAS PUMPS

USTs

ISBLKBUS

ISFBUS

CONVERT EXISTING DI TO CB

EXISTING R/W

142

DONALD STRICKLAND
DB 7387 PG 707
PB 9 PG 31

GRAPHIC SCALE
50 0 50 100

KLEINFELDER
Bright People. Right Solutions.
www.kleinfelder.com

PROJECT NO.	113754
DRAWN:	11/24/2010
DRAWN BY:	DJH
CHECKED BY:	JMS
SCALE:	1" = 50'

SITE MAP

PARCEL #142
DONALD STRICKLAND
2425 LEGION ROAD

TIP NO. U-2809B | WBS ELEMENT NO. 34865.2.3

CUMBERLAND COUNTY
NORTH CAROLINA

FIGURE: **2**

DRAWING NAME: Parcel-142_DonaldStrickland.dgr

KLEINFELDER JOB NUMBER: 113754

OFFICE LOCATION: GREENSBORO

NAD 83/2001

SR 1132 LEGION RD 29.5' BST

SR 1154 WEST MOUNTAIN 21.5' BST

SS-1 BQL BQL
SS-2 BQL BQL
SS-3 BQL BQL
SS-4 BQL BQL
SS-5 BQL BQL
SS-6 BQL BQL
SS-7 BQL BQL

MTL CANOPY
CONC 2 GAS PUMPS
USTs
ISBLKBUS
ISFBUS
BST
CONC
BLOWOUT FORCE PIPE
CONVERT EXISTING DI TO CB
EXISTING R/W

142

DONALD STRICKLAND
DB 7387 PG 707
PB 9 PG 31

EXPLANATION

SS-1 **SOIL BORING**

BQL / BQL GRO / DRO **IN PPM**

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

GRAPHIC SCALE
50 0 50 100

KLEINFELDER
Bright People. Right Solutions.
www.kleinfelder.com

PROJECT NO.	113754
DRAWN:	11/24/2010
DRAWN BY:	DJH
CHECKED BY:	JMS
SCALE:	1" = 50'

BORING LOCATION MAP
PARCEL #142
DONALD STRICKLAND
2425 LEGION ROAD

TIP NO. U-2809B | WBS ELEMENT NO. 34865.2.3

CUMBERLAND COUNTY
NORTH CAROLINA

FIGURE: **3**

APPENDIX A

SITE PHOTOGRAPHS
KLEINFELDER PROJECT NO. 113754
PARCEL NO. 142 STRICKLAND #6 PROPERTY

Photograph 1 – View looking east at area of future DOT drainage

Photograph 2 – View looking southeast where two samples were collected in the grass island.

SITE PHOTOGRAPHS
KLEINFELDER PROJECT NO. 113754
PARCEL NO. 142 STRICKLAND #6 PROPERTY

Photograph 3 – View looking south. A sample was collected from the two corners of the concrete pad.

APPENDIX B

Pyramid Project # 2010258

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

DONALD STRICKLAND PROPERTY
PARCEL 142
Fayetteville, North Carolina

November 5, 2010

Report prepared for: John Stewart P.G.
Kleinfelder
313 Gallimore Dairy Road
Greensboro, NC 27409

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

Reviewed by: Douglas A Canavello
Douglas Canavello, P.G.

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
P.O. Box 16265
GREENSBORO, NC 27416-0265
(336) 335-3174

Kleinfelder
GEOPHYSICAL INVESTIGATION REPORT
DONALD STRICKLAND PROPERTY
PARCEL 142
Fayetteville, North Carolina

TABLE OF CONTENTS PAGE

FIGURES

1.0 INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Kleinfelder across the western portion (proposed Right-of-Way area) of the Donald Strickland property (Parcel 142) located along the easterly side of Legion Road approximately 0.1 mile south of the Legion Road and West Mountain Drive intersection in Fayetteville, North Carolina. Conducted on October 21 and 29, 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 area of interest at Parcel 142.

Kleinfelder representative Mr. John Stewart, P.G provided site maps to Pyramid Environmental personnel during the week of September 30, 2010, which identified the geophysical survey area of the Strickland property. The geophysical survey area had a maximum length and width of 220 feet and 70 feet, respectively. Photographs of the geophysical equipment used in this investigation and a portion of the geophysical survey area at Parcel 142 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. The EM survey was performed on October 21, 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 (X-axis) 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 October 29, 2010 across selected EM61 differential anomalies and steel reinforced concrete pavement 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 **Figure 2.** The bottom coil results represent the most sensitive component of the EM61 instrument and detect metal objects regardless of size. The bottom coil response can be used to delineate metal conduits or utility lines, small, isolated metal objects, and areas containing insignificant metal debris. The differential results are obtained from the difference between the top and bottom coils of the EM61 instrument. The differential results focus on the larger metal objects such as drum and UST-size objects and ignore the smaller insignificant metal objects.

Preliminary geophysical results obtained from Parcel 142 were reported to Mr. Stewart on November 2, 2010.

3.0 DISCUSSION OF RESULTS

The linear EM61 bottom coil anomalies intersecting grid coordinates X=25 Y=80, X=40 Y=220, X=41 Y=35, and X=50 Y=207 are probably in response to buried utility lines or conduits. The EM61 anomalies centered near grid coordinates X=30 Y=154, X=50 Y=85, X=60 Y=190, and X=65 Y=208 are probably in response to known surface objects such as metal poles, utility line-related boxes or guy wires. GPR data suggest the high amplitude EM61 anomaly centered near grid coordinates X=70

Y=137 is in response to steel reinforced concrete, the pump island and buried conduits. GPR data also suggest that the low amplitude EM61 differential anomaly centered near grid coordinates X=30 Y=43 is in response to a portion of a buried line.

The EM61 metal detection and GPR results suggest the surveyed portion of Parcel 142 does not contain metallic USTs.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected across the area of interest at the Donald Strickland property (Parcel 142) located in Fayetteville, North Carolina, provides the following summary and conclusions:

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

- The linear EM61 bottom coil anomalies intersecting grid coordinates X=25 Y=80, X=40 Y=220, X=41 Y=35, and X=50 Y=207 are probably in response to buried utility lines or conduits.

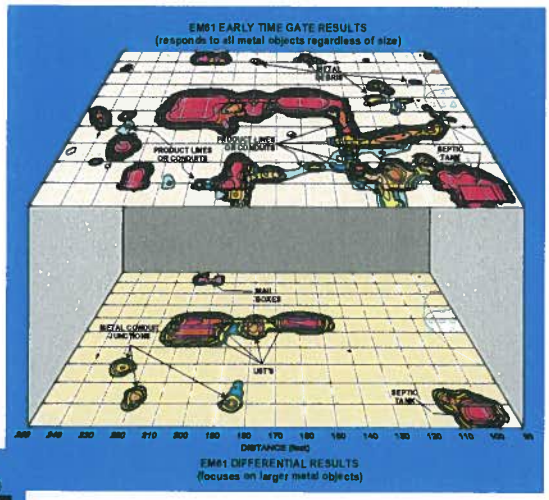
- GPR data suggest the high amplitude EM61 anomaly centered near grid coordinates X=70 Y=137 is in response to steel reinforced concrete, the pump island and buried conduits

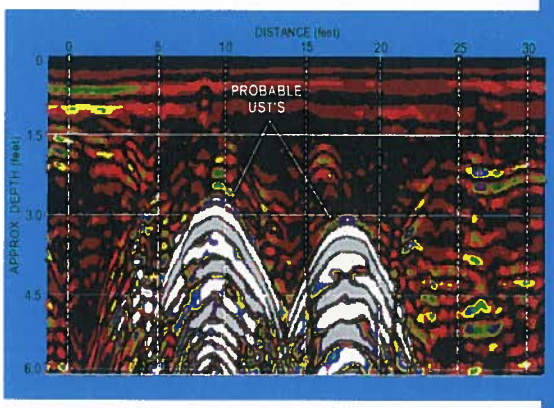
- The EM61 metal detection and GPR results suggest the surveyed portion of Parcel 142 does not contain metallic USTs.

5.0 LIMITATIONS

EM61 and GPR surveys have been performed and this report prepared for Kleinfelder in accordance with generally accepted guidelines for EM61 metal detection and GPR surveys. It is generally recognized that the results of the geophysical surveys are non-unique and may not represent actual

subsurface conditions. The geophysical 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.

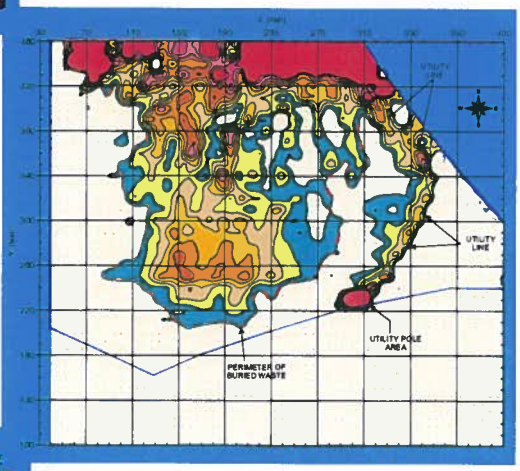


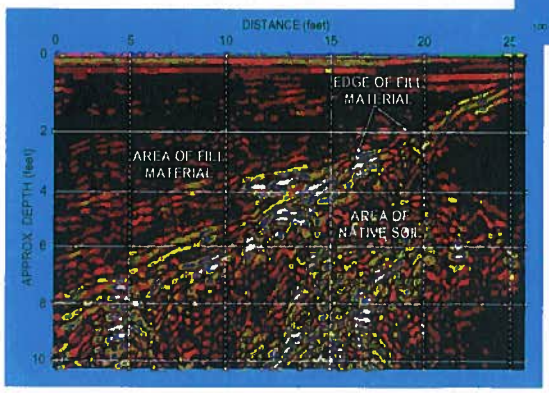


FIGURES

(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 at Parcel 142 on October 21, 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 Parcel 142 on October 29, 2010.

The photograph shows the front (western) portion of the Donald Strickland property (Parcel 142) located at the intersection of Legion Road and West Mountain Drive in Fayetteville, North Carolina. The photograph is viewed in a northeasterly direction.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

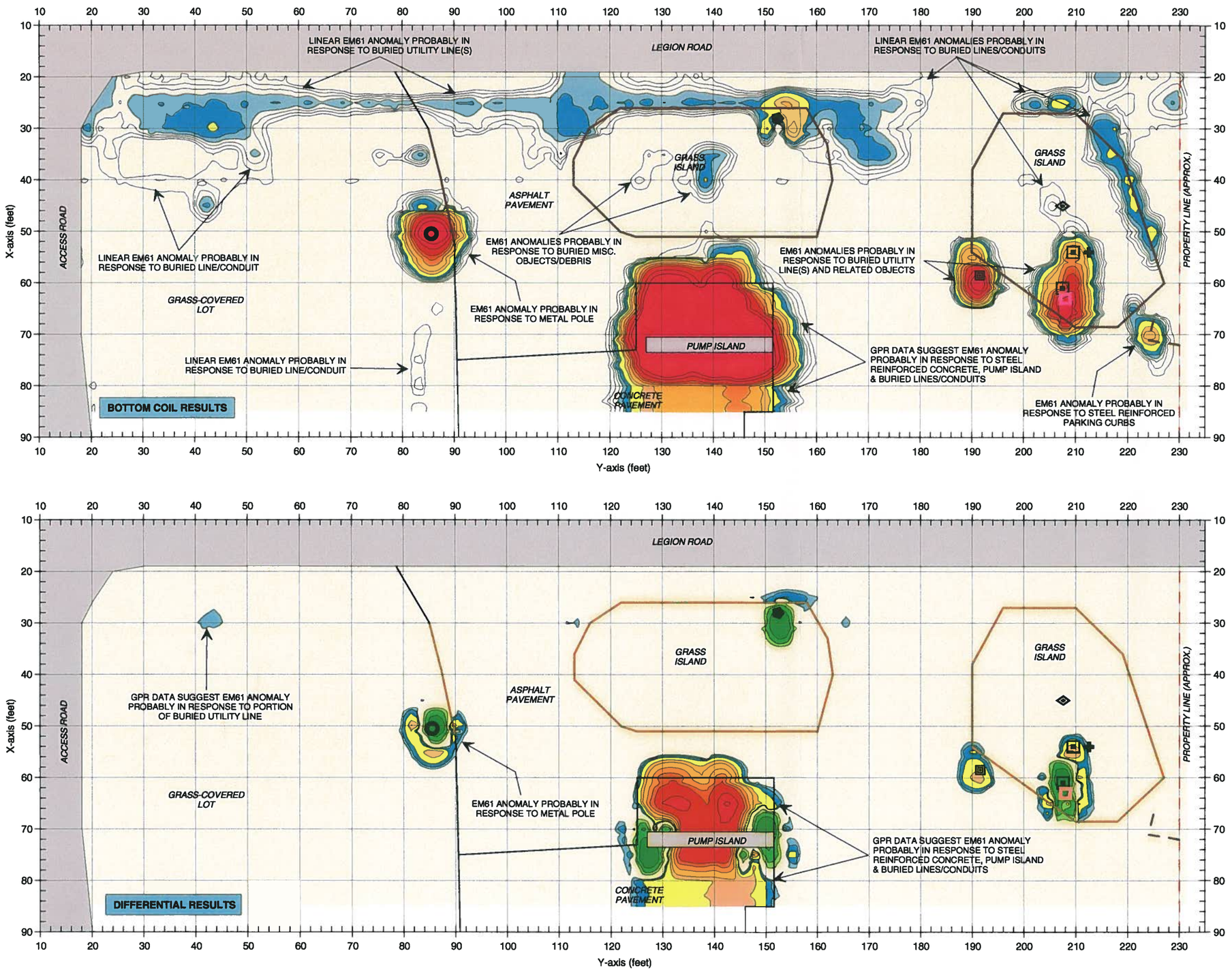
CLIENT	KLEINFELDER	DATE	11/02/10	DRWN	MJD
SITE	DONALD STRICKLAND PROPERTY (PARCEL 142)	LAY		CHKD	
CITY	FAYETTEVILLE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	J-NO.	2010-258	APVD	

GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS

FIGURE 1

EM61 METAL DETECTION RESULTS

FIGURE 2



APPROXIMATE NORTH

LEGEND

- SURVEY AREA: EM61 OR GPR DATA ACQUIRED ALONG X-AXIS TRENDING LINES SPACED 5 FEET APART
- UNKNOWN VALVE COVER
- GUY WIRE
- METAL SIGN POLE
- TELEPHONE
- ROAD SIGN
- UTILITY LINE BOX
- UTILITY OR LAMP POLE
- WATER METER BOX
- CONCRETE PARKING CURBS
- CONCRETE CURBING

EM61 METAL DETECTION RESPONSE (MILLIVOLTS)

-1000 -900 -800 -700 -600 -500 -400 -300 -200 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 200 300 400 500 600 700 800 900 1000

The contour plot shows the bottom coil (most sensitive) and differential results of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris.

The EM61 data were collected on October 21, 2010 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on October 29, 2010 across selected EM61anomalies using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna. The geophysical investigation suggests that the surveyed portion of the property does not contain metallic USTs.

GRAPHIC SCALE IN FEET

DRAWN	MJD		
CHKD			
DATE	11/03/10	LAY	
DWG		PROJECT	2010-258

CLIENT: KLEINFELDER
SITE: DONALD STRICKLAND PROPERTY (PARCEL 142)
CITY: FAYETTEVILLE
STATE: NORTH CAROLINA
TITLE: GEOPHYSICAL RESULTS

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

APPENDIX C

LOG OF BORING SS-1

SHEET 1 OF 1

Client NCDOT | Drill Contractor Kleinfelder | Elevation –

Project Name U-2809B | Drill Method 2 inch Direct Push | Total Depth 8.0

Number 113754 | Drilling Started 11/17/10 Ended 11/17/10 | Depth To Water

Location Strickland (#6 Citgo) #142 | Logged By P. Pozzo

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			4	SW		Tan SAND	
			4.2	SW		Tan SAND	
5	SS 1-6'		5.2	SW		White Tan SAND	5
			3.5	SW		White Tan SAND in Water Table	
						Boring Terminated at 8 feet in RESIDUAL	
10							10
15							15
20							20
25							25
30							30

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

Remarks Sample SS-1 collected at 6 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.

LOG A EWNN05 113754A.GPJ LOG A EWNN05.GDT 12/16/10

LOG OF BORING SS-2

SHEET 1 OF 1

Client NCDOT | Drill Contractor Kleinfelder

Project Name U-2809B | Drill Method 2 inch Direct Push | Elevation –

Number 113754 | Drilling Started 11/17/10 Ended 11/17/10 | Total Depth 8.0

Location Strickland (#6 Citgo) #142 | Logged By P. Pozzo | Depth To Water

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			3.1	SW		Tan SAND	
			3.2	SW		Tan SAND	
5	SS 2-6'		4.1	SW		White Tan SAND	5
			3.8	SW		White Tan SAND in Water Table	
						Boring Terminated at 8 feet in RESIDUAL	
10							10
15							15
20							20
25							25
30							30

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

Remarks Sample SS-2 collected at 6 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.

LOG OF BORING SS-3

SHEET 1 OF 1

Client NCDOT | Drill Contractor Kleinfelder | Elevation --

Project Name U-2809B | Drill Method 2 inch Direct Push | Total Depth 8.0

Number 113754 | Drilling Started 11/17/10 Ended 11/17/10 | Depth To Water

Location Strickland (#6 Citgo) #142 | Logged By P. Pozzo

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			4.6	SW		Tan SAND	
			4.2	SW		Tan SAND	
5	SS 3-6'		5.6	SW		White Tan SAND	5
			83.8	SW		White Tan SAND in Water Table	
						Boring Terminated at 8 feet in RESIDUAL	
10							10
15							15
20							20
25							25
30							30

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

Remarks Sample SS-3 collected at 6 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.

LOG A EWNN05 113754A.GPJ LOG A EWNN05.GDT 12/16/10

LOG OF BORING SS-4

SHEET 1 OF 1

Client NCDOT | Drill Contractor Kleinfelder | Elevation --

Project Name U-2809B | Drill Method 2 inch Direct Push | Total Depth 8.0

Number 113754 | Drilling Started 11/17/10 Ended 11/17/10 | Depth To Water

Location Strickland (#6 Citgo) #142 | Logged By P. Pozzo

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			2.3	SW		Tan SAND	
			6.2	SW		Tan SAND	
5	SS 4-6'		170	SW		White Tan SAND	5
			180	SW		White Tan SAND in Water Table	
						Boring Terminated at 8 feet in RESIDUAL	
10							10
15							15
20							20
25							25
30							30

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

Remarks Sample SS-4 collected at 6 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.

LOG A EWNN05 113754A.GPJ LOG A EWNN05.GDT 12/16/10

LOG OF BORING SS-5

SHEET 1 OF 1

Client NCDOT
Project Name U-2809B
Number 113754
Location Strickland (#6 Citgo) #142

Drill Contractor Kleinfelder
Drill Method 2 inch Direct Push
Drilling Started 11/17/10 Ended 11/17/10
Logged By P. Pozzo

Elevation --
Total Depth 8.0
Depth To Water

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			3.6	SW		Tan SAND	
	SS 5-4'		4.2	SW		Tan SAND	
5			1.4	SW		White Tan SAND	5
			1.1	SW		White Tan SAND in Water Table	
						Boring Terminated at 8 feet in RESIDUAL	
10							10
15							15
20							20
25							25
30							30

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

Remarks Sample SS-5 collected at 4 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.

LOG OF BORING SS-6

SHEET 1 OF 1

Client NCDOT
Project Name U-2809B
Number 113754
Location Strickland (#6 Citgo) #142

Drill Contractor Kleinfelder
Drill Method 2 inch Direct Push
Drilling Started 11/17/10 Ended 11/17/10
Logged By P. Pozzo

Elevation --
Total Depth 8.0
Depth To Water

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			1.4	SW		Tan SAND	
			1.5	SW		Tan SAND	
5	SS 6-6'		1.8	SW		White Tan SAND	5
			1.4	SW		White Tan SAND in Water Table	
						Boring Terminated at 8 feet in RESIDUAL	
10							10
15							15
20							20
25							25
30							30

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

Remarks Sample SS-6 collected at 6 ft. submitted for laboratory analysis.

See key sheet for symbols and abbreviations used above.

LOG A EWNN05 113754A.GPJ LOG A EWNN05.GDT 12/16/10

LOG OF BORING SS-7

SHEET 1 OF 1

Client NCDOT
Project Name U-2809B
Number 113754
Location Strickland (#6 Citgo) #142

Drill Contractor Kleinfelder
Drill Method 2 inch Direct Push
Drilling Started 11/17/10 Ended 11/17/10
Logged By P. Pozzo

Elevation --
Total Depth 8.0
Depth To Water

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			3	SW		Tan SAND	
				SM		Tan Silty SAND	
			57.9				
5	SS 7-6'			SM		White Tan Silty SAND	5
			124				
				SM		White Tan Silty SAND in Water Table	
			115				
						Boring Terminated at 8 feet in RESIDUAL	
10							10
15							15
20							20
25							25
30							30

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

Remarks

See key sheet for symbols and abbreviations used above.

LOG A EWNN05 113754A.GPJ LOG A EWNN05.GDT 12/16/10

APPENDIX D

SGS

Peter Pozzo
Trigon/Kleinfelder
313 Gallimore Dairy Road
Greensboro, NC 27409

Report Number: G118-597

Client Project: NCDOT Fayetteville PSA

Dear Peter Pozzo,

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 Lori Lockamy 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 12/10/10

for: Project Manager
Lori Lockamy

Date

List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

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

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

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

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

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

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

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

% Rec = Percent Recovery

% soilds = Percent Solids

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

MI34.021808.4

SGS North America, Inc.

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

Client Sample ID: 142 SS-1 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-22A
Lab Project ID: G118-597
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 11/17/2010 14:04
Date Received: 11/19/2010
Matrix: Soil
Solids 96.94

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.32	mg/Kg	1	11/30/10 02:28

Surrogate Spike Results

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

Comments:

Batch Information

Analytical Batch: VP112910
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 5.82 g
Final Volume: 5 mL

Analyst: LMC

SGS North America, Inc.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 142 SS-1 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-22D
Lab Project ID: G118-597

Date Collected: 11/17/2010 14:04
Date Received: 11/19/2010
Matrix: Soil
Solids 96.94
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.39	mg/Kg	1	11/22/10 17:52

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	31.9	79.7

Comments:

Batch Information

Analytical Batch: EP112210
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17791
Prep Method: 3541
Prep Date: 11/19/10
Initial Prep Wt/Vol: 32.3 G
Prep Final Vol: 10 mL

Analyst: EK

NC Certification #481

Reviewed By:

SGS North America, Inc.

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

Client Sample ID: 142 SS-2 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-23A
Lab Project ID: G118-597
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 11/17/2010 13:52
Date Received: 11/19/2010
Matrix: Soil
Solids 96.01

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.74	mg/Kg	1	11/30/10 02:55

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	97.9	97.9		70-130

Comments:

Batch Information

Analytical Batch: VP112910
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 5.44 g
Final Volume: 5 mL

Analyst: LMC

SGS North America, Inc.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 142 SS-2 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-23D
Lab Project ID: G118-597

Date Collected: 11/17/2010 13:52
Date Received: 11/19/2010
Matrix: Soil
Solids 96.01
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.50	mg/Kg	1	11/22/10 18:20

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	30.7	76.8

Comments:

Batch Information

Analytical Batch: EP112210
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17791
Prep Method: 3541
Prep Date: 11/19/10
Initial Prep Wt/Vol: 32.07 G
Prep Final Vol: 10 mL

Analyst: EX

NC Certification #481

Reviewed By:

SGS North America, Inc.

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

Client Sample ID: 142 SS-3 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-24A
Lab Project ID: G118-597
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 11/17/2010 13:39
Date Received: 11/19/2010
Matrix: Soil
Solids 96.35

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.73	mg/Kg	1	11/30/10 03:22

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	96.9	96.9		70-130

Comments:

Batch Information

Analytical Batch: VP112910
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 5.43 g
Final Volume: 5 mL

Analyst: LMC

SGS North America, Inc.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 142 SS-3 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-24D
Lab Project ID: G118-597

Date Collected: 11/17/2010 13:39
Date Received: 11/19/2010
Matrix: Soil
Solids 96.35
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.46	mg/Kg	1	11/22/10 18:48

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	30.1	75.2

Comments:

Batch Information

Analytical Batch: EP112210
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17791
Prep Method: 3541
Prep Date: 11/19/10
Initial Prep Wt/Vol: 32.12 G
Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

Reviewed By: MM

SGS North America, Inc.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 142 SS-4 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-25A
Lab Project ID: G118-597
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 11/17/2010 13:26
Date Received: 11/19/2010
Matrix: Soil
Solids 95.70

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.90	mg/Kg	1	11/30/10 03:49

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	94.3	94.3		70-130

Comments:

Batch Information

Analytical Batch: VP112910
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 5.31 g
Final Volume: 5 mL

Analyst: _____

SGS North America, Inc.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 142 SS-4 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-25D
Lab Project ID: G118-597

Date Collected: 11/17/2010 13:26
Date Received: 11/19/2010
Matrix: Soil
Solids 95.70
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.38	mg/Kg	1	11/22/10 22:07

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

Comments:

Batch Information

Analytical Batch: EP112210
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17791
Prep Method: 3541
Prep Date: 11/19/10
Initial Prep Wt/Vol: 32.75 G
Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

Reviewed By: DRO.XLS

SGS North America, Inc.

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

Client Sample ID: 142 SS-5 4'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-26A
Lab Project ID: G118-597
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 11/17/2010 13:14
Date Received: 11/19/2010
Matrix: Soil
Solids 95.29

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.62	mg/Kg	1	11/30/10 04:16

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	96.9	96.9		70-130

Comments:

Batch Information

Analytical Batch: VP112910
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 5.6 g
Final Volume: 5 mL

Analyst: LMC

SGS North America, Inc.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 142 SS-5 4'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-26D
Lab Project ID: G118-597

Date Collected: 11/17/2010 13:14
Date Received: 11/19/2010
Matrix: Soil
Solids 95.29
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.22	mg/Kg	1	11/25/10 23:56

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	29.6	73.9

Comments:

Batch Information

Analytical Batch: EP112410
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17808
Prep Method: 3541
Prep Date: 11/23/10
Initial Prep Wt/Vol: 33.72 G
Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

Reviewed By: DRO.XLS

SGS North America, Inc.

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

Client Sample ID: 142 SS-6 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-27A
Lab Project ID: G118-597
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 11/17/2010 13:01
Date Received: 11/19/2010
Matrix: Soil
Solids 96.07

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.88	mg/Kg	1	11/30/10 04:42

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	94.1	94.1		70-130

Comments:

Batch Information

Analytical Batch: VP112910
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 5.31 g
Final Volume: 5 mL

Analyst: LMC

SGS North America, Inc.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 142 SS-6 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-27D
Lab Project ID: G118-597

Date Collected: 11/17/2010 13:01
Date Received: 11/19/2010
Matrix: Soil
Solids 96.07
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.22	mg/Kg	1	11/26/10 00:23

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	32	80

Comments:

Batch Information

Analytical Batch: EP112410
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17808
Prep Method: 3541
Prep Date: 11/23/10
Initial Prep Wt/Vol: 33.45 G
Prep Final Vol: 10 mL

Analyst: _____

NC Certification #481

Reviewed By: _____
DRO.XLS

SGS North America, Inc.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 142 SS-7 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-28A
Lab Project ID: G118-597
Report Basis: Dry Weight

Analyzed By: LMC
Date Collected: 11/17/2010 12:50
Date Received: 11/19/2010
Matrix: Soil
Solids 95.31

Analyte	Result	RL	Units	Dilution Factor	Date Analyzed
Gasoline Range Organics	BQL	5.54	mg/Kg	1	11/30/10 05:09

Surrogate Spike Results

	Added	Result	Recovery	Flag	Limits
BFB	100	94.4	94.4		70-130

Comments:

Batch Information

Analytical Batch: VP112910
Analytical Method: 8015
Instrument ID: GC4
Analyst: LMC

Prep Method: 5035
Initial Wt/Vol: 5.68 g
Final Volume: 5 mL

Analyst: LMC

NC Certification #481
N.C. Certification #481

Reviewed By:

SGS North America, Inc.

Results for Total Petroleum Hydrocarbons
by GC/FID 8015

Client Sample ID: 142 SS-7 6'
Client Project ID: NCDOT Fayetteville PSA
Lab Sample ID: G118-597-28D
Lab Project ID: G118-597

Date Collected: 11/17/2010 12:50
Date Received: 11/19/2010
Matrix: Soil
Solids 95.31
Report Basis: Dry Weight

Parameter	Result	RL	Units	Dilution Factor	Date Analyzed
Diesel Range Organics	BQL	6.28	mg/Kg	1	11/26/10 00:52

Surrogate Spike Results	Spike Added	Control Limits	Spike Result	Percent Recovery
OTP	40	40-140	30.4	75.9

Comments:

Batch Information

Analytical Batch: EP112410
Analytical Method: 8015
Instrument: GC6
Analyst: DTF

Prep batch: 17808
Prep Method: 3541
Prep Date: 11/23/10
Initial Prep Wt/Vol: 33.43 G
Prep Final Vol: 10 mL

Analyst: _____

NC Certification #481

Reviewed By: _____

CHAIN OF CUSTODY RECORD
SGS North America Inc.

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

www.us.sgs.com

099436

(1)

CLIENT: Kleinfelder

CONTACT: Peter Pozzo PHONE NO: (336) 6680093

PROJECT: NCDOT Fayetteville BA SITE/PWSID#: 4-2809.B

REPORTS TO: Peter Pozzo
John Stewart FAX NO.: ( )

INVOICE TO: Carol Shore QUOTE #: NCDOT

P.O. NUMBER: WBS 34865.2.3

SGS Reference: WBS 34865.2.3

PAGE 1 OF 5

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Preservatives Used	Analysis Required (3) D20	G20	G260	REMARKS
	43 SS-3 4'	11/7/10	1500	Soil	3	G		✓	✓		
✓	43 SS-4 6'	11/7/10	1509	Soil	3	G		✓	✓		
✓	43 SS-5 6'	11/7/10	1517	Soil	3	G		✓	✓		
✓	19 SS-1 4'	11/8/10	759	Soil	3			✓	✓		
✓	19 SS-2 4'	"	808	"	3			✓	✓		
✓	19 SS-3 4'	"	~~824~~ 824	"	3			✓	✓		
✓	22 SS-4 2'	"	829	"	6			✓	✓	✓	
✓	22 SS-5 2'	"	910	"	6			✓	✓	✓	
✓	22 SS-6 4'	"	851	"	6			✓	✓	✓	
✓	147 SS-1 8'	↓	1017	↓	6	↓		✓	✓	✓	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
	11/9/10	1735	FedEx
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 11/19/10	Time 9:55	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 4.6, 5.1

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

SGS North America, Inc.

N.C. Certification #481

CHAIN OF CUSTODY RECORD
SGS North America Inc.

SGS

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

www.us.sgs.com

099437

SGS North America, Inc.

(1)
CLIENT: Kleinfelder
CONTACT: Peter Pozzo PHONE NO: (336) 668 0093
PROJECT: NCDOT Fayetteville SITE/PWSID#: PSA U-2809B
REPORTS TO: Peter Pozzo, John Stewart FAX NO.: ( )
INVOICE TO: Carol Shore QUOTE #: NCDOT
P.O. NUMBER: WBS 34865.2.3

SGS Reference: WBS 34865 2.3
PAGE 2 OF 5

(2) (3)

Preservatives Used: MeOH

Analysis Required: DRO, GRO

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	DRO	GRO	REMARKS
	168 SS-1 2'	11/17/10	9:50	Soil	3	G	✓	✓	
	168 SS-2 8'	↓	10:19	↓	↓	↓	✓	✓	
	168 SS-3 6'	↓	10:06	↓	↓	↓	✓	✓	
	168 SS-5 8'	↓	9:34	↓	↓	↓	✓	✓	
	168 SS-6 2'	↓	10:35	↓	↓	↓	✓	✓	
	168 SS-7 2'	↓	10:44	↓	↓	↓	✓	✓	
	168 SS-8 8'	↓	10:58	↓	↓	↓	✓	✓	
	168 SS-9 2'	↓	11:06	↓	↓	↓	✓	✓	
	168 SS-10 8'	↓	11:21	↓	↓	↓	✓	✓	
	168 SS-11 8'	↓	11:32	↓	↓	↓	✓	✓	

(5)

	Date	Time	Received By:
Collected/Relinquished By:(1) [signature]	11/18/10	1735	FedEx
Relinquished By: (2)			
Relinquished By: (3)			
Relinquished By: (4)	11/19/10	9:55	[signature]

(4)
Shipping Carrier:
Shipping Ticket No:
Samples Received Cold? (Circle) (YES) NO
Temperature°C: 4.6, 5.1
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

CHAIN OF CUSTODY RECORD
SGS North America Inc.

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

www.us.sgs.com

099435

(1)

CLIENT: Kleinfelder

CONTACT: Peter Pozzo PHONE NO: (336) 668-0043

PROJECT: NCDOT Fayetteville EFSA SITE/PWSID#: U-2809B

REPORTS TO: Peter Pozzo, John Stewart FAX NO.:( )

INVOICE TO: Carol Shore QUOTE #: NCDOT

P.O. NUMBER: WBS 34865.2.3

SGS Reference: WBS 34865.2.3

PAGE 3 OF 5

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP, G=GRAB)	Preservatives Used / Analysis Required (3)	REMARKS
	168 SS-12 2'	11/17/10	1148	Soil	3	G	D20 G20 mem and	
	142 SS-1 6'		1404					
	142 SS-2 6'		1352					
	142 SS-3 6'		1339					
	142 SS-4 6'		1326					
	142 SS-5 4'		1314					
	142 SS-6 6'		1301					
	142 SS-7 6'		1250					
	43 SS-1 6'		1437					
	43 SS-2 6'		1447					

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
	11/18/10	1735	FedEx
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 11/19/10	Time 9:55	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 4.6, 5.1

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

SGS North America, Inc.

N.C. Certification #481

SGS

CHAIN OF CUSTODY RECORD
SGS North America Inc.

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

www.us.sgs.com

099431

(1)

CLIENT: KleinFelder

CONTACT: Peter Pozzo PHONE NO:( )

PROJECT: NCDOT Fayetteville BSA SITE/PWSID#:

REPORTS TO:

FAX NO.:( )

INVOICE TO: QUOTE #:

P.O. NUMBER: WBS 34965.2.3

SGS Reference: G118-597

PAGE 4 OF 5

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP, G=GRAB)	Preservatives Used	Methanol	Sodium Bisulfate							Analysis Required (3) D20	G20	8260	REMARKS
	147 SS-2 2'	11/8/10	1024	Soil	6	G										✓	✓	✓	
	147 SS-3 4'		1040		6											✓	✓	✓	
	147 SS-4 6'		1107		6											✓	✓	✓	
	147 SS-5 8'		1124													✓	✓	✓	
	147 SS-6 2'		1252													✓	✓	✓	
	147 SS-7 4'		1304													✓	✓	✓	
	147 SS-8 8'		1320													✓	✓	✓	
	147 SS-9 8'		1338													✓	✓	✓	
	147 SS-10 4'		1406													✓	✓	✓	
	147 HA-1 (2')		1500		✓	✓										✓	✓	✓	Sample discharged in PER P. POZZO. WLL

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
	11/8/10	1735	FedEx
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 11/9/10	Time 9:55	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 4.6, 5.1

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

SGS

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
• Alaska • New Jersey • North Carolina • Maryland • New York • Ohio
www.us.sgs.com

099434

CLIENT:	Kleinfelder
CONTACT:	Peter Pozzo
PHONE NO:( )	
PROJECT:	NCDOT Fayetteville PSA
SITE/PWSID#:	
REPORTS TO:	
FAX NO.:( )	
INVOICE TO:	
QUOTE #:	
P.O. NUMBER:	WBS 34865.2.3
SGS Reference:	G118-597
PAGE	5 OF 5

Preservatives Used: 1 / Methanol / Bottle Bisulfate

Analysis Required: D20 / G20 / 8260

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	D20	G20	8260							REMARKS
	147 HA-2 4	111810	1434	Soil	6	6	✓	✓	✓							

	Date	Time	Received By:
Collected/Relinquished By:(1) [signature]	11/16/10	1735	Fed Ex
Relinquished By: (2)			
Relinquished By: (3)			
Relinquished By: (4)	11/18/10	9:55	[signature]

Shipping Carrier:	Samples Received Cold? (Circle) **YES** NO
Shipping Ticket No:	Temperature°C: 4.6, 5.1
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