

PRELIMINARY SITE ASSESSMENT

**GLADE VALLEY – US HIGHWAY 21 SOUTH FROM ROARING GAP TO SPARTA
PARCEL #182, CLINT F. BEDSAUL AND LINDA T. BEDSAUL PROPERTY
3166 US HIGHWAY 21 SOUTH
GLADE VALLEY, ALLEGHANY COUNTY, NORTH CAROLINA**

**NCDOT WBS ELEMENT 37044.1.1
STATE PROJECT R-3101**

January 13, 2012

Prepared for:

**Cyrus F. Parker, 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.
6200 Harris Technology Blvd.
Charlotte, North Carolina 28269**

Kleinfelder Project No. 123173

**Copyright 2012 Kleinfelder
All Rights Reserved**

**ONLY THE CLIENT OR ITS DESIGNATED REPRESENTATIVES MAY USE THIS DOCUMENT AND ONLY FOR THE SPECIFIC
PROJECT FOR WHICH THIS REPORT WAS PREPARED.**



January 13, 2012
123173 | CLT12R010

Cyrus F. Parker, L.G., P.E.
North Carolina Department of Transportation
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

**Subject: Preliminary Site Assessment
WBS Element No. 37044.1.1, State Project R-3101
Parcel #182, Clint F. Bedsaul and Linda T. Bedsaul Property
3166 US Highway 21 South
Glade Valley, Alleghany County, North Carolina**

Dear Mr. Parker:

Please find the enclosed 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 contaminant concentrations exceeding the State action levels for petroleum USTs. 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.

A handwritten signature in black ink, appearing to read "Travis O'Quinn".

Travis O'Quinn
Staff Professional I

A handwritten signature in blue ink, appearing to read "Craig D Neil".

Craig D Neil, P.G.
Senior Professional

TLO/CDN:jc
Enclosure

PRELIMINARY SITE ASSESSMENT

Site Name and Location: Parcel #182 Clint F. Bedsaul and Linda T. Bedsaul Property
3166 US Hwy 21 South
Glade Valley, Alleghany County, North Carolina

Latitude and Longitude: 36° 28' 44.03" N, 81° 04' 43.56"W

Facility ID Number: 0-030163

NCDOT Project No.: NCDOT WBS Element 37044.1.1
State Project R-3101

Date of Report: January 13, 2012

Consultant: Kleinfelder Southeast, Inc.
6200 Harris Technology Blvd
Charlotte, North Carolina 28269
Attn: Mr. Craig D. Neil
Phone: 704.598.1049 X457

Seal and Signature of Certifying Licensed Geologist

I, Craig D. Neil, 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.



Craig D. Neil, P.G.
NC License No. 1882

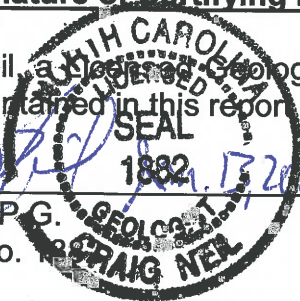


TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Site Description.....	1
1.2	Site Location.....	1
2.0	SITE ASSESSMENT	2
2.1	Geophysical Investigation.....	2
2.2	Soil Sampling.....	2
3.0	RESULTS	3
3.1	Geophysical Investigation.....	3
3.2	Soil Sampling.....	3
4.0	CONCLUSIONS AND RECOMMENDATIONS.....	3
5.0	LIMITATIONS	4

TABLES

- 1 Soil Sample PID Results
- 2 Soil Sample Analytical Summary

FIGURES

- 1 Site Location Map
- 2 Site Map
- 3 Boring Location Map

APPENDICES

- A Site Photographs
- B Pyramid Environmental & Engineering, P.C. Geophysical Survey Report
- C Boring Logs
- D Laboratory Report

1.0 INTRODUCTION

Kleinfelder Southeast, Inc. (Kleinfelder) has prepared this Preliminary Site Assessment (PSA) report documenting assessment activities performed at the Clint F. Bedsaul and Linda T Bedsaul Property (Parcel 182) located at 3166 US Highway 21 South in Glade Valley, Alleghany County, North Carolina (Figure 1). This assessment was conducted on behalf of the North Carolina Department of Transportation (NCDOT) in accordance with Kleinfelder's November 1, 2011 proposal.

NCDOT is proposing to widen US Highway 21 South (US 21) from Roaring Gap to Sparta. The proposed right-of-way includes a portion of Parcel 182 (Figure 2). Based on information provided by NCDOT, the site may have historically operated as a gasoline station. Therefore, 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 21 from Roaring Gap to Sparta.

1.1 Site Description

The proposed right-of-way includes approximately 15 to 20 feet on each side of the current US 21. At the time of our site reconnaissance, the site contained an office building/repair shop. According to NCDENR's UST Section Registry, one underground storage tank (UST) is registered at the site; however, the UST was not identified within the proposed DOT right-of-way. Furthermore, geophysical investigation did not identify any unknown metallic UST's within the proposed right-of-way. Site photographs are shown in Appendix A.

1.2 Site Location

The facility is located at 3166 US Highway 21 South in Glade Valley, North Carolina. The property is bound to the north by US 21 with residential and commercial properties beyond; east by Circle L Restaurant; west and south by Old US 21 and residential properties.

2.0 SITE ASSESSMENT

2.1 Geophysical Investigation

Pyramid Environmental & Engineering, P.C (Pyramid) conducted a geophysical investigation of the property on November 10, 2011. Pyramid utilized ground penetration radar (GPR) and electromagnetic (EM) induction technology to search for potential geophysical anomalies and potential USTs at the site. Pyramid did not identify potential geophysical anomalies or potential UST's at the site. A copy of the Pyramid Geophysical Investigation Report is included in Appendix B. Prior to conducting soil borings, 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, five soil samples were collected along the NCDOT proposed right-of-way. Kleinfelder met Probe Technology at the site on December 21, 2011. Probe Technology advanced five soil borings (SB-1 to SB-5) 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 ten feet below the ground surface (bgs) at each location. Soil borings SB-1 through SB-5 were located in front of the structure along the proposed right-of-way. Soil samples were collected by driving a macrocore sampler in five foot intervals in each boring. Each five 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. 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 Pace Analytical, a NCDOT contract laboratory, for chemical analysis

3.0 RESULTS

3.1 Geophysical Investigation

Pyramid concluded that the GPR and EM investigation did not detect metallic USTs within the survey area. Pyramid's report is included in Appendix B.

3.2 Soil Sampling

Gasoline range organics (GRO) or diesel range organics (DRO) were not detected in the soil samples above the laboratory detection limit or the North Carolina action levels. 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.

Based on laboratory analytical results and PID readings, no petroleum impacted soils above the North Carolina action levels were identified within the proposed right-of-way at the site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

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

- ◆ The GPR and EM investigation did not detect metallic USTs within the survey area.
- ◆ Groundwater was not encountered in the soil borings.
- ◆ GRO or DRO were not detected in borings above the laboratory detection limits or North Carolina action levels.
- ◆ Based on the soil samples and PID reading, no petroleum impacted soils were identified within the proposed right-of-way at the site.

Based on the results of the laboratory analysis, Kleinfelder does not recommend additional assessment or remediation at the site.

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
SB-1	0.0 - 2.5	0.1
	2.5-5.0	0.0
	5.0-7.5	0.0
	7.5-10.0	0.0
SB-2	0.0 - 2.5	0.2
	2.5-5.0	0.2
	5.0-7.5	0.0
	7.5-10.0	0.1
SB-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
SB-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
SB-5	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 December 21, 2011.

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	DEPTH	COLLECTION DATE	DRO	GRO
SB-1	7.5-10.0	12/21/2011	<5.4	<5.8
SB-2	7.5-10.0	12/21/2011	<5.6	<6.3
SB-3	7.5-10.0	12/21/2011	<5.4	<6.3
SB-4	7.5-10.0	12/21/2011	<5.4	<6.5
SB-5	7.5-10.0	12/21/2011	<5.9	<6.3
State Action Level (Petroleum UST)			10	10

Notes:

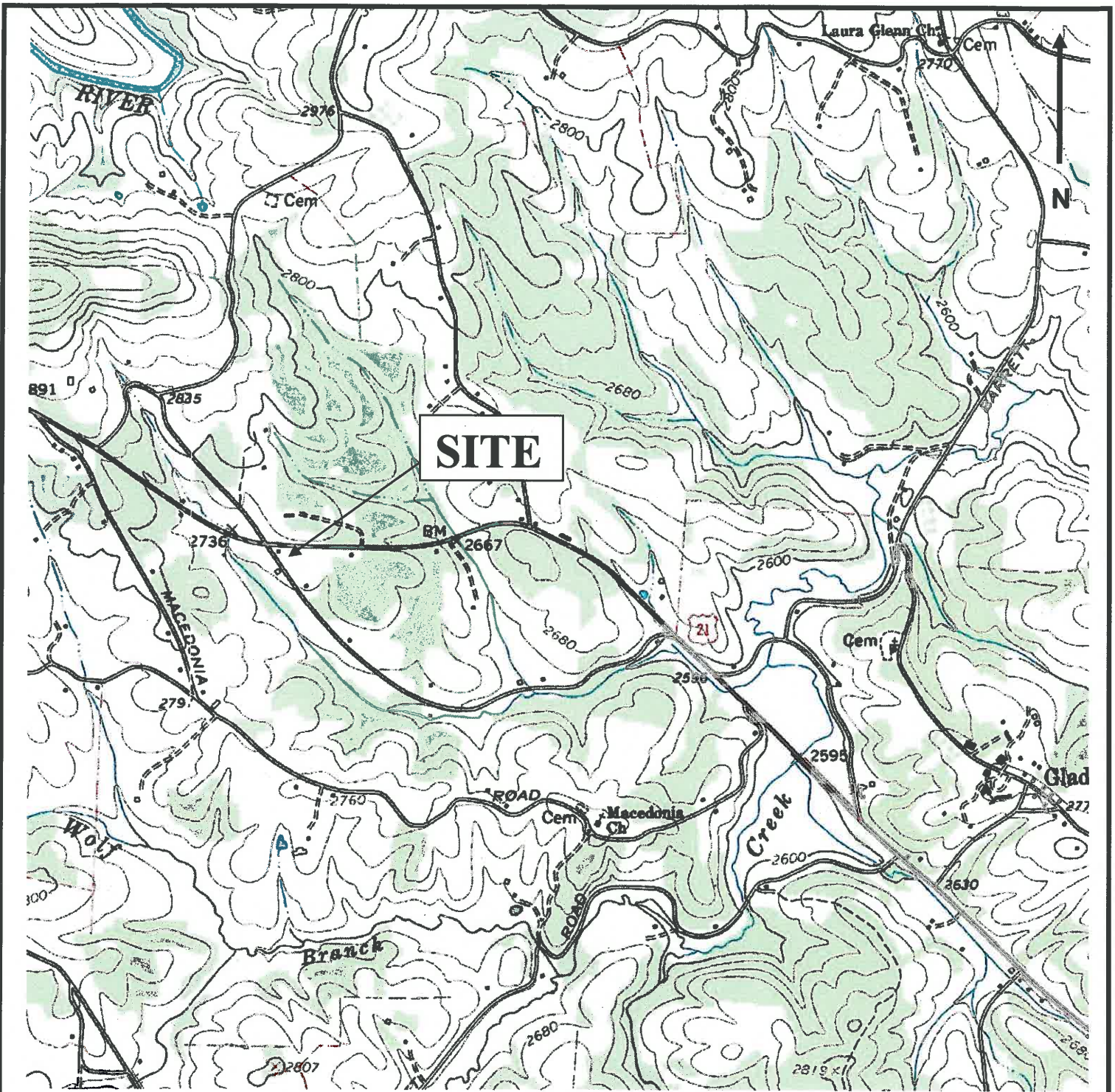
Results presented in milligrams per kilogram, analogous to parts per million

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

Bold denotes concentration exceeds the State Action Level for Petroleum USTs

FIGURES



6200 HARRIS TECHNOLOGY BOULEVARD
 CHARLOTTE, NORTH CAROLINA
 PHONE: 704.598.1049

**FIGURE 1
 SITE LOCATION MAP**

**PARCEL #182 – CLINT F. BEDSAUL &
 LINDA T. BEDSAUL PROPERTY
 3166 US HWY 21 SOUTH
 GLADE VALLEY, NORTH CAROLINA**

DATE: 1/4/2011

APPROVED BY:

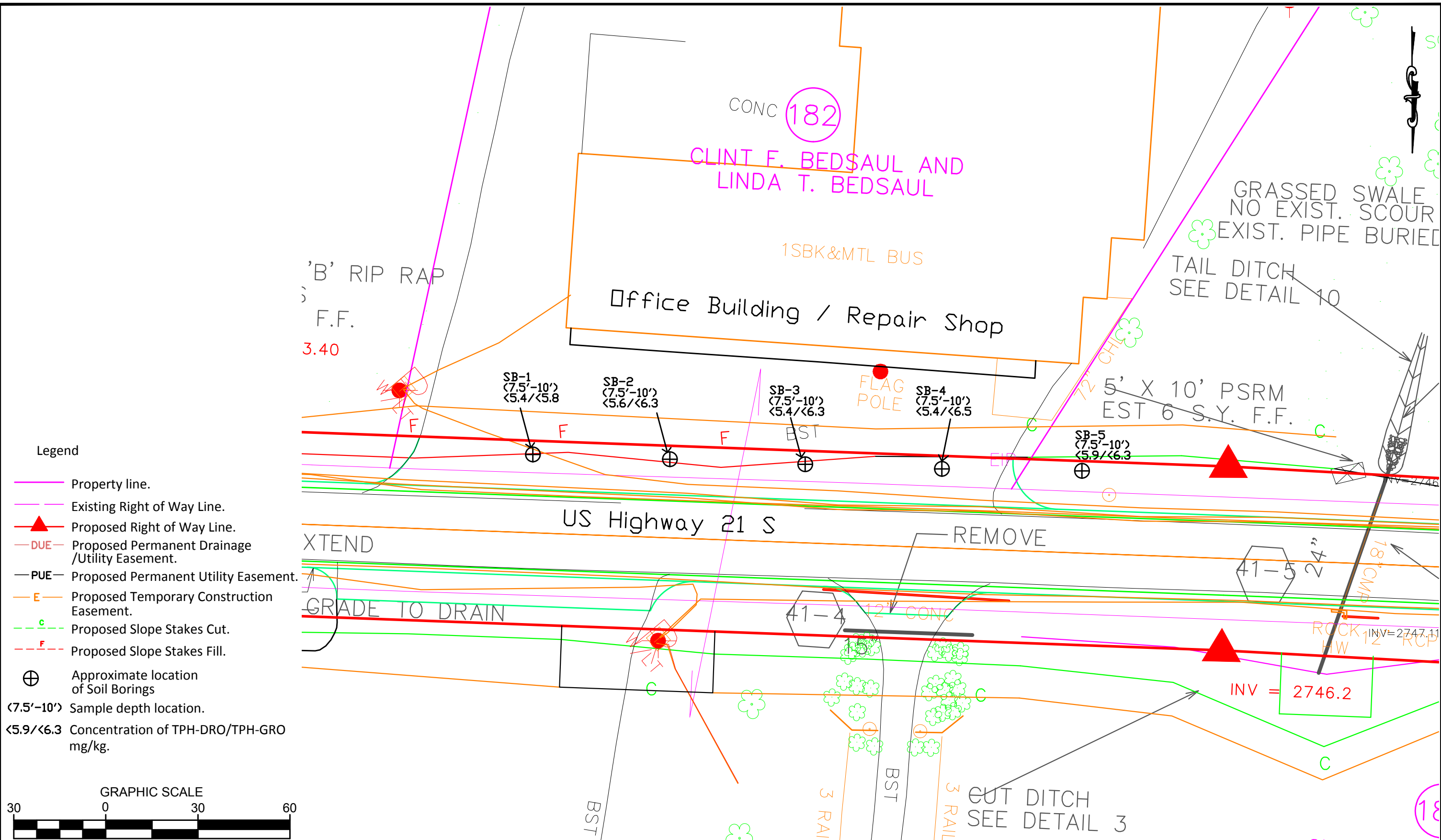
CON

SCALE: as shown

SOURCE: USGS Topographic
 Orthophoto Map, NC Glade Valley 1968

PROJECT NO: 123173

ATTACHED IMAGES: XRef: R3101_ddc_DRN_110701; XRef: r3101_ddc_ss_shifted_1_090624; XRef: r3101_ddc_dsn_090611; XRef: r3101_is_pml_081022; XRef: r3101_is_pml_060321; XRef: r3101_is_sue_060321
 ATTACHED XREFS: XRef: W:\share\ENVIRONMENTAL\Projects\Active Projects\123173_Spartan\CDOT\123101\Figures\CONC\182\182.dwg; XRef: W:\share\ENVIRONMENTAL\Projects\Active Projects\123173_Spartan\CDOT\123101\Figures\CONC\182\182.dwg; XRef: W:\share\ENVIRONMENTAL\Projects\Active Projects\123173_Spartan\CDOT\123101\Figures\CONC\182\182.dwg



The information included on this graphic representation 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. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or misusing the information.



PROJECT NO.	123173
DRAWN:	APR 2012
DRAWN BY:	AB
CHECKED BY:	TO
FILE NAME:	Parcel 182-197_042012.dwg

BORING LOCATION and CONTAMINATION MAP	
Parcel # 182	
Clint F. & Linda T. Bedsaul Property	
NCDOT WBS ELEMENT 37044.1.1	
STATE PROJECT R-3101	
3166 US Hwy 21 South	
GLADE VALLEY, NORTH CAROLINA	

FIGURE
3

APPENDIX A

SITE PHOTOGRAPHS
KLEINFELDER PROJECT NO. 123173
PARCEL NO. 182



Photograph 1 View of the Clint F. Bedsaul and Linda T. Bedsaul property looking east. Highway 21 is to the left and the office building/repair shop is to the right in the photograph.



Photograph 2 View of the asphalt drive / parking area within the proposed right-of-way. The photograph is facing west.

APPENDIX B

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

CLINT & LINDA BEDSAUL PROPERTY (PARCEL 182)

3166 US Highway 21 South

Glade Valley, North Carolina

State Project R-3101 WBS Element 37044.1.1

December 6, 2011

**Report prepared for: NC Department of Transportation
GeoTechnical Engineering Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, North Carolina 27699-1589**

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

Reviewed by: 
Douglas Canavello, P.G.

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

**NC Department of Transportation
GEOPHYSICAL INVESTIGATION REPORT
CLINT & LINDA BEDSAUL (PARCEL 182)
3166 US Highway 21 South
Glade Valley, North Carolina
State Project R-2612B WBS Element 34483.1.1**

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1.0 INTRODUCTION	1
2.0 FIELD METHODOLOGY	1
3.0 DISCUSSION OF RESULTS	2
4.0 SUMMARY & CONCLUSIONS	3
5.0 LIMITATIONS	3

FIGURES

- | | |
|----------|--|
| Figure 1 | Geophysical Equipment & Site Photographs |
| Figure 2 | EM61 Metal Detection Results |

1.0 INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for the North Carolina Department of Transportation (NCDOT) – Geotechnical Unit across the proposed right-of-way (ROW) area at the Clint and Linda Bedsaul property (Parcel 182) located at 3166 US Highway 21 South near Glade Valley, North Carolina. Conducted on November 10, 2011, the geophysical investigation was performed as part of the NCDOT preliminary site assessment for the US Highway 21 from Roaring Gap to Sparta project (State Project R-3101, WBS Element – 37044.1.1), to determine if unknown, metallic, underground storage tanks (USTs) were present beneath the proposed ROW area of the property

The Clint and Linda Bedsaul property consists of a freight shipping facility with an office building located in the front portion of the property. The proposed ROW area includes a portion of the asphalt-covered parking area and grass yards that lies between the office building and US Highway 21. The geophysical survey area has a maximum length and width of 360 feet and 40 feet, respectively.

NCDOT representative Mr. Ethan J. Caldwell, LG, PE provided site information which identified the geophysical survey area to Pyramid Environmental personnel during the week of October 17, 2011. Photographs of the geophysical equipment used in this investigation and the geophysical survey area of the Bedsaul property are shown in **Figure 1**.

2.0 FIELD METHODOLOGY

Prior to conducting the geophysical investigation, a 10-foot by 20-foot survey grid was established across the geophysical survey area 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 November 10, 2011 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 northwesterly-southeasterly 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.

Preliminary geophysical results obtained from the site were emailed to Kleinfelder representative Mr. Craig Neal, PG during the week of November 21, 2011.

3.0 DISCUSSION OF RESULTS

Contour plots of the EM61 bottom coil and differential results are presented in **Figure 2**. The bottom coil results represent the most sensitive component of the EM61 instrument and detect metal objects regardless of size. The bottom coil response can be used to delineate metal conduits or utility lines, small, isolated metal objects, and areas containing insignificant metal debris. The differential results are obtained from the difference between the top and bottom coils of the EM61 instrument. The differential results focus on the larger metal objects such as drum and UST-size objects and ignore the smaller insignificant metal objects.

The high-amplitude EM61 bottom coil anomalies centered near grid coordinates X=30 Y=56, X=60 Y=46, X=268 Y=60, and X=270 Y=45 are probably in response to a manhole cover, water meter covers, utility line cables boxes or a guy wire. The small bottom coil anomaly centered near grid coordinates X=68 Y=60 is probably in response to a metal pipe.

The negative EM61 differential anomalies centered near grid coordinates X=100 Y=45, X=133 Y=45 and X=155 Y=45 are probably in response to the parked vehicles. Due to the absence of unexplained EM61 differential anomalies, ground penetrating radar scans were not conducted at the

Clint and Linda Bedsaul property. The EM61 metal detection results suggest that the proposed ROW area (geophysical survey area) at this site does not contain buried, metallic USTs.

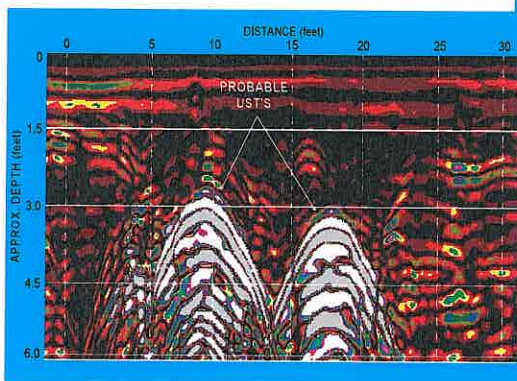
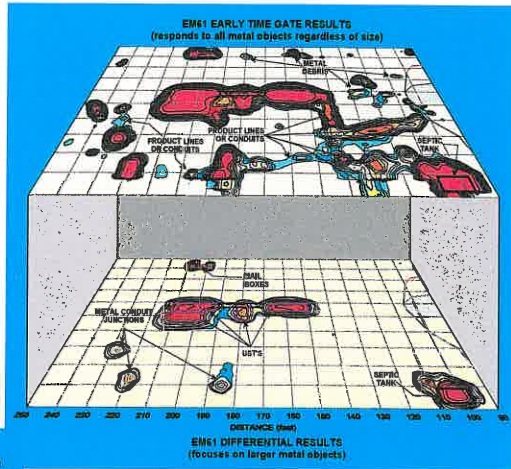
4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 data collected across the proposed ROW area at the Clint and Linda Bedsaul property (Parcel 182) located at 3166 US Highway 21 South near Glade Valley, North Carolina, provides the following summary and conclusions:

- The EM61 surveys provided reliable results for the detection of metallic USTs within the accessible portions of the proposed ROW area of the site.
- The high-amplitude EM61 bottom coil anomalies centered near grid coordinates X=30 Y=56, X=60 Y=46, X=268 Y=60, and X=270 Y=45 are probably in response to a manhole cover, water meter covers, utility line cables boxes or a guy wire.
- The negative EM61 differential anomalies centered near grid coordinates X=100 Y=45, X=133 Y=45 and X=155 Y=45 are probably in response to the parked vehicles.
- The EM61 metal detection results suggest that the proposed ROW area (geophysical survey area) at this site does not contain buried, metallic USTs.

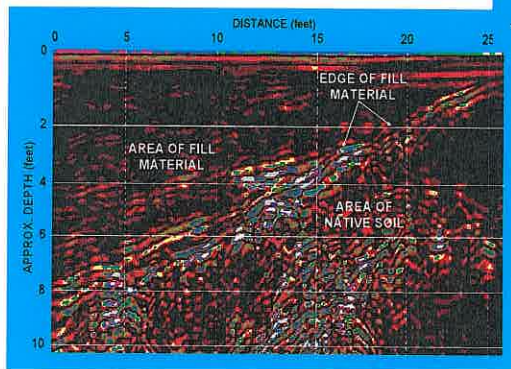
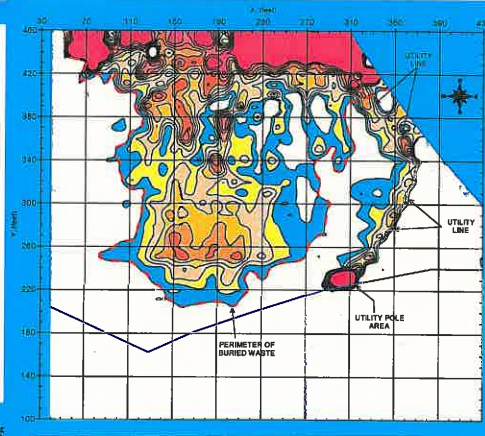
5.0 LIMITATIONS

EM61 surveys have been performed and this report prepared for the NCDOT in accordance with generally accepted guidelines for EM61 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 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 proposed Right-of-Way area at Parcel 182 on November 10, 2011. Due to an absence of unexplained EM61 differential anomalies, ground penetrating radar scans were not performed at this site.



The photograph shows the front portion of the Clint and Linda Bedsaul property (Parcel 182) located at 3166 US Highway 21 South, near Glade Valley, North Carolina. The geophysical investigation was performed across the front portion of the property. The photograph is viewed in an easterly direction.



CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	DATE	12/06/11	BY	MJD
PROJECT	CLINT & LINDA BEDSAUL PROPERTY (PARCEL 182)	DATE		BY	
LOCATION	GLADE VALLEY	STATE	NORTH CAROLINA	DATE	
TITLE	GEOPHYSICAL RESULTS		NO.	2011-267	REV.

GEOPHYSICAL EQUIPMENT
& SITE PHOTOGRAPHS

APPENDIX C

Client NCDOT
 Project Name Sparta PSAs
 Number 123173 Task 1
 Location Parcel 182

Drill Contractor Geoprobe Technology
 Drill Method Geoprobe
 Drilling Started 12/20/11 Ended 12/20/11
 Logged By A. Bauser

LOG OF BORING SB-1/182
 SHEET 1 OF 1

Elevation -
 Total Depth 10.0

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			0.1	GP	ASPHALT - 2 inches		
				SM		Poorly Graded GRAVEL, Gray-Brown, Non Plastic, Angular Fine to Coarse Gravel, Some Sand Silty SAND, Tan-Orange, Fine to Medium Sand, Some Subangular Gravel, Non Plastic, Slightly Moist	
5			0.0	SM		GRAVEL, Fine Angular with Coarse Sand Silty SAND, Tan-Orange, Fine to Medium Sand, Black Splotches, Slightly Moist	5
			0.0	SP		SAND with Silt and Pulverized Gravel, Completely Weathered Rock, Slightly Moist, Tan-White and Black	
10	SS		0.0				10
						Boring Terminated at 10 feet in RESIDUAL	
15							15
20							20
25							25
30							30

LOG A EWN05 SPARTA.GPJ LOG A EWN05.GDT 1/12/12



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

Remarks Sample collected from 7.5-10.0 ft. submitted for laboratory analysis

See key sheet for symbols and abbreviations used above.

Client NCDOT
 Project Name Sparta PSAs
 Number 123173 Task 1
 Location Parcel 182

Drill Contractor Geoprobe Technology
 Drill Method Geoprobe
 Drilling Started 12/20/11 Ended 12/20/11
 Logged By A. Bauser

LOG OF BORING SB-2/182
 SHEET 1 OF 1

Elevation -
 Total Depth 10.0

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			0.2	SM	ASPHALT - 2 inches		
			0.2		GRAVEL, Gray, Fine to Coarse Subangular with Sand, Non Plastic, Dry		
			0.2		Silty SAND, Orange-Tan, Fine Sand, Slightly Moist, Loose		
5			0.0		Completed Weathered Rock, Sand Silt and Gravel, Tan to Tan-Yellow		5
	SS		0.1				
10						Boring Terminated at 10 feet in RESIDUAL	10
15							15
20							20
25							25
30							30

LOG A EWN05_SPARTA.GPJ LOG A EWN05.GDT 1/12/12



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

Remarks Sample collected from 7.5-10.0 ft. submitted for laboratory analysis

See key sheet for symbols and abbreviations used above.

Client NCDOT
 Project Name Sparta PSAs
 Number 123173 Task 1
 Location Parcel 182

Drill Contractor Geoprobe Technology
 Drill Method Geoprobe
 Drilling Started 12/20/11 Ended 12/20/11
 Logged By A. Bauser

LOG OF BORING SB-3/182
 SHEET 1 OF 1

Elevation —
 Total Depth 10.0

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			0.0			ASPHALT - 2 inches	
			0.0			GRAVEL, Gray, Fine to Coarse Angular, Slightly Moist	
			0.0			Partially Weathered Rock, Yellow-Tan, Completely Weathered Sand Silt and Gravel, Striations	
5			0.0				5
			0.0				
10	SS		0.0				10
						Boring Terminated at 10 feet in RESIDUAL	
15							15
20							20
25							25
30							30

LOG A EWINN05 SPARTA.GPJ LOG A EWINN05.GDT 1/12/12



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

Remarks Sample collected from 7.5-10.0 ft. submitted for laboratory analysis

See key sheet for symbols and abbreviations used above.

Client NCDOT
 Project Name Sparta PSAs
 Number 123173 Task 1
 Location Parcel 182

Drill Contractor Geoprobe Technology
 Drill Method Geoprobe
 Drilling Started 12/20/11 Ended 12/20/11
 Logged By A. Bauser

LOG OF BORING SB-4/182
 SHEET 1 OF 1

Elevation --
 Total Depth 10.0

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
			0.0		ASPHALT - 2 inches		
			0.0		GRAVEL, Gray, Fine to Coarse Angular, Slightly Moist		
			0.0		Partially Weathered Rock, Completely Weathered, Tan-Yellow, Sand Silt and Gravel, Striations, Friable		
5			0.0				5
			0.0				
10	SS		0.0				10
						Boring Terminated at 10 feet in RESIDUAL	
15							15
20							20
25							25
30							30

LOG A EWINN05 SPARTA.GPJ LOG A EWINN05.GDT 1/12/12



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

Remarks Sample collected from 7.5-10.0 ft. submitted for laboratory analysis

See key sheet for symbols and abbreviations used above.

Client NCDOT
 Project Name Sparta PSAs
 Number 123173 Task 1
 Location Parcel 182

Drill Contractor Geoprobe Technology
 Drill Method Geoprobe
 Drilling Started 12/20/11 Ended 12/20/11
 Logged By A. Bauser

LOG OF BORING SB-5/182
 SHEET 1 OF 1

Elevation --
 Total Depth 10.0

DEPTH FEET	SAMPLE NO.	BLOWS/FT	PID ppm	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
0.0			0.0			TOPSOIL - 1 inch	0.0
0.0			0.0			Completely Weathered Rock, Sand Silt, Slightly Moist, Friable	0.0
5.0			0.0				5.0
7.5			0.0				7.5
10.0	SS		0.0				10.0
10.0						Boring Terminated at 10 feet in RESIDUAL	10.0
15.0							15.0
20.0							20.0
25.0							25.0
30.0							30.0

LOG A EWN05 SPARTA.GPJ LOG A EWN05.GDT 1/12/12



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

Remarks Sample collected from 7.5-10.0 ft. submitted for laboratory analysis

See key sheet for symbols and abbreviations used above.

APPENDIX D



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

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

December 30, 2011

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

RE: Project: Parcel 182 WSB 37044.1.1
Pace Project No.: 92109089

Dear Chemical Engineer:

Enclosed are the analytical results for sample(s) received by the laboratory on December 22, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Charles Hardin

charles.hardin@pacelabs.com
Project Manager

Enclosures

cc: Mr. Peter Pozzo, Kleinfelder, Inc.



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..



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

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

CERTIFICATIONS

Project: Parcel 182 WSB 37044.1.1
Pace Project No.: 92109089

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Virginia Drinking Water Certification #: 00213

Connecticut Certification #: PH-0104
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DHH Drinking Water # LA 100031
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460144

REPORT OF LABORATORY ANALYSIS



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

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

SAMPLE SUMMARY

Project: Parcel 182 WSB 37044.1.1
Pace Project No.: 92109089

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92109089001	SB-1 (182)	Solid	12/21/11 10:10	12/22/11 16:35
92109089002	SB-2 (182)	Solid	12/21/11 10:15	12/22/11 16:35
92109089003	SB-3 (182)	Solid	12/21/11 10:20	12/22/11 16:35
92109089004	SB-4 (182)	Solid	12/21/11 10:25	12/22/11 16:35
92109089005	SB-5 (182)	Solid	12/21/11 10:30	12/22/11 16:35

REPORT OF LABORATORY ANALYSIS



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

SAMPLE ANALYTE COUNT

Project: Parcel 182 WSB 37044.1.1
 Pace Project No.: 92109089

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92109089001	SB-1 (182)	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92109089002	SB-2 (182)	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92109089003	SB-3 (182)	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92109089004	SB-4 (182)	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92109089005	SB-5 (182)	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	AW	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc..



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

ANALYTICAL RESULTS

Project: Parcel 182 WSB 37044.1.1

Pace Project No.: 92109089

Sample: SB-1 (182) Lab ID: 92109089001 Collected: 12/21/11 10:10 Received: 12/22/11 16:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546									
Diesel Components	ND	mg/kg	5.4	4.9	1	12/23/11 06:30	12/28/11 12:27	68334-30-5	
Surrogates									
n-Pentacosane (S)	36	%	41-119		1	12/23/11 06:30	12/28/11 12:27	629-99-2	S2
Gasoline Range Organics									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B									
Gasoline Range Organics	ND	mg/kg	5.8	5.8	1	12/23/11 12:17	12/23/11 23:35	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-167		1	12/23/11 12:17	12/23/11 23:35	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	7.2	%	0.10	0.10	1		12/23/11 14:39		



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

ANALYTICAL RESULTS

Project: Parcel 182 WSB 37044.1.1

Pace Project No.: 92109089

Sample: SB-2 (182) Lab ID: 92109089002 Collected: 12/21/11 10:15 Received: 12/22/11 16:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546									
Diesel Components	ND	mg/kg	5.6	5.1	1	12/29/11 15:05	12/30/11 10:49	68334-30-5	
Surrogates									
n-Pentacosane (S)	46	%	41-119		1	12/29/11 15:05	12/30/11 10:49	629-99-2	
Gasoline Range Organics									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B									
Gasoline Range Organics	ND	mg/kg	6.3	6.3	1	12/23/11 12:17	12/23/11 23:59	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-167		1	12/23/11 12:17	12/23/11 23:59	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	11.1	%	0.10	0.10	1		12/23/11 14:39		



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

ANALYTICAL RESULTS

Project: Parcel 182 WSB 37044.1.1
 Pace Project No.: 92109089

Sample: SB-3 (182) Lab ID: 92109089003 Collected: 12/21/11 10:20 Received: 12/22/11 16:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546									
Diesel Components	ND	mg/kg	5.4	4.8	1	12/23/11 06:30	12/28/11 13:27	68334-30-5	
Surrogates									
n-Pentacosane (S)	47	%	41-119		1	12/23/11 06:30	12/28/11 13:27	629-99-2	
Gasoline Range Organics									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B									
Gasoline Range Organics	ND	mg/kg	6.3	6.3	1	12/23/11 12:17	12/24/11 00:23	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-167		1	12/23/11 12:17	12/24/11 00:23	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	6.7	%	0.10	0.10	1		12/23/11 14:39		



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

ANALYTICAL RESULTS

Project: Parcel 182 WSB 37044.1.1
 Pace Project No.: 92109089

Sample: SB-4 (182) Lab ID: 92109089004 Collected: 12/21/11 10:25 Received: 12/22/11 16:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546									
Diesel Components	ND	mg/kg	5.4	4.8	1	12/23/11 06:30	12/28/11 13:27	68334-30-5	
Surrogates									
n-Pentacosane (S)	55	%	41-119		1	12/23/11 06:30	12/28/11 13:27	629-99-2	
Gasoline Range Organics									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B									
Gasoline Range Organics	ND	mg/kg	6.5	6.5	1	12/23/11 12:17	12/24/11 00:47	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-167		1	12/23/11 12:17	12/24/11 00:47	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	7.1	%	0.10	0.10	1		12/23/11 14:40		



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

ANALYTICAL RESULTS

Project: Parcel 182 WSB 37044.1.1
 Pace Project No.: 92109089

Sample: SB-5 (182) Lab ID: 92109089005 Collected: 12/21/11 10:30 Received: 12/22/11 16:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546									
Diesel Components	ND	mg/kg	5.9	5.3	1	12/23/11 06:30	12/28/11 13:57	68334-30-5	
Surrogates									
n-Pentacosane (S)	62	%	41-119		1	12/23/11 06:30	12/28/11 13:57	629-99-2	
Gasoline Range Organics									
Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B									
Gasoline Range Organics	ND	mg/kg	6.9	6.9	1	12/23/11 12:17	12/24/11 01:12	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-167		1	12/23/11 12:17	12/24/11 01:12	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	15.7	%	0.10	0.10	1		12/23/11 14:40		



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

QUALITY CONTROL DATA

Project: Parcel 182 WSB 37044.1.1
 Pace Project No.: 92109089

QC Batch: GCV/5635 Analysis Method: EPA 8015 Modified
 QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
 Associated Lab Samples: 92109089001, 92109089002, 92109089003, 92109089004, 92109089005

METHOD BLANK: 704042 Matrix: Solid
 Associated Lab Samples: 92109089001, 92109089002, 92109089003, 92109089004, 92109089005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.8	12/23/11 16:42	
4-Bromofluorobenzene (S)	%	94	70-167	12/23/11 16:42	

LABORATORY CONTROL SAMPLE: 704043

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	24.3	24.0	99	70-165	
4-Bromofluorobenzene (S)	%			91	70-167	

QUALITY CONTROL DATA

Project: Parcel 182 WSB 37044.1.1
Pace Project No.: 92109089

QC Batch: OEXT/15996 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92109089001, 92109089003, 92109089004, 92109089005

METHOD BLANK: 703972 Matrix: Solid
Associated Lab Samples: 92109089001, 92109089003, 92109089004, 92109089005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Components	mg/kg	ND	5.0	12/27/11 11:41	
n-Pentacosane (S)	%	67	41-119	12/27/11 11:41	

LABORATORY CONTROL SAMPLE: 703973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Components	mg/kg	66.7	51.8	78	49-113	
n-Pentacosane (S)	%			68	41-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 703974 703975

Parameter	Units	92109089001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Diesel Components	mg/kg	ND	71.9	71.9	32.2	34.0	45	47	10-146	6	30	
n-Pentacosane (S)	%						39	46	41-119			S2



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

QUALITY CONTROL DATA

Project: Parcel 182 WSB 37044.1.1
 Pace Project No.: 92109089

QC Batch: OEXT/16046 Analysis Method: EPA 8015 Modified
 QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
 Associated Lab Samples: 92109089002

METHOD BLANK: 705431 Matrix: Solid
 Associated Lab Samples: 92109089002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Components	mg/kg	ND	5.0	12/30/11 10:19	
n-Pentacosane (S)	%	55	41-119	12/30/11 10:19	

LABORATORY CONTROL SAMPLE & LCSD: 705432 705433

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Components	mg/kg	66.7	42.9	44.8	64	67	49-113	5	30	
n-Pentacosane (S)	%				64	65	41-119			



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

QUALITY CONTROL DATA

Project: Parcel 182 WSB 37044.1.1
 Pace Project No.: 92109089

QC Batch: PMST/4410 Analysis Method: ASTM D2974-87
 QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
 Associated Lab Samples: 92109089001, 92109089002, 92109089003, 92109089004, 92109089005

SAMPLE DUPLICATE: 703865

Parameter	Units	92109089001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.2	8.5	16	25	

SAMPLE DUPLICATE: 703866

Parameter	Units	92109101001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.9	18.7	1	25	



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

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

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

QUALIFIERS

Project: Parcel 182 WSB 37044.1.1
Pace Project No.: 92109089

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

S2 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).



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

Pace Analytical Services, Inc.
 2225 Riverside Dr.
 Asheville, NC 28804
 (828)254-7176

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Parcel 182 WSB 37044.1.1
 Pace Project No.: 92109089

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92109089001	SB-1 (182)	EPA 3546	OEXT/15996	EPA 8015 Modified	GCSV/11119
92109089002	SB-2 (182)	EPA 3546	OEXT/16046	EPA 8015 Modified	GCSV/11151
92109089003	SB-3 (182)	EPA 3546	OEXT/15996	EPA 8015 Modified	GCSV/11119
92109089004	SB-4 (182)	EPA 3546	OEXT/15996	EPA 8015 Modified	GCSV/11119
92109089005	SB-5 (182)	EPA 3546	OEXT/15996	EPA 8015 Modified	GCSV/11119
92109089001	SB-1 (182)	EPA 5035A/5030B	GCV/5635	EPA 8015 Modified	GCV/5637
92109089002	SB-2 (182)	EPA 5035A/5030B	GCV/5635	EPA 8015 Modified	GCV/5637
92109089003	SB-3 (182)	EPA 5035A/5030B	GCV/5635	EPA 8015 Modified	GCV/5637
92109089004	SB-4 (182)	EPA 5035A/5030B	GCV/5635	EPA 8015 Modified	GCV/5637
92109089005	SB-5 (182)	EPA 5035A/5030B	GCV/5635	EPA 8015 Modified	GCV/5637
92109089001	SB-1 (182)	ASTM D2974-87	PMST/4410		
92109089002	SB-2 (182)	ASTM D2974-87	PMST/4410		
92109089003	SB-3 (182)	ASTM D2974-87	PMST/4410		
92109089004	SB-4 (182)	ASTM D2974-87	PMST/4410		
92109089005	SB-5 (182)	ASTM D2974-87	PMST/4410		



Document Name:
Sample Condition Upon Receipt (SCUR)

Document Revised: July 29, 2011
Page 1 of 2

Document Number:
F-CHR-CS-03-rev.05

Issuing Authority:
Pace Huntersville Quality Office

Client Name: Klerfeld

Project # 92109089

Where Received: Huntersville Asheville Eden

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

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

Optional:
Proj. Due Date
Proj. Name

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used: IR Gun T1102 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Temp Correction Factor Add / Subtract 0 °C

Corrected Cooler Temp.: 1.9 C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: [Signature]

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>[Signature]</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: CAH

Date: 12/21/11

SRF Review: BLM

Date: 12/23/11

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