Preliminary Site Assessment

1640 Farmville Boulevard

Parcel #13, W.G. Bount, Et Al

Greenville, Pitt County, North Carolina

State Project No. U-3315

WBS Element: 35781.1.2

February 22, 2013

Terracon Project No. 70127335

Prepared for:

North Carolina Department of Transportation (NCDOT)

Geotechnical Engineering Unit

Prepared by:

Terracon Consultants, Inc.

Raleigh, North Carolina

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February 22, 2013

North Carolina Department of Transportation
Attention: Mr. Gordon Box, LG
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, NC 27699

Re: Preliminary Site Assessment (PSA)
Parcel 13, W.G. Blount, Et Al
1640 Farmville Boulevard
Greenville, Pitt County, North Carolina
Terracon Project No. 70127335
WBS Element: 35781.1.2

Dear Mr. Box:

Terracon Consultants, Inc. (Terracon) is pleased to submit a Preliminary Site Assessment (PSA) report for the above referenced site. This assessment was performed in accordance with our Proposal for Preliminary Site Assessment (Terracon Proposal No. P70127314) dated February August 7, 2012. This report includes the findings of the investigation, and provides our conclusions and recommendations.

Terracon appreciates the opportunity to provide these services to the NCDOT. If you have any questions concerning this report or need additional information, please contact us at 919-873-2211.

Sincerely,

Terracon Consultants, Inc.

Prepared by:

Stephen Kerlin
Environmental Professional

Reviewed by:

for Christopher L. Corbitt, PG
Authorized Project Reviewer

Lori C. Hoffman

Lori Hoffman, PE
Environmental Department Manager

PRELIMINARY SITE ASSESSMENT

PARCEL 13, W.G. BOUNT, ET AL
1640 FARMVILLE BOULEVARD
GREENVILLE, PITT COUNTY, NORTH CAROLINA

1.0 INTRODUCTION

1.1 Site Description

Site Name	Parcel 13, W.G. Bount, Et Al
Site Location/Address	1640 Farmville Boulevard, Greenville, North Carolina
General Site Description	The site is currently maintained as cleared and wooded land.

1.2 Site History

According to information provided by the NCDOT, Parcel 13 is located at 1640 Farmville Boulevard and is currently maintained as cleared and wooded land. It is Terracon's understanding that the NCDOT intends to acquire the entire parcel.

1.3 Scope of Work

Terracon has prepared the following Preliminary Site Assessment (PSA) scope of work (SOW) in accordance with the NCDOT's Request for Technical and Cost Proposal dated June 19, 2012 and Terracon's Proposal for Preliminary Site Assessment (Proposal No. P70127314) dated August 7, 2012. The scope of work included a geophysical investigation, the collection of seven soil samples and one groundwater sample for laboratory analysis and the preparation of a report documenting our soil and groundwater investigation activities.

1.4 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either expressed or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These PSA services were performed in accordance with the scope of work authorized by you, our client, as reflected in our proposal and were not restricted by ASTM E1903-97.

1.5 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, undetectable or not present during these services; thus, we cannot represent that the site is free of hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this PSA. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.6 Reliance

This report has been prepared for the exclusive use of North Carolina Department of Transportation (NCDOT). Any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the expressed written authorization of the client and Terracon.

2.0 FIELD ACTIVITIES

The following PSA activities are presented in the order that they were conducted in the field on August 15, 21 and 23, 2012. Exhibit 1 presents the general boundaries and topography of the site on portions of the USGS topographic quadrangle map of Greenville SW, North Carolina dated 1998. Exhibit 2 is a site layout plan that depicts the approximate locations of the site features and soil boring locations.

2.1 Geophysical Survey

On August 15th and 21st, 2012, Pyramid Environmental conducted a geophysical investigation at the site in an effort to determine if unknown, metallic underground storage tanks (USTs) were present beneath the proposed right-of-way (ROW) area. The geophysical investigation included an electromagnetic (EM) induction survey using a Geonics EM-61 MK1 metal detection instrument and a ground penetrating radar (GPR) survey using a GSSI SIR-2000 unit.

The geophysical investigation did not reveal metallic USTs in the area of investigation identified for this site.

A copy of the geophysical report is included in Appendix B.

2.2 Soil Sampling

Based on the findings of the geophysical investigation, Terracon selected the locations of seven (7) soil borings along the southern boundary of the property on August 23, 2012. The borings were advanced by Bridger Drilling Enterprises, Inc., a North Carolina licensed driller using a Geoprobe® rig. The drilling equipment was cleaned using a high pressure washer prior to beginning the project and before each boring.

Soil samples were collected in 5-foot, disposable, acetate sleeves and observed for documenting soil lithology, color, moisture content, and sensory evidence of impairment. The soil samples were placed in resealable plastic bags set aside for a sufficient amount of time to allow volatilization of organic compounds from the soil. The soil samples were then screened using a *Thermo Electron Corporation TVA-1000* field-portable Photoionization/Flame Ionization Detector (PID/FID) by inserting the probe tip into the headspace of the bag. The PID readings and soil sample depths are included on Table 1 and on individual Boring Logs in Appendix A.

Soil borings B-1 through and B-7 were advanced to a depth of approximately 15 feet below bgs. Groundwater levels were measured at depths ranging from approximately 7.5 and 10 feet bgs. Based on the depth to groundwater, soils were only screened above the saturated zone. Soils obtained from the acetate sleeves were separated into two and half foot intervals.

The soil samples were collected and placed in laboratory prepared glassware and packed in ice in a cooler. The sample cooler and completed chain-of-custody forms were relinquished to SGS North American Inc. in Wilmington, North Carolina.

2.3 Groundwater Sampling

Following soil sampling activities, soil boring B-1, located near the southwest corner of the site and in the apparent down-gradient position relative to a dry cleaning operation situated on the adjacent property to the west, was converted to temporary groundwater sampling well (TW-1) by driving the direct push probe to approximately 15 feet bgs and installing a temporary monitoring well. The temporary monitoring well location is depicted on Exhibit 2. The temporary monitoring well was constructed with the following materials:

- 1-inch diameter, 0.010-inch machine slotted PVC well screen with a threaded bottom cap; and,
- 1-inch diameter, threaded, flush-joint PVC riser pipe to surface.

Groundwater was measured in the temporary groundwater monitoring well at a depth of approximately 7.5 feet bgs. The water that flowed into the temporary screen was purged with a peristaltic pump until turbidity decreased. A sample collected from the temporary monitoring well was placed into laboratory supplied, pre-preserved sample containers. The sample

containers were packed in ice, and along with chain of custody documentation were picked up by a laboratory courier for delivery to the laboratory.

2.4 Subsurface Conditions

The soil samples from ground surface to a depth of 15 feet included silty sands, clayey sands, silty clay, and sandy clay. No petroleum odors were noted in the samples. Soil samples from the zone exhibiting the highest PID reading from each boring were submitted for laboratory analysis.

3.0 LABORATORY ANALYSES

Soil samples were submitted for laboratory analysis of Total Petroleum Hydrocarbons (TPH) Diesel Range Organics (DRO) by Method 8015C/3541 and TPH Gasoline Range Organics (GRO) by Method 8015C/5035. The groundwater sample was submitted for laboratory analysis of volatile organic compounds (VOCs) by EPA Method 8260 and semi-volatile organic compounds (SVOCs) by EPA Method 8270. Samples were submitted for laboratory analysis to SGS North American Inc. in Wilmington, North Carolina. Please refer to Appendix D for the laboratory analytical reports.

4.0 DATA EVALUATION

4.1 Soil Sample Analytical Results and Interpretation

TPH DRO was reported in soil sample S-1 (72.3 mg/kg) at a concentration above the NCDENR Action Level of 10 milligrams/kilogram (mg/kg). TPH-DRO was not detected above the laboratory reporting limits in the remaining soil samples submitted for laboratory analysis.

TPH GRO was not detected above the laboratory reporting limits in the soil samples submitted for laboratory analysis.

A summary of the soil sampling analytical results is included in Table 1 as an attachment to this report.

4.2 Groundwater Analytical Results and Interpretation

Laboratory analytical results reported tetrachloroethene (39.9 ug/L) in well TW-1 at a concentration that exceeds the NCAC 2L Groundwater Quality Standard of 0.7 ug/L.

Laboratory analytical results reported methylene chloride (0.65 ug/L J), trichlorethene (2.1 ug/L) and cis-1,2-dichloroethene (3.2 ug/L) in groundwater sample TW-1 at concentrations that exceeded their respective laboratory method detection limits but were below their NCAC 2L Groundwater Quality Standards of 5.0 ug/L, 3.0 ug/L and 70 ug/L, respectively.

No SVOCs were reported in well TW-1 at concentrations above their respective laboratory method detection limits.

A summary of the groundwater sampling analytical results is included in Table 2 as an attachment to this report.

5.0 CONCLUSIONS

The findings of this investigation are discussed below.

- The geophysical investigation did not reveal probable metallic USTs or other buried anomalies in the area of investigation identified for this site.

- Seven (7) soil borings were advanced to a depth of approximately 15 feet bgs in the southern portion of the site oriented in a generally east to west direction south of Farmville Boulevard.

- TPH DRO was detected in soil sample S-1 (72.3 mg/kg) at a concentration above the NCDENR Action Level of 10 mg/kg. TPH-DRO and TPH GRO were not detected above the laboratory reporting limits in the remaining soil samples submitted for laboratory analysis.

- Groundwater was measured in temporary groundwater monitoring well TW-1 at a depth of approximately 7.5 feet bgs.

- Tetrachloroethene (39.9 ug/L) was detected in well TW-1 at a concentration that exceeds the NCAC 2L Groundwater Quality Standard of 0.7 ug/L. Methylene chloride (0.65 ug/L J), trichloroethene (2.1 ug/L) and cis-1,2-dichloroethene (3.2 ug/L) were detected in the groundwater at concentrations that exceeded their respective laboratory method detection limits but were below their NCAC 2L Groundwater Quality Standards of 5.0 ug/L, 3.0 ug/L and 70 ug/L, respectively.

  Methylene chloride was also detected in the groundwater on the adjacent property to the west (Parcel #12, Vincent Peele Property, LLC) which is occupied by Scott's Cleaners. Methylene chloride is a primary constituent of spotting agents used in dry cleaning operations to remove stains from oils, fats, waxes, grease, cosmetics, paints and plastics. It is also found in stain repellents and detergent maintenance test kits that are commonly used in dry cleaning facilities.

- Based on information provided by NCDOT, Terracon estimates a total of 167 yd^3 or 250.5 tons of contaminated soil be used for estimating quantities to be removed from Parcel 13 at S-1 during construction. This is based on the following assumptions:

Roadway Excavation

- From Sta. 25+08, 15' Rt to 76' Rt, cross-section area of 75.6 ft^2
- From Sta. 25+63 , 15' Rt to 76' Rt, cross-section area of 88.3 ft^2

  (75.6 ft^2 x 27 ft) + (88.3 ft^2 x 28 ft) = 4714 ft^3 or 167 yd^3

Utility and Drainage Excavation

Not anticipated for Parcel 13

TABLES

Table 1 - Soil Sampling Analytical Results Summary
Table 2 – Groundwater Sampling Analytical Results Summary

Table 1
Soil Sampling Analytical Results Summary
Parcel #13, W.G. Bount, Et Al
Greenville, Pitt County, North Carolina

Sample ID	Depth	PID reading	Method 5035/GRO	Method 3546/DRO
	ft bgs	ppm	mg/kg	mg/kg
S-1	0-2.5	9.99	<2.85	72.3
S-2	5.0-7.5	3.43	<2.86	<6.83
S-3	5.0-7.5	2.5	<2.99	<7.27
S-4	2.5-5.0	2.56	<3.02	<7.06
S-5	2.5-5.0	3.09	<3.51	<7.17
S-6	2.5-5.0	2.13	<3.41	<7.14
S-7	2.5-5.0	2.76	<2.85	<6.81
NCDENR Action Level			10	10

Notes:
ft bgs = feet below ground surface
mg/kg = miligrams per kilogram
ppm = parts per million
DRO = Diesel Range Organics
GRO = Gasoline Range Organics
ND = Below laboratory detection limits
Highlight indicates above NCDENR UST Section Action Level of 10 mg/kg

Table 2
Groundwater Sampling Analytical Results Summary
Parcel #13, W.G. Bount, Et Al
Greenville, Pitt County, North Carolina

			Sample ID	TW-1
			Depth	7.5 FT
Method	Parameter	Units	NCAC 2L Groundwater Quality Standard	Value
8260B	Methylene Chloride	ug/l	5	0.65 J
	Tetrachloroethene	ug/l	0.7	39.9
	Trichloroethene	ug/l	3	2.1 J
	cis-1,2-Dichloroethene	ug/l	70	3.2 J
8270C	SVOCs	ug/l	No Analytes Detected Above the Laboratory Detection Limits	

Notes:

NE = Not established

ug/L = micrograms per liter

=Greater than or equal to the NCAC 2L Groundwater Quality Standard

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

FIGURES

Exhibit 1 – Vicinity Map (Topographic Map)
Exhibit 2 – Site Diagram with Soil Boring Locations and Analytical Data

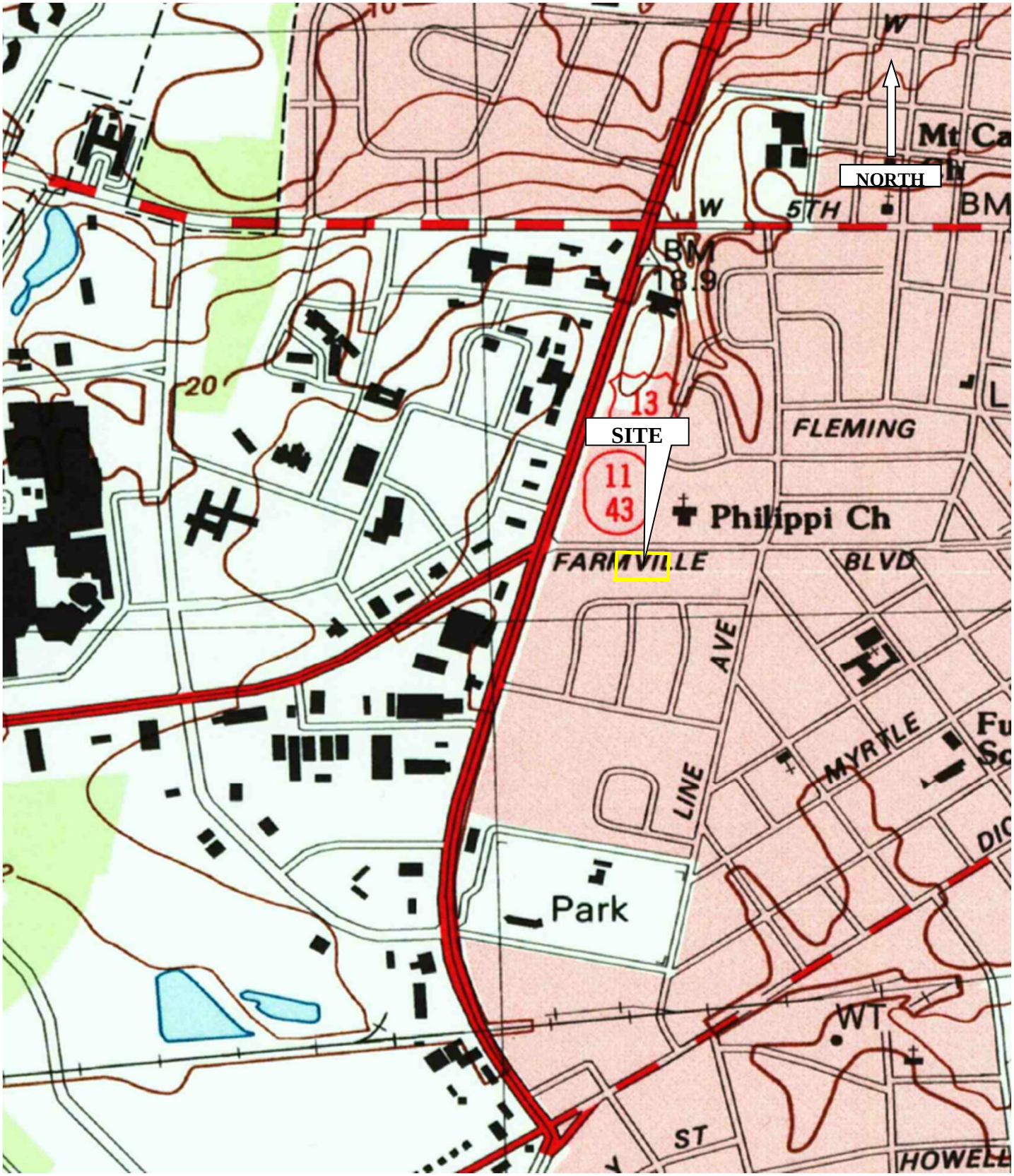


Diagram is for general location only

Site Vicinity Map
Parcel # 13 - W.G. Bount, Et Al
1640 Farmville Boulevard
Greenville, Pitt County, North Carolina

Reference: Greenville SW, NC USGS Quadrangle

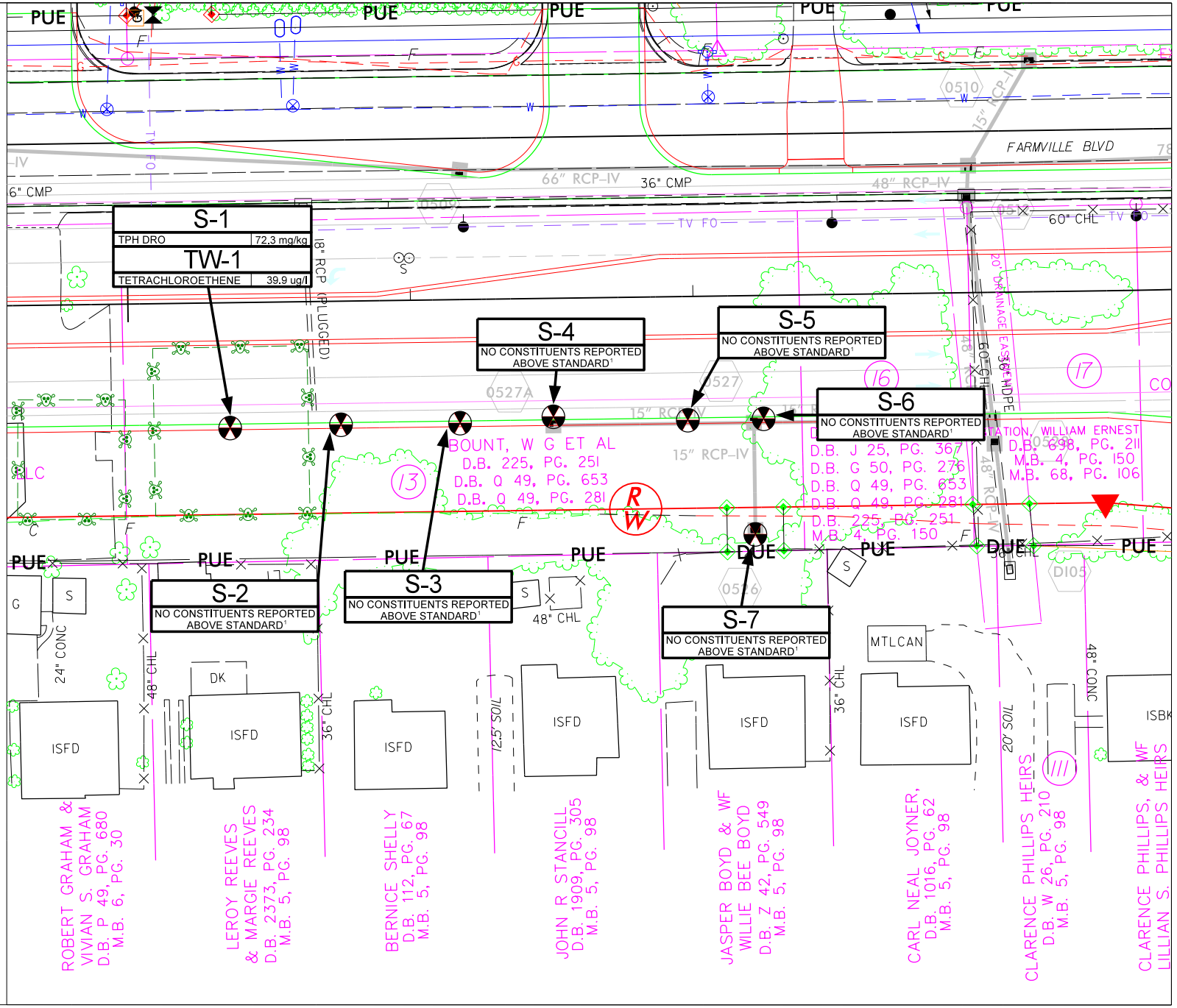
Dated Year: 1998

Terracon

PROJECT NO.:	70127335
DATE: 10/3/12	CONTOUR INT: 2 meters
DRAWN: SJK	CHECK: LCH
SCALE: NTS	

LEGEND

- PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE WITH IRON PIN AND CAP MARKER
- PROPOSED CONSTRUCTION EASEMENT
- PROPOSED EDGE OF TRAVEL
- PROPOSED CUT / FILL LINE
- PUE – PROPOSED PERMANENT UTILITY EASEMENT
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE PIPING
- ESTIMATED SOIL CONTAMINATION
- SOIL AND/OR GROUNDWATER SAMPLE LOCATION



NOTES:

1. NCDENR UST SECTION ACTION LEVEL NCAC 2L GROUNDWATER QUALITY STANDARD

N
NC GRID NAD 83/95

0 25 50
FEET

SCALE:	1:50
DATE:	FEBRUARY 2013
DRAWN BY:	MJA
APPROVED BY:	LCH / BWS
PROJ. REFERENCE NUMBER:	35781.1.2
TIP NUMBER:	U-3315
COUNTY:	PITT
TERRACON PROJECT:	70127335

Terracon
5240 GREEN'S DAIRY ROAD RALEIGH, NC 27616
PH. (919) 873-2211 FAX. (919) 873-9555

SITE DIAGRAM WITH SOIL BORING LOCATIONS AND ANALYTICAL DATA

BOUNT, W G ET AL PROPERTY - PARCEL 13
-L- STATION 26+25
1640 FARMVILLE BOULEVARD
GREENVILLE, PITT COUNTY, NORTH CAROLINA

EXHIBIT 2

APPENDIX A

Boring Logs

SOIL BORING LOG

PROJECT NAME: Stantonsburg/Tenth Street Connector	SOIL BORING I.D.: B-1
PROJECT NO.: 70127335	DATE(S) DRILLED: August 22, 2012
PROJECT LOCATION: Parcel #13, 1640 Farmville Blvd. Greenville, North Carolina	DRILLING CONTR.: Bridger Drilling Enterprises, Inc.
	DRILL METHOD: Geoprobe
	BORING DIAMETER: 2 inches
CLIENT: NCDOT Geoenvironmental	SAMPLING METHOD/INTERVAL: 5-Foot
LOGGED BY: Steve Kerlin	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
				No petroleum odors	0.0	Dark brown with organics (0-6")
					0.5	Tan/gray sand (6"-3.5')
					1.0	
					1.5	
					2.0	
0-2.5		NA	9.99*	No petroleum odors	2.5	
					3.0	
					3.5	Dark brown/black sand (3.5' - 4')
					4.0	Tan/gray sand (4'-5')
					4.5	
2.5 - 5.0		NA	8.27	No petroleum odors	5.0	Tan/gray sandy clay (5'-15')
					5.5	
					6.0	
					6.5	
					7.0	
5.0 - 7.5*		NA	7.88	No petroleum odors	7.5	
					8.0	
					8.5	
					9.0	
					9.5	
7.5 - 10.0		NA	5.85	No petroleum odors	10.0	Wet soils observed here during soil boring - static water
					10.5	measured at 7.5 feet in temp. groundwater monitoring well
					11.0	MW-1 installed in this boring
					11.5	
					12.0	
10.0 - 12.5		NA	NA	No petroleum odors	12.5	
					13.0	
					13.5	
					14.0	
					14.5	
12.5 - 15		NA	NA	No petroleum odors	15.0	
					15.5	Boring Terminated at 15.0 feet bgs
					16.0	
					16.5	
					17.0	
					17.5	
					18.0	
					18.5	
					19.0	
					19.5	
					20.0	
					20.5	
					21.0	
					21.5	

DRILLING METHODS
AR - AIR ROTARY
CFA - CONTINUOUS FLIGHT AUGER
DC - DRIVEN CASING
HA - HAND AUGER
HSA - HOLLOW STEM AUGER
MD - MUD DRILLING
RC - ROCK CORING
WR - WATER ROTARY

SAMPLING METHODS
SS - SPLIT SPOON
ST - SHELBY TUBE
GP - GEOPROBE

* - Sample collected for analysis
ND = <1 ppm

Terracon

SOIL BORING LOG

PROJECT NAME: Stantonsburg/Tenth Street Connector	SOIL BORING I.D.: B-2
PROJECT NO.: 70127335	DATE(S) DRILLED: August 22, 2012
PROJECT LOCATION: Parcel #13, 1640 Farmville Blvd. Greenville, North Carolina	DRILLING CONTR.: Bridger Drilling Enterprises, Inc.
	DRILL METHOD: Geoprobe
	BORING DIAMETER: 2 inches
CLIENT: NCDOT Geoenvironmental	SAMPLING METHOD/INTERVAL: 5-Foot
LOGGED BY: Steve Kerlin	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
				No petroleum odors	0.0	Dark brown with organics (0-6")
					0.5	Tan/gray sand (6"-3.5')
					1.0	
					1.5	
					2.0	
0-2.5		NA	2.32	No petroleum odors	2.5	
					3.0	
					3.5	Dark brown/black sand (3.5' - 4')
					4.0	Tan/gray sand (4'-5')
					4.5	
2.5 - 5.0		NA	3.53	No petroleum odors	5.0	Tan/gray sandy clay (5'-15')
					5.5	
					6.0	
					6.5	
					7.0	
5.0 - 7.5*		NA	3.43*	No petroleum odors	7.5	
					8.0	
					8.5	
					9.0	Wet soils observed here during soil boring
					9.5	
7.5 - 10.0		NA	2.81	No petroleum odors	10.0	
					10.5	
					11.0	
					11.5	
					12.0	
10.0 - 12.5		NA	NA	No petroleum odors	12.5	
					13.0	
					13.5	
					14.0	
					14.5	
12.5 - 15		NA	NA	No petroleum odors	15.0	
					15.5	Boring Terminated at 15.0 feet bgs
					16.0	
					16.5	
					17.0	
					17.5	
					18.0	
					18.5	
					19.0	
					19.5	
					20.0	
					20.5	
					21.0	
					21.5	

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Terracon

SOIL BORING LOG

PROJECT NAME: Stantonsburg/Tenth Street Connector	SOIL BORING I.D.: B-3
PROJECT NO.: 70127335	DATE(S) DRILLED: August 22, 2012
PROJECT LOCATION: Parcel #13, 1640 Farmville Blvd. Greenville, North Carolina	DRILLING CONTR.: Bridger Drilling Enterprises, Inc.
	DRILL METHOD: Geoprobe
	BORING DIAMETER: 2 inches
CLIENT: NCDOT Geoenvironmental	SAMPLING METHOD/INTERVAL: 5-Foot
LOGGED BY: Steve Kerlin	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
				No petroleum odors	0.0	Dark brown with organics (0-6")
					0.5	Tan/gray sand (6"-3.5')
					1.0	
					1.5	
					2.0	
0-2.5		NA	2.02	No petroleum odors	2.5	
					3.0	
					3.5	Dark brown/black sand (3.5' - 4')
					4.0	Tan/gray sand (4'-5')
					4.5	
2.5 - 5.0		NA	2.23	No petroleum odors	5.0	Tan/gray sandy clay (5'-15')
					5.5	
					6.0	
					6.5	
					7.0	
5.0 - 7.5*		NA	2.56*	No petroleum odors	7.5	
					8.0	
					8.5	
					9.0	
					9.5	
7.5 - 10.0		NA	2.50	No petroleum odors	10.0	Wet soils observed here during soil boring
					10.5	
					11.0	
					11.5	
					12.0	
10.0 - 12.5		NA	NA	No petroleum odors	12.5	
					13.0	
					13.5	
					14.0	
					14.5	
12.5 - 15		NA	NA	No petroleum odors	15.0	
					15.5	Boring Terminated at 15.0 feet bgs
					16.0	
					16.5	
					17.0	
					17.5	
					18.0	
					18.5	
					19.0	
					19.5	
					20.0	
					20.5	
					21.0	
					21.5	

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ND = <1 ppm

Terracon

SOIL BORING LOG

PROJECT NAME: Stantonsburg/Tenth Street Connector	SOIL BORING I.D.: B-4
PROJECT NO.: 70127335	DATE(S) DRILLED: August 22, 2012
PROJECT LOCATION: Parcel #13, 1640 Farmville Blvd. Greenville, North Carolina	DRILLING CONTR.: Bridger Drilling Enterprises, Inc.
	DRILL METHOD: Geoprobe
	BORING DIAMETER: 2 inches
CLIENT: NCDOT Geoenvironmental	SAMPLING METHOD/INTERVAL: 5-Foot
LOGGED BY: Steve Kerlin	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
				No petroleum odors	0.0	Dark brown with organics (0-6")
					0.5	Tan/gray sand (6"-3.5')
					1.0	
					1.5	
					2.0	
0-2.5		NA	1.91	No petroleum odors	2.5	
					3.0	
					3.5	Dark brown/black sand (3.5' - 4')
					4.0	Tan/gray sand (4'-5')
					4.5	
2.5 - 5.0		NA	2.56*	No petroleum odors	5.0	Tan/gray sandy clay (5'-15')
					5.5	
					6.0	
					6.5	
					7.0	
5.0 - 7.5*		NA	2.11	No petroleum odors	7.5	
					8.0	
					8.5	
					9.0	
					9.5	
7.5 - 10.0		NA	2.13	No petroleum odors	10.0	Wet soils observed here during soil boring
					10.5	
					11.0	
					11.5	
					12.0	
10.0 - 12.5		NA	NA	No petroleum odors	12.5	
					13.0	
					13.5	
					14.0	
					14.5	
12.5 - 15		NA	NA	No petroleum odors	15.0	
					15.5	Boring Terminated at 15.0 feet bgs
					16.0	
					16.5	
					17.0	
					17.5	
					18.0	
					18.5	
					19.0	
					19.5	
					20.0	
					20.5	
					21.0	
					21.5	

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GP - GEOPROBE

* - Sample collected for analysis
ND = <1 ppm

Terracon

SOIL BORING LOG

PROJECT NAME: Stantonsburg/Tenth Street Connector	SOIL BORING I.D.: B-5
PROJECT NO.: 70127335	DATE(S) DRILLED: August 22, 2012
PROJECT LOCATION: Parcel #13, 1640 Farmville Blvd. Greenville, North Carolina	DRILLING CONTR.: Bridger Drilling Enterprises, Inc.
	DRILL METHOD: Geoprobe
	BORING DIAMETER: 2 inches
CLIENT: NCDOT Geoenvironmental	SAMPLING METHOD/INTERVAL: 5-Foot
LOGGED BY: Steve Kerlin	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
				No petroleum odors	0.0	Dark brown with organics (0-6")
					0.5	Tan/gray sand (6"-3.5')
					1.0	
					1.5	
					2.0	
0-2.5		NA	2.01	No petroleum odors	2.5	
					3.0	
					3.5	Dark brown/black sand (3.5' - 4')
					4.0	Tan/gray sand (4'-5')
					4.5	
2.5 - 5.0		NA	3.09*	No petroleum odors	5.0	Tan/gray sandy clay (5'-15')
					5.5	
					6.0	
					6.5	
					7.0	
5.0 - 7.5*		NA	2.57	No petroleum odors	7.5	
					8.0	Wet soils observed here during soil boring
					8.5	
					9.0	
					9.5	
7.5 - 10.0		NA	NA	No petroleum odors	10.0	
					10.5	
					11.0	
					11.5	
					12.0	
10.0 - 12.5		NA	NA	No petroleum odors	12.5	
					13.0	
					13.5	
					14.0	
					14.5	
12.5 - 15		NA	NA	No petroleum odors	15.0	
					15.5	Boring Terminated at 15.0 feet bgs
					16.0	
					16.5	
					17.0	
					17.5	
					18.0	
					18.5	
					19.0	
					19.5	
					20.0	
					20.5	
					21.0	
					21.5	

DRILLING METHODS
AR - AIR ROTARY
CFA - CONTINUOUS FLIGHT AUGER
DC - DRIVEN CASING
HA - HAND AUGER
HSA - HOLLOW STEM AUGER
MD - MUD DRILLING
RC - ROCK CORING
WR - WATER ROTARY

SAMPLING METHODS
SS - SPLIT SPOON
ST - SHELBY TUBE
GP - GEOPROBE

* - Sample collected for analysis
ND = <1 ppm

Terracon

SOIL BORING LOG

PROJECT NAME: Stantonsburg/Tenth Street Connector	SOIL BORING I.D.: B-6
PROJECT NO.: 70127335	DATE(S) DRILLED: August 22, 2012
PROJECT LOCATION: Parcel #13, 1640 Farmville Blvd. Greenville, North Carolina	DRILLING CONTR.: Bridger Drilling Enterprises, Inc.
	DRILL METHOD: Geoprobe
	BORING DIAMETER: 2 inches
CLIENT: NCDOT Geoenvironmental	SAMPLING METHOD/INTERVAL: 5-Foot
LOGGED BY: Steve Kerlin	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
				No petroleum odors	0.0	Dark brown with organics (0-6")
					0.5	Tan/gray sand (6"-3.5')
					1.0	
					1.5	
					2.0	
0-2.5		NA	1.81	No petroleum odors	2.5	
					3.0	
					3.5	Dark brown/black sand (3.5' - 4')
					4.0	Tan/gray sand (4'-5')
					4.5	
2.5 - 5.0		NA	2.73*	No petroleum odors	5.0	Tan/gray sandy clay (5'-15')
					5.5	
					6.0	
					6.5	
					7.0	
5.0 - 7.5*		NA	1.97	No petroleum odors	7.5	
					8.0	
					8.5	
					9.0	
					9.5	
7.5 - 10.0		NA	2.62	No petroleum odors	10.0	Wet soils observed here during soil boring
					10.5	
					11.0	
					11.5	
					12.0	
10.0 - 12.5		NA	NA	No petroleum odors	12.5	
					13.0	
					13.5	
					14.0	
					14.5	
12.5 - 15		NA	NA	No petroleum odors	15.0	
					15.5	Boring Terminated at 15.0 feet bgs
					16.0	
					16.5	
					17.0	
					17.5	
					18.0	
					18.5	
					19.0	
					19.5	
					20.0	
					20.5	
					21.0	
					21.5	

DRILLING METHODS
AR - AIR ROTARY
CFA - CONTINUOUS FLIGHT AUGER
DC - DRIVEN CASING
HA - HAND AUGER
HSA - HOLLOW STEM AUGER
MD - MUD DRILLING
RC - ROCK CORING
WR - WATER ROTARY

SAMPLING METHODS
SS - SPLIT SPOON
ST - SHELBY TUBE
GP - GEOPROBE

* - Sample collected for analysis
ND = <1 ppm

Terracon

SOIL BORING LOG

PROJECT NAME: Stantonsburg/Tenth Street Connector	SOIL BORING I.D.: B-7
PROJECT NO.: 70127335	DATE(S) DRILLED: August 22, 2012
PROJECT LOCATION: Parcel #13, 1640 Farmville Blvd. Greenville, North Carolina	DRILLING CONTR.: Bridger Drilling Enterprises, Inc.
	DRILL METHOD: Geoprobe
	BORING DIAMETER: 2 inches
CLIENT: NCDOT Geoenvironmental	SAMPLING METHOD/INTERVAL: 5-Foot
LOGGED BY: Steve Kerlin	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
				No petroleum odors	0.0	Dark brown with organics (0-6")
					0.5	Tan/gray sand (6"-3.5')
					1.0	
					1.5	
					2.0	
0-2.5		NA	2.40	No petroleum odors	2.5	
					3.0	
					3.5	Dark brown/black sand (3.5' - 4')
					4.0	Tan/gray sand (4'-5')
					4.5	
2.5 - 5.0		NA	2.76*	No petroleum odors	5.0	Tan/gray sandy clay (5'-15')
					5.5	
					6.0	
					6.5	
					7.0	
5.0 - 7.5*		NA	2.08	No petroleum odors	7.5	
					8.0	
					8.5	
					9.0	
					9.5	
7.5 - 10.0		NA	2.16	No petroleum odors	10.0	Wet soils observed here during soil boring
					10.5	
					11.0	
					11.5	
					12.0	
10.0 - 12.5		NA	NA	No petroleum odors	12.5	
					13.0	
					13.5	
					14.0	
					14.5	
12.5 - 15		NA	NA	No petroleum odors	15.0	
					15.5	Boring Terminated at 15.0 feet bgs
					16.0	
					16.5	
					17.0	
					17.5	
					18.0	
					18.5	
					19.0	
					19.5	
					20.0	
					20.5	
					21.0	
					21.5	

DRILLING METHODS
AR - AIR ROTARY
CFA - CONTINUOUS FLIGHT AUGER
DC - DRIVEN CASING
HA - HAND AUGER
HSA - HOLLOW STEM AUGER
MD - MUD DRILLING
RC - ROCK CORING
WR - WATER ROTARY

SAMPLING METHODS
SS - SPLIT SPOON
ST - SHELBY TUBE
GP - GEOPROBE

* - Sample collected for analysis
ND = <1 ppm

Terracon

APPENDIX B

Geophysical Survey Report

Pyramid Project # 2012212

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

W.G. BOUNT, ET AL PROPERTY (PARCEL 13)
1640 Farmville Boulevard
Greenville, North Carolina

September 24, 2012

Report prepared for: **Lori C. Hoffman, PE**
Stephen J. Kerlin
Terracon
5240 Green's Dairy Road
Raleigh, North Carolina 27616

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

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

Terracon
GEOPHYSICAL INVESTIGATION REPORT
W.G. BOUNT, ET AL, PROPERTY (PARCEL 13)
1640 Farmville Boulevard
Greenville, North Carolina

TABLE OF CONTENTS PAGE

FIGURES

1.0 INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Terracon across the W.G. Bount, et al property (Parcel 13) located at 1640 Farmville Boulevard in Greenville, North Carolina. Conducted on August 15 and 21, 2012, the geophysical investigation was performed as part of the North Carolina Department of Transportation (NCDOT) preliminary site assessment for state project number U-3315 (WBS Element 35781.1.2) to determine if unknown, metallic, underground storage tanks (USTs) were present beneath the site.

The W.G. Bount, et al property consists of an open, grass-covered lot that runs along the south side of Farmville Boulevard. Residential properties lie to the south of the property and an open lot and a laundromat lie to the east and west of the site, respectively. The geophysical survey area has a maximum length and width of 220 feet and 125 feet, respectively.

Terracon representatives Mr. Stephen Kerlin and Ms. Lori Hoffman, PE provided information and maps identifying the geophysical survey area to Mark Denil, PG prior to conducting the investigation. Photographs of the geophysical equipment used in this investigation and the property are shown in **Figure 1**.

2.0 FIELD METHODOLOGY

Prior to conducting the geophysical investigation, a 20-foot by 20-foot survey grid was established across the geophysical survey (proposed ROW) 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 and ground penetrating radar (GPR) surveys. The EM survey was performed 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 easterly-westerly trending, 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.

The GPR investigation was conducted across selected EM61 differential anomalies 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.

Verbal, preliminary geophysical results obtained from the site were provided to Mr. Kerlin or Ms Hoffman during the week of August 27, 2012.

3.0 DISCUSSION OF RESULTS

Contour plots of the EM61 bottom coil and differential results are presented in **Figures 2 and 3**, respectively**.** The bottom coil results represent the most sensitive component of the EM61 instrument and detect metal objects regardless of size. The bottom coil response can be used to delineate metal conduits or utility lines, small, isolated metal objects, and areas containing insignificant metal debris. The differential results are obtained from the difference between the top and bottom coils of the EM61 instrument. The differential results focus on the larger metal objects such as drum and UST-size objects and ignore the smaller insignificant metal objects.

The linear, EM61 bottom coil anomaly intersecting grid coordinates X=220 Y=153 is probably in response to buried utility lines that run along the southern edge of Farmville Boulevard. The EM61 bottom coil anomalies centered near grid coordinates X=353 Y=153 and X=373 Y=153 are probably in response to the metal road signs. The several, randomly-scattered, bottom coil anomalies centered

near grid coordinates X=345 Y=60, X=353 Y=40 and X=372 Y=40 are probably in response to buried, miscellaneous, metal debris or small objects.

GPR data suggest the EM61 differential anomalies centered near grid coordinates X=344 Y=140 and X=377 Y=65 are in response to buried, miscellaneous metal objects. The remaining EM61 anomalies shown in Figures 2 and 3 are probably in response to known surface objects, conduits or to small, insignificant metal debris/objects. The geophysical investigation suggests that Parcel 13 does not contain metallic USTs within the surveyed portion of the site.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected across the W.G. Bount, et al property (Parcel 13) located at 1640 Farmville Boulevard in Greenville, 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.

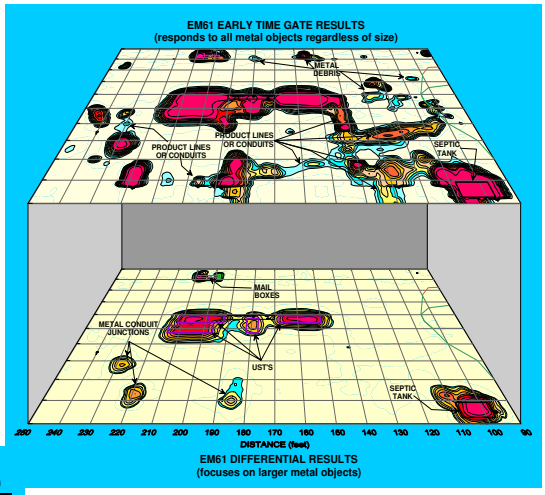
- The linear, EM61 bottom coil anomaly intersecting grid coordinates X=220 Y=153 is probably in response to buried utility lines that run along the southern edge of Farmville Boulevard.

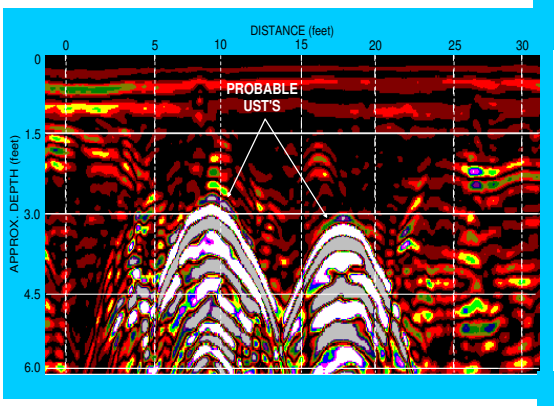
- GPR data suggest the EM61 differential anomalies centered near grid coordinates X=344 Y=140 and X=377 Y=65 are in response to buried, miscellaneous metal objects.

- The geophysical investigation suggests that Parcel 13 does not contain metallic USTs within the surveyed portion of the site.

5.0 LIMITATIONS

EM61 and GPR surveys have been performed and this report prepared for Terracon Consultants, Inc. in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained for this project have not conclusively determined that the area of interest does not contain buried, metallic USTs, but that none were detected.

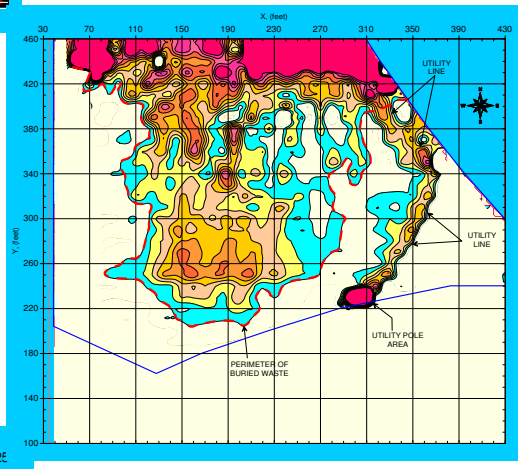


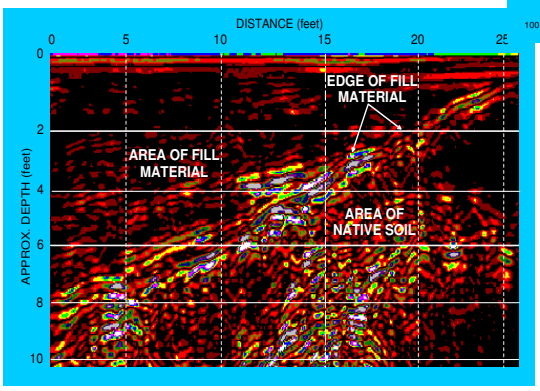


FIGURES

(on the following pages)

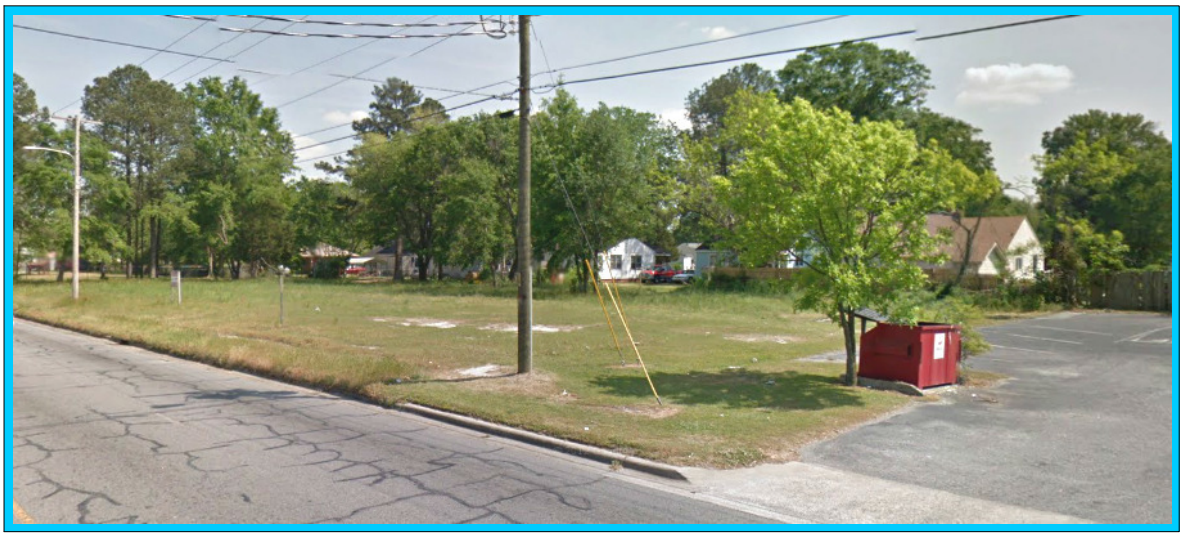
Figures shown on this page are for esthetic purposes only and are not related to the geophysical results discussed in this report.





The photograph shows the Geonics EM61 metal detector that was used to conduct the metal detection survey across the Blount, et al property (Parcel 13) on August 15, 2012.

The photographs show the SIR-2000 GPR system equipped with a 400 MHz antenna that were used to conduct the ground penetrating radar investigation across selected EM61 differential anomalies at the Parcel 13 site on August 21, 2012.



The photograph shows the W.G. Bount, et al property (Parcel 13) located at 1640 Farmville Boulevard in Greenville, North Carolina. The photograph is viewed in a southeasterly direction.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

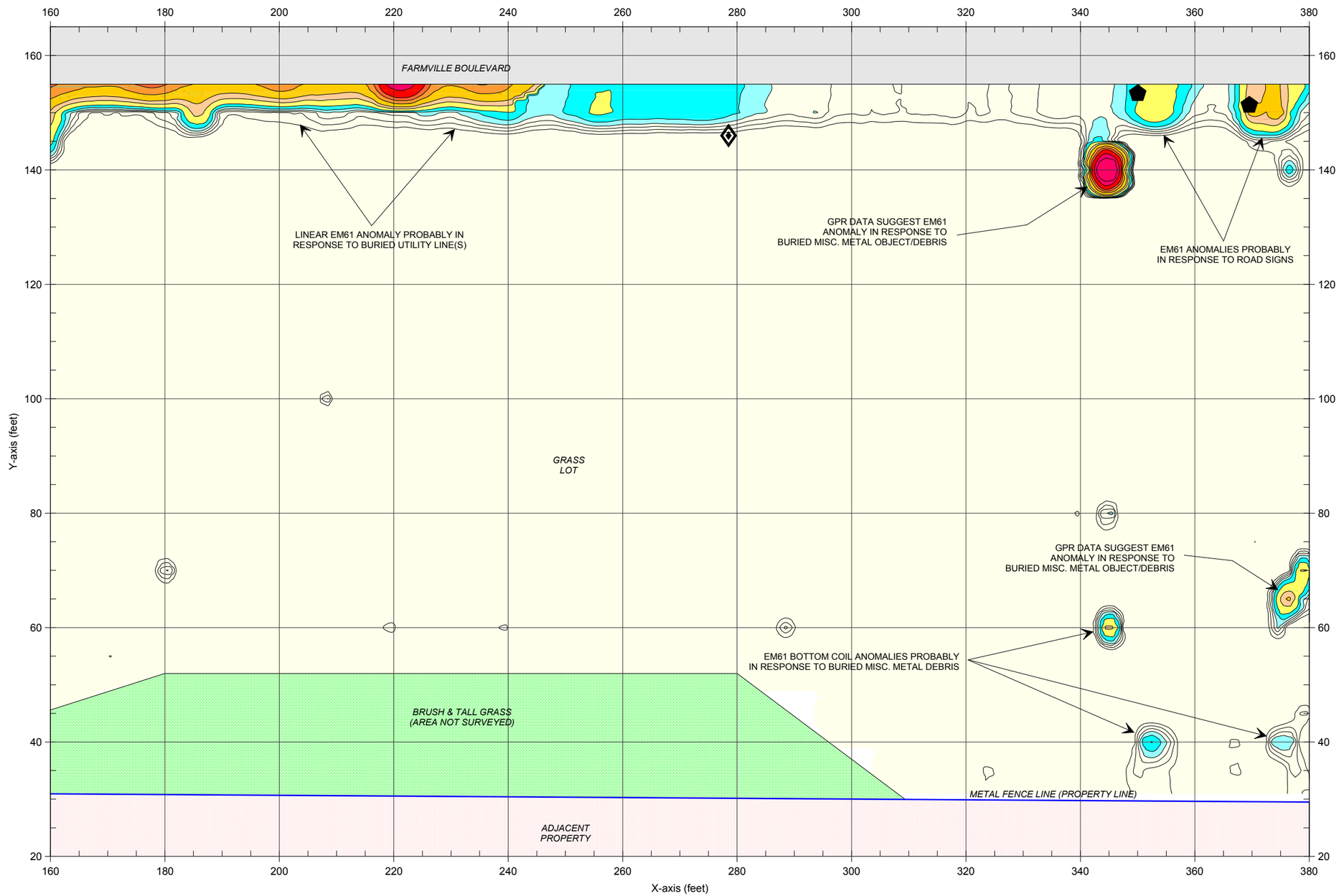
CLIENT	TERRACON CONSULTANTS, INC.	DATE	09/24/12	DRWN	MJD
SITE	W.G. BOUNT, ETAL PROPERTY (PARCEL 13)	LAY		CHKD	
CITY	GREENVILLE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	JNO	2012-212	FIGURE	

GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS

FIGURE 1

EM61 METAL DETECTION (BOTTOM COIL RESULTS)

FIGURE 2



N
W
E
S
APPROXIMATE NORTH

LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- DUMPSTER
- GOODWILL CLOTHING BOX
- BUSHES OR BRUSHY TERRAIN
- WOODEN FENCE
- METAL FENCE LINE
- BURIED CONDUIT
- WATER METER COVER
- UTILITY POLE
- GAS METER JUNCTION
- GUY WIRE
- MAIL BOX
- ROAD SIGN
- METAL VALVE OR CLEAN-OUT COVER

EM61 BOTTOM COIL RESPONSE (MILLIVOLTS)

-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) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM61 survey was conducted on August 15, 2012 using a Geonics EM61 instrument. Ground penetrating radar (GPR) scans were conducted across selected EM61 anomalies on August 21, 2012 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

GRAPHIC SCALE IN FEET

DRWN	CHKD	FIGURE
MJD		
DATE	LAY	DWG	J-NO.
09/24/12			2012-212

CLIENT: TERRACON CONSULTANTS, INC.
SITE: W.G. BOUNT, ET AL PROPERTY (PARCEL 13)
CITY: GREENVILLE
STATE: NORTH CAROLINA
TITLE: GEOPHYSICAL RESULTS

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

FARMVILLE BOULEVARD

LINEAR EM61 ANOMALY PROBABLY IN RESPONSE TO BURIED UTILITY LINE(S)

GPR DATA SUGGEST EM61 ANOMALY IN RESPONSE TO BURIED MISC. METAL OBJECT/DEBRIS

EM61 ANOMALY PROBABLY IN RESPONSE TO ROAD SIGN

GRASS LOT

GPR DATA SUGGEST EM61 ANOMALY IN RESPONSE TO BURIED MISC. METAL OBJECT/DEBRIS

BRUSH & TALL GRASS (AREA NOT SURVEYED)

METAL FENCE LINE (PROPERTY LINE)

ADJACENT PROPERTY

Y-axis (feet)

X-axis (feet)

APPROXIMATE NORTH

LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- DUMPSTER
- GOODWILL CLOTHING BOX
- BUSHES OR BRUSHY TERRAIN
- WOODEN FENCE
- METAL FENCE LINE
- BURIED CONDUIT
- WATER METER COVER
- UTILITY POLE
- GAS METER JUNCTION
- GUY WIRE
- MAIL BOX
- ROAD SIGN
- METAL VALVE OR CLEAN-OUT COVER

EM61 DIFFERENTIAL RESPONSE (MILLIVOLTS)

-5000 -400 -200 -100 -90 -45 -90 -75 -100 -150 -200 -300 -400 -500 -750 -1000

Note: The contour plot shows the differential response between the bottom and top coils of the EM61 instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 survey was conducted on August 15, 2012 using a Geonics EM61 instrument. Ground penetrating radar (GPR) scans were conducted across selected EM61 anomalies on August 21, 2012 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

EM61 METAL DETECTION (DIFFERENTIAL RESULTS)

FIGURE 3

GRAPHIC SCALE IN FEET

DRWN	CHKD		FIGURE
MJD			
DATE	LAY	DWG	J-NO.
09/24/12			2012-212

CLIENT: TERRACON CONSULTANTS, INC.

SITE: W.G. BOUNT, ET AL PROPERTY (PARCEL 13)

CITY: GREENVILLE

STATE: NORTH CAROLINA

TITLE: GEOPHYSICAL RESULTS

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.

APPENDIX C

Laboratory Analytical Reports and Chain of Custody

Laboratory Report of Analysis

To: Steve Kerlin
Terracon
5240 Greens Dairy Rd
Raleigh, NC 27616

Report Number: **31202736**

Client Project: **70127335 U-3315**

Dear Steve Kerlin,

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. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. 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 Michael D. Page 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.

Michael D. Page — Date
Project Manager
michael.page@sgs.com

Print Date: 09/06/2012 N.C. Certification # 481

Laboratory Qualifiers

Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
V	Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit
A	Amount detected is less than the Lower Method Calibration Limit
J	Estimated Concentration.
O	The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high
E	Amount detected is greater than the Upper Calibration Limit
S	The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s)
Q	Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s)
I	Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s)
DPE	Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s)
TIC	Tentatively Identified Compound
EMPC	Estimated Maximum possible Concentration due to ion ratio failure
ND	Not Detected
K	Result is estimated due to ion ratio failure in High Resolution PCB Analysis
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
S-1	31202736001	08/23/2012 09:25	08/27/2012 08:00	Soil-Solid as dry weight
S-2	31202736002	08/23/2012 09:36	08/27/2012 08:00	Soil-Solid as dry weight
S-3	31202736003	08/23/2012 09:45	08/27/2012 08:00	Soil-Solid as dry weight
S-4	31202736004	08/23/2012 10:00	08/27/2012 08:00	Soil-Solid as dry weight
S-5	31202736005	08/23/2012 11:20	08/27/2012 08:00	Soil-Solid as dry weight
S-6	31202736006	08/23/2012 10:25	08/27/2012 08:00	Soil-Solid as dry weight
S-7	31202736007	08/23/2012 11:30	08/27/2012 08:00	Soil-Solid as dry weight
MW-1	31202736008	08/23/2012 12:15	08/27/2012 08:00	Water

Results of **S-1**

Client Sample ID: **S-1**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736001-A
Lab Project ID: 31202736

Collection Date: 08/23/2012 09:25
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 88.60

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	2.85	2.85	mg/kg	1	08/30/2012 18:24
Surrogates							
4-Bromofluorobenzene	104			70.0-130	%	1	08/30/2012 18:24

Batch Information

Analytical Batch: **VGC2115**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/30/2012 18:24**

Prep Batch: **VXX3931**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/27/2012 14:04**
Prep Initial Wt./Vol.: **7.92 g**
Prep Extract Vol: **5 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-1**

Client Sample ID: **S-1**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736001-C
Lab Project ID: 31202736

Collection Date: 08/23/2012 09:25
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 88.60

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**72.3**		6.82	6.82	mg/kg	1	08/28/2012 19:46
Surrogates							
o-Terphenyl	90.6			40.0-140	%	1	08/28/2012 19:46

Batch Information

Analytical Batch: **XGC2487**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/28/2012 19:46**

Prep Batch: **XXX2982**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/27/2012 16:45**
Prep Initial Wt./Vol.: **33.09 g**
Prep Extract Vol: **10 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-2**

Client Sample ID: **S-2**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736002-A
Lab Project ID: 31202736

Collection Date: 08/23/2012 09:36
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 88.60

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	2.86	2.86	mg/kg	1	08/30/2012 18:49
Surrogates							
4-Bromofluorobenzene	100			70.0-130	%	1	08/30/2012 18:49

Batch Information

Analytical Batch: **VGC2115**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/30/2012 18:49**

Prep Batch: **VXX3931**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/27/2012 14:05**
Prep Initial Wt./Vol.: **7.88 g**
Prep Extract Vol: **5 mL**

Results of **S-2**

Client Sample ID: **S-2**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736002-C
Lab Project ID: 31202736

Collection Date: 08/23/2012 09:36
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 88.60

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	6.83	6.83	mg/kg	1	08/28/2012 20:15
Surrogates							
o-Terphenyl	100			40.0-140	%	1	08/28/2012 20:15

Batch Information

Analytical Batch: **XGC2487**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/28/2012 20:15**

Prep Batch: **XXX2982**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/27/2012 16:45**
Prep Initial Wt./Vol.: **33.06 g**
Prep Extract Vol: **10 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-3**

Client Sample ID: **S-3**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736003-A
Lab Project ID: 31202736

Collection Date: 08/23/2012 09:45
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 83.40

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	2.99	2.99	mg/kg	1	08/30/2012 19:14
Surrogates							
4-Bromofluorobenzene	104			70.0-130	%	1	08/30/2012 19:14

Batch Information

Analytical Batch: **VGC2115**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/30/2012 19:14**

Prep Batch: **VXX3931**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/27/2012 14:05**
Prep Initial Wt./Vol.: **8.01 g**
Prep Extract Vol: **5 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-3**

Client Sample ID: **S-3**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736003-B
Lab Project ID: 31202736

Collection Date: 08/23/2012 09:45
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 83.40

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	7.27	7.27	mg/kg	1	08/28/2012 20:43
Surrogates							
o-Terphenyl	101			40.0-140	%	1	08/28/2012 20:43

Batch Information

Analytical Batch: **XGC2487**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/28/2012 20:43**

Prep Batch: **XXX2982**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/27/2012 16:45**
Prep Initial Wt./Vol.: **32.99 g**
Prep Extract Vol: **10 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-4**

Client Sample ID: **S-4**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736004-A
Lab Project ID: 31202736

Collection Date: 08/23/2012 10:00
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 84.80

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.02	3.02	mg/kg	1	08/30/2012 19:40
Surrogates							
4-Bromofluorobenzene	104			70.0-130	%	1	08/30/2012 19:40

Batch Information

Analytical Batch: **VGC2115**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/30/2012 19:40**

Prep Batch: **VXX3931**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/27/2012 14:06**
Prep Initial Wt./Vol.: **7.8 g**
Prep Extract Vol: **5 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-4**

Client Sample ID: **S-4**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736004-B
Lab Project ID: 31202736

Collection Date: 08/23/2012 10:00
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 84.80

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	7.06	7.06	mg/kg	1	08/28/2012 21:11
Surrogates							
o-Terphenyl	96.3			40.0-140	%	1	08/28/2012 21:11

Batch Information

Analytical Batch: **XGC2487**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/28/2012 21:11**

Prep Batch: **XXX2982**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/27/2012 16:45**
Prep Initial Wt./Vol.: **33.42 g**
Prep Extract Vol: **10 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-5**

Client Sample ID: **S-5**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736005-A
Lab Project ID: 31202736

Collection Date: 08/23/2012 11:20
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 85.70

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.51	3.51	mg/kg	1	08/30/2012 20:05
Surrogates							
4-Bromofluorobenzene	104			70.0-130	%	1	08/30/2012 20:05

Batch Information

Analytical Batch: **VGC2115**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/30/2012 20:05**

Prep Batch: **VXX3931**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/27/2012 14:06**
Prep Initial Wt./Vol.: **6.64 g**
Prep Extract Vol: **5 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-5**

Client Sample ID: **S-5**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736005-B
Lab Project ID: 31202736

Collection Date: 08/23/2012 11:20
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 85.70

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	7.17	7.17	mg/kg	1	08/28/2012 21:39
Surrogates							
o-Terphenyl	98.6			40.0-140	%	1	08/28/2012 21:39

Batch Information

Analytical Batch: **XGC2487**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/28/2012 21:39**

Prep Batch: **XXX2982**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/27/2012 16:45**
Prep Initial Wt./Vol.: **32.53 g**
Prep Extract Vol: **10 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-6**

Client Sample ID: **S-6**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736006-A
Lab Project ID: 31202736

Collection Date: 08/23/2012 10:25
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 82.40

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.41	3.41	mg/kg	1	08/30/2012 20:30
Surrogates							
4-Bromofluorobenzene	104			70.0-130	%	1	08/30/2012 20:30

Batch Information

Analytical Batch: **VGC2115**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/30/2012 20:30**

Prep Batch: **VXX3931**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/27/2012 14:07**
Prep Initial Wt./Vol.: **7.12 g**
Prep Extract Vol: **5 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-6**

Client Sample ID: **S-6**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736006-B
Lab Project ID: 31202736

Collection Date: 08/23/2012 10:25
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 82.40

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	7.14	7.14	mg/kg	1	08/28/2012 22:07
Surrogates							
o-Terphenyl	86.3			40.0-140	%	1	08/28/2012 22:07

Batch Information

Analytical Batch: **XGC2487**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/28/2012 22:07**

Prep Batch: **XXX2982**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/27/2012 16:45**
Prep Initial Wt./Vol.: **33.99 g**
Prep Extract Vol: **10 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-7**

Client Sample ID: **S-7**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736007-A
Lab Project ID: 31202736

Collection Date: 08/23/2012 11:30
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 86.80

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	2.85	2.85	mg/kg	1	08/30/2012 20:55
Surrogates							
4-Bromofluorobenzene	103			70.0-130	%	1	08/30/2012 20:55

Batch Information

Analytical Batch: **VGC2115**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/30/2012 20:55**

Prep Batch: **VXX3931**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/27/2012 14:07**
Prep Initial Wt./Vol.: **8.1 g**
Prep Extract Vol: **5 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **S-7**

Client Sample ID: **S-7**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736007-B
Lab Project ID: 31202736

Collection Date: 08/23/2012 11:30
Received Date: 08/27/2012 08:00
Matrix: Soil-Solid as dry weight
Solids (%): 86.80

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	6.81	6.81	mg/kg	1	08/28/2012 22:35
Surrogates							
o-Terphenyl	96.7			40.0-140	%	1	08/28/2012 22:35

Batch Information

Analytical Batch: **XGC2487**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/28/2012 22:35**

Prep Batch: **XXX2982**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/27/2012 16:45**
Prep Initial Wt./Vol.: **33.84 g**
Prep Extract Vol: **10 mL**

Print Date: 09/06/2012

N.C. Certification # 481

Results of **MW-1**

Client Sample ID: **MW-1**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736008-B
Lab Project ID: 31202736

Collection Date: 08/23/2012 12:15
Received Date: 08/27/2012 08:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.520	5.00	ug/L	5	08/31/2012 15:16
1,1,1-Trichloroethane	ND	U	0.340	5.00	ug/L	5	08/31/2012 15:16
1,1,2,2-Tetrachloroethane	ND	U	1.07	5.00	ug/L	5	08/31/2012 15:16
1,1,2-Trichloroethane	ND	U	0.840	5.00	ug/L	5	08/31/2012 15:16
1,1-Dichloroethane	ND	U	0.305	5.00	ug/L	5	08/31/2012 15:16
1,1-Dichloroethene	ND	U	0.400	5.00	ug/L	5	08/31/2012 15:16
1,1-Dichloropropene	ND	U	0.335	5.00	ug/L	5	08/31/2012 15:16
1,2,3-Trichlorobenzene	ND	U	0.710	5.00	ug/L	5	08/31/2012 15:16
1,2,3-Trichloropropane	ND	U	1.05	5.00	ug/L	5	08/31/2012 15:16
1,2,4-Trichlorobenzene	ND	U	0.670	5.00	ug/L	5	08/31/2012 15:16
1,2,4-Trimethylbenzene	ND	U	0.575	5.00	ug/L	5	08/31/2012 15:16
1,2-Dibromo-3-chloropropane	ND	U	3.74	25.0	ug/L	5	08/31/2012 15:16
1,2-Dibromoethane	ND	U	0.515	5.00	ug/L	5	08/31/2012 15:16
1,2-Dichlorobenzene	ND	U	0.885	5.00	ug/L	5	08/31/2012 15:16
1,2-Dichloroethane	ND	U	0.380	5.00	ug/L	5	08/31/2012 15:16
1,2-Dichloropropane	ND	U	0.475	5.00	ug/L	5	08/31/2012 15:16
1,3,5-Trimethylbenzene	ND	U	0.650	5.00	ug/L	5	08/31/2012 15:16
1,3-Dichlorobenzene	ND	U	0.630	5.00	ug/L	5	08/31/2012 15:16
1,3-Dichloropropane	ND	U	0.770	5.00	ug/L	5	08/31/2012 15:16
1,4-Dichlorobenzene	ND	U	0.840	5.00	ug/L	5	08/31/2012 15:16
2,2-Dichloropropane	ND	U	0.445	5.00	ug/L	5	08/31/2012 15:16
2-Butanone	ND	U	3.44	125	ug/L	5	08/31/2012 15:16
2-Chlorotoluene	ND	U	0.755	5.00	ug/L	5	08/31/2012 15:16
2-Hexanone	ND	U	6.30	25.0	ug/L	5	08/31/2012 15:16
4-Chlorotoluene	ND	U	0.685	5.00	ug/L	5	08/31/2012 15:16
4-Isopropyltoluene	ND	U	0.630	5.00	ug/L	5	08/31/2012 15:16
4-Methyl-2-pentanone	ND	U	5.20	25.0	ug/L	5	08/31/2012 15:16
Acetone	ND	U	2.99	125	ug/L	5	08/31/2012 15:16
Benzene	ND	U	0.355	5.00	ug/L	5	08/31/2012 15:16
Bromobenzene	ND	U	0.550	5.00	ug/L	5	08/31/2012 15:16
Bromochloromethane	ND	U	0.265	5.00	ug/L	5	08/31/2012 15:16
Bromodichloromethane	ND	U	0.430	5.00	ug/L	5	08/31/2012 15:16
Bromoform	ND	U	0.473	5.00	ug/L	5	08/31/2012 15:16
Bromomethane	ND	U	1.06	5.00	ug/L	5	08/31/2012 15:16
n-Butylbenzene	ND	U	0.575	5.00	ug/L	5	08/31/2012 15:16
Carbon disulfide	ND	U	0.320	5.00	ug/L	5	08/31/2012 15:16
Carbon tetrachloride	ND	U	0.620	5.00	ug/L	5	08/31/2012 15:16
Chlorobenzene	ND	U	0.645	5.00	ug/L	5	08/31/2012 15:16
Chloroethane	ND	U	0.660	5.00	ug/L	5	08/31/2012 15:16
Chloroform	ND	U	0.385	5.00	ug/L	5	08/31/2012 15:16
Chloromethane	ND	U	0.530	5.00	ug/L	5	08/31/2012 15:16
Dibromochloromethane	ND	U	0.575	5.00	ug/L	5	08/31/2012 15:16
Dibromomethane	ND	U	0.545	5.00	ug/L	5	08/31/2012 15:16
Dichlorodifluoromethane	ND	U	0.525	25.0	ug/L	5	08/31/2012 15:16

Print Date: 09/06/2012

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Results of **MW-1**

Client Sample ID: **MW-1**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736008-B
Lab Project ID: 31202736

Collection Date: 08/23/2012 12:15
Received Date: 08/27/2012 08:00
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND	U	0.393	5.00	ug/L	5	08/31/2012 15:16
trans-1,3-Dichloropropene	ND	U	0.431	5.00	ug/L	5	08/31/2012 15:16
Diisopropyl Ether	ND	U	0.415	5.00	ug/L	5	08/31/2012 15:16
Ethyl Benzene	ND	U	0.500	5.00	ug/L	5	08/31/2012 15:16
Hexachlorobutadiene	ND	U	0.555	5.00	ug/L	5	08/31/2012 15:16
Isopropylbenzene (Cumene)	ND	U	0.560	5.00	ug/L	5	08/31/2012 15:16
Methyl iodide	ND	U	0.575	5.00	ug/L	5	08/31/2012 15:16
Methylene chloride	**0.650**	J	0.560	25.0	ug/L	5	08/31/2012 15:16
Naphthalene	ND	U	0.720	5.00	ug/L	5	08/31/2012 15:16
Styrene	ND	U	0.700	5.00	ug/L	5	08/31/2012 15:16
Tetrachloroethene	**39.9**		0.375	5.00	ug/L	5	08/31/2012 15:16
Toluene	ND	U	0.340	5.00	ug/L	5	08/31/2012 15:16
Trichloroethene	**2.10**	J	0.375	5.00	ug/L	5	08/31/2012 15:16
Trichlorofluoromethane	ND	U	0.685	5.00	ug/L	5	08/31/2012 15:16
Vinyl chloride	ND	U	0.475	5.00	ug/L	5	08/31/2012 15:16
Xylene (total)	ND	U	1.00	10.0	ug/L	5	08/31/2012 15:16
cis-1,2-Dichloroethene	**3.20**	J	0.415	5.00	ug/L	5	08/31/2012 15:16
m,p-Xylene	ND	U	1.00	10.0	ug/L	5	08/31/2012 15:16
n-Propylbenzene	ND	U	0.590	5.00	ug/L	5	08/31/2012 15:16
o-Xylene	ND	U	0.610	5.00	ug/L	5	08/31/2012 15:16
sec-Butylbenzene	ND	U	0.540	5.00	ug/L	5	08/31/2012 15:16
tert-Butyl methyl ether (MTBE)	ND	U	0.445	5.00	ug/L	5	08/31/2012 15:16
tert-Butylbenzene	ND	U	0.680	5.00	ug/L	5	08/31/2012 15:16
trans-1,2-Dichloroethene	ND	U	0.375	5.00	ug/L	5	08/31/2012 15:16
trans-1,4-Dichloro-2-butene	ND	U	4.39	25.0	ug/L	5	08/31/2012 15:16
Surrogates							
1,2-Dichloroethane-d4	99.0			64.0-140	%	5	08/31/2012 15:16
4-Bromofluorobenzene	102			85.0-115	%	5	08/31/2012 15:16
Toluene d8	102			82.0-117	%	5	08/31/2012 15:16

Batch Information

Analytical Batch: **VMS2516**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**
Analytical Date/Time: **08/31/2012 15:16**

Prep Batch: **VXX3935**
Prep Method: **SW-846 5030B**
Prep Date/Time: **08/31/2012 08:55**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 09/06/2012

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Results of **MW-1**

Client Sample ID: **MW-1**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736008-C
Lab Project ID: 31202736

Collection Date: 08/23/2012 12:15
Received Date: 08/27/2012 08:00
Matrix: Water

Results by **SW-846 8270D**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	1.78	5.15	ug/L	1	08/30/2012 17:34
1,2-Dichlorobenzene	ND	U	1.76	5.15	ug/L	1	08/30/2012 17:34
1,3-Dichlorobenzene	ND	U	1.70	5.15	ug/L	1	08/30/2012 17:34
1,4-Dichlorobenzene	ND	U	1.68	5.15	ug/L	1	08/30/2012 17:34
2,4,5-Trichlorophenol	ND	U	2.14	5.15	ug/L	1	08/30/2012 17:34
2,4,6-Trichlorophenol	ND	U	2.09	5.15	ug/L	1	08/30/2012 17:34
2,4-Dichlorophenol	ND	U	2.12	5.15	ug/L	1	08/30/2012 17:34
2,4-Dinitrophenol	ND	U	0.688	25.7	ug/L	1	08/30/2012 17:34
2,4-Dinitrotoluene	ND	U	1.89	5.15	ug/L	1	08/30/2012 17:34
2,6-Dinitrotoluene	ND	U	1.94	5.15	ug/L	1	08/30/2012 17:34
2-Chloronaphthalene	ND	U	2.06	5.15	ug/L	1	08/30/2012 17:34
2-Chlorophenol	ND	U	2.89	5.15	ug/L	1	08/30/2012 17:34
2-Methylnaphthalene	ND	U	2.00	5.15	ug/L	1	08/30/2012 17:34
2-Methylphenol	ND	U	2.13	5.15	ug/L	1	08/30/2012 17:34
2-Nitroaniline	ND	U	1.74	5.15	ug/L	1	08/30/2012 17:34
2-Nitrophenol	ND	U	2.03	5.15	ug/L	1	08/30/2012 17:34
3 and/or 4-Methylphenol	ND	U	2.31	5.15	ug/L	1	08/30/2012 17:34
3,3'-Dichlorobenzidine	ND	U	1.80	10.3	ug/L	1	08/30/2012 17:34
3-Nitroaniline	ND	U	1.70	25.7	ug/L	1	08/30/2012 17:34
4,6-Dinitro-2-methylphenol	ND	U	0.509	25.7	ug/L	1	08/30/2012 17:34
4-Chloro-3-methylphenol	ND	U	2.04	5.15	ug/L	1	08/30/2012 17:34
4-Chloroaniline	ND	U	1.94	25.7	ug/L	1	08/30/2012 17:34
4-Chlorophenyl phenyl ether	ND	U	2.53	5.15	ug/L	1	08/30/2012 17:34
Acenaphthene	ND	U	2.12	5.15	ug/L	1	08/30/2012 17:34
Acenaphthylene	ND	U	2.06	5.15	ug/L	1	08/30/2012 17:34
Anthracene	ND	U	1.99	5.15	ug/L	1	08/30/2012 17:34
Benzo(a)anthracene	ND	U	2.02	5.15	ug/L	1	08/30/2012 17:34
Benzo(a)pyrene	ND	U	1.92	5.15	ug/L	1	08/30/2012 17:34
Benzo(b)fluoranthene	ND	U	2.02	5.15	ug/L	1	08/30/2012 17:34
Benzo(g,h,i)perylene	ND	U	2.21	5.15	ug/L	1	08/30/2012 17:34
Benzo(k)fluoranthene	ND	U	2.38	5.15	ug/L	1	08/30/2012 17:34
Benzoic acid	ND	U	2.35	5.15	ug/L	1	08/30/2012 17:34
Bis(2-Chloroethoxy)methane	ND	U	2.18	5.15	ug/L	1	08/30/2012 17:34
Bis(2-Chloroethyl)ether	ND	U	2.28	5.15	ug/L	1	08/30/2012 17:34
Bis(2-Chloroisopropyl)ether	ND	U	2.10	5.15	ug/L	1	08/30/2012 17:34
Bis(2-Ethylhexyl)phthalate	ND	U	2.01	5.15	ug/L	1	08/30/2012 17:34
4-Bromophenyl phenyl ether	ND	U	2.10	5.15	ug/L	1	08/30/2012 17:34
Butyl benzyl phthalate	ND	U	1.95	5.15	ug/L	1	08/30/2012 17:34
Chrysene	ND	U	2.27	5.15	ug/L	1	08/30/2012 17:34
Di-n-butyl phthalate	ND	U	1.97	5.15	ug/L	1	08/30/2012 17:34
Di-n-octyl phthalate	ND	U	1.50	5.15	ug/L	1	08/30/2012 17:34
Dibenz(a,h)anthracene	ND	U	2.08	5.15	ug/L	1	08/30/2012 17:34
Dibenzofuran	ND	U	2.29	5.15	ug/L	1	08/30/2012 17:34
Diethyl phthalate	ND	U	2.16	5.15	ug/L	1	08/30/2012 17:34

Print Date: 09/06/2012

N.C. Certification # 481

Results of **MW-1**

Client Sample ID: **MW-1**
Client Project ID: **70127335 U-3315**
Lab Sample ID: 31202736008-C
Lab Project ID: 31202736

Collection Date: 08/23/2012 12:15
Received Date: 08/27/2012 08:00
Matrix: Water

Results by **SW-846 8270D**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND	U	2.20	5.15	ug/L	1	08/30/2012 17:34
2,4-Dimethylphenol	ND	U	2.28	5.15	ug/L	1	08/30/2012 17:34
Diphenylamine	ND	U	2.08	5.15	ug/L	1	08/30/2012 17:34
Fluoranthene	ND	U	2.08	5.15	ug/L	1	08/30/2012 17:34
Fluorene	ND	U	2.51	5.15	ug/L	1	08/30/2012 17:34
Hexachlorobenzene	ND	U	1.99	5.15	ug/L	1	08/30/2012 17:34
Hexachlorobutadiene	ND	U	1.57	5.15	ug/L	1	08/30/2012 17:34
Hexachlorocyclopentadiene	ND	U	0.812	10.3	ug/L	1	08/30/2012 17:34
Hexachloroethane	ND	U	1.44	5.15	ug/L	1	08/30/2012 17:34
Indeno(1,2,3-cd)pyrene	ND	U	2.08	5.15	ug/L	1	08/30/2012 17:34
Isophorone	ND	U	2.15	5.15	ug/L	1	08/30/2012 17:34
Naphthalene	ND	U	2.00	5.15	ug/L	1	08/30/2012 17:34
4-Nitroaniline	ND	U	1.73	25.7	ug/L	1	08/30/2012 17:34
Nitrobenzene	ND	U	2.26	5.15	ug/L	1	08/30/2012 17:34
4-Nitrophenol	ND	U	1.31	25.7	ug/L	1	08/30/2012 17:34
Pentachlorophenol	ND	U	1.60	25.7	ug/L	1	08/30/2012 17:34
Phenanthrene	ND	U	2.05	5.15	ug/L	1	08/30/2012 17:34
Phenol	ND	U	2.43	5.15	ug/L	1	08/30/2012 17:34
Pyrene	ND	U	2.07	5.15	ug/L	1	08/30/2012 17:34
n-Nitrosodi-n-propylamine	ND	U	2.30	5.15	ug/L	1	08/30/2012 17:34
Surrogates							
2,4,6-Tribromophenol	99.0			29.3-152	%	1	08/30/2012 17:34
2-Fluorobiphenyl	89.0			50.0-107	%	1	08/30/2012 17:34
2-Fluorophenol	78.0			33.1-118	%	1	08/30/2012 17:34
Nitrobenzene-d5	94.0			46.0-118	%	1	08/30/2012 17:34
Phenol-d6	91.0			49.0-120	%	1	08/30/2012 17:34
Terphenyl-d14	101			22.1-142	%	1	08/30/2012 17:34

Batch Information

Analytical Batch: **XMS1654**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/30/2012 17:34**

Prep Batch: **XXX2991**
Prep Method: **SW-846 3520C**
Prep Date/Time: **08/29/2012 15:23**
Prep Initial Wt./Vol.: **971 mL**
Prep Extract Vol: **5 mL**

Print Date: 09/06/2012

N.C. Certification # 481

CHAIN OF CUSTODY

SGS ANALYTICAL PERSPECTIVES
5500 Business Drive
Wilmington, NC 28405
+1 910 350 1903
WWW.SGS.COM

WBS # 35781.12

CLIENT:	Terracon Consultants Inc.
CONTACT:	Steve Kerlin **PHONE NO:** (919) 873-2211
PROJECT:	70127335 **SITE / PWSID / WBS #:** U-3315
REPORTS TO:	sjkerlin@terracon.com
EMAIL:	
INVOICE TO:	NCDOT **QUOTE #** NA **P.O. NUMBER** NA

SGS Reference #: 3120276

PAGE 1 OF 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	SAMPLE TYPE (C=COMP, G=GRAB)	PRESERVATIVES USED: MeOH		HCl								ANALYSIS REQUIRED: TPH GRO	TPH DRO	VOCs (8260)	SVOCs (8270)							REMARKS
	S-1	8/23/12	9:25A	SS	3	G											X	X									
	S-2		9:35A	SS	3												X	X									
	S-3		9:45A	SS	3												X	X									
	S-4		10:00A	SS	3												X	X									
	S-5		11:20A	SS	3												X	X									
	S-6		10:25A	SS	3												X	X									
	S-7		11:30A	SS	3												X	X									
	MW-1		12:15	GW	4														X	X							

COLLECTED/RELINQUISHED BY: (1)	**DATE**	**TIME**	**RECEIVED BY:**	**REPORT LEVEL:**	**REQUESTED TURNAROUND TIME:**
Stephen Kerlin	8/23/12	17:30	8/24/12 1145	☐ Level I ☐ Level II ☐ Level IV	☐ Rush: _____ ☑ Standard
Relinquished By: (2)	Date	Time	Received By:	**SPECIAL DELIVERABLES:** State of Origin: _____	☐ Trust Fund
				☐ DoD ☐ EDD: _____	Other: _____
Relinquished By: (3)	Date	Time	Received By:	**SPECIAL INSTRUCTIONS:**	
Received For Laboratory By:	Date	Time	CoC Seal: INTACT BROKEN (ABSENT)	Shipping Carrier:	Notes:
	8/27/12	0800	Sample Receipt Temp: C 2.5°C	Shipping Ticket No:	

SGS-00055 (06/12)

ANALYTICAL PERSPECTIVES IS NOW PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

White - Retained by Lab
Yellow - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **NCDOT-Terracon** Work Order No.: **31202736**

1. ___ Shipped
   _X_ Hand Delivered

2. _X_ COC Present on Receipt
   ___ No COC
   ___ Additional Transmittal Forms

3. ___ Custody Tape on Container
   _X_ No Custody Tape

4. _X_ Samples Intact
   ___ Samples Broken / Leaking

5. _X_ Chilled on Receipt Actual Temp.(s) in °C: 2.5
   ___ Ambient on Receipt
   ___ Walk-in on Ice; Coming down to temp.
   ___ Received Outside of Temperature Specifications

6. _X_ Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

7. ___ Chlorine absent
   ___ HNO3 < 2
   ___ HCL < 2
   ___ Additional Preservatives verified (see notes)

8. _X_ Received Within Holding Time
   ___ Not Received Within Holding Time

9. _X_ No Discrepancies Noted
   ___ Discrepancies Noted
   ___ NCDENR notified of Discrepancies*

10. _X_ No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Notes:

Comments:

Inspected and Logged in by: JJ

Date: Mon-8/27/12 00:00

*NCDENR must be notified when collection, holding time or preservation requirements are not met. MI_11.6