Preliminary Site Assessment

1006 Dickinson Avenue

Parcel #187, Gatlin, Wilton Lee

Vacant Commercial Structure

Greenville, Pitt County, North Carolina

State Project No. U-3315

WBS Element: 35781.1.2

February 20, 2013

Terracon Project No. 70127335

Prepared for:

North Carolina Department of Transportation (NCDOT)

Geotechnical Engineering Unit

Prepared by:

Terracon Consultants, Inc.

Raleigh, North Carolina

February 20, 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 #187, Gatlin, Wilton Lee
Vacant Commercial Structure
1006 Dickinson Avenue
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 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:

Benjamin W. Swift
Environmental Professional

Reviewed by:

for: Christopher L. Corbitt, PG
Authorized Project Reviewer

Lori C. Hoffman

Lori Hoffman, PE
Environmental Department Manager

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PRELIMINARY SITE ASSESSMENT

PARCEL #187, GATLIN, WILTON LEE
1006 DICKINSON AVENUE
GREENVILLE, PITT COUNTY, NORTH CAROLINA

1.0 INTRODUCTION

1.1 Site Description

Site Name	Parcel #187, Gatlin, Wilton Lee (Vacant Commercial Structure)
Site Location/Address	Located at 1006 Dickinson Avenue in Greenville, North Carolina
General Site Description	The site is occupied by a vacant structure previously operated as a drycleaner and coin operated laundry.

1.2 Site History

According to information provided by the NCDOT and collected by Terracon, there are no known release incidents associated with the site and the facility is not enrolled within the North Carolina Department of Environment and Natural Resources (NCDENR) DSCA Program. The site is occupied by a vacant structure that was previously operated as a drycleaning business and a coin operated laundry. Terracon reviewed Sanborn maps to determine the site history. Development of the site was shown on the 1911, 1916, 1923, 1929, 1946 maps as a church. In 1958, a storage building was depicted on the site; and the church was no longer present. The NCDOT intends to acquire the entire parcel as part of their proposed road construction activities.

1.3 Scope of Work

Terracon has prepared the following Preliminary Site Assessment (PSA) scope of work 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 five soil samples and two groundwater samples for laboratory analysis and preparation of a report documenting our environmental 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 agreed with 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 the North Carolina Department of Transportation (NCDOT). Authorization for use or reliance by another 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 22, 29, and September 6, 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 22, and 29, 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 site. 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 probable 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 provided oversight for the advancement of six (6) soil borings along the exterior of the vacant dry-cleaning facility on September 6, 2012. The borings were completed by Bridger Drilling Enterprises, Inc., a North Carolina licensed driller using a Geoprobe® rig.

Soil samples were collected in 5-foot, disposable, acetate sleeves to document soil lithology, color, moisture content, and sensory evidence of impairment. The soil samples were placed in resealable plastic bags for a sufficient amount of time to allow volatilization of organic compounds from the soils. 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 each bag. The PID readings and soil sample depths are included on individual boring logs in Appendix A.

Soil borings B-1, B-2, B-4, B-5, and B-6 were each advanced to a depth of approximately 15 feet below ground surface (bgs). Soil boring B-5 was advanced to approximately 20 feet below bgs.

The soil samples were placed in laboratory prepared glassware and packed in an ice filled 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

Soil boring B-3, located in an apparent down-gradient position at the southeastern corner of the building, was converted to a temporary groundwater sampling well (TW-1) by driving the direct push probe to approximately 20 feet bgs and installing the well. The well location is included in Exhibit 2. The temporary monitoring well was constructed using 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.

The depth to groundwater was measured in the temporary well at approximately 17.2 feet bgs. Water that flowed into the temporary screen was purged with a peristaltic pump until turbidity decreased. A water sample was collected from the temporary well and placed into laboratory supplied, pre-preserved sample containers. The ice-packed sample containers and chain of custody documentation were picked up by a courier for delivery to the laboratory.

2.4 Subsurface Conditions

The soil samples from ground surface to a depth of 20 feet included silty sands, clayey sands, silty clay, and sandy clay. No petroleum odors or elevated PID readings were noted in the samples. Soil samples from the interval in each boring exhibiting the highest PID readings or most obvious evidence of contamination were submitted for laboratory analysis.

3.0 LABORATORY ANALYSES

Soil and groundwater samples were 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 to SGS North American Inc. in Wilmington, North Carolina for analysis. Please refer to Appendix C for the laboratory analytical reports.

4.0 DATA EVALUATION

4.1 Soil Sample Analytical Results and Interpretation

VOC and SVOC compounds were not detected in the soil samples above the laboratory reporting limits.

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 for groundwater sample TW-1 reported tetrachloroethene (122 ug/L) and trichloroethene (80.8 ug/L) at concentrations that exceed their respective NCAC 2L Groundwater Quality Standards.

Cis-1,2-Dichloroethene (51.1 ug/L) was also detected in the water sample from well TW-1 above the laboratory method detection limit but below its NCAC 2L Groundwater Quality Standard.

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 in the area of

investigation identified for this site.

- Six soil borings were advanced to depths ranging from approximately 15 to 20 feet bgs.

- VOC and SVOC compounds were not detected in the soil samples above the laboratory reporting limits.

- The depth to groundwater was measured in temporary well TW-1 at approximately 17.2 feet bgs.

- Laboratory analytical results for groundwater sample TW-1 reported tetrachloroethene (122 ug/L) and trichloroethene (80.8 ug/L) at concentrations that exceed their respective NCAC 2L Groundwater Quality Standards.

  Cis-1,2-Dichloroethene (51.1 ug/L) was also detected above the laboratory method detection limit but is below its NCAC 2L Groundwater Quality Standard.

- Based on the laboratory analytical results, contamination was not detected in the soils within the project area. Chlorinated compounds were detected in the groundwater apparently downgradient of the vacant dry cleaning facility located on the site. There is a potential for impacted soils to be located beneath the footprint of the building.

- Due to the depth of groundwater (17.2 feet bgs) and the projected depth of disturbance during road construction activities, there is a potential that groundwater may not be encountered; however, impacted soils may be encountered beneath the vacant dry cleaning facility.

TABLES

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

Table 1
Soil Sampling Analytical Results Summary
Parcel #187, Gatlin, Wilton Lee Property
Greenville, Pitt County, North Carolina

				Sample ID	S-1	S-2	S-3	S-4	S-5	S-6
				Depth	5.0-7.5 FT	10.0-12.5 FT	5.0-7.5 FT	5.0-7.5 FT	5.0-7.5 FT	5.0-7.5 FT
Method	**Parameter**	**Units**	**NCDENR IHSB Residential Health Based PSRGs (mg/kg)**	**NCDENR IHSB Protection of Groundwater PSRGs (mg/kg)**	**Value**	**Value**	**Value**	**Value**	**Value**	**Value**
8260B	VOCs	mg/kg	No Analytes Detected Above the Laboratory Detection Limits							
8270C	SVOCs	mg/kg	No Analytes Detected Above the Laboratory Detection Limits							

Notes:
Samples collected on September 6, 2012
NE = Not established
units = mg/kg - sample analyte compound concentrations measured in milligrams per kilogram

Table 2
Groundwater Sampling Analytical Results Summary
Parcel #187, Gatlin, Wilton Lee Property
Greenville, Pitt County, North Carolina

			Sample ID	TW-1
			Depth	17.2 FT
Method	**Parameter**	**Units**	**NCAC 2L Groundwater Quality Standard**	**Value**
8260B	Tetrachloroethene	ug/l	0.7	**122**
	Trichloroethene	ug/l	3	**80.8**
	cis-1,2-Dichloroethene	ug/l	70	**51.1**
8270C	SVOCs	ug/l	No Analytes Detected Above the Laboratory Detection Limits	

Notes:

GW Sample collected on September 6, 2012

NE = Not established

units = ug/L - sample analyte compound concentrations measured in micrograms per liter

Bold concentrations were reported above the laboratory method detection limits but below the NCAC 2L Groundwater Quality Standard

FIGURES

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

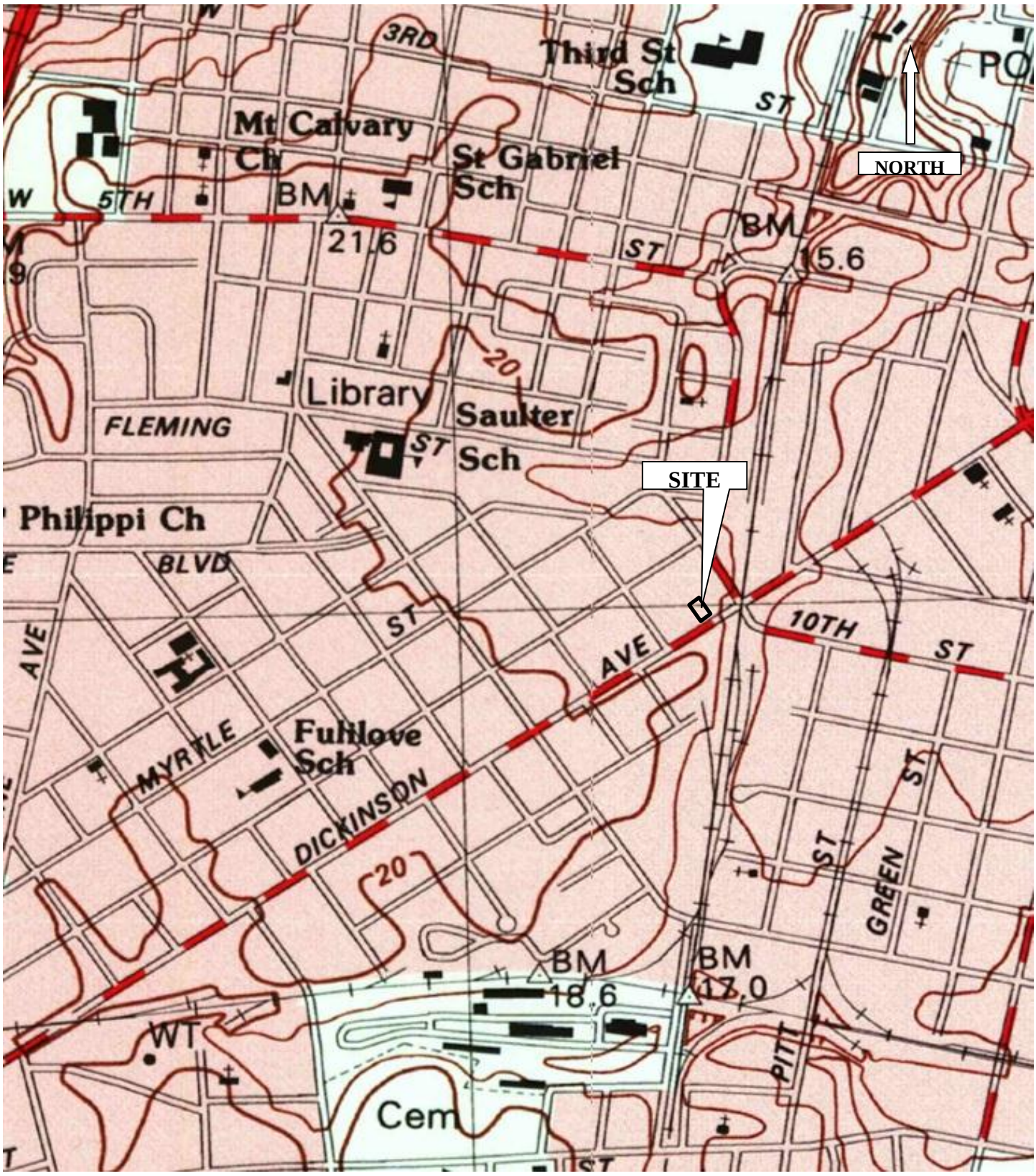


Diagram is for general location only

Site Vicinity Map
Parcel # 187
1006 Dickinson Avenue
Greenville, Pitt County, North Carolina

Reference: Greenville SW, NC USGS Quadrangle

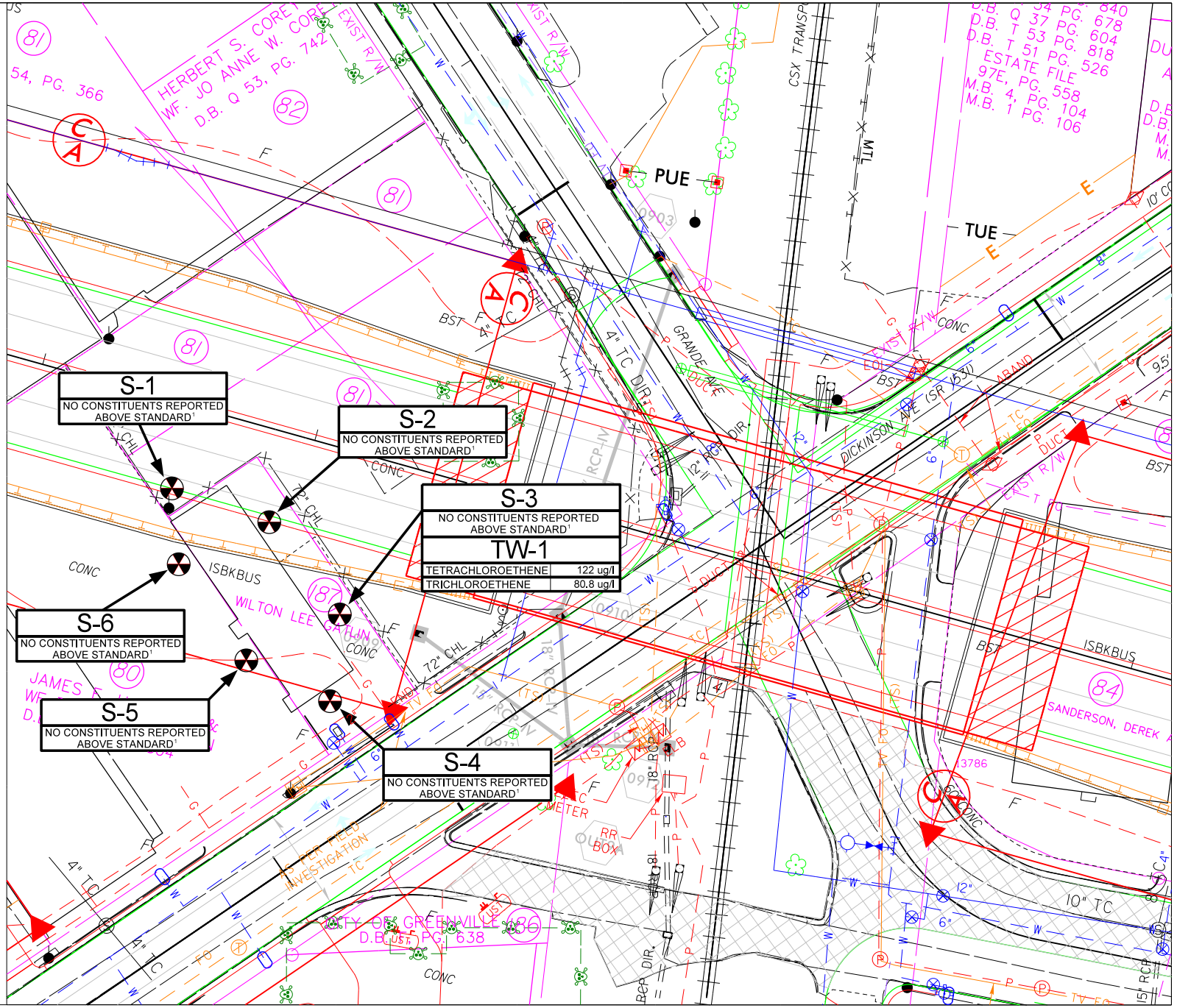
Dated Year: 1998

Terracon

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

LEGEND

- PROPERTY LINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE WITH IRON PIN AND CAP MARKER
- PROPOSED CONTROL OF ACCESS
- 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
- UST – POSSIBLE UST LOCATION



NOTES:

1. IHSB INDUSTRIAL SOIL REMEDIATION GOALS 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

WILTON LEE GATLIN PROPERTY - PARCEL 187
-Y10- STATION 15+00
1006 DICKINSON AVENUE
GREENVILLE, PITT COUNTY, NORTH CAROLINA

EXHIBIT
2

APPENDICES

Appendix A – Boring Logs
Appendix B – Geophysical Survey Report
Appendix C – Laboratory Analytical Reports and Chain of Custody

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: September 6, 2012
PROJECT LOCATION: Parcel #187, 1006 Dickinson Avenue Extension 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: Ben Swift	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
0 - 2.5		NA	0.0	No odors	0.0	Asphalt
					0.5	Brown, tan sandy clay/moist
					1.0	
					1.5	
					2.0	Grey, tan clayey sand
2.5 - 5.0		NA	0.0		2.5	
					3.0	
					3.5	
					4.0	
					4.5	
5.0 - 7.5*		NA	0.0		5.0	
					5.5	
					6.0	
					6.5	
					7.0	
7.5 - 10.0		NA	0.0		7.5	
					8.0	
					8.5	
					9.0	
					9.5	
10.0 - 12.5		NA	0.0		10.0	White, tan fine to medium sand
					10.5	
					11.0	
					11.5	
					12.0	
12.5 - 15.0		NA	0.0		12.5	
					13.0	
					13.5	
					14.0	Moist at 14 feet bgs
					14.5	
					15.0	Boring Terminated at 15.0 feet bgs
					15.5	
					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: September 6, 2012
PROJECT LOCATION: Parcel #187, 1006 Dickinson Avenue Extension 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: Ben Swift	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
0 - 2.5		NA	0.0	No odors	0.0	Concrete
					0.5	Brown, orange clayey sand
					1.0	
					1.5	
					2.0	Grey, orange clayey sand
2.5 - 5.0		NA	0.0		2.5	
					3.0	
					3.5	
					4.0	
					4.5	
5.0 - 7.5		NA	0.0		5.0	
					5.5	
					6.0	
					6.5	
					7.0	Tan, orange fine to medium sand
7.5 - 10.0		NA	0.0		7.5	
					8.0	
					8.5	
					9.0	
					9.5	
10.0 - 12.5*		NA	0.1		10.0	
					10.5	
					11.0	
					11.5	
					12.0	
12.5 - 15.0		NA	0.1		12.5	
					13.0	
					13.5	
					14.0	
					14.5	
					15.0	Boring Terminated at 15.0 feet bgs
					15.5	
					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
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SAMPLING METHODS
SS - SPLIT SPOON
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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-3
PROJECT NO.: 70127335	DATE(S) DRILLED: September 6, 2012
PROJECT LOCATION: Parcel #187, 1006 Dickinson Avenue Extension 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: Ben Swift	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
0 - 2.5		NA	0.0	No odors	0.0	Concrete
					0.5	Brown orange clayey sand
					1.0	
					1.5	
					2.0	
2.5 - 5.0		NA	0.0		2.5	Orange, grey clayey sand
					3.0	
					3.5	
					4.0	
					4.5	
5.0 - 7.5*		NA	0.0		5.0	
					5.5	
					6.0	
					6.5	
					7.0	Orange, tan sand
7.5 - 10.0		NA	0.0		7.5	
					8.0	
					8.5	
					9.0	
					9.5	
10.0 - 12.5		NA	0.0		10.0	
					10.5	
					11.0	
					11.5	
					12.0	Brown clay
12.5 - 15.0		NA	0.0		12.5	
					13.0	
					13.5	
					14.0	Orange, tan sand/moist
					14.5	
15.0 - 17.5		NA	0.0		15.0	
					15.5	
					16.0	
					16.5	
					17.0	
17.5 - 20.0		NA	0.0		17.5	
					18.0	Red, orange sandy silt/wet
					18.5	
					19.0	
					19.5	Well set at 20 feet bgs
					20.0	Boring Terminated at 20 feet bgs
					20.5	
					21.0	
					21.5	

DRILLING METHODS
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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-4
PROJECT NO.: 70127335	DATE(S) DRILLED: September 6, 2012
PROJECT LOCATION: Parcel #187, 1006 Dickinson Avenue Extension 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: Ben Swift	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
0 - 2.5		NA	0.0	No odors	0.0	Concrete
					0.5	Brown, orange sandy clay
					1.0	
					1.5	
					2.0	
2.5 - 5.0		NA	0.0		2.5	
					3.0	Tan, orange clayey sand
					3.5	
					4.0	
					4.5	
5.0 - 7.5*		NA	0.0		5.0	
					5.5	
					6.0	
					6.5	
					7.0	
7.5 - 10.0		NA	0.0		7.5	
					8.0	
					8.5	
					9.0	Tan, orange clay
					9.5	
10.0 - 12.5		NA	0.0		10.0	White, tan fine to medium sand
					10.5	
					11.0	
					11.5	
					12.0	
12.5 - 15.0		NA	0.0		12.5	
					13.0	
					13.5	
					14.0	
					14.5	
					15.0	Boring Terminated at 15.0 feet bgs
					15.5	
					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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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-5
PROJECT NO.: 70127335	DATE(S) DRILLED: September 6, 2012
PROJECT LOCATION: Parcel #187, 1006 Dickinson Avenue Extension 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: Ben Swift	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
0 - 2.5		NA	0.0	No odors	0.0	Concrete
					0.5	Brown, orange clayey sand/moist
					1.0	
					1.5	
					2.0	
2.5 - 5.0		NA	0.0		2.5	
					3.0	Brown, orange clayey sand
					3.5	
					4.0	
					4.5	
5.0 - 7.5*		NA	0.0		5.0	Tan, orange clayey sand
					5.5	
					6.0	
					6.5	
					7.0	Orange, brown clay/moist
7.5 - 10.0		NA	0.0		7.5	
					8.0	White, tan fine to medium sand
					8.5	
					9.0	
					9.5	
10.0 - 12.5		NA	0.0		10.0	
					10.5	
					11.0	
					11.5	
					12.0	
12.5 - 15.0		NA	0.0		12.5	
					13.0	
					13.5	
					14.0	
					14.5	
					15.0	Boring Terminated at 15.0 feet bgs
					15.5	
					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: September 6, 2012
PROJECT LOCATION: Parcel #187, 1006 Dickinson Avenue Extension 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: Ben Swift	REMARKS: BGS = below grade surface

DESCRIPTIVE LOG

SAMPLE INTERVAL	SAMPLE REC. (IN.)	BLOWS PER 6"	PID/FID (ppm)	Odors	DEPTH (FT)	DESCRIPTION OF SOIL
0 - 2.5		NA	0.0	No odors	0.0	Concrete
					0.5	Brown, orange sandy clay
					1.0	
					1.5	
					2.0	Orange, tan clayey sand
2.5 - 5.0		NA	0.0		2.5	
					3.0	
					3.5	
					4.0	
					4.5	
5.0 - 7.5*		NA	0.0		5.0	
					5.5	
					6.0	
					6.5	
					7.0	
7.5 - 10.0		NA	0.0		7.5	
					8.0	
					8.5	
					9.0	Orange, brown clay/moist
					9.5	
10.0 - 12.5		NA	0.0		10.0	
					10.5	
					11.0	White, tan fine to medium sand
					11.5	
					12.0	
12.5 - 15.0		NA	0.0		12.5	
					13.0	
					13.5	
					14.0	
					14.5	
					15.0	Boring Terminated at 15.0 feet bgs
					15.5	
					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
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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

CORY, HANNAN, GATLIN & HOLLMAN PROPERTIES
(PARCELS 79, 80, 81, 82, 187, & 188)
Dickinson Avenue
Greenville, North Carolina

September 27, 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
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
COREY, HANNAN, GATLIN & HOLLOMAN PROPERTIES
(PARCELS 79, 80, 81, 82, 187, & 188)
Dickinson Avenue
Greenville, North Carolina

TABLE OF CONTENTS PAGE

FIGURES

1.0 INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Terracon across portions of six different parcels of properties located adjacent to the intersection of Dickinson Avenue and Grande Avenue in Greenville, North Carolina. Conducted on August 22, 23 and 29, 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 proposed ROW areas of the six properties. The following are the six properties:

Herbert S. Corey Properties (Parcels 79, 81 & 82)	1000 Dickinson Avenue
James E. Hannan Property (Parcel 80)	1008 Dickinson Avenue
Wilton Lee Gatlin Property (Parcel 187)	1006 Dickinson Avenue
Oscar Holloman Property (Parcel 188)	1003 Dickinson Avenue

The Herbert S. Corey properties consist of three separate but contiguous parcels with several miscellaneous buildings. The properties previous operated as storage lots and a filling station. The geophysical survey area encompassed the open asphalt pavement of the properties and a 10 to 20-foot buffer along the northerly, southerly and westerly sides of the buildings. The James E. Hannan property consists of a commercial building with steel reinforced concrete pavement (parking area) adjacent to the easterly side of the building. The geophysical survey area encompassed a 10 to 20-foot buffer around the northerly, southerly and easterly sides of the building.

The Wilton Lee Gatlin property contains a commercial building that was previously used as a dry cleaning facility. The building is surrounded by steel reinforced pavement (parking area). The geophysical survey area encompassed the entire parcel. The Oscar Holloman property is occupied by a partially failed building and at the time of the geophysical investigation, nearly half of the building footprint was a debris pile as a result of the structural failure. The geophysical survey area encompassed a 5 to 10-foot buffer along the northerly and easterly sides of the building.

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 a portion of the six parcels 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 surveys area using measuring tapes 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.

At Parcels 79 and 81, 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 northwesterly-southeasterly or northeasterly-southwesterly 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 the areas containing steel reinforced concrete and 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.

Due to the steel reinforced concrete pavement encountered within the areas of interest at Parcels 80, 82, 187, and 188, the geophysical investigation was limited to GPR surveys. GPR data were continuously collected along X-axis and Y-axis survey lines spaced 5 feet apart across the specified areas at each parcel using the same GPR equipment and settings that were discussed above. Locations of the EM61 metal detection survey lines and the GPR survey lines for the six parcels are shown as red dots and purple lines, respectively in **Figure 2**. Each red dot represents an EM61 data point.

Verbal, preliminary geophysical results obtained from the site were provided to Mr. Kerlin or Ms Hoffman during the week of September 3, 2012.

3.0 DISCUSSION OF RESULTS

Contour plots of the EM61 bottom coil and differential results obtained from Parcels 79, 81 and 82 are presented in **Figures 3 and 4**, 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 anomalies intersecting grid coordinates X=15 Y=20, X=30 Y=92, X=30 Y=115, X=210 Y=110, and X=300 Y=165 are probably in response to buried utility lines or conduits. The linear, bottom coil anomalies intersecting grid coordinates X=30 Y=80, X=30 Y=138 and X=100 Y=28 are probably in response to buildings and buried lines. The linear, bottom coil anomalies intersecting grid coordinates X=220 Y=66, X=240 Y=118 and X=345 Y=160 are probably in response to the metal fence line that runs along the perimeter of Parcel 81. The linear, bottom coil anomaly intersecting grid coordinates X=182 Y=120 is probably in response to the building.

GPR data suggest the EM61 differential anomalies centered near grid coordinates X=290 Y=190, X=310 Y=210, X=315 Y=160, and X=334 Y=185 are in response to buried, miscellaneous metal objects or to portions of buried conduits.

GPR data acquired across the steel reinforced concrete pavement at Parcels 80, 187 and 188 did not detect buried metallic USTs. Although GPR scans detected a number of buried lines/conduits beneath the sidewalks running along Chestnut Street, Grande Avenue and Dickinson Avenue, the GPR data suggest the surveyed areas of interest do not contain buried metallic USTs.

The geophysical investigation conducted across the accessible portions of Parcels 79, 80, 81, 82, 187, and 188 suggest the areas do not contain buried metallic USTs.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected across the accessible portions of Parcels 79, 80, 81, 82, 187, and 188 located adjacent to the intersection of Dickinson Avenue and Grande Avenue 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.

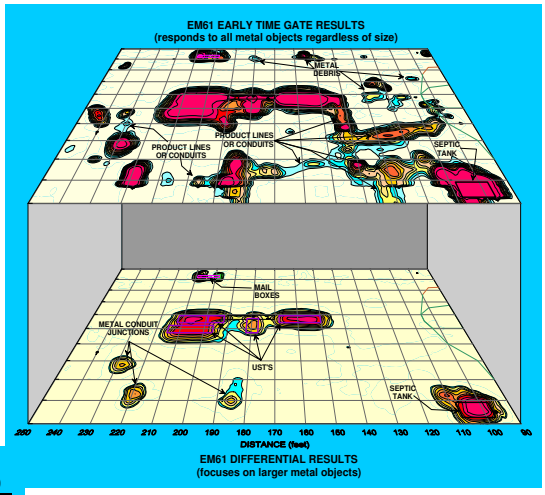
- The linear, EM61 bottom coil anomalies intersecting grid coordinates X=15 Y=20, X=30 Y=92, X=30 Y=115, X=210 Y=110, and X=300 Y=165 are probably in response to buried utility lines or conduits.

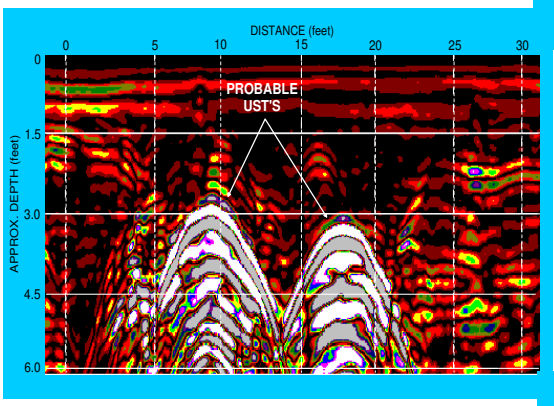
- GPR data suggest the EM61 differential anomalies centered near grid coordinates X=290 Y=190, X=310 Y=210, X=315 Y=160, and X=334 Y=185 are in response to buried, miscellaneous metal objects or to portions of buried conduits.

- The geophysical investigation conducted across the accessible portions of Parcels 79, 80, 81, 82, 187, and 188 suggest the areas do not contain buried metallic USTs.

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 areas of interest do not contain buried, metallic USTs, but that none were detected.

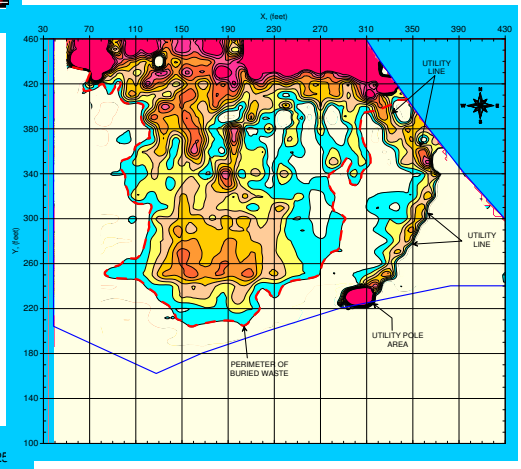


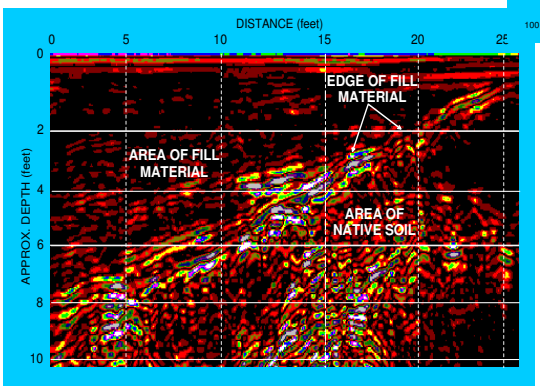


FIGURES

(on the following pages)

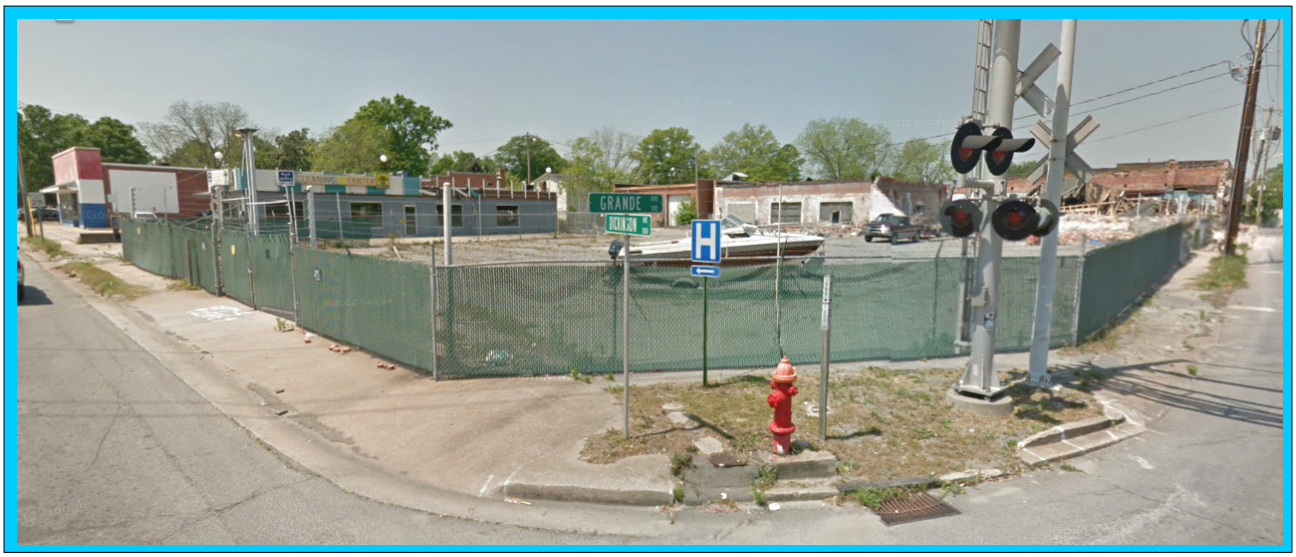
Figures shown on this page are for esthetic purposes only and are not related to the geophysical results discussed in this report.





The photograph shows the Geonics EM61 metal detector that was used to conduct the metal detection survey across the Herbert Corey properties (Parcels 79, 81 & 82) on August 22, 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 the areas containing steel reinforced concrete and selected EM61 differential anomalies at Parcels, 79, 80, 81, 82, 187, & 188 on August 23 & 29, 2012.



The photograph shows the eastern portions of the Corey, Hannan, Gatlin and Holloman properties located adjacent to the intersection of Dickinson Avenue and Grande Avenue in Greenville, North Carolina. The photograph is viewed in a northwesterly direction.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	TERRACON CONSULTANTS, INC.	DATE	09/27/12	DRWN	MJD
SITE	COREY, HANNAN, GATLIN, & HOLLOMAN PROPERTIES	LAY		CHKD	
CITY	GREENVILLE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	JNO	2012-212	FIGURE	

GEOPHYSICAL EQUIPMENT & SITE PHOTOGRAPHS

FIGURE 1

Y-axis (feet)

X-axis (feet)

CHESTNUT STREET

GRASS ISLAND

CONCRETE SIDEWALK

CONCRETE PAVEMENT

BUILDING
OSCAR HOLLOMAN PROPERTY
(PARCEL 188)

CONCRETE SIDEWALK

BUILDING
HERBERT COREY PROPERTY
(PARCELS 81 & 82)

BUILDING
HERBERT COREY PROPERTY
(PARCEL 79)

GRAVEL/ASPHALT
ACCESS ROAD

GRASS LOT
(ADJACENT PROPERTY)

DEBRIS PILE FROM BUILDING FAILURE
(AREA NOT SURVEYED)

GPR SURVEY LINES
(PURPLE LINES)

EM61 SURVEY LINES
(RED DOTS)

TREES

GRANDE AVENUE

HERBERT COREY PROPERTY
(PARCEL 81)

DEBRIS

ASPHLAT
PAVEMENT

CONCRETE

DEBRIS

BUILDING
WILTON LEE GATLIN PROPERTY
(PARCEL 187)

STEEL REINFORCED
CONCRETE

FENCE LINE

CONCRETE

CONCRETE WALKWAY

BUILDING
JAMES E. HANNAN PROPERTY
(PARCEL 80)

CONCRETE WALKWAY

STEEL REINFORCED
CONCRETE

DICKINSON AVENUE

LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- DEBRIS PILE
- STORM SEWER GRATE
- METAL FENCE LINE
- WATER METER COVER
- UTILITY POLE
- SUPPORT POLE
- FIRE HYDRANT
- MONITORING WELL
- ROAD SIGN
- EM61 METAL DETECTION SURVEY LINE
- GPR SURVEY LINE

APPROXIMATE NORTH

Note: The map shows the geophysical survey area at Parcels 79, 80, 81, 82, 187, and 188. The red dots represent the EM61 metal detection survey lines that were acquired on August 22, 2012 using a Geonics EM61 metal detection instrument. Each dot represents an EM61 data point.

The solid purple lines represent the ground penetrating radar (GPR) survey lines that were acquired across areas containing steel reinforced concrete and selected EM61 metal detection anomalies. The GPR investigation was conducted on August 23 and 29, 2012, using a Geophysical Survey Systems SIR-2000 unit with a 400 MHz antenna.

The red polygon in the aerial photograph represents the approximate outer perimeter of the geophysical survey at at the subject parcels.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

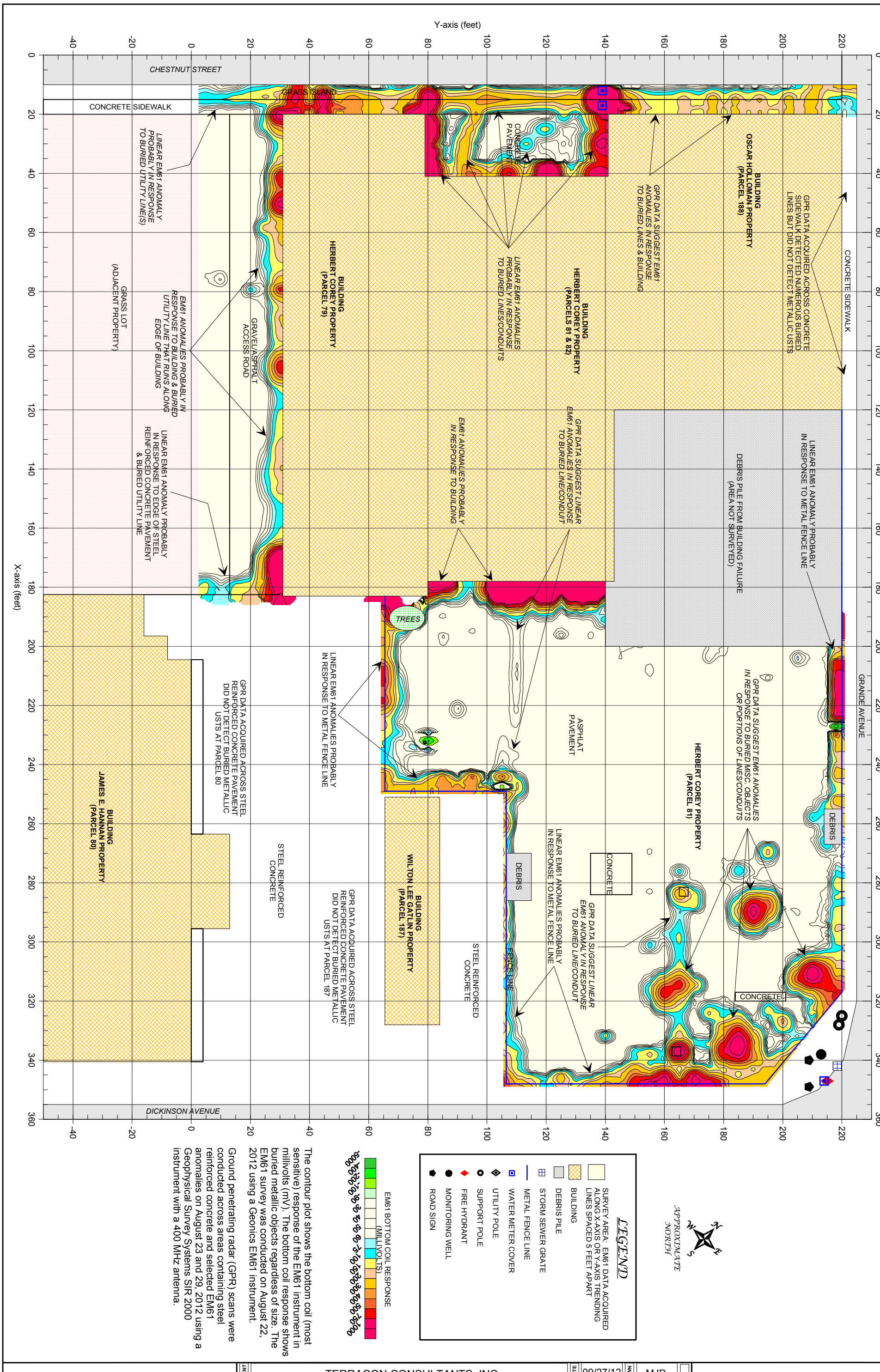
CLIENT	TERRACON CONSULTANTS, INC.	DATE	09/27/12	DRWN	MJD
SITE	COREY, HANNAN, GATLIN, & HOLLOMAN PROPERTIES	LAY		CHKD	
CITY	GREENVILLE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS			J.NO.	2012-212

FIGURE

GRAPHIC SCALE IN FEET

GEOPHYSICAL SURVEY LINE LOCATIONS

FIGURE 2



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 22, 2012 using a Geonics EM61 instrument.

Ground penetrating radar (GPR) scans were conducted across areas containing steel reinforced concrete and selected EM61 anomalies on August 23 and 29, 2012 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	TERRACON CONSULTANTS, INC.	DATE	09/27/12	DRWN	MJD
SITE	COREY, HANNAN, GATLIN, & HOLLOMAN PROPERTIES	LAY		CHKD	
CITY	GREENVILLE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS			J.NO.	2012-212

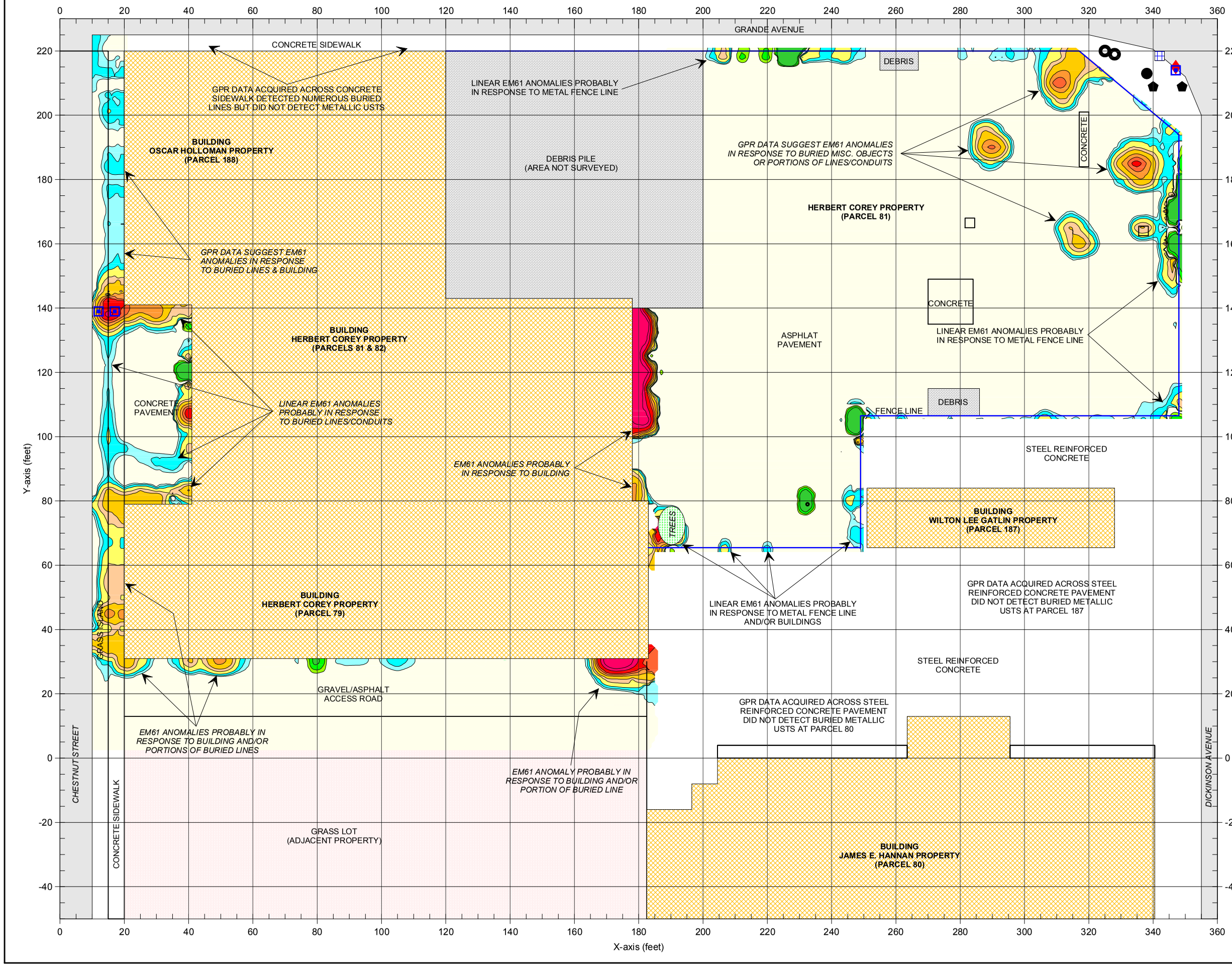
GRAPHIC SCALE IN FEET

EM61 METAL DETECTION
(BOTTOM COIL RESULTS)

FIGURE 3

EM61 METAL DETECTION (DIFFERENTIAL RESULTS)

FIGURE 4



APPROXIMATE NORTH

LEGEND

- SURVEY AREA: EM61 DATA ACQUIRED ALONG X-AXIS OR Y-AXIS TRENDING LINES SPACED 5 FEET APART
- BUILDING
- DEBRIS PILE
- STORM SEWER GRATE
- METAL FENCE LINE
- WATER METER COVER
- UTILITY POLE
- SUPPORT POLE
- FIRE HYDRANT
- MONITORING WELL
- ROAD SIGN

EM61 DIFFERENTIAL RESPONSE (MILLIVOLTS)

-5000 -400 -250 -100 -90 -45 -80 -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 22, 2012 using a Geonics EM61 instrument.

Ground penetrating radar (GPR) scans were conducted across areas containing steel reinforced concrete and selected EM61 anomalies on August 23 & 29, 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.
09/27/12			2012-212

CLIENT: TERRACON CONSULTANTS, INC.
SITE: COREY, HANNAN, GATLIN, & HOLLOMAN PROPERTIES
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: **31202868**

Client Project: **70127335 U-3315 Parcel#187**

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: 09/20/2012 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

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	31202868001	09/06/2012 11:25	09/10/2012 14:45	Soil-Solid as dry weight
S-2	31202868002	09/06/2012 11:51	09/10/2012 14:45	Soil-Solid as dry weight
S-3	31202868003	09/06/2012 12:23	09/10/2012 14:45	Soil-Solid as dry weight
S-4	31202868004	09/06/2012 12:59	09/10/2012 14:45	Soil-Solid as dry weight
S-5	31202868005	09/06/2012 14:39	09/10/2012 14:45	Soil-Solid as dry weight
S-6	31202868006	09/06/2012 15:01	09/10/2012 14:45	Soil-Solid as dry weight
TW-1	31202868007	09/06/2012 13:50	09/10/2012 14:45	Water
Trip Blank (Not on COC)	31202868008	09/06/2012 00:00	09/10/2012 14:45	Water

Results of **S-1**

Client Sample ID: **S-1**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868001-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 11:25
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 83.20

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,1,1-Trichloroethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,1,2,2-Tetrachloroethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,1,2-Trichloroethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,1-Dichloroethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,1-Dichloroethene	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,1-Dichloropropene	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,2,3-Trichlorobenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,2,3-Trichloropropane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,2,4-Trichlorobenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,2,4-Trimethylbenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,2-Dibromo-3-chloropropane	ND		28.4	ug/Kg	1	09/12/2012 13:03
1,2-Dibromoethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,2-Dichlorobenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,2-Dichloroethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,2-Dichloropropane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,3,5-Trimethylbenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,3-Dichlorobenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,3-Dichloropropane	ND		4.74	ug/Kg	1	09/12/2012 13:03
1,4-Dichlorobenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
2,2-Dichloropropane	ND		4.74	ug/Kg	1	09/12/2012 13:03
2-Butanone	ND		23.7	ug/Kg	1	09/12/2012 13:03
2-Chlorotoluene	ND		4.74	ug/Kg	1	09/12/2012 13:03
2-Hexanone	ND		11.9	ug/Kg	1	09/12/2012 13:03
4-Chlorotoluene	ND		4.74	ug/Kg	1	09/12/2012 13:03
4-Isopropyltoluene	ND		4.74	ug/Kg	1	09/12/2012 13:03
4-Methyl-2-pentanone	ND		11.9	ug/Kg	1	09/12/2012 13:03
Acetone	ND		47.4	ug/Kg	1	09/12/2012 13:03
Benzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Bromobenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Bromochloromethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
Bromodichloromethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
Bromoform	ND		4.74	ug/Kg	1	09/12/2012 13:03
Bromomethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
n-Butylbenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Carbon disulfide	ND		4.74	ug/Kg	1	09/12/2012 13:03
Carbon tetrachloride	ND		4.74	ug/Kg	1	09/12/2012 13:03
Chlorobenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Chloroethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
Chloroform	ND		4.74	ug/Kg	1	09/12/2012 13:03
Chloromethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
Dibromochloromethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
Dibromomethane	ND		4.74	ug/Kg	1	09/12/2012 13:03

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-1**

Client Sample ID: **S-1**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868001-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 11:25
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 83.20

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
cis-1,3-Dichloropropene	ND		4.74	ug/Kg	1	09/12/2012 13:03
trans-1,3-Dichloropropene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Diisopropyl Ether	ND		4.74	ug/Kg	1	09/12/2012 13:03
Ethyl Benzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Hexachlorobutadiene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Isopropylbenzene (Cumene)	ND		4.74	ug/Kg	1	09/12/2012 13:03
Methyl iodide	ND		4.74	ug/Kg	1	09/12/2012 13:03
Methylene chloride	ND		19.0	ug/Kg	1	09/12/2012 13:03
Naphthalene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Styrene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Tetrachloroethene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Toluene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Trichloroethene	ND		4.74	ug/Kg	1	09/12/2012 13:03
Trichlorofluoromethane	ND		4.74	ug/Kg	1	09/12/2012 13:03
Vinyl chloride	ND		4.74	ug/Kg	1	09/12/2012 13:03
Xylene (total)	ND		9.48	ug/Kg	1	09/12/2012 13:03
cis-1,2-Dichloroethene	ND		4.74	ug/Kg	1	09/12/2012 13:03
m,p-Xylene	ND		9.48	ug/Kg	1	09/12/2012 13:03
n-Propylbenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
o-Xylene	ND		4.74	ug/Kg	1	09/12/2012 13:03
sec-Butylbenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
tert-Butyl methyl ether (MTBE)	ND		4.74	ug/Kg	1	09/12/2012 13:03
tert-Butylbenzene	ND		4.74	ug/Kg	1	09/12/2012 13:03
trans-1,2-Dichloroethene	ND		4.74	ug/Kg	1	09/12/2012 13:03
trans-1,4-Dichloro-2-butene	ND		23.7	ug/Kg	1	09/12/2012 13:03
Surrogates						
1,2-Dichloroethane-d4	113		55.0-173	%	1	09/12/2012 13:03
4-Bromofluorobenzene	99.0		23.0-141	%	1	09/12/2012 13:03
Toluene d8	103		57.0-134	%	1	09/12/2012 13:03

Batch Information

Analytical Batch: **VMS2545**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**

Prep Batch: **VXX3982**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **09/11/2012 10:36**
Prep Initial Wt./Vol.: **6.34 g**
Prep Extract Vol: **5 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-1**

Client Sample ID: **S-1**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868001-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 11:25
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 83.20

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		381	ug/Kg	1	09/14/2012 15:47
1,2-Dichlorobenzene	ND		381	ug/Kg	1	09/14/2012 15:47
1,3-Dichlorobenzene	ND		381	ug/Kg	1	09/14/2012 15:47
1,4-Dichlorobenzene	ND		381	ug/Kg	1	09/14/2012 15:47
2,4,5-Trichlorophenol	ND		381	ug/Kg	1	09/14/2012 15:47
2,4,6-Trichlorophenol	ND		381	ug/Kg	1	09/14/2012 15:47
2,4-Dichlorophenol	ND		381	ug/Kg	1	09/14/2012 15:47
2,4-Dinitrophenol	ND		1900	ug/Kg	1	09/14/2012 15:47
2,4-Dinitrotoluene	ND		381	ug/Kg	1	09/14/2012 15:47
2,6-Dinitrotoluene	ND		381	ug/Kg	1	09/14/2012 15:47
2-Chloronaphthalene	ND		381	ug/Kg	1	09/14/2012 15:47
2-Chlorophenol	ND		381	ug/Kg	1	09/14/2012 15:47
2-Methylnaphthalene	ND		381	ug/Kg	1	09/14/2012 15:47
2-Methylphenol	ND		381	ug/Kg	1	09/14/2012 15:47
2-Nitroaniline	ND		381	ug/Kg	1	09/14/2012 15:47
2-Nitrophenol	ND		381	ug/Kg	1	09/14/2012 15:47
3 and/or 4-Methylphenol	ND		381	ug/Kg	1	09/14/2012 15:47
3,3'-Dichlorobenzidine	ND		761	ug/Kg	1	09/14/2012 15:47
3-Nitroaniline	ND		1900	ug/Kg	1	09/14/2012 15:47
4,6-Dinitro-2-methylphenol	ND		1900	ug/Kg	1	09/14/2012 15:47
4-Chloro-3-methylphenol	ND		381	ug/Kg	1	09/14/2012 15:47
4-Chloroaniline	ND		381	ug/Kg	1	09/14/2012 15:47
4-Chlorophenyl phenyl ether	ND		381	ug/Kg	1	09/14/2012 15:47
Acenaphthene	ND		381	ug/Kg	1	09/14/2012 15:47
Acenaphthylene	ND		381	ug/Kg	1	09/14/2012 15:47
Anthracene	ND		381	ug/Kg	1	09/14/2012 15:47
Benzo(a)anthracene	ND		381	ug/Kg	1	09/14/2012 15:47
Benzo(a)pyrene	ND		381	ug/Kg	1	09/14/2012 15:47
Benzo(b)fluoranthene	ND		381	ug/Kg	1	09/14/2012 15:47
Benzo(g,h,i)perylene	ND		381	ug/Kg	1	09/14/2012 15:47
Benzo(k)fluoranthene	ND		381	ug/Kg	1	09/14/2012 15:47
Benzoic acid	ND		1900	ug/Kg	1	09/14/2012 15:47
Bis(2-Chloroethoxy)methane	ND		381	ug/Kg	1	09/14/2012 15:47
Bis(2-Chloroethyl)ether	ND		381	ug/Kg	1	09/14/2012 15:47
Bis(2-Chloroisopropyl)ether	ND		381	ug/Kg	1	09/14/2012 15:47
Bis(2-Ethylhexyl)phthalate	ND		381	ug/Kg	1	09/14/2012 15:47
4-Bromophenyl phenyl ether	ND		381	ug/Kg	1	09/14/2012 15:47
Butyl benzyl phthalate	ND		381	ug/Kg	1	09/14/2012 15:47
Chrysene	ND		381	ug/Kg	1	09/14/2012 15:47
Di-n-butyl phthalate	ND		381	ug/Kg	1	09/14/2012 15:47
Di-n-octyl phthalate	ND		381	ug/Kg	1	09/14/2012 15:47
Dibenz(a,h)anthracene	ND		381	ug/Kg	1	09/14/2012 15:47
Dibenzofuran	ND		381	ug/Kg	1	09/14/2012 15:47

Print Date: 09/20/2012

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Results of **S-1**

Client Sample ID: **S-1**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868001-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 11:25
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 83.20

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND		381	ug/Kg	1	09/14/2012 15:47
Dimethyl phthalate	ND		381	ug/Kg	1	09/14/2012 15:47
2,4-Dimethylphenol	ND		381	ug/Kg	1	09/14/2012 15:47
Diphenylamine	ND		381	ug/Kg	1	09/14/2012 15:47
Fluoranthene	ND		381	ug/Kg	1	09/14/2012 15:47
Fluorene	ND		381	ug/Kg	1	09/14/2012 15:47
Hexachlorobenzene	ND		1900	ug/Kg	1	09/14/2012 15:47
Hexachlorobutadiene	ND		381	ug/Kg	1	09/14/2012 15:47
Hexachlorocyclopentadiene	ND		761	ug/Kg	1	09/14/2012 15:47
Hexachloroethane	ND		381	ug/Kg	1	09/14/2012 15:47
Indeno(1,2,3-cd)pyrene	ND		381	ug/Kg	1	09/14/2012 15:47
Isophorone	ND		381	ug/Kg	1	09/14/2012 15:47
Naphthalene	ND		381	ug/Kg	1	09/14/2012 15:47
4-Nitroaniline	ND		1900	ug/Kg	1	09/14/2012 15:47
Nitrobenzene	ND		381	ug/Kg	1	09/14/2012 15:47
4-Nitrophenol	ND		1900	ug/Kg	1	09/14/2012 15:47
Pentachlorophenol	ND		1900	ug/Kg	1	09/14/2012 15:47
Phenanthrene	ND		381	ug/Kg	1	09/14/2012 15:47
Phenol	ND		381	ug/Kg	1	09/14/2012 15:47
Pyrene	ND		381	ug/Kg	1	09/14/2012 15:47
n-Nitrosodi-n-propylamine	ND		381	ug/Kg	1	09/14/2012 15:47
Surrogates						
2,4,6-Tribromophenol	77.0		41.0-129	%	1	09/14/2012 15:47
2-Fluorobiphenyl	78.0		48.0-123	%	1	09/14/2012 15:47
2-Fluorophenol	72.0		42.0-123	%	1	09/14/2012 15:47
Nitrobenzene-d5	84.0		46.0-117	%	1	09/14/2012 15:47
Phenol-d6	84.0		48.0-125	%	1	09/14/2012 15:47
Terphenyl-d14	89.0		44.0-140	%	1	09/14/2012 15:47

Batch Information

Analytical Batch: **XMS1665**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**

Prep Batch: **XXX3037**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/12/2012 15:32**
Prep Initial Wt./Vol.: **31.64 g**
Prep Extract Vol: **10 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-2**

Client Sample ID: **S-2**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868002-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 11:51
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 87.20

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,1,1-Trichloroethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,1,2,2-Tetrachloroethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,1,2-Trichloroethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,1-Dichloroethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,1-Dichloroethene	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,1-Dichloropropene	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,2,3-Trichlorobenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,2,3-Trichloropropane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,2,4-Trichlorobenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,2,4-Trimethylbenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,2-Dibromo-3-chloropropane	ND		36.0	ug/Kg	1	09/12/2012 13:29
1,2-Dibromoethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,2-Dichlorobenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,2-Dichloroethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,2-Dichloropropane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,3,5-Trimethylbenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,3-Dichlorobenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,3-Dichloropropane	ND		6.01	ug/Kg	1	09/12/2012 13:29
1,4-Dichlorobenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
2,2-Dichloropropane	ND		6.01	ug/Kg	1	09/12/2012 13:29
2-Butanone	ND		30.0	ug/Kg	1	09/12/2012 13:29
2-Chlorotoluene	ND		6.01	ug/Kg	1	09/12/2012 13:29
2-Hexanone	ND		15.0	ug/Kg	1	09/12/2012 13:29
4-Chlorotoluene	ND		6.01	ug/Kg	1	09/12/2012 13:29
4-Isopropyltoluene	ND		6.01	ug/Kg	1	09/12/2012 13:29
4-Methyl-2-pentanone	ND		15.0	ug/Kg	1	09/12/2012 13:29
Acetone	ND		60.1	ug/Kg	1	09/12/2012 13:29
Benzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Bromobenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Bromochloromethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
Bromodichloromethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
Bromoform	ND		6.01	ug/Kg	1	09/12/2012 13:29
Bromomethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
n-Butylbenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Carbon disulfide	ND		6.01	ug/Kg	1	09/12/2012 13:29
Carbon tetrachloride	ND		6.01	ug/Kg	1	09/12/2012 13:29
Chlorobenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Chloroethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
Chloroform	ND		6.01	ug/Kg	1	09/12/2012 13:29
Chloromethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
Dibromochloromethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
Dibromomethane	ND		6.01	ug/Kg	1	09/12/2012 13:29

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-2**

Client Sample ID: **S-2**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868002-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 11:51
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 87.20

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
cis-1,3-Dichloropropene	ND		6.01	ug/Kg	1	09/12/2012 13:29
trans-1,3-Dichloropropene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Diisopropyl Ether	ND		6.01	ug/Kg	1	09/12/2012 13:29
Ethyl Benzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Hexachlorobutadiene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Isopropylbenzene (Cumene)	ND		6.01	ug/Kg	1	09/12/2012 13:29
Methyl iodide	ND		6.01	ug/Kg	1	09/12/2012 13:29
Methylene chloride	ND		24.0	ug/Kg	1	09/12/2012 13:29
Naphthalene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Styrene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Tetrachloroethene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Toluene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Trichloroethene	ND		6.01	ug/Kg	1	09/12/2012 13:29
Trichlorofluoromethane	ND		6.01	ug/Kg	1	09/12/2012 13:29
Vinyl chloride	ND		6.01	ug/Kg	1	09/12/2012 13:29
Xylene (total)	ND		12.0	ug/Kg	1	09/12/2012 13:29
cis-1,2-Dichloroethene	ND		6.01	ug/Kg	1	09/12/2012 13:29
m,p-Xylene	ND		12.0	ug/Kg	1	09/12/2012 13:29
n-Propylbenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
o-Xylene	ND		6.01	ug/Kg	1	09/12/2012 13:29
sec-Butylbenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
tert-Butyl methyl ether (MTBE)	ND		6.01	ug/Kg	1	09/12/2012 13:29
tert-Butylbenzene	ND		6.01	ug/Kg	1	09/12/2012 13:29
trans-1,2-Dichloroethene	ND		6.01	ug/Kg	1	09/12/2012 13:29
trans-1,4-Dichloro-2-butene	ND		30.0	ug/Kg	1	09/12/2012 13:29
Surrogates						
1,2-Dichloroethane-d4	111		55.0-173	%	1	09/12/2012 13:29
4-Bromofluorobenzene	100		23.0-141	%	1	09/12/2012 13:29
Toluene d8	99.0		57.0-134	%	1	09/12/2012 13:29

Batch Information

Analytical Batch: **VMS2545**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**

Prep Batch: **VXX3982**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **09/11/2012 10:37**
Prep Initial Wt./Vol.: **4.77 g**
Prep Extract Vol: **5 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-2**

Client Sample ID: **S-2**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868002-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 11:51
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 87.20

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		329	ug/Kg	1	09/18/2012 21:33
1,2-Dichlorobenzene	ND		329	ug/Kg	1	09/18/2012 21:33
1,3-Dichlorobenzene	ND		329	ug/Kg	1	09/18/2012 21:33
1,4-Dichlorobenzene	ND		329	ug/Kg	1	09/18/2012 21:33
2,4,5-Trichlorophenol	ND		329	ug/Kg	1	09/18/2012 21:33
2,4,6-Trichlorophenol	ND		329	ug/Kg	1	09/18/2012 21:33
2,4-Dichlorophenol	ND		329	ug/Kg	1	09/18/2012 21:33
2,4-Dinitrophenol	ND		1640	ug/Kg	1	09/18/2012 21:33
2,4-Dinitrotoluene	ND		329	ug/Kg	1	09/18/2012 21:33
2,6-Dinitrotoluene	ND		329	ug/Kg	1	09/18/2012 21:33
2-Chloronaphthalene	ND		329	ug/Kg	1	09/18/2012 21:33
2-Chlorophenol	ND		329	ug/Kg	1	09/18/2012 21:33
2-Methylnaphthalene	ND		329	ug/Kg	1	09/18/2012 21:33
2-Methylphenol	ND		329	ug/Kg	1	09/18/2012 21:33
2-Nitroaniline	ND		329	ug/Kg	1	09/18/2012 21:33
2-Nitrophenol	ND		329	ug/Kg	1	09/18/2012 21:33
3 and/or 4-Methylphenol	ND		329	ug/Kg	1	09/18/2012 21:33
3,3'-Dichlorobenzidine	ND		657	ug/Kg	1	09/18/2012 21:33
3-Nitroaniline	ND		1640	ug/Kg	1	09/18/2012 21:33
4,6-Dinitro-2-methylphenol	ND		1640	ug/Kg	1	09/18/2012 21:33
4-Chloro-3-methylphenol	ND		329	ug/Kg	1	09/18/2012 21:33
4-Chloroaniline	ND		329	ug/Kg	1	09/18/2012 21:33
4-Chlorophenyl phenyl ether	ND		329	ug/Kg	1	09/18/2012 21:33
Acenaphthene	ND		329	ug/Kg	1	09/18/2012 21:33
Acenaphthylene	ND		329	ug/Kg	1	09/18/2012 21:33
Anthracene	ND		329	ug/Kg	1	09/18/2012 21:33
Benzo(a)anthracene	ND		329	ug/Kg	1	09/18/2012 21:33
Benzo(a)pyrene	ND		329	ug/Kg	1	09/18/2012 21:33
Benzo(b)fluoranthene	ND		329	ug/Kg	1	09/18/2012 21:33
Benzo(g,h,i)perylene	ND		329	ug/Kg	1	09/18/2012 21:33
Benzo(k)fluoranthene	ND		329	ug/Kg	1	09/18/2012 21:33
Benzoic acid	ND		1640	ug/Kg	1	09/18/2012 21:33
Bis(2-Chloroethoxy)methane	ND		329	ug/Kg	1	09/18/2012 21:33
Bis(2-Chloroethyl)ether	ND		329	ug/Kg	1	09/18/2012 21:33
Bis(2-Chloroisopropyl)ether	ND		329	ug/Kg	1	09/18/2012 21:33
Bis(2-Ethylhexyl)phthalate	ND		329	ug/Kg	1	09/18/2012 21:33
4-Bromophenyl phenyl ether	ND		329	ug/Kg	1	09/18/2012 21:33
Butyl benzyl phthalate	ND		329	ug/Kg	1	09/18/2012 21:33
Chrysene	ND		329	ug/Kg	1	09/18/2012 21:33
Di-n-butyl phthalate	ND		329	ug/Kg	1	09/18/2012 21:33
Di-n-octyl phthalate	ND		329	ug/Kg	1	09/18/2012 21:33
Dibenz(a,h)anthracene	ND		329	ug/Kg	1	09/18/2012 21:33
Dibenzofuran	ND		329	ug/Kg	1	09/18/2012 21:33

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-2**

Client Sample ID: **S-2**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868002-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 11:51
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 87.20

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND		329	ug/Kg	1	09/18/2012 21:33
Dimethyl phthalate	ND		329	ug/Kg	1	09/18/2012 21:33
2,4-Dimethylphenol	ND		329	ug/Kg	1	09/18/2012 21:33
Diphenylamine	ND		329	ug/Kg	1	09/18/2012 21:33
Fluoranthene	ND		329	ug/Kg	1	09/18/2012 21:33
Fluorene	ND		329	ug/Kg	1	09/18/2012 21:33
Hexachlorobenzene	ND		1640	ug/Kg	1	09/18/2012 21:33
Hexachlorobutadiene	ND		329	ug/Kg	1	09/18/2012 21:33
Hexachlorocyclopentadiene	ND		657	ug/Kg	1	09/18/2012 21:33
Hexachloroethane	ND		329	ug/Kg	1	09/18/2012 21:33
Indeno(1,2,3-cd)pyrene	ND		329	ug/Kg	1	09/18/2012 21:33
Isophorone	ND		329	ug/Kg	1	09/18/2012 21:33
Naphthalene	ND		329	ug/Kg	1	09/18/2012 21:33
4-Nitroaniline	ND		1640	ug/Kg	1	09/18/2012 21:33
Nitrobenzene	ND		329	ug/Kg	1	09/18/2012 21:33
4-Nitrophenol	ND		1640	ug/Kg	1	09/18/2012 21:33
Pentachlorophenol	ND		1640	ug/Kg	1	09/18/2012 21:33
Phenanthrene	ND		329	ug/Kg	1	09/18/2012 21:33
Phenol	ND		329	ug/Kg	1	09/18/2012 21:33
Pyrene	ND		329	ug/Kg	1	09/18/2012 21:33
n-Nitrosodi-n-propylamine	ND		329	ug/Kg	1	09/18/2012 21:33
Surrogates						
2,4,6-Tribromophenol	67.0		41.0-129	%	1	09/18/2012 21:33
2-Fluorobiphenyl	85.0		48.0-123	%	1	09/18/2012 21:33
2-Fluorophenol	77.0		42.0-123	%	1	09/18/2012 21:33
Nitrobenzene-d5	87.0		46.0-117	%	1	09/18/2012 21:33
Phenol-d6	90.0		48.0-125	%	1	09/18/2012 21:33
Terphenyl-d14	90.0		44.0-140	%	1	09/18/2012 21:33

Batch Information

Analytical Batch: **XMS1668**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**

Prep Batch: **XXX3037**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/12/2012 15:32**
Prep Initial Wt./Vol.: **34.93 g**
Prep Extract Vol: **10 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-3**

Client Sample ID: **S-3**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868003-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 12:23
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 82.90

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,1,1-Trichloroethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,1,2,2-Tetrachloroethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,1,2-Trichloroethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,1-Dichloroethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,1-Dichloroethene	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,1-Dichloropropene	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,2,3-Trichlorobenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,2,3-Trichloropropane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,2,4-Trichlorobenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,2,4-Trimethylbenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,2-Dibromo-3-chloropropane	ND		27.4	ug/Kg	1	09/12/2012 13:57
1,2-Dibromoethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,2-Dichlorobenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,2-Dichloroethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,2-Dichloropropane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,3,5-Trimethylbenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,3-Dichlorobenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,3-Dichloropropane	ND		4.56	ug/Kg	1	09/12/2012 13:57
1,4-Dichlorobenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
2,2-Dichloropropane	ND		4.56	ug/Kg	1	09/12/2012 13:57
2-Butanone	ND		22.8	ug/Kg	1	09/12/2012 13:57
2-Chlorotoluene	ND		4.56	ug/Kg	1	09/12/2012 13:57
2-Hexanone	ND		11.4	ug/Kg	1	09/12/2012 13:57
4-Chlorotoluene	ND		4.56	ug/Kg	1	09/12/2012 13:57
4-Isopropyltoluene	ND		4.56	ug/Kg	1	09/12/2012 13:57
4-Methyl-2-pentanone	ND		11.4	ug/Kg	1	09/12/2012 13:57
Acetone	ND		45.6	ug/Kg	1	09/12/2012 13:57
Benzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Bromobenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Bromochloromethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
Bromodichloromethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
Bromoform	ND		4.56	ug/Kg	1	09/12/2012 13:57
Bromomethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
n-Butylbenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Carbon disulfide	ND		4.56	ug/Kg	1	09/12/2012 13:57
Carbon tetrachloride	ND		4.56	ug/Kg	1	09/12/2012 13:57
Chlorobenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Chloroethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
Chloroform	ND		4.56	ug/Kg	1	09/12/2012 13:57
Chloromethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
Dibromochloromethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
Dibromomethane	ND		4.56	ug/Kg	1	09/12/2012 13:57

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-3**

Client Sample ID: **S-3**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868003-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 12:23
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 82.90

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
cis-1,3-Dichloropropene	ND		4.56	ug/Kg	1	09/12/2012 13:57
trans-1,3-Dichloropropene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Diisopropyl Ether	ND		4.56	ug/Kg	1	09/12/2012 13:57
Ethyl Benzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Hexachlorobutadiene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Isopropylbenzene (Cumene)	ND		4.56	ug/Kg	1	09/12/2012 13:57
Methyl iodide	ND		4.56	ug/Kg	1	09/12/2012 13:57
Methylene chloride	ND		18.3	ug/Kg	1	09/12/2012 13:57
Naphthalene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Styrene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Tetrachloroethene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Toluene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Trichloroethene	ND		4.56	ug/Kg	1	09/12/2012 13:57
Trichlorofluoromethane	ND		4.56	ug/Kg	1	09/12/2012 13:57
Vinyl chloride	ND		4.56	ug/Kg	1	09/12/2012 13:57
Xylene (total)	ND		9.13	ug/Kg	1	09/12/2012 13:57
cis-1,2-Dichloroethene	ND		4.56	ug/Kg	1	09/12/2012 13:57
m,p-Xylene	ND		9.13	ug/Kg	1	09/12/2012 13:57
n-Propylbenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
o-Xylene	ND		4.56	ug/Kg	1	09/12/2012 13:57
sec-Butylbenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
tert-Butyl methyl ether (MTBE)	ND		4.56	ug/Kg	1	09/12/2012 13:57
tert-Butylbenzene	ND		4.56	ug/Kg	1	09/12/2012 13:57
trans-1,2-Dichloroethene	ND		4.56	ug/Kg	1	09/12/2012 13:57
trans-1,4-Dichloro-2-butene	ND		22.8	ug/Kg	1	09/12/2012 13:57
Surrogates						
1,2-Dichloroethane-d4	110		55.0-173	%	1	09/12/2012 13:57
4-Bromofluorobenzene	98.0		23.0-141	%	1	09/12/2012 13:57
Toluene d8	103		57.0-134	%	1	09/12/2012 13:57

Batch Information

Analytical Batch: **VMS2545**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**

Prep Batch: **VXX3982**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **09/11/2012 10:39**
Prep Initial Wt./Vol.: **6.61 g**
Prep Extract Vol: **5 mL**

Print Date: 09/20/2012

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Results of **S-3**

Client Sample ID: **S-3**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868003-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 12:23
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 82.90

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		383	ug/Kg	1	09/19/2012 17:26
1,2-Dichlorobenzene	ND		383	ug/Kg	1	09/19/2012 17:26
1,3-Dichlorobenzene	ND		383	ug/Kg	1	09/19/2012 17:26
1,4-Dichlorobenzene	ND		383	ug/Kg	1	09/19/2012 17:26
2,4,5-Trichlorophenol	ND		383	ug/Kg	1	09/19/2012 17:26
2,4,6-Trichlorophenol	ND		383	ug/Kg	1	09/19/2012 17:26
2,4-Dichlorophenol	ND		383	ug/Kg	1	09/19/2012 17:26
2,4-Dinitrophenol	ND		1910	ug/Kg	1	09/19/2012 17:26
2,4-Dinitrotoluene	ND		383	ug/Kg	1	09/19/2012 17:26
2,6-Dinitrotoluene	ND		383	ug/Kg	1	09/19/2012 17:26
2-Chloronaphthalene	ND		383	ug/Kg	1	09/19/2012 17:26
2-Chlorophenol	ND		383	ug/Kg	1	09/19/2012 17:26
2-Methylnaphthalene	ND		383	ug/Kg	1	09/19/2012 17:26
2-Methylphenol	ND		383	ug/Kg	1	09/19/2012 17:26
2-Nitroaniline	ND		383	ug/Kg	1	09/19/2012 17:26
2-Nitrophenol	ND		383	ug/Kg	1	09/19/2012 17:26
3 and/or 4-Methylphenol	ND		383	ug/Kg	1	09/19/2012 17:26
3,3'-Dichlorobenzidine	ND		766	ug/Kg	1	09/19/2012 17:26
3-Nitroaniline	ND		1910	ug/Kg	1	09/19/2012 17:26
4,6-Dinitro-2-methylphenol	ND		1910	ug/Kg	1	09/19/2012 17:26
4-Chloro-3-methylphenol	ND		383	ug/Kg	1	09/19/2012 17:26
4-Chloroaniline	ND		383	ug/Kg	1	09/19/2012 17:26
4-Chlorophenyl phenyl ether	ND		383	ug/Kg	1	09/19/2012 17:26
Acenaphthene	ND		383	ug/Kg	1	09/19/2012 17:26
Acenaphthylene	ND		383	ug/Kg	1	09/19/2012 17:26
Anthracene	ND		383	ug/Kg	1	09/19/2012 17:26
Benzo(a)anthracene	ND		383	ug/Kg	1	09/19/2012 17:26
Benzo(a)pyrene	ND		383	ug/Kg	1	09/19/2012 17:26
Benzo(b)fluoranthene	ND		383	ug/Kg	1	09/19/2012 17:26
Benzo(g,h,i)perylene	ND		383	ug/Kg	1	09/19/2012 17:26
Benzo(k)fluoranthene	ND		383	ug/Kg	1	09/19/2012 17:26
Benzoic acid	ND		1910	ug/Kg	1	09/19/2012 17:26
Bis(2-Chloroethoxy)methane	ND		383	ug/Kg	1	09/19/2012 17:26
Bis(2-Chloroethyl)ether	ND		383	ug/Kg	1	09/19/2012 17:26
Bis(2-Chloroisopropyl)ether	ND		383	ug/Kg	1	09/19/2012 17:26
Bis(2-Ethylhexyl)phthalate	ND		383	ug/Kg	1	09/19/2012 17:26
4-Bromophenyl phenyl ether	ND		383	ug/Kg	1	09/19/2012 17:26
Butyl benzyl phthalate	ND		383	ug/Kg	1	09/19/2012 17:26
Chrysene	ND		383	ug/Kg	1	09/19/2012 17:26
Di-n-butyl phthalate	ND		383	ug/Kg	1	09/19/2012 17:26
Di-n-octyl phthalate	ND		383	ug/Kg	1	09/19/2012 17:26
Dibenz(a,h)anthracene	ND		383	ug/Kg	1	09/19/2012 17:26
Dibenzofuran	ND		383	ug/Kg	1	09/19/2012 17:26

Print Date: 09/20/2012

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Results of **S-3**

Client Sample ID: **S-3**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868003-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 12:23
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 82.90

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND		383	ug/Kg	1	09/19/2012 17:26
Dimethyl phthalate	ND		383	ug/Kg	1	09/19/2012 17:26
2,4-Dimethylphenol	ND		383	ug/Kg	1	09/19/2012 17:26
Diphenylamine	ND		383	ug/Kg	1	09/19/2012 17:26
Fluoranthene	ND		383	ug/Kg	1	09/19/2012 17:26
Fluorene	ND		383	ug/Kg	1	09/19/2012 17:26
Hexachlorobenzene	ND		1910	ug/Kg	1	09/19/2012 17:26
Hexachlorobutadiene	ND		383	ug/Kg	1	09/19/2012 17:26
Hexachlorocyclopentadiene	ND		766	ug/Kg	1	09/19/2012 17:26
Hexachloroethane	ND		383	ug/Kg	1	09/19/2012 17:26
Indeno(1,2,3-cd)pyrene	ND		383	ug/Kg	1	09/19/2012 17:26
Isophorone	ND		383	ug/Kg	1	09/19/2012 17:26
Naphthalene	ND		383	ug/Kg	1	09/19/2012 17:26
4-Nitroaniline	ND		1910	ug/Kg	1	09/19/2012 17:26
Nitrobenzene	ND		383	ug/Kg	1	09/19/2012 17:26
4-Nitrophenol	ND		1910	ug/Kg	1	09/19/2012 17:26
Pentachlorophenol	ND		1910	ug/Kg	1	09/19/2012 17:26
Phenanthrene	ND		383	ug/Kg	1	09/19/2012 17:26
Phenol	ND		383	ug/Kg	1	09/19/2012 17:26
Pyrene	ND		383	ug/Kg	1	09/19/2012 17:26
n-Nitrosodi-n-propylamine	ND		383	ug/Kg	1	09/19/2012 17:26
Surrogates						
2,4,6-Tribromophenol	56.0		41.0-129	%	1	09/19/2012 17:26
2-Fluorobiphenyl	64.0		48.0-123	%	1	09/19/2012 17:26
2-Fluorophenol	62.0		42.0-123	%	1	09/19/2012 17:26
Nitrobenzene-d5	66.0		46.0-117	%	1	09/19/2012 17:26
Phenol-d6	71.0		48.0-125	%	1	09/19/2012 17:26
Terphenyl-d14	67.0		44.0-140	%	1	09/19/2012 17:26

Batch Information

Analytical Batch: **XMS1669**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**

Prep Batch: **XXX3037**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/12/2012 15:32**
Prep Initial Wt./Vol.: **31.57 g**
Prep Extract Vol: **10 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-4**

Client Sample ID: **S-4**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868004-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 12:59
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 85.90

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,1,1-Trichloroethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,1,2,2-Tetrachloroethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,1,2-Trichloroethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,1-Dichloroethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,1-Dichloroethene	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,1-Dichloropropene	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,2,3-Trichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,2,3-Trichloropropane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,2,4-Trichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,2,4-Trimethylbenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,2-Dibromo-3-chloropropane	ND		27.7	ug/Kg	1	09/12/2012 14:23
1,2-Dibromoethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,2-Dichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,2-Dichloroethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,2-Dichloropropane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,3,5-Trimethylbenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,3-Dichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,3-Dichloropropane	ND		4.62	ug/Kg	1	09/12/2012 14:23
1,4-Dichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
2,2-Dichloropropane	ND		4.62	ug/Kg	1	09/12/2012 14:23
2-Butanone	ND		23.1	ug/Kg	1	09/12/2012 14:23
2-Chlorotoluene	ND		4.62	ug/Kg	1	09/12/2012 14:23
2-Hexanone	ND		11.6	ug/Kg	1	09/12/2012 14:23
4-Chlorotoluene	ND		4.62	ug/Kg	1	09/12/2012 14:23
4-Isopropyltoluene	ND		4.62	ug/Kg	1	09/12/2012 14:23
4-Methyl-2-pentanone	ND		11.6	ug/Kg	1	09/12/2012 14:23
Acetone	ND		46.2	ug/Kg	1	09/12/2012 14:23
Benzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Bromobenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Bromochloromethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
Bromodichloromethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
Bromoform	ND		4.62	ug/Kg	1	09/12/2012 14:23
Bromomethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
n-Butylbenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Carbon disulfide	ND		4.62	ug/Kg	1	09/12/2012 14:23
Carbon tetrachloride	ND		4.62	ug/Kg	1	09/12/2012 14:23
Chlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Chloroethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
Chloroform	ND		4.62	ug/Kg	1	09/12/2012 14:23
Chloromethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
Dibromochloromethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
Dibromomethane	ND		4.62	ug/Kg	1	09/12/2012 14:23

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-4**

Client Sample ID: **S-4**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868004-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 12:59
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 85.90

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
cis-1,3-Dichloropropene	ND		4.62	ug/Kg	1	09/12/2012 14:23
trans-1,3-Dichloropropene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Diisopropyl Ether	ND		4.62	ug/Kg	1	09/12/2012 14:23
Ethyl Benzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Hexachlorobutadiene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Isopropylbenzene (Cumene)	ND		4.62	ug/Kg	1	09/12/2012 14:23
Methyl iodide	ND		4.62	ug/Kg	1	09/12/2012 14:23
Methylene chloride	ND		18.5	ug/Kg	1	09/12/2012 14:23
Naphthalene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Styrene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Tetrachloroethene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Toluene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Trichloroethene	ND		4.62	ug/Kg	1	09/12/2012 14:23
Trichlorofluoromethane	ND		4.62	ug/Kg	1	09/12/2012 14:23
Vinyl chloride	ND		4.62	ug/Kg	1	09/12/2012 14:23
Xylene (total)	ND		9.25	ug/Kg	1	09/12/2012 14:23
cis-1,2-Dichloroethene	ND		4.62	ug/Kg	1	09/12/2012 14:23
m,p-Xylene	ND		9.25	ug/Kg	1	09/12/2012 14:23
n-Propylbenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
o-Xylene	ND		4.62	ug/Kg	1	09/12/2012 14:23
sec-Butylbenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
tert-Butyl methyl ether (MTBE)	ND		4.62	ug/Kg	1	09/12/2012 14:23
tert-Butylbenzene	ND		4.62	ug/Kg	1	09/12/2012 14:23
trans-1,2-Dichloroethene	ND		4.62	ug/Kg	1	09/12/2012 14:23
trans-1,4-Dichloro-2-butene	ND		23.1	ug/Kg	1	09/12/2012 14:23
Surrogates						
1,2-Dichloroethane-d4	113		55.0-173	%	1	09/12/2012 14:23
4-Bromofluorobenzene	99.0		23.0-141	%	1	09/12/2012 14:23
Toluene d8	102		57.0-134	%	1	09/12/2012 14:23

Batch Information

Analytical Batch: **VMS2545**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**

Prep Batch: **VXX3982**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **09/11/2012 10:41**
Prep Initial Wt./Vol.: **6.29 g**
Prep Extract Vol: **5 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-4**

Client Sample ID: **S-4**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868004-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 12:59
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 85.90

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		356	ug/Kg	1	09/19/2012 17:49
1,2-Dichlorobenzene	ND		356	ug/Kg	1	09/19/2012 17:49
1,3-Dichlorobenzene	ND		356	ug/Kg	1	09/19/2012 17:49
1,4-Dichlorobenzene	ND		356	ug/Kg	1	09/19/2012 17:49
2,4,5-Trichlorophenol	ND		356	ug/Kg	1	09/19/2012 17:49
2,4,6-Trichlorophenol	ND		356	ug/Kg	1	09/19/2012 17:49
2,4-Dichlorophenol	ND		356	ug/Kg	1	09/19/2012 17:49
2,4-Dinitrophenol	ND		1780	ug/Kg	1	09/19/2012 17:49
2,4-Dinitrotoluene	ND		356	ug/Kg	1	09/19/2012 17:49
2,6-Dinitrotoluene	ND		356	ug/Kg	1	09/19/2012 17:49
2-Chloronaphthalene	ND		356	ug/Kg	1	09/19/2012 17:49
2-Chlorophenol	ND		356	ug/Kg	1	09/19/2012 17:49
2-Methylnaphthalene	ND		356	ug/Kg	1	09/19/2012 17:49
2-Methylphenol	ND		356	ug/Kg	1	09/19/2012 17:49
2-Nitroaniline	ND		356	ug/Kg	1	09/19/2012 17:49
2-Nitrophenol	ND		356	ug/Kg	1	09/19/2012 17:49
3 and/or 4-Methylphenol	ND		356	ug/Kg	1	09/19/2012 17:49
3,3'-Dichlorobenzidine	ND		712	ug/Kg	1	09/19/2012 17:49
3-Nitroaniline	ND		1780	ug/Kg	1	09/19/2012 17:49
4,6-Dinitro-2-methylphenol	ND		1780	ug/Kg	1	09/19/2012 17:49
4-Chloro-3-methylphenol	ND		356	ug/Kg	1	09/19/2012 17:49
4-Chloroaniline	ND		356	ug/Kg	1	09/19/2012 17:49
4-Chlorophenyl phenyl ether	ND		356	ug/Kg	1	09/19/2012 17:49
Acenaphthene	ND		356	ug/Kg	1	09/19/2012 17:49
Acenaphthylene	ND		356	ug/Kg	1	09/19/2012 17:49
Anthracene	ND		356	ug/Kg	1	09/19/2012 17:49
Benzo(a)anthracene	ND		356	ug/Kg	1	09/19/2012 17:49
Benzo(a)pyrene	ND		356	ug/Kg	1	09/19/2012 17:49
Benzo(b)fluoranthene	ND		356	ug/Kg	1	09/19/2012 17:49
Benzo(g,h,i)perylene	ND		356	ug/Kg	1	09/19/2012 17:49
Benzo(k)fluoranthene	ND		356	ug/Kg	1	09/19/2012 17:49
Benzoic acid	ND		1780	ug/Kg	1	09/19/2012 17:49
Bis(2-Chloroethoxy)methane	ND		356	ug/Kg	1	09/19/2012 17:49
Bis(2-Chloroethyl)ether	ND		356	ug/Kg	1	09/19/2012 17:49
Bis(2-Chloroisopropyl)ether	ND		356	ug/Kg	1	09/19/2012 17:49
Bis(2-Ethylhexyl)phthalate	ND		356	ug/Kg	1	09/19/2012 17:49
4-Bromophenyl phenyl ether	ND		356	ug/Kg	1	09/19/2012 17:49
Butyl benzyl phthalate	ND		356	ug/Kg	1	09/19/2012 17:49
Chrysene	ND		356	ug/Kg	1	09/19/2012 17:49
Di-n-butyl phthalate	ND		356	ug/Kg	1	09/19/2012 17:49
Di-n-octyl phthalate	ND		356	ug/Kg	1	09/19/2012 17:49
Dibenz(a,h)anthracene	ND		356	ug/Kg	1	09/19/2012 17:49
Dibenzofuran	ND		356	ug/Kg	1	09/19/2012 17:49

Print Date: 09/20/2012

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Results of **S-4**

Client Sample ID: **S-4**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868004-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 12:59
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 85.90

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND		356	ug/Kg	1	09/19/2012 17:49
Dimethyl phthalate	ND		356	ug/Kg	1	09/19/2012 17:49
2,4-Dimethylphenol	ND		356	ug/Kg	1	09/19/2012 17:49
Diphenylamine	ND		356	ug/Kg	1	09/19/2012 17:49
Fluoranthene	ND		356	ug/Kg	1	09/19/2012 17:49
Fluorene	ND		356	ug/Kg	1	09/19/2012 17:49
Hexachlorobenzene	ND		1780	ug/Kg	1	09/19/2012 17:49
Hexachlorobutadiene	ND		356	ug/Kg	1	09/19/2012 17:49
Hexachlorocyclopentadiene	ND		712	ug/Kg	1	09/19/2012 17:49
Hexachloroethane	ND		356	ug/Kg	1	09/19/2012 17:49
Indeno(1,2,3-cd)pyrene	ND		356	ug/Kg	1	09/19/2012 17:49
Isophorone	ND		356	ug/Kg	1	09/19/2012 17:49
Naphthalene	ND		356	ug/Kg	1	09/19/2012 17:49
4-Nitroaniline	ND		1780	ug/Kg	1	09/19/2012 17:49
Nitrobenzene	ND		356	ug/Kg	1	09/19/2012 17:49
4-Nitrophenol	ND		1780	ug/Kg	1	09/19/2012 17:49
Pentachlorophenol	ND		1780	ug/Kg	1	09/19/2012 17:49
Phenanthrene	ND		356	ug/Kg	1	09/19/2012 17:49
Phenol	ND		356	ug/Kg	1	09/19/2012 17:49
Pyrene	ND		356	ug/Kg	1	09/19/2012 17:49
n-Nitrosodi-n-propylamine	ND		356	ug/Kg	1	09/19/2012 17:49
Surrogates						
2,4,6-Tribromophenol	79.0		41.0-129	%	1	09/19/2012 17:49
2-Fluorobiphenyl	91.0		48.0-123	%	1	09/19/2012 17:49
2-Fluorophenol	82.0		42.0-123	%	1	09/19/2012 17:49
Nitrobenzene-d5	92.0		46.0-117	%	1	09/19/2012 17:49
Phenol-d6	94.0		48.0-125	%	1	09/19/2012 17:49
Terphenyl-d14	96.0		44.0-140	%	1	09/19/2012 17:49

Batch Information

Analytical Batch: **XMS1669**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**

Prep Batch: **XXX3037**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/12/2012 15:32**
Prep Initial Wt./Vol.: **32.73 g**
Prep Extract Vol: **10 mL**

Print Date: 09/20/2012

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Results of **S-5**

Client Sample ID: **S-5**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868005-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 14:39
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 84.20

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,1,1-Trichloroethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,1,2,2-Tetrachloroethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,1,2-Trichloroethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,1-Dichloroethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,1-Dichloroethene	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,1-Dichloropropene	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,2,3-Trichlorobenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,2,3-Trichloropropane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,2,4-Trichlorobenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,2,4-Trimethylbenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,2-Dibromo-3-chloropropane	ND		25.4	ug/Kg	1	09/12/2012 14:49
1,2-Dibromoethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,2-Dichlorobenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,2-Dichloroethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,2-Dichloropropane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,3,5-Trimethylbenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,3-Dichlorobenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,3-Dichloropropane	ND		4.23	ug/Kg	1	09/12/2012 14:49
1,4-Dichlorobenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
2,2-Dichloropropane	ND		4.23	ug/Kg	1	09/12/2012 14:49
2-Butanone	ND		21.2	ug/Kg	1	09/12/2012 14:49
2-Chlorotoluene	ND		4.23	ug/Kg	1	09/12/2012 14:49
2-Hexanone	ND		10.6	ug/Kg	1	09/12/2012 14:49
4-Chlorotoluene	ND		4.23	ug/Kg	1	09/12/2012 14:49
4-Isopropyltoluene	ND		4.23	ug/Kg	1	09/12/2012 14:49
4-Methyl-2-pentanone	ND		10.6	ug/Kg	1	09/12/2012 14:49
Acetone	ND		42.3	ug/Kg	1	09/12/2012 14:49
Benzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Bromobenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Bromochloromethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
Bromodichloromethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
Bromoform	ND		4.23	ug/Kg	1	09/12/2012 14:49
Bromomethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
n-Butylbenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Carbon disulfide	ND		4.23	ug/Kg	1	09/12/2012 14:49
Carbon tetrachloride	ND		4.23	ug/Kg	1	09/12/2012 14:49
Chlorobenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Chloroethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
Chloroform	ND		4.23	ug/Kg	1	09/12/2012 14:49
Chloromethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
Dibromochloromethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
Dibromomethane	ND		4.23	ug/Kg	1	09/12/2012 14:49

Print Date: 09/20/2012

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Results of **S-5**

Client Sample ID: **S-5**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868005-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 14:39
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 84.20

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
cis-1,3-Dichloropropene	ND		4.23	ug/Kg	1	09/12/2012 14:49
trans-1,3-Dichloropropene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Diisopropyl Ether	ND		4.23	ug/Kg	1	09/12/2012 14:49
Ethyl Benzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Hexachlorobutadiene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Isopropylbenzene (Cumene)	ND		4.23	ug/Kg	1	09/12/2012 14:49
Methyl iodide	ND		4.23	ug/Kg	1	09/12/2012 14:49
Methylene chloride	ND		16.9	ug/Kg	1	09/12/2012 14:49
Naphthalene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Styrene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Tetrachloroethene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Toluene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Trichloroethene	ND		4.23	ug/Kg	1	09/12/2012 14:49
Trichlorofluoromethane	ND		4.23	ug/Kg	1	09/12/2012 14:49
Vinyl chloride	ND		4.23	ug/Kg	1	09/12/2012 14:49
Xylene (total)	ND		8.47	ug/Kg	1	09/12/2012 14:49
cis-1,2-Dichloroethene	ND		4.23	ug/Kg	1	09/12/2012 14:49
m,p-Xylene	ND		8.47	ug/Kg	1	09/12/2012 14:49
n-Propylbenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
o-Xylene	ND		4.23	ug/Kg	1	09/12/2012 14:49
sec-Butylbenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
tert-Butyl methyl ether (MTBE)	ND		4.23	ug/Kg	1	09/12/2012 14:49
tert-Butylbenzene	ND		4.23	ug/Kg	1	09/12/2012 14:49
trans-1,2-Dichloroethene	ND		4.23	ug/Kg	1	09/12/2012 14:49
trans-1,4-Dichloro-2-butene	ND		21.2	ug/Kg	1	09/12/2012 14:49
Surrogates						
1,2-Dichloroethane-d4	112		55.0-173	%	1	09/12/2012 14:49
4-Bromofluorobenzene	100		23.0-141	%	1	09/12/2012 14:49
Toluene d8	102		57.0-134	%	1	09/12/2012 14:49

Batch Information

Analytical Batch: **VMS2545**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**

Prep Batch: **VXX3982**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **09/11/2012 10:42**
Prep Initial Wt./Vol.: **7.01 g**
Prep Extract Vol: **5 mL**

Print Date: 09/20/2012

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Results of **S-5**

Client Sample ID: **S-5**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868005-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 14:39
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 84.20

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		371	ug/Kg	1	09/14/2012 17:18
1,2-Dichlorobenzene	ND		371	ug/Kg	1	09/14/2012 17:18
1,3-Dichlorobenzene	ND		371	ug/Kg	1	09/14/2012 17:18
1,4-Dichlorobenzene	ND		371	ug/Kg	1	09/14/2012 17:18
2,4,5-Trichlorophenol	ND		371	ug/Kg	1	09/14/2012 17:18
2,4,6-Trichlorophenol	ND		371	ug/Kg	1	09/14/2012 17:18
2,4-Dichlorophenol	ND		371	ug/Kg	1	09/14/2012 17:18
2,4-Dinitrophenol	ND		1860	ug/Kg	1	09/14/2012 17:18
2,4-Dinitrotoluene	ND		371	ug/Kg	1	09/14/2012 17:18
2,6-Dinitrotoluene	ND		371	ug/Kg	1	09/14/2012 17:18
2-Chloronaphthalene	ND		371	ug/Kg	1	09/14/2012 17:18
2-Chlorophenol	ND		371	ug/Kg	1	09/14/2012 17:18
2-Methylnaphthalene	ND		371	ug/Kg	1	09/14/2012 17:18
2-Methylphenol	ND		371	ug/Kg	1	09/14/2012 17:18
2-Nitroaniline	ND		371	ug/Kg	1	09/14/2012 17:18
2-Nitrophenol	ND		371	ug/Kg	1	09/14/2012 17:18
3 and/or 4-Methylphenol	ND		371	ug/Kg	1	09/14/2012 17:18
3,3'-Dichlorobenzidine	ND		743	ug/Kg	1	09/14/2012 17:18
3-Nitroaniline	ND		1860	ug/Kg	1	09/14/2012 17:18
4,6-Dinitro-2-methylphenol	ND		1860	ug/Kg	1	09/14/2012 17:18
4-Chloro-3-methylphenol	ND		371	ug/Kg	1	09/14/2012 17:18
4-Chloroaniline	ND		371	ug/Kg	1	09/14/2012 17:18
4-Chlorophenyl phenyl ether	ND		371	ug/Kg	1	09/14/2012 17:18
Acenaphthene	ND		371	ug/Kg	1	09/14/2012 17:18
Acenaphthylene	ND		371	ug/Kg	1	09/14/2012 17:18
Anthracene	ND		371	ug/Kg	1	09/14/2012 17:18
Benzo(a)anthracene	ND		371	ug/Kg	1	09/14/2012 17:18
Benzo(a)pyrene	ND		371	ug/Kg	1	09/14/2012 17:18
Benzo(b)fluoranthene	ND		371	ug/Kg	1	09/14/2012 17:18
Benzo(g,h,i)perylene	ND		371	ug/Kg	1	09/14/2012 17:18
Benzo(k)fluoranthene	ND		371	ug/Kg	1	09/14/2012 17:18
Benzoic acid	ND		1860	ug/Kg	1	09/14/2012 17:18
Bis(2-Chloroethoxy)methane	ND		371	ug/Kg	1	09/14/2012 17:18
Bis(2-Chloroethyl)ether	ND		371	ug/Kg	1	09/14/2012 17:18
Bis(2-Chloroisopropyl)ether	ND		371	ug/Kg	1	09/14/2012 17:18
Bis(2-Ethylhexyl)phthalate	ND		371	ug/Kg	1	09/14/2012 17:18
4-Bromophenyl phenyl ether	ND		371	ug/Kg	1	09/14/2012 17:18
Butyl benzyl phthalate	ND		371	ug/Kg	1	09/14/2012 17:18
Chrysene	ND		371	ug/Kg	1	09/14/2012 17:18
Di-n-butyl phthalate	ND		371	ug/Kg	1	09/14/2012 17:18
Di-n-octyl phthalate	ND		371	ug/Kg	1	09/14/2012 17:18
Dibenz(a,h)anthracene	ND		371	ug/Kg	1	09/14/2012 17:18
Dibenzofuran	ND		371	ug/Kg	1	09/14/2012 17:18

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-5**

Client Sample ID: **S-5**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868005-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 14:39
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 84.20

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND		371	ug/Kg	1	09/14/2012 17:18
Dimethyl phthalate	ND		371	ug/Kg	1	09/14/2012 17:18
2,4-Dimethylphenol	ND		371	ug/Kg	1	09/14/2012 17:18
Diphenylamine	ND		371	ug/Kg	1	09/14/2012 17:18
Fluoranthene	ND		371	ug/Kg	1	09/14/2012 17:18
Fluorene	ND		371	ug/Kg	1	09/14/2012 17:18
Hexachlorobenzene	ND		1860	ug/Kg	1	09/14/2012 17:18
Hexachlorobutadiene	ND		371	ug/Kg	1	09/14/2012 17:18
Hexachlorocyclopentadiene	ND		743	ug/Kg	1	09/14/2012 17:18
Hexachloroethane	ND		371	ug/Kg	1	09/14/2012 17:18
Indeno(1,2,3-cd)pyrene	ND		371	ug/Kg	1	09/14/2012 17:18
Isophorone	ND		371	ug/Kg	1	09/14/2012 17:18
Naphthalene	ND		371	ug/Kg	1	09/14/2012 17:18
4-Nitroaniline	ND		1860	ug/Kg	1	09/14/2012 17:18
Nitrobenzene	ND		371	ug/Kg	1	09/14/2012 17:18
4-Nitrophenol	ND		1860	ug/Kg	1	09/14/2012 17:18
Pentachlorophenol	ND		1860	ug/Kg	1	09/14/2012 17:18
Phenanthrene	ND		371	ug/Kg	1	09/14/2012 17:18
Phenol	ND		371	ug/Kg	1	09/14/2012 17:18
Pyrene	ND		371	ug/Kg	1	09/14/2012 17:18
n-Nitrosodi-n-propylamine	ND		371	ug/Kg	1	09/14/2012 17:18
Surrogates						
2,4,6-Tribromophenol	71.0		41.0-129	%	1	09/14/2012 17:18
2-Fluorobiphenyl	78.0		48.0-123	%	1	09/14/2012 17:18
2-Fluorophenol	72.0		42.0-123	%	1	09/14/2012 17:18
Nitrobenzene-d5	84.0		46.0-117	%	1	09/14/2012 17:18
Phenol-d6	82.0		48.0-125	%	1	09/14/2012 17:18
Terphenyl-d14	89.0		44.0-140	%	1	09/14/2012 17:18

Batch Information

Analytical Batch: **XMS1665**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**

Prep Batch: **XXX3037**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/12/2012 15:32**
Prep Initial Wt./Vol.: **32.02 g**
Prep Extract Vol: **10 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-6**

Client Sample ID: **S-6**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868006-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 15:01
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 83.70

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,1,1-Trichloroethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,1,2,2-Tetrachloroethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,1,2-Trichloroethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,1-Dichloroethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,1-Dichloroethene	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,1-Dichloropropene	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,2,3-Trichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,2,3-Trichloropropane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,2,4-Trichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,2,4-Trimethylbenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,2-Dibromo-3-chloropropane	ND		27.7	ug/Kg	1	09/12/2012 15:16
1,2-Dibromoethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,2-Dichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,2-Dichloroethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,2-Dichloropropane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,3,5-Trimethylbenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,3-Dichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,3-Dichloropropane	ND		4.62	ug/Kg	1	09/12/2012 15:16
1,4-Dichlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
2,2-Dichloropropane	ND		4.62	ug/Kg	1	09/12/2012 15:16
2-Butanone	ND		23.1	ug/Kg	1	09/12/2012 15:16
2-Chlorotoluene	ND		4.62	ug/Kg	1	09/12/2012 15:16
2-Hexanone	ND		11.6	ug/Kg	1	09/12/2012 15:16
4-Chlorotoluene	ND		4.62	ug/Kg	1	09/12/2012 15:16
4-Isopropyltoluene	ND		4.62	ug/Kg	1	09/12/2012 15:16
4-Methyl-2-pentanone	ND		11.6	ug/Kg	1	09/12/2012 15:16
Acetone	ND		46.2	ug/Kg	1	09/12/2012 15:16
Benzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Bromobenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Bromochloromethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
Bromodichloromethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
Bromoform	ND		4.62	ug/Kg	1	09/12/2012 15:16
Bromomethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
n-Butylbenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Carbon disulfide	ND		4.62	ug/Kg	1	09/12/2012 15:16
Carbon tetrachloride	ND		4.62	ug/Kg	1	09/12/2012 15:16
Chlorobenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Chloroethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
Chloroform	ND		4.62	ug/Kg	1	09/12/2012 15:16
Chloromethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
Dibromochloromethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
Dibromomethane	ND		4.62	ug/Kg	1	09/12/2012 15:16

Print Date: 09/20/2012

N.C. Certification # 481

Results of **S-6**

Client Sample ID: **S-6**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868006-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 15:01
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 83.70

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
cis-1,3-Dichloropropene	ND		4.62	ug/Kg	1	09/12/2012 15:16
trans-1,3-Dichloropropene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Diisopropyl Ether	ND		4.62	ug/Kg	1	09/12/2012 15:16
Ethyl Benzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Hexachlorobutadiene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Isopropylbenzene (Cumene)	ND		4.62	ug/Kg	1	09/12/2012 15:16
Methyl iodide	ND		4.62	ug/Kg	1	09/12/2012 15:16
Methylene chloride	ND		18.5	ug/Kg	1	09/12/2012 15:16
Naphthalene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Styrene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Tetrachloroethene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Toluene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Trichloroethene	ND		4.62	ug/Kg	1	09/12/2012 15:16
Trichlorofluoromethane	ND		4.62	ug/Kg	1	09/12/2012 15:16
Vinyl chloride	ND		4.62	ug/Kg	1	09/12/2012 15:16
Xylene (total)	ND		9.24	ug/Kg	1	09/12/2012 15:16
cis-1,2-Dichloroethene	ND		4.62	ug/Kg	1	09/12/2012 15:16
m,p-Xylene	ND		9.24	ug/Kg	1	09/12/2012 15:16
n-Propylbenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
o-Xylene	ND		4.62	ug/Kg	1	09/12/2012 15:16
sec-Butylbenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
tert-Butyl methyl ether (MTBE)	ND		4.62	ug/Kg	1	09/12/2012 15:16
tert-Butylbenzene	ND		4.62	ug/Kg	1	09/12/2012 15:16
trans-1,2-Dichloroethene	ND		4.62	ug/Kg	1	09/12/2012 15:16
trans-1,4-Dichloro-2-butene	ND		23.1	ug/Kg	1	09/12/2012 15:16
Surrogates						
1,2-Dichloroethane-d4	112		55.0-173	%	1	09/12/2012 15:16
4-Bromofluorobenzene	99.0		23.0-141	%	1	09/12/2012 15:16
Toluene d8	103		57.0-134	%	1	09/12/2012 15:16

Batch Information

Analytical Batch: **VMS2545**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**

Prep Batch: **VXX3982**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **09/11/2012 10:44**
Prep Initial Wt./Vol.: **6.46 g**
Prep Extract Vol: **5 mL**

Print Date: 09/20/2012

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Results of **S-6**

Client Sample ID: **S-6**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868006-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 15:01
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 83.70

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		365	ug/Kg	1	09/14/2012 17:41
1,2-Dichlorobenzene	ND		365	ug/Kg	1	09/14/2012 17:41
1,3-Dichlorobenzene	ND		365	ug/Kg	1	09/14/2012 17:41
1,4-Dichlorobenzene	ND		365	ug/Kg	1	09/14/2012 17:41
2,4,5-Trichlorophenol	ND		365	ug/Kg	1	09/14/2012 17:41
2,4,6-Trichlorophenol	ND		365	ug/Kg	1	09/14/2012 17:41
2,4-Dichlorophenol	ND		365	ug/Kg	1	09/14/2012 17:41
2,4-Dinitrophenol	ND		1820	ug/Kg	1	09/14/2012 17:41
2,4-Dinitrotoluene	ND		365	ug/Kg	1	09/14/2012 17:41
2,6-Dinitrotoluene	ND		365	ug/Kg	1	09/14/2012 17:41
2-Chloronaphthalene	ND		365	ug/Kg	1	09/14/2012 17:41
2-Chlorophenol	ND		365	ug/Kg	1	09/14/2012 17:41
2-Methylnaphthalene	ND		365	ug/Kg	1	09/14/2012 17:41
2-Methylphenol	ND		365	ug/Kg	1	09/14/2012 17:41
2-Nitroaniline	ND		365	ug/Kg	1	09/14/2012 17:41
2-Nitrophenol	ND		365	ug/Kg	1	09/14/2012 17:41
3 and/or 4-Methylphenol	ND		365	ug/Kg	1	09/14/2012 17:41
3,3'-Dichlorobenzidine	ND		729	ug/Kg	1	09/14/2012 17:41
3-Nitroaniline	ND		1820	ug/Kg	1	09/14/2012 17:41
4,6-Dinitro-2-methylphenol	ND		1820	ug/Kg	1	09/14/2012 17:41
4-Chloro-3-methylphenol	ND		365	ug/Kg	1	09/14/2012 17:41
4-Chloroaniline	ND		365	ug/Kg	1	09/14/2012 17:41
4-Chlorophenyl phenyl ether	ND		365	ug/Kg	1	09/14/2012 17:41
Acenaphthene	ND		365	ug/Kg	1	09/14/2012 17:41
Acenaphthylene	ND		365	ug/Kg	1	09/14/2012 17:41
Anthracene	ND		365	ug/Kg	1	09/14/2012 17:41
Benzo(a)anthracene	ND		365	ug/Kg	1	09/14/2012 17:41
Benzo(a)pyrene	ND		365	ug/Kg	1	09/14/2012 17:41
Benzo(b)fluoranthene	ND		365	ug/Kg	1	09/14/2012 17:41
Benzo(g,h,i)perylene	ND		365	ug/Kg	1	09/14/2012 17:41
Benzo(k)fluoranthene	ND		365	ug/Kg	1	09/14/2012 17:41
Benzoic acid	ND		1820	ug/Kg	1	09/14/2012 17:41
Bis(2-Chloroethoxy)methane	ND		365	ug/Kg	1	09/14/2012 17:41
Bis(2-Chloroethyl)ether	ND		365	ug/Kg	1	09/14/2012 17:41
Bis(2-Chloroisopropyl)ether	ND		365	ug/Kg	1	09/14/2012 17:41
Bis(2-Ethylhexyl)phthalate	ND		365	ug/Kg	1	09/14/2012 17:41
4-Bromophenyl phenyl ether	ND		365	ug/Kg	1	09/14/2012 17:41
Butyl benzyl phthalate	ND		365	ug/Kg	1	09/14/2012 17:41
Chrysene	ND		365	ug/Kg	1	09/14/2012 17:41
Di-n-butyl phthalate	ND		365	ug/Kg	1	09/14/2012 17:41
Di-n-octyl phthalate	ND		365	ug/Kg	1	09/14/2012 17:41
Dibenz(a,h)anthracene	ND		365	ug/Kg	1	09/14/2012 17:41
Dibenzofuran	ND		365	ug/Kg	1	09/14/2012 17:41

Print Date: 09/20/2012

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Results of **S-6**

Client Sample ID: **S-6**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868006-E
Lab Project ID: 31202868

Collection Date: 09/06/2012 15:01
Received Date: 09/10/2012 14:45
Matrix: Soil-Solid as dry weight
Solids (%): 83.70

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND		365	ug/Kg	1	09/14/2012 17:41
Dimethyl phthalate	ND		365	ug/Kg	1	09/14/2012 17:41
2,4-Dimethylphenol	ND		365	ug/Kg	1	09/14/2012 17:41
Diphenylamine	ND		365	ug/Kg	1	09/14/2012 17:41
Fluoranthene	ND		365	ug/Kg	1	09/14/2012 17:41
Fluorene	ND		365	ug/Kg	1	09/14/2012 17:41
Hexachlorobenzene	ND		1820	ug/Kg	1	09/14/2012 17:41
Hexachlorobutadiene	ND		365	ug/Kg	1	09/14/2012 17:41
Hexachlorocyclopentadiene	ND		729	ug/Kg	1	09/14/2012 17:41
Hexachloroethane	ND		365	ug/Kg	1	09/14/2012 17:41
Indeno(1,2,3-cd)pyrene	ND		365	ug/Kg	1	09/14/2012 17:41
Isophorone	ND		365	ug/Kg	1	09/14/2012 17:41
Naphthalene	ND		365	ug/Kg	1	09/14/2012 17:41
4-Nitroaniline	ND		1820	ug/Kg	1	09/14/2012 17:41
Nitrobenzene	ND		365	ug/Kg	1	09/14/2012 17:41
4-Nitrophenol	ND		1820	ug/Kg	1	09/14/2012 17:41
Pentachlorophenol	ND		1820	ug/Kg	1	09/14/2012 17:41
Phenanthrene	ND		365	ug/Kg	1	09/14/2012 17:41
Phenol	ND		365	ug/Kg	1	09/14/2012 17:41
Pyrene	ND		365	ug/Kg	1	09/14/2012 17:41
n-Nitrosodi-n-propylamine	ND		365	ug/Kg	1	09/14/2012 17:41
Surrogates						
2,4,6-Tribromophenol	73.0		41.0-129	%	1	09/14/2012 17:41
2-Fluorobiphenyl	78.0		48.0-123	%	1	09/14/2012 17:41
2-Fluorophenol	77.0		42.0-123	%	1	09/14/2012 17:41
Nitrobenzene-d5	88.0		46.0-117	%	1	09/14/2012 17:41
Phenol-d6	88.0		48.0-125	%	1	09/14/2012 17:41
Terphenyl-d14	90.0		44.0-140	%	1	09/14/2012 17:41

Batch Information

Analytical Batch: **XMS1665**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**

Prep Batch: **XXX3037**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/12/2012 15:32**
Prep Initial Wt./Vol.: **32.8 g**
Prep Extract Vol: **10 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **TW-1**

Client Sample ID: **TW-1**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868007-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 13:50
Received Date: 09/10/2012 14:45
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		4.00	ug/L	4	09/11/2012 17:19
1,1,1-Trichloroethane	ND		4.00	ug/L	4	09/11/2012 17:19
1,1,2,2-Tetrachloroethane	ND		4.00	ug/L	4	09/11/2012 17:19
1,1,2-Trichloroethane	ND		4.00	ug/L	4	09/11/2012 17:19
1,1-Dichloroethane	ND		4.00	ug/L	4	09/11/2012 17:19
1,1-Dichloroethene	ND		4.00	ug/L	4	09/11/2012 17:19
1,1-Dichloropropene	ND		4.00	ug/L	4	09/11/2012 17:19
1,2,3-Trichlorobenzene	ND		4.00	ug/L	4	09/11/2012 17:19
1,2,3-Trichloropropane	ND		4.00	ug/L	4	09/11/2012 17:19
1,2,4-Trichlorobenzene	ND		4.00	ug/L	4	09/11/2012 17:19
1,2,4-Trimethylbenzene	ND		4.00	ug/L	4	09/11/2012 17:19
1,2-Dibromo-3-chloropropane	ND		20.0	ug/L	4	09/11/2012 17:19
1,2-Dibromoethane	ND		4.00	ug/L	4	09/11/2012 17:19
1,2-Dichlorobenzene	ND		4.00	ug/L	4	09/11/2012 17:19
1,2-Dichloroethane	ND		4.00	ug/L	4	09/11/2012 17:19
1,2-Dichloropropane	ND		4.00	ug/L	4	09/11/2012 17:19
1,3,5-Trimethylbenzene	ND		4.00	ug/L	4	09/11/2012 17:19
1,3-Dichlorobenzene	ND		4.00	ug/L	4	09/11/2012 17:19
1,3-Dichloropropane	ND		4.00	ug/L	4	09/11/2012 17:19
1,4-Dichlorobenzene	ND		4.00	ug/L	4	09/11/2012 17:19
2,2-Dichloropropane	ND		4.00	ug/L	4	09/11/2012 17:19
2-Butanone	ND		100	ug/L	4	09/11/2012 17:19
2-Chlorotoluene	ND		4.00	ug/L	4	09/11/2012 17:19
2-Hexanone	ND		20.0	ug/L	4	09/11/2012 17:19
4-Chlorotoluene	ND		4.00	ug/L	4	09/11/2012 17:19
4-Isopropyltoluene	ND		4.00	ug/L	4	09/11/2012 17:19
4-Methyl-2-pentanone	ND		20.0	ug/L	4	09/11/2012 17:19
Acetone	ND		100	ug/L	4	09/11/2012 17:19
Benzene	ND		4.00	ug/L	4	09/11/2012 17:19
Bromobenzene	ND		4.00	ug/L	4	09/11/2012 17:19
Bromochloromethane	ND		4.00	ug/L	4	09/11/2012 17:19
Bromodichloromethane	ND		4.00	ug/L	4	09/11/2012 17:19
Bromoform	ND		4.00	ug/L	4	09/11/2012 17:19
Bromomethane	ND		4.00	ug/L	4	09/11/2012 17:19
n-Butylbenzene	ND		4.00	ug/L	4	09/11/2012 17:19
Carbon disulfide	ND		4.00	ug/L	4	09/11/2012 17:19
Carbon tetrachloride	ND		4.00	ug/L	4	09/11/2012 17:19
Chlorobenzene	ND		4.00	ug/L	4	09/11/2012 17:19
Chloroethane	ND		4.00	ug/L	4	09/11/2012 17:19
Chloroform	ND		4.00	ug/L	4	09/11/2012 17:19
Chloromethane	ND		4.00	ug/L	4	09/11/2012 17:19
Dibromochloromethane	ND		4.00	ug/L	4	09/11/2012 17:19
Dibromomethane	ND		4.00	ug/L	4	09/11/2012 17:19

Print Date: 09/20/2012

N.C. Certification # 481

Results of **TW-1**

Client Sample ID: **TW-1**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868007-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 13:50
Received Date: 09/10/2012 14:45
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND		20.0	ug/L	4	09/11/2012 17:19
cis-1,3-Dichloropropene	ND		4.00	ug/L	4	09/11/2012 17:19
trans-1,3-Dichloropropene	ND		4.00	ug/L	4	09/11/2012 17:19
Diisopropyl Ether	ND		4.00	ug/L	4	09/11/2012 17:19
Ethyl Benzene	ND		4.00	ug/L	4	09/11/2012 17:19
Hexachlorobutadiene	ND		4.00	ug/L	4	09/11/2012 17:19
Isopropylbenzene (Cumene)	ND		4.00	ug/L	4	09/11/2012 17:19
Methyl iodide	ND		4.00	ug/L	4	09/11/2012 17:19
Methylene chloride	ND		20.0	ug/L	4	09/11/2012 17:19
Naphthalene	ND		4.00	ug/L	4	09/11/2012 17:19
Styrene	ND		4.00	ug/L	4	09/11/2012 17:19
Tetrachloroethene	**122**		4.00	ug/L	4	09/11/2012 17:19
Toluene	ND		4.00	ug/L	4	09/11/2012 17:19
Trichloroethene	**80.8**		4.00	ug/L	4	09/11/2012 17:19
Trichlorofluoromethane	ND		4.00	ug/L	4	09/11/2012 17:19
Vinyl chloride	ND		4.00	ug/L	4	09/11/2012 17:19
Xylene (total)	ND		8.00	ug/L	4	09/11/2012 17:19
cis-1,2-Dichloroethene	**51.1**		4.00	ug/L	4	09/11/2012 17:19
m,p-Xylene	ND		8.00	ug/L	4	09/11/2012 17:19
n-Propylbenzene	ND		4.00	ug/L	4	09/11/2012 17:19
o-Xylene	ND		4.00	ug/L	4	09/11/2012 17:19
sec-Butylbenzene	ND		4.00	ug/L	4	09/11/2012 17:19
tert-Butyl methyl ether (MTBE)	ND		4.00	ug/L	4	09/11/2012 17:19
tert-Butylbenzene	ND		4.00	ug/L	4	09/11/2012 17:19
trans-1,2-Dichloroethene	ND		4.00	ug/L	4	09/11/2012 17:19
trans-1,4-Dichloro-2-butene	ND		20.0	ug/L	4	09/11/2012 17:19
Surrogates						
1,2-Dichloroethane-d4	103		64.0-140	%	4	09/11/2012 17:19
4-Bromofluorobenzene	100		85.0-115	%	4	09/11/2012 17:19
Toluene d8	101		82.0-117	%	4	09/11/2012 17:19

Batch Information

Analytical Batch: **VMS2543**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**

Prep Batch: **VXX3979**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/11/2012 08:17**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **TW-1**

Client Sample ID: **TW-1**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868007-D
Lab Project ID: 31202868

Collection Date: 09/06/2012 13:50
Received Date: 09/10/2012 14:45
Matrix: Water

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		5.16	ug/L	1	09/14/2012 0:31
1,2-Dichlorobenzene	ND		5.16	ug/L	1	09/14/2012 0:31
1,3-Dichlorobenzene	ND		5.16	ug/L	1	09/14/2012 0:31
1,4-Dichlorobenzene	ND		5.16	ug/L	1	09/14/2012 0:31
2,4,5-Trichlorophenol	ND		5.16	ug/L	1	09/14/2012 0:31
2,4,6-Trichlorophenol	ND		5.16	ug/L	1	09/14/2012 0:31
2,4-Dichlorophenol	ND		5.16	ug/L	1	09/14/2012 0:31
2,4-Dinitrophenol	ND		25.8	ug/L	1	09/14/2012 0:31
2,4-Dinitrotoluene	ND		5.16	ug/L	1	09/14/2012 0:31
2,6-Dinitrotoluene	ND		5.16	ug/L	1	09/14/2012 0:31
2-Chloronaphthalene	ND		5.16	ug/L	1	09/14/2012 0:31
2-Chlorophenol	ND		5.16	ug/L	1	09/14/2012 0:31
2-Methylnaphthalene	ND		5.16	ug/L	1	09/14/2012 0:31
2-Methylphenol	ND		5.16	ug/L	1	09/14/2012 0:31
2-Nitroaniline	ND		5.16	ug/L	1	09/14/2012 0:31
2-Nitrophenol	ND		5.16	ug/L	1	09/14/2012 0:31
3 and/or 4-Methylphenol	ND		5.16	ug/L	1	09/14/2012 0:31
3,3'-Dichlorobenzidine	ND		10.3	ug/L	1	09/14/2012 0:31
3-Nitroaniline	ND		25.8	ug/L	1	09/14/2012 0:31
4,6-Dinitro-2-methylphenol	ND		25.8	ug/L	1	09/14/2012 0:31
4-Chloro-3-methylphenol	ND		5.16	ug/L	1	09/14/2012 0:31
4-Chloroaniline	ND		25.8	ug/L	1	09/14/2012 0:31
4-Chlorophenyl phenyl ether	ND		5.16	ug/L	1	09/14/2012 0:31
Acenaphthene	ND		5.16	ug/L	1	09/14/2012 0:31
Acenaphthylene	ND		5.16	ug/L	1	09/14/2012 0:31
Anthracene	ND		5.16	ug/L	1	09/14/2012 0:31
Benzo(a)anthracene	ND		5.16	ug/L	1	09/14/2012 0:31
Benzo(a)pyrene	ND		5.16	ug/L	1	09/14/2012 0:31
Benzo(b)fluoranthene	ND		5.16	ug/L	1	09/14/2012 0:31
Benzo(g,h,i)perylene	ND		5.16	ug/L	1	09/14/2012 0:31
Benzo(k)fluoranthene	ND		5.16	ug/L	1	09/14/2012 0:31
Benzoic acid	ND		5.16	ug/L	1	09/14/2012 0:31
Bis(2-Chloroethoxy)methane	ND		5.16	ug/L	1	09/14/2012 0:31
Bis(2-Chloroethyl)ether	ND		5.16	ug/L	1	09/14/2012 0:31
Bis(2-Chloroisopropyl)ether	ND		5.16	ug/L	1	09/14/2012 0:31
Bis(2-Ethylhexyl)phthalate	ND		5.16	ug/L	1	09/14/2012 0:31
4-Bromophenyl phenyl ether	ND		5.16	ug/L	1	09/14/2012 0:31
Butyl benzyl phthalate	ND		5.16	ug/L	1	09/14/2012 0:31
Chrysene	ND		5.16	ug/L	1	09/14/2012 0:31
Di-n-butyl phthalate	ND		5.16	ug/L	1	09/14/2012 0:31
Di-n-octyl phthalate	ND		5.16	ug/L	1	09/14/2012 0:31
Dibenz(a,h)anthracene	ND		5.16	ug/L	1	09/14/2012 0:31
Dibenzofuran	ND		5.16	ug/L	1	09/14/2012 0:31

Print Date: 09/20/2012

N.C. Certification # 481

Results of **TW-1**

Client Sample ID: **TW-1**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868007-D
Lab Project ID: 31202868

Collection Date: 09/06/2012 13:50
Received Date: 09/10/2012 14:45
Matrix: Water

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diethyl phthalate	ND		5.16	ug/L	1	09/14/2012 0:31
Dimethyl phthalate	ND		5.16	ug/L	1	09/14/2012 0:31
2,4-Dimethylphenol	ND		5.16	ug/L	1	09/14/2012 0:31
Diphenylamine	ND		5.16	ug/L	1	09/14/2012 0:31
Fluoranthene	ND		5.16	ug/L	1	09/14/2012 0:31
Fluorene	ND		5.16	ug/L	1	09/14/2012 0:31
Hexachlorobenzene	ND		5.16	ug/L	1	09/14/2012 0:31
Hexachlorobutadiene	ND		5.16	ug/L	1	09/14/2012 0:31
Hexachlorocyclopentadiene	ND		10.3	ug/L	1	09/14/2012 0:31
Hexachloroethane	ND		5.16	ug/L	1	09/14/2012 0:31
Indeno(1,2,3-cd)pyrene	ND		5.16	ug/L	1	09/14/2012 0:31
Isophorone	ND		5.16	ug/L	1	09/14/2012 0:31
Naphthalene	ND		5.16	ug/L	1	09/14/2012 0:31
4-Nitroaniline	ND		25.8	ug/L	1	09/14/2012 0:31
Nitrobenzene	ND		5.16	ug/L	1	09/14/2012 0:31
4-Nitrophenol	ND		25.8	ug/L	1	09/14/2012 0:31
Pentachlorophenol	ND		25.8	ug/L	1	09/14/2012 0:31
Phenanthrene	ND		5.16	ug/L	1	09/14/2012 0:31
Phenol	ND		5.16	ug/L	1	09/14/2012 0:31
Pyrene	ND		5.16	ug/L	1	09/14/2012 0:31
n-Nitrosodi-n-propylamine	ND		5.16	ug/L	1	09/14/2012 0:31
Surrogates						
2,4,6-Tribromophenol	95.0		29.3-152	%	1	09/14/2012 0:31
2-Fluorobiphenyl	90.0		50.0-107	%	1	09/14/2012 0:31
2-Fluorophenol	75.0		33.1-118	%	1	09/14/2012 0:31
Nitrobenzene-d5	93.0		46.0-118	%	1	09/14/2012 0:31
Phenol-d6	88.0		49.0-120	%	1	09/14/2012 0:31
Terphenyl-d14	101		22.1-142	%	1	09/14/2012 0:31

Batch Information

Analytical Batch: **XMS1663**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**

Prep Batch: **XXX3040**
Prep Method: **SW-846 3520C**
Prep Date/Time: **09/13/2012 08:20**
Prep Initial Wt./Vol.: **969 mL**
Prep Extract Vol: **5 mL**

Print Date: 09/20/2012

N.C. Certification # 481

Results of **Trip Blank (Not on COC)**

Client Sample ID: **Trip Blank (Not on COC)**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868008-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 00:00
Received Date: 09/10/2012 14:45
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		1.00	ug/L	1	09/11/2012 16:54
1,1,1-Trichloroethane	ND		1.00	ug/L	1	09/11/2012 16:54
1,1,2,2-Tetrachloroethane	ND		1.00	ug/L	1	09/11/2012 16:54
1,1,2-Trichloroethane	ND		1.00	ug/L	1	09/11/2012 16:54
1,1-Dichloroethane	ND		1.00	ug/L	1	09/11/2012 16:54
1,1-Dichloroethene	ND		1.00	ug/L	1	09/11/2012 16:54
1,1-Dichloropropene	ND		1.00	ug/L	1	09/11/2012 16:54
1,2,3-Trichlorobenzene	ND		1.00	ug/L	1	09/11/2012 16:54
1,2,3-Trichloropropane	ND		1.00	ug/L	1	09/11/2012 16:54
1,2,4-Trichlorobenzene	ND		1.00	ug/L	1	09/11/2012 16:54
1,2,4-Trimethylbenzene	ND		1.00	ug/L	1	09/11/2012 16:54
1,2-Dibromo-3-chloropropane	ND		5.00	ug/L	1	09/11/2012 16:54
1,2-Dibromoethane	ND		1.00	ug/L	1	09/11/2012 16:54
1,2-Dichlorobenzene	ND		1.00	ug/L	1	09/11/2012 16:54
1,2-Dichloroethane	ND		1.00	ug/L	1	09/11/2012 16:54
1,2-Dichloropropane	ND		1.00	ug/L	1	09/11/2012 16:54
1,3,5-Trimethylbenzene	ND		1.00	ug/L	1	09/11/2012 16:54
1,3-Dichlorobenzene	ND		1.00	ug/L	1	09/11/2012 16:54
1,3-Dichloropropane	ND		1.00	ug/L	1	09/11/2012 16:54
1,4-Dichlorobenzene	ND		1.00	ug/L	1	09/11/2012 16:54
2,2-Dichloropropane	ND		1.00	ug/L	1	09/11/2012 16:54
2-Butanone	ND		25.0	ug/L	1	09/11/2012 16:54
2-Chlorotoluene	ND		1.00	ug/L	1	09/11/2012 16:54
2-Hexanone	ND		5.00	ug/L	1	09/11/2012 16:54
4-Chlorotoluene	ND		1.00	ug/L	1	09/11/2012 16:54
4-Isopropyltoluene	ND		1.00	ug/L	1	09/11/2012 16:54
4-Methyl-2-pentanone	ND		5.00	ug/L	1	09/11/2012 16:54
Acetone	ND		25.0	ug/L	1	09/11/2012 16:54
Benzene	ND		1.00	ug/L	1	09/11/2012 16:54
Bromobenzene	ND		1.00	ug/L	1	09/11/2012 16:54
Bromochloromethane	ND		1.00	ug/L	1	09/11/2012 16:54
Bromodichloromethane	ND		1.00	ug/L	1	09/11/2012 16:54
Bromoform	ND		1.00	ug/L	1	09/11/2012 16:54
Bromomethane	ND		1.00	ug/L	1	09/11/2012 16:54
n-Butylbenzene	ND		1.00	ug/L	1	09/11/2012 16:54
Carbon disulfide	ND		1.00	ug/L	1	09/11/2012 16:54
Carbon tetrachloride	ND		1.00	ug/L	1	09/11/2012 16:54
Chlorobenzene	ND		1.00	ug/L	1	09/11/2012 16:54
Chloroethane	ND		1.00	ug/L	1	09/11/2012 16:54
Chloroform	ND		1.00	ug/L	1	09/11/2012 16:54
Chloromethane	ND		1.00	ug/L	1	09/11/2012 16:54
Dibromochloromethane	ND		1.00	ug/L	1	09/11/2012 16:54
Dibromomethane	ND		1.00	ug/L	1	09/11/2012 16:54

Print Date: 09/20/2012

N.C. Certification # 481

Results of **Trip Blank (Not on COC)**

Client Sample ID: **Trip Blank (Not on COC)**
Client Project ID: **70127335 U-3315 Parcel#187**
Lab Sample ID: 31202868008-A
Lab Project ID: 31202868

Collection Date: 09/06/2012 00:00
Received Date: 09/10/2012 14:45
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dichlorodifluoromethane	ND		5.00	ug/L	1	09/11/2012 16:54
cis-1,3-Dichloropropene	ND		1.00	ug/L	1	09/11/2012 16:54
trans-1,3-Dichloropropene	ND		1.00	ug/L	1	09/11/2012 16:54
Diisopropyl Ether	ND		1.00	ug/L	1	09/11/2012 16:54
Ethyl Benzene	ND		1.00	ug/L	1	09/11/2012 16:54
Hexachlorobutadiene	ND		1.00	ug/L	1	09/11/2012 16:54
Isopropylbenzene (Cumene)	ND		1.00	ug/L	1	09/11/2012 16:54
Methyl iodide	ND		1.00	ug/L	1	09/11/2012 16:54
Methylene chloride	ND		5.00	ug/L	1	09/11/2012 16:54
Naphthalene	ND		1.00	ug/L	1	09/11/2012 16:54
Styrene	ND		1.00	ug/L	1	09/11/2012 16:54
Tetrachloroethene	ND		1.00	ug/L	1	09/11/2012 16:54
Toluene	ND		1.00	ug/L	1	09/11/2012 16:54
Trichloroethene	ND		1.00	ug/L	1	09/11/2012 16:54
Trichlorofluoromethane	ND		1.00	ug/L	1	09/11/2012 16:54
Vinyl chloride	ND		1.00	ug/L	1	09/11/2012 16:54
Xylene (total)	ND		2.00	ug/L	1	09/11/2012 16:54
cis-1,2-Dichloroethene	ND		1.00	ug/L	1	09/11/2012 16:54
m,p-Xylene	ND		2.00	ug/L	1	09/11/2012 16:54
n-Propylbenzene	ND		1.00	ug/L	1	09/11/2012 16:54
o-Xylene	ND		1.00	ug/L	1	09/11/2012 16:54
sec-Butylbenzene	ND		1.00	ug/L	1	09/11/2012 16:54
tert-Butyl methyl ether (MTBE)	ND		1.00	ug/L	1	09/11/2012 16:54
tert-Butylbenzene	ND		1.00	ug/L	1	09/11/2012 16:54
trans-1,2-Dichloroethene	ND		1.00	ug/L	1	09/11/2012 16:54
trans-1,4-Dichloro-2-butene	ND		5.00	ug/L	1	09/11/2012 16:54
Surrogates						
1,2-Dichloroethane-d4	104		64.0-140	%	1	09/11/2012 16:54
4-Bromofluorobenzene	99.0		85.0-115	%	1	09/11/2012 16:54
Toluene d8	101		82.0-117	%	1	09/11/2012 16:54

Batch Information

Analytical Batch: **VMS2543**
Analytical Method: **SW-846 8260B**
Instrument: **MSD4**
Analyst: **BWS**

Prep Batch: **VXX3979**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/11/2012 08:17**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 09/20/2012

N.C. Certification # 481

CHAIN OF CUSTODY RECORD
SGS North America Inc.

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

www.us.sgs.com

104678

(1)
CLIENT: TERRACON
CONTACT: BEN SWIFT PHONE NO:(919) 873-2211
PROJECT: U-3315 #187 SITE/PWSID#: 70127335
REPORTS TO: lchoffman@terracon.com FAX NO.:( )
INVOICE TO: NCDOT QUOTE #:
P.O. NUMBER:

SGS Reference: 3120286 8

PAGE 1 OF 1

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used: NaSO4 MeOH/HCl	Analysis Required (3): VOCs (8260)	SVOCs (8270)	REMARKS
	S-1	9-6-12	1125	SS	5	G		X	X	
	S-2		1151	SS						
	S-3		1223	SS						
	S-4		1254	SS						
	S-5		1439	SS						
	S-6		1501	SS						
	TW-1	↓	1350	GW						

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:	
BEN SWIFT	9-7-12	0839		9/8/12 1715
Relinquished By: (2)	Date	Time	Received By:	
	9/10/12	1200		
Relinquished By: (3)	Date	Time	Received By:	
	9/10/12	1445		
Relinquished By: (4)	Date	Time	Received By:	

(4)

Shipping Carrier:
Shipping Ticket No:
Samples Received Cold? (Circle) YES NO
Temperature°C: 0, 2°C
Special Deliverable Requirements:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Special Instructions:
Requested Turnaround Time:
☐ RUSH _____ Date Needed ☒ STD

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **NCDOT-Terracon** Work Order No.: **31202868**

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: 0.2
   ___ 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-9/10/12 00:00

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