PRELIMINARY SITE ASSESSMENT

EDWARD M. HUGHES PROPERTY – PARCEL 009
SHORT STOP EXXON
3235 RAY ROAD
SPRING LAKE, HARNETT COUNTY, NORTH CAROLINA
STATE PROJECT: U-3465
WBS ELEMENT: 39017.1.1
OCTOBER 25, 2012

Report prepared for:

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SHORT STOP EXXON
SPRING LAKE, HARNETT COUNTY, NORTH CAROLINA

1.0 Introduction

Pyramid Environmental & Engineering P.C. (Pyramid) has prepared this Preliminary Site Assessment (PSA) report documenting background information, field activities, assessment activities, findings, conclusions, and recommendations for the Edward M. Hughes Property (Parcel 009). The Edward M. Hughes Property (Parcel 009) contains an active convenience store (Short Stop Exxon) located at 3235 Ray Road, Spring Lake, Harnett County, North Carolina. This preliminary site assessment was conducted on behalf of the North Carolina Department of Transportation (NCDOT) in accordance with Pyramid's August 17, 2012 technical proposal.

The purpose of this assessment was to determine the presence or absence of underground storage tanks (USTs) and impacted soils at the subject property in the proposed right-of-way and construction easement areas related to the widening of Ray Road (State Project U-3465). The location of the subject site is shown on **Figure 1**, and a site map is presented as **Figure 2**. **Figure 3** presents a scaled out perspective of the entire Parcel showing property boundaries, property owner name, and station number/alignment, from the NCDOT engineering files provided to Pyramid.

1.1 Background Information

Based on the NCDOT's July 23, 2012, *Request for Technical and Cost Proposal*, the PSA was conducted within the NCDOT right of way (ROW), easements, or proposed utility easements. According to the technical proposal from the NCDOT, Parcel 009 is proposed to be a total take. The PSA included the following:

- Research of the property for past uses and possible releases.
- Conduct a preliminary geophysical site assessment and limited soil assessment in the proposed ROW and easements.
- Measure depth to groundwater and obtain one groundwater sample for the site for laboratory analysis by installing a temporary monitoring well.

1.2 Project Information

On September 6, 2012, Pyramid personnel talked with the tenants (Short Stop Food Marts) of Parcel 009 and received access to the property to complete the PSA field work. Pyramid personnel talked with Mr. Chris Neal, President and CEO of Short Stop Food Marts and received access to the property. Mr. Neal stated the property owner, Edward M. Hughes, for Parcel 009 past away recently. Mr. Chris Neal's phone number is (910) 433 – 4490, extension 22.

Prior to field activities, a Health and Safety Plan was prepared. Prior to drilling activities, the public underground utilities were located and marked by the North Carolina One-Call Service. A private utility locator, Northstate Utility Locating Incorporated of Colfax, North Carolina was used to mark the on site private, buried utilities including utilities associated with any UST systems.

The Edward M. Hughs Property (Parcel 009) contains an active convenience store. According to the North Carolina Department of Environment and Natural Resources (NCDENR) UST Section Registry, there are three (3) known USTs on the subject property. According to the NCDENR UST Section database, the UST system is comprised of two (2) 6,000-gallon gasoline USTs and one (1) 4,000-gallon gasoline UST. The Facility ID number for the site is 0-021508.

Pyramid also completed PSAs for an additional six properties along Ray Road (Parcel #'s 004, 019, 021, 022, 038, and 069). As requested by the NCDOT, Pyramid prepared separate PSA reports for each property.

2.0 Site History

Pyramid completed a records review, NCDENR file review, interviewed NCDNER personnel, and reviewed aerial photographs. Pyramid reviewed the 1938, 1955, 1964, 1971, 1983, 1993, 1999, and 2010 aerial photographs for past uses. Historical information reviewed as part of the PSA indicated that the subject site was first developed for use as a convenience store between 1971 and 1983. The earliest aerial to show the building and canopy was the 1983 aerial. The 1971 aerial photograph indicated the land was re-graded for development, but the land was still vacant. Prior to 1971, aerial photographs showed that the land was first cleared prior to the 1955 air photo. The 1938 air photo shows the property to be undeveloped wooded land. The 1955 and 1964 aerial photographs indicate the land was cleared and most likely used for agricultural purposes. The 1955, 1964, 1971, and 1983 aerial photographs are included in **Appendix A**.

On September 7, 2012, Pyramid interview Mr. James Brown, the incident manager for Harnett County with the NCDENR UST Section. Mr. Brown stated no incidents or releases were in the state database for the site.

As part of the PSA, a background review to identify onsite and potential off-site sources of environmental contamination was performed. The background review included Federal and Non-Federal database searches. FirstSearch Technology Corporation, a commercially available database service was used for the search. Pyramid ordered a road corridor search for Ray Road sites. The database search listed the Parcel 009 site on the NCDENR Register for USTs only. The Environmental FirstSearch Report is included in **Appendix B**.

3.0 Geophysical Investigation

Geophysical investigation results indicate the presence of three active known USTs at the property, located northwest of the pump islands. The three USTs were interpreted to be oriented approximately east/west. The two southern tanks were estimated to be approximately 16 feet long and 8 feet wide. The northern tank was estimated to by approximately 20 feet long and 7 feet wide. The tanks were observed to be at a depth of approximately 4 feet below land surface (bls). It should be noted that the GPR signal was attenuated more strongly at the east end of the north tank, making the east end less clear than the remaining tanks. It is possible that the estimated area containing the north tank may represent two smaller tanks rather than one longer tank.

The geophysical investigation confirms that the area containing the proposed ROW and easement at Parcel 009 contains three known metallic USTs. The full details of the geophysical investigation are included in the Geophysical Investigation Report as **Appendix C**.

4.0 Soil Sampling Activities & Results

4.1 Soil Assessment Field Activities

On September 17, 2012, Pyramid mobilized to the site to drill soil borings, install a temporary monitoring well, and collect the proposed soil samples and groundwater sample for the PSA. The soil borings and temporary well were completed using a track mounted Geoprobe® Direct-Push rig. Nine (9) soil borings were advanced on the subject property. Eight (8) soil borings were advanced within the proposed NCDOT ROW and Easement. Soil borings 9-1, 9-2, and 9-7 were installed adjacent to active pump islands and product lines. Soil borings 9-3, 9-4, 9-5, and 9-6 were installed adjacent to USTs and product lines. Soil boring 9-8 was installed adjacent to a kerosene aboveground storage tank (AST) and dispenser just outside of the proposed utility easement. Soil boring 9-9 was installed between the pump island and Ray Road. The selected locations were chosen to avoid public utilities along Ray Road and private utilities associated with the UST system. The locations of the borings are shown on **Figure 2**.

Soil samples were continuously collected in five foot long disposable sleeves from each boring for geologic description, and visual examination for signs of contamination. Soil recovered from each sleeve was field screened using a Photo-Ionization Detector (PID) every 2 to 2.5 feet depending on the soil recovery of each sleeve. In general, the soil sample with the highest PID readings was selected from each boring for laboratory analysis. The soil boring logs with the soil descriptions, visual examination, and PID

screening results are included in **Appendix D**. The PID field screening results are summarized in **Table 1**.

In order to prevent cross contamination, new disposable nitrile gloves were worn by the sampling technician during the sampling activities, and were changed between samples. The soil samples selected for laboratory analyses were placed in laboratory prepared containers and shipped to SGS Laboratories in Wilmington, NC. The selected soil samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) by EPA Method 8015C/5035 and diesel range organics (DRO) by EPA Method 8015C/3550.

4.2 Soil Sample Analytical Results

The laboratory results for soil samples 9-4(10-12.5) and 9-7(3-5) detected TPH-DRO above laboratory detection limit (8.07 mg/kg and 9.65 mg/kg), but below NCDENR Action Level of 10 mg/kg for TPH-DRO. The laboratory results for soil borings 9-1(5-7.5), 9-2(5-7.5), 9-3(7.5-10), 9-5(10-12), 9-6(3-5), 9-8(2-5), and 9-9(5-7.5) did not detect any TPH-DRO or TPH-GRO above laboratory detection limits. The soil sample laboratory results are summarized in **Table 2**. A copy of the laboratory report and chain-of-custody is included in **Appendix E**.

4.3 Temporary Monitoring Well Installation

On September 17, 2012, Pyramid converted soil boring 9-9 into a 1-inch diameter temporary monitoring well. Soil boring 9-9 was completed to a depth total depth of 30 feet bls. The temporary well was constructed with 20 feet of 1-inch diameter of schedule 80 PVC casing and 10 feet of 1-inch diameter of schedule 80 PVC slotted screen. The temporary well was set in the boring with 10 feet of slotted screen set at the bottom of the well.

On September 17, 2012, temporary monitoring well 9-9 was gauged using a properly decontaminated electric water level probe. The depth-to-groundwater was gauged at 26.25 feet bls. The temporary monitoring well was sampled using a new 1-inch disposal bailer. After the well was gauged and sampled, the temporary monitoring well was properly abandoned by the drillers by removing all the casing, and filling the bore hole with bentonite chips and portland cement.

4.4 Groundwater Analytical Results

The groundwater sample 9-9(TW) was placed in laboratory prepared containers for analysis of volatile organic compounds (VOCs) by EPA Method 6200B, and the sample was shipped to SGS Laboratories in Wilmington, NC. The laboratory results for groundwater sample 9-9(TW) detected the compounds benzene (0.28 µg/l), toluene (0.36 µg/l), and total xylenes (1.59 µg/l) above laboratory detection limits, but below the NCAC 2L Groundwater Standard for benzene (0.28 µg/l), toluene (600 µg/l), and total xylenes (1.59 µg/l). No other compounds were detected above laboratory limits. The

groundwater results for sample 9-9(TW) are summarized in **Table 3**. A copy of the laboratory report and chain-of-custody is included in **Appendix E**.

5.0 Conclusions and Recommendations

As requested by NCDOT, Pyramid has completed a PSA at Parcel 009 located 3235 Ray Road, Harnett County, Spring Lake, NC. The following is a summary of the assessment activities and results.

5.1 Geophysical Investigation

The EM survey recorded anomalies that were consistent with the presence of metallic USTs. The GPR scans also confirmed the presence of three active known USTs at the property, located to the northwest of the pump islands. The three USTs were interpreted to be oriented approximately east/west. The two southern tanks were estimated to be approximately 16 feet long and 8 feet wide. The northern tank was estimated to be approximately 20 feet long and 7 feet wide. The tanks were observed to be at a depth of approximately 4 feet bls.

The geophysical investigation confirms that the area containing the proposed ROW and easement at Parcel 009 contains three known metallic USTs.

5.2 Limited Soil Assessment

The laboratory results for soil samples 9-4(10-12.5) and 9-7(3-5) detected TPH-DRO above laboratory detection limit (8.07 mg/kg and 9.65 mg/kg), but below NCDENR Action Level of 10 mg/kg for TPH-DRO. The laboratory results for soil borings 9-1(5-7.5), 9-2(5-7.5), 9-3(7.5-10), 9-5(10-12), 9-6(3-5), 9-8(2-5), and 9-9(5-7.5) did not detect any TPH-DRO or TPH-GRO above laboratory detection limits.

The detection of TPH-DRO at soil borings 9-4 and 9-7 above laboratory detection limits, but below NCDENR Action Levels, indicates a possible petroleum release from the UST system.

5.3 Limited Groundwater Assessment

Soil boring 9-9 was converted into a 1-inch diameter temporary monitoring well to a depth total depth of 30 feet bls. The depth-to-groundwater was gauged at 26.25 feet bls. The laboratory results for groundwater sample 9-9(TW) detected the compounds benzene (0.28 µg/l), toluene (0.36 µg/l), and total xylenes (1.59 µg/l) above laboratory detection limits, but below the NCAC 2L Groundwater Standard for benzene (0.28 µg/l), toluene (600 µg/l), and total xylenes (1.59 µg/l). No other compounds were detected above laboratory limits.

5.4 Recommendations

Prior to road construction activities, the dispensers (pump islands), product lines, the three USTs, and contents should be properly removed and disposed of according to NCDENR UST Section regulations.

During road construction activities, it is possible the NCDOT may encounter petroleum impacted soil over laboratory detection limits, but below the NCDENR Action Levels near soil borings 9-4 and 9-7.

If the soil is impacted at soil boring 9-4, approximately 40 cubic yards of potentially impacted soil may be encountered from 0 to 10 feet bls. Approximately 40 cubic yards of potentially impacted soil may be encountered near soil boring 9-7 from 0 to 10 feet bls. Pyramid estimates roughly 20 cubic yards of impacted soil near soil boring 9-4 from 0 to 5 feet, and approximately 20 cubic yards of impacted soil near soil boring 9-7 from 0 to 5 feet.

If impacted soil is encountered and removed from the former UST basin, the impacted soil should be managed according to NCDENR DWM UST Section Guidelines and disposed of at a permitted facility. Petroleum impacted soil from a UST system is considered non-hazardous waste. A list of permitted soil remediation facilities can be found on the NCDENR DWM UST Section web-page (http://portal.ncdenr.org/web/wm/ust/soilsites).

6.0 Limitations

The estimated volumes of petroleum contaminated soil are based on the limited data points and soil samples collected by Pyramid for this preliminary investigation. The actual amount of petroleum impacted/contaminated soil may vary depending on the actual grading plan for the project within the affected ROW and easement. The laboratory results only reflect the current conditions at the locations sampled on the date this Preliminary Site Assessment was performed.

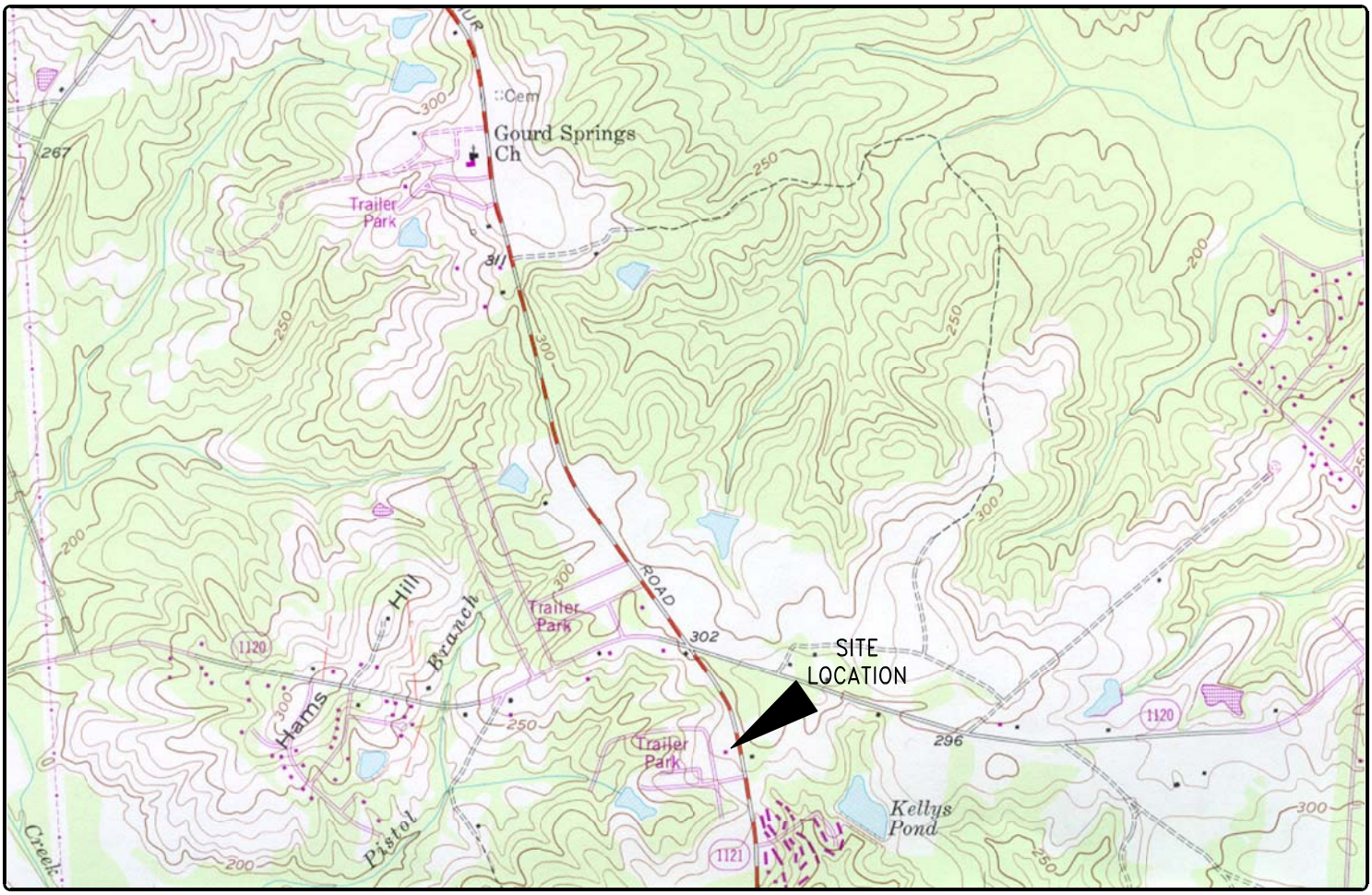
7.0 Closure

This report was prepared for, and is available solely for use by NCDOT and their designees. The contents thereof may not be used or relied upon by any other person without the express written consent and authorization of Pyramid Environmental & Engineering, P.C. (Pyramid). The observations, conclusions, and recommendations documented in this report are based on site conditions and information reviewed at the time of Pyramid's investigation. Pyramid appreciates the opportunity to provide this environmental service.

FIGURES

USGS TOPOGRAPHIC MAP

SITE: 3235 RAY ROAD LOCATION: SPRING LAKE, NORTH CAROLINA



USGS IDENTIFICATION

USGS 7.5 MINUTE MAP	ANDERSON CREEK, NC
ORIGINAL DATE:	1956
PHOTOREVISION DATE:	1981

	PRIMARY HIGHWAY, HARD SURFACE
	SECONDARY HIGHWAY, HARD SURFACE
	LIGHT-DUTY ROAD HARD OR IMPROVED SURFACE
	UNIMPROVED ROAD
	STATE ROAD
	U.S. ROUTE
	INTERSTATE ROUTE

SCALES

MILES: 1/2 0 1

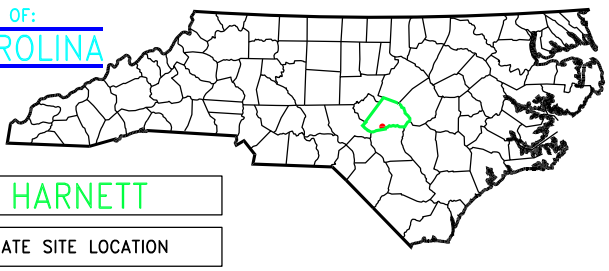
FEET: 1000 0 2000 4000 6000

1" = 2000'

NOTES:
- TOPOGRAPHICAL CONTOUR INTERVAL = 10 FEET
- PHOTOREVISIONS DENOTED IN PURPLE

MAGNETIC NORTH

COUNTY MAP OF: NORTH CAROLINA



COUNTY: HARNETT

APPROXIMATE SITE LOCATION

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT:	NC DOT U-3465
PROPERTY NAME:	3235 RAY RD. PARCEL 009
CITY:	SPRING LAKE
STATE:	NORTH CAROLINA
TITLE:	TOPOGRAPHIC MAP
SCALE:	1"=2000'
DATE:	9/21/12
DRAWING NAME:	USGSTOPO
DRAWN BY:	KAM
CHECK BY:	TDL
JOB NO.:	2012-228
TYPE:	PHASE II
FIGURE NUMBER:	1

NOTES

TOPOGRAPHIC MAP USED IN THIS GRAPHIC IS MAPPED, EDITED, AND PUBLISHED BY THE UNITED STATES GEOLOGIC SURVEY, DEPARTMENT OF THE INTERIOR, RESTON VIRGINIA.

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS.

B 009-5(10-12')
(<6.8)
[<3.78]

B 009-3(7.5-10')
(<6.94)
[<3.36]

B 009-8(2-5')
(<7.10)
[<3.27]

B 009-9(5-7.5')
(<6.56)
[<3.33]

B 009-4(10-12.5')
(8.07)
[<3.23]

B 009-1(5-7.5')
(<6.98)
[<3.41]

B 009-6(3-5')
(<6.69)
[<3.11]

B 009-7(3-5')
(9.65)
[<3.25]

B 009-2(5-7.5')
(<6.42)
[<3.03]

LEGEND

- PROPOSED UTILITY EASEMENT
- EXISTING ROW
- EXISTING PROPERTY BOUNDARY
- PROPOSED ROW
- PROPOSED CONST. EASEMENT
- PROP. DRAINAGE UTIL. EASEMENT
- PROPOSED SS CUT LINE
- PROPOSED SS FILL LINE
- PROPOSED SS TRANSITION LINE
- PROPOSED DRAINAGE PIPING
- PROPOSED DRAINAGE EASEMENT
- PROPOSED CATCH BASIN
- SOIL SAMPLE BORING LOCATION
- BORING CONVERTED TO MW
- AREA OF CONTAMINATION (>BDL, <10 PPM)
- AREA OF CONTAMINATION (>10 PPM)
- POSSIBLE UST
- PROBABLE UST

(<6.1) TPH-DRO concentration (mg/kg)
[<6.1] TPH-GRO concentration (mg/kg)

N

0 50 100

FEET

TITLE
SOIL BORING LOCATIONS AND
ESTIMATED AREA OF CONTAMINATION

PROJECT
NCDOT ROW PROJECT U-3465 (3907.1.1)
EDWARD M. HUGHES PROPERTY- PARCEL 009
RAY ROAD, HARNETT COUNTY, NORTH CAROLINA

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
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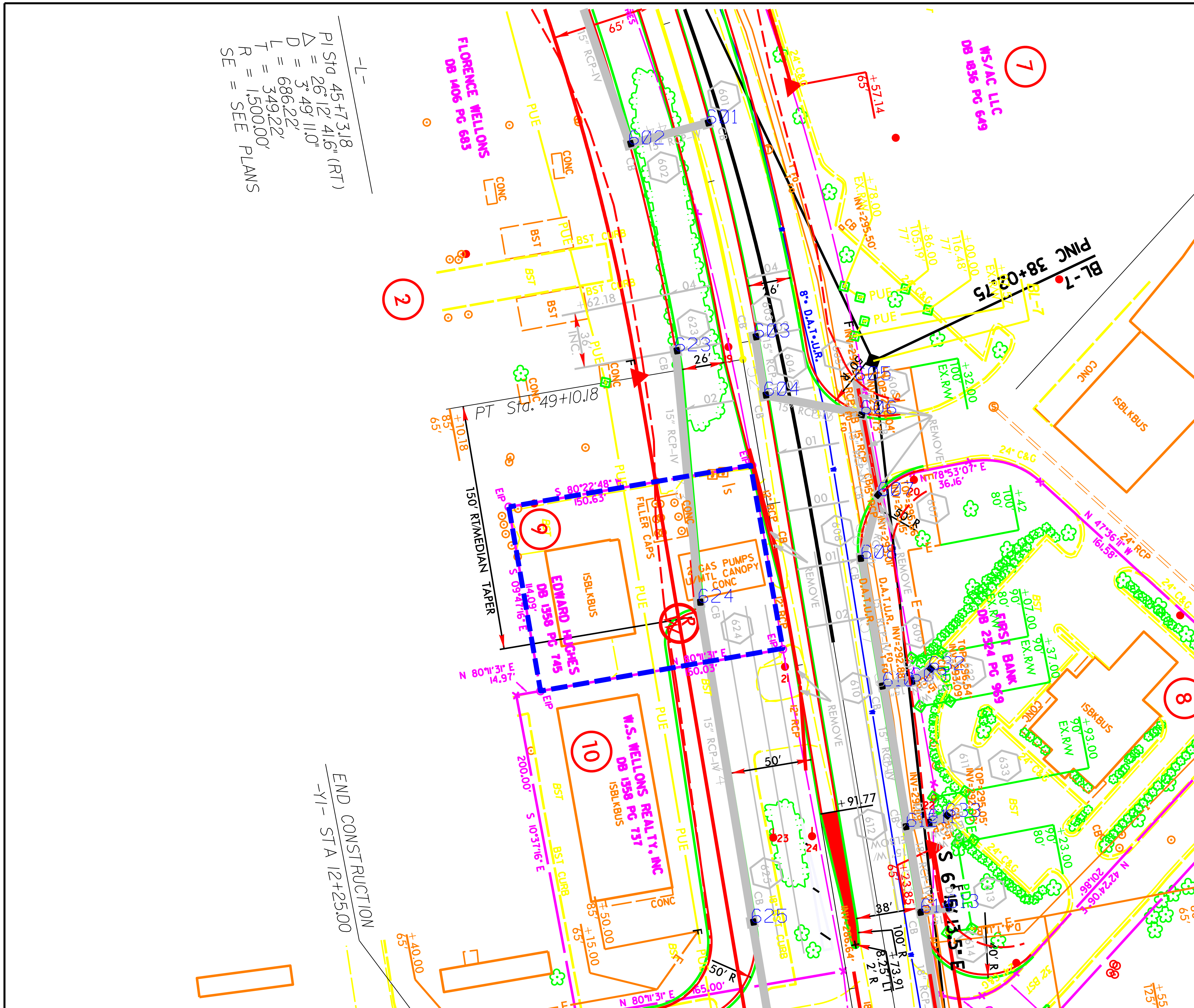
DATE: 9-19-12 | REVISION NO. 0

PYRAMID PROJECT NO. 2012-228 | FIGURE NO. 2



LEGEND

- PROPOSED UTILITY EASEMENT
- EXISTING ROW
- EXISTING PROPERTY BOUNDARY
- PROPOSED ROW
- PROPOSED CONST. EASEMENT
- PROP. DRAINAGE UTIL. EASEMENT
- PROPOSED SS CUT LINE
- PROPOSED SS FILL LINE
- PROPOSED SS TRANSITION LINE
- PROPOSED DRAINAGE PIPING
- PROPOSED DRAINAGE EASEMENT
- PROPOSED CATCH BASIN
- SOIL SAMPLE BORING LOCATION
- BORING CONVERTED TO MW
- AREA OF CONTAMINATION (>BDL, <10 PPM)
- AREA OF CONTAMINATION (>10 PPM)
- UST — POSSIBLE UST
- UST — PROBABLE UST
- (<6.1) TPH-DRO concentration (mg/kg)
- [<6.1] TPH-GRO concentration (mg/kg)
- PARCEL 009 BOUNDARY

0 50 100
FEET

N

TITLE: PROPERTY BOUNDARIES AND OWNER/STATION INFORMATION	
PROJECT: NCDOT ROW PROJECT U-3465 (3907.1.1) EDWARD M. HUGHES PROPERTY- PARCEL 009 RAY ROAD, HARNETT COUNTY, NORTH CAROLINA	
PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.	503 INDUSTRIAL AVENUE GREENSBORO, NC 27406 336.335.3174 (p) 336.691.0648 (f) License # C1251 Eng. / #C257 Geology
DATE: 9-19-12	REVISION NO. 0
PYRAMID PROJECT NO. 2012-228	FIGURE NO. 3

TABLES

TABLE 1

Summary of PID Screening Results

NCDOT Project U-3465

3235 Ray Road - Parcel 009

Harnett County, Spring Lake, North Carolina

SOIL BORING	SAMPLE ID	DEPTH (feet bgs)	PID READINGS (PPM)
9-1	9-1(3-5)	3 to 5	0
	9-1(5-7.5)	5 to 7.5	0
	9-1(7.5-10)	7.5 to10	0
9-2	9-2(4-5)	4 to 5	0
	9-2(5-7.5)	5 to 7.5	0
9-3	9-3(3-5)	2 to 5	0
	9-3(7.5-10)	7.5 to 10	**45**
	9-3(12-15)	12 to 15	30
9-4	9-4(2-5)	2 to 5	0
	9-4(5-7.5)	5 to 7.5	130
	9-4(7.5-10)	7.5 to 10	0
	9-4(10-12.5)	10 to 12.5	**3000**
	9-4(12.5-15)	12.5 to15	55
9-5	9-5(3-5)	3 to 5	25
	9-5(8-10)	8 to 10	35
	9-5(10-12)	10 to 12	**1400**
	9-5(13-15)	13 to 15	25
9-6	9-6(3-5)	3 to 5	**35**
	19-6(8-10)	8 to 10	10
9-7	9-7(3-5)	3 to 5	**15**
9-8	9-8(2-5)	2 to 5	**25**
9-9	9-9(2-5)	2 to 5	35
	9-9(5-7.5)	5 to 7.5	**95**
	9-9(7.5-10)	7.5 to 10	15

bgs= below ground surface

PID= photo-ionization detector

PPM= parts-per-million

TABLE 2

Summary of Soil Sample Analytical Results

NCDOT Project U-3465
3235 Ray Road - Parcel 009
Harnett County, Spring Lake, North Carolina

SAMPLE ID	DATE	DEPTH (feet)	PID (ppm)	EPA Method 3550 DRO (mg/kg)	EPA Method 5035 GRO (mg/kg)
9-1(5-7.5)	9/17/2012	5 to 7.5	0	<6.98	<3.41
9-2(5-7.5)	9/17/2012	5 to 7.5	0	<6.42	<3.03
9-3(7.5-10)	9/17/2012	7.5 to 10	45	<6.94	<3.36
9-4(10-12.5)	9/17/2012	10 to 12.5	3000	8.07	<3.23
9-5(10-12)	9/17/2012	10 to 12	1400	<6.80	<3.78
9-6(3-5)	9/17/2012	3 to 5	35	<6.69	<3.11
9-7(3-5)	9/17/2012	3 to 5	15	9.65	<3.25
9-8(2-5)	9/17/2012	2 to 5	25	<7.10	<3.27
9-9(5-7.5)	9/12/2012	5 to 7.5	95	<6.56	<3.33
NC Initial Cleanup Level - UST Section for 5035/5030-GRO; 3550-DRO				10	10

PID= photo-ionizaton detector
PPM= parts-per-million
GRO= Gasoline Range Organics
DRO= Diesel Range Organics
mg/kg= micograms-per-kilogram

TABLE 3

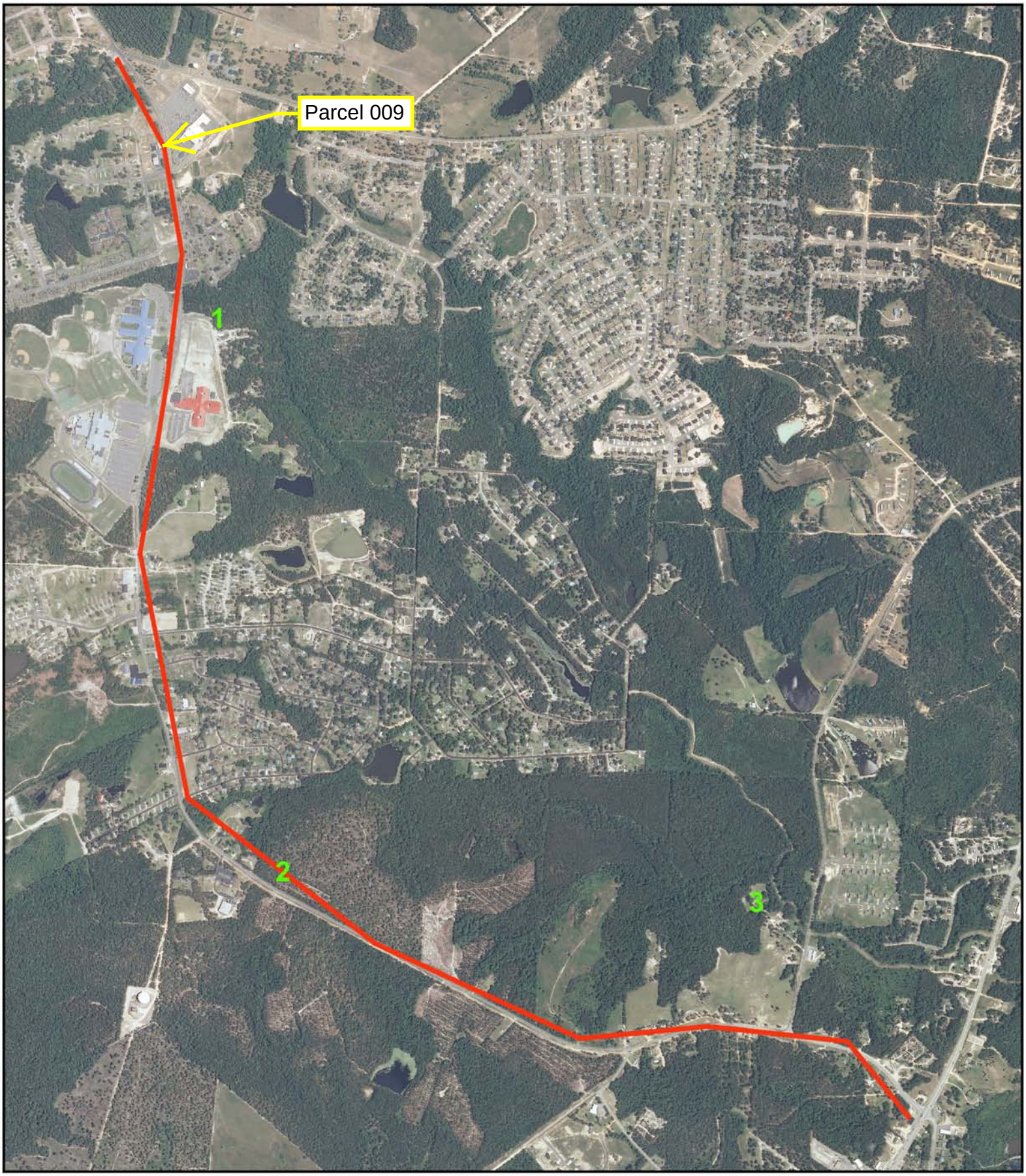
Summary of Groundwater Analytical Results

NCDOT Project U-3465
3235 Ray Road - Parcel 009
Harnett County, Spring Lake, North Carolina

PARAMETER	UNITS	SAMPLE ID	NCAC 2L GROUNDWATER STANDARD
		9-9(TW)	
EPA Method 6200B; Sample Collection Date: 9/17/12			
Benzene	ug/L	0.28	1
Chloroform	ug/L	ND	70
Diisopropyl Ether (IPE)	ug/L	ND	70
Ethyl Benzene	ug/L	ND	600
Isopropylbenzene (Cumene)	ug/L	ND	70
Naphthalene	ug/L	ND	6
Styrene	ug/L	ND	70
Toluene	ug/L	0.36	600
Total Xylenes	ug/L	1.59	500
n-Propylbenzene	ug/L	ND	70
sec-Butylbenzene	ug/L	ND	70
tert-Butyl methyl ether (MTBE)	ug/L	ND	20
tert-Butylbenzene	ug/L	ND	70
1,2,4-Trimethylbenzene	ug/L	ND	400
1,2-Dichloroethane	ug/L	ND	0.4
1,3,5-Trimethylbenzene	ug/L	ND	400
4-Isopropyltoluene	ug/L	ND	25
All Other Parameters	ug/L	ND	NA

ug/L= micrograms-per-liter
ND= Not Detected
NA= Not Applicable

APPENDIX A



Historical Aerial Photo

2010 - REFERENCE MOSAIC

SR 1121 FROM NC 210 TO SR 1120

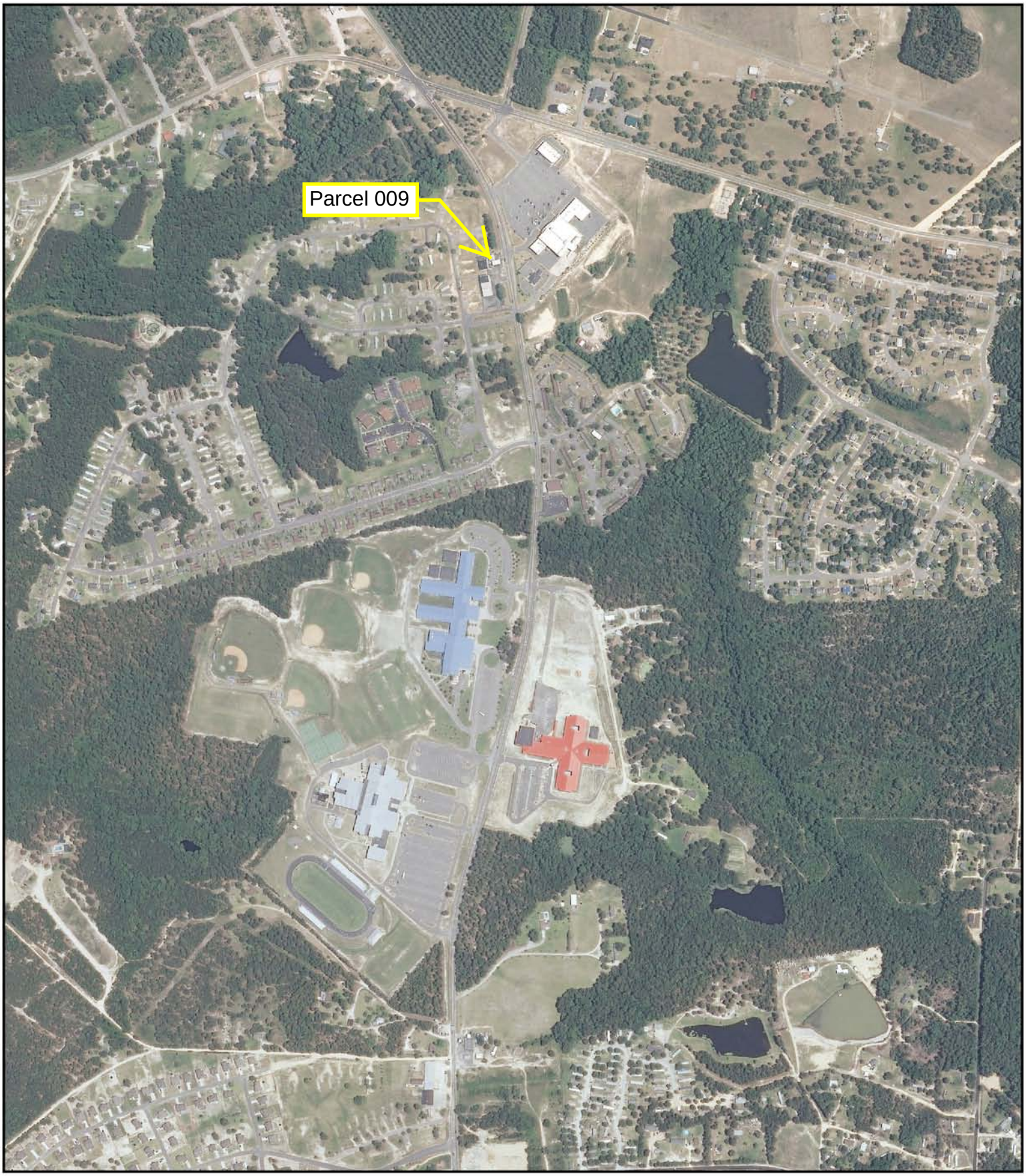
SPRING LAKE, NC 28390

Target Site: 35.240729, -78.953625; Job Number: 2012-228

FIRSTSEARCH

N W E S

1 inch equals 1,416 feet



Historical Aerial Photo
2010 - SECTION 1
SR 1121 FROM NC 210 TO SR 1120
SPRING LAKE, NC 28390

FIRSTSEARCH

Target Site: 35.240729, -78.953625; Job Number: 2012-228

N
W E
S

1 inch equals 750 feet

Historical Aerial Photo
1999 - SECTION 1
SR 1121 FROM NC 210 TO SR 1120
SPRING LAKE, NC 28390

FIRSTSEARCH

Target Site: 35.240729, -78.953625; Job Number: 2012-228

N
W E
S

1 inch equals 750 feet

Historical Aerial Photo
1993 - SECTION 1
SR 1121 FROM NC 210 TO SR 1120
SPRING LAKE, NC 28390

Target Site: 35.240729, -78.953625; Job Number: 2012-228

FIRSTSEARCH

N
W E
S

1 inch equals 750 feet

Historical Aerial Photo
1983 - SECTION 1
SR 1121 FROM NC 210 TO SR 1120
SPRING LAKE, NC 28390

Target Site: 35.240729, -78.953625; Job Number: 2012-228

FIRSTSEARCH

N
W E
S

1 inch equals 750 feet

Historical Aerial Photo
1971 - SECTION 1
SR 1121 FROM NC 210 TO SR 1120
SPRING LAKE, NC 28390

Target Site: 35.240729, -78.953625; Job Number: 2012-228

FIRSTSEARCH

N
W E
S

1 inch equals 750 feet

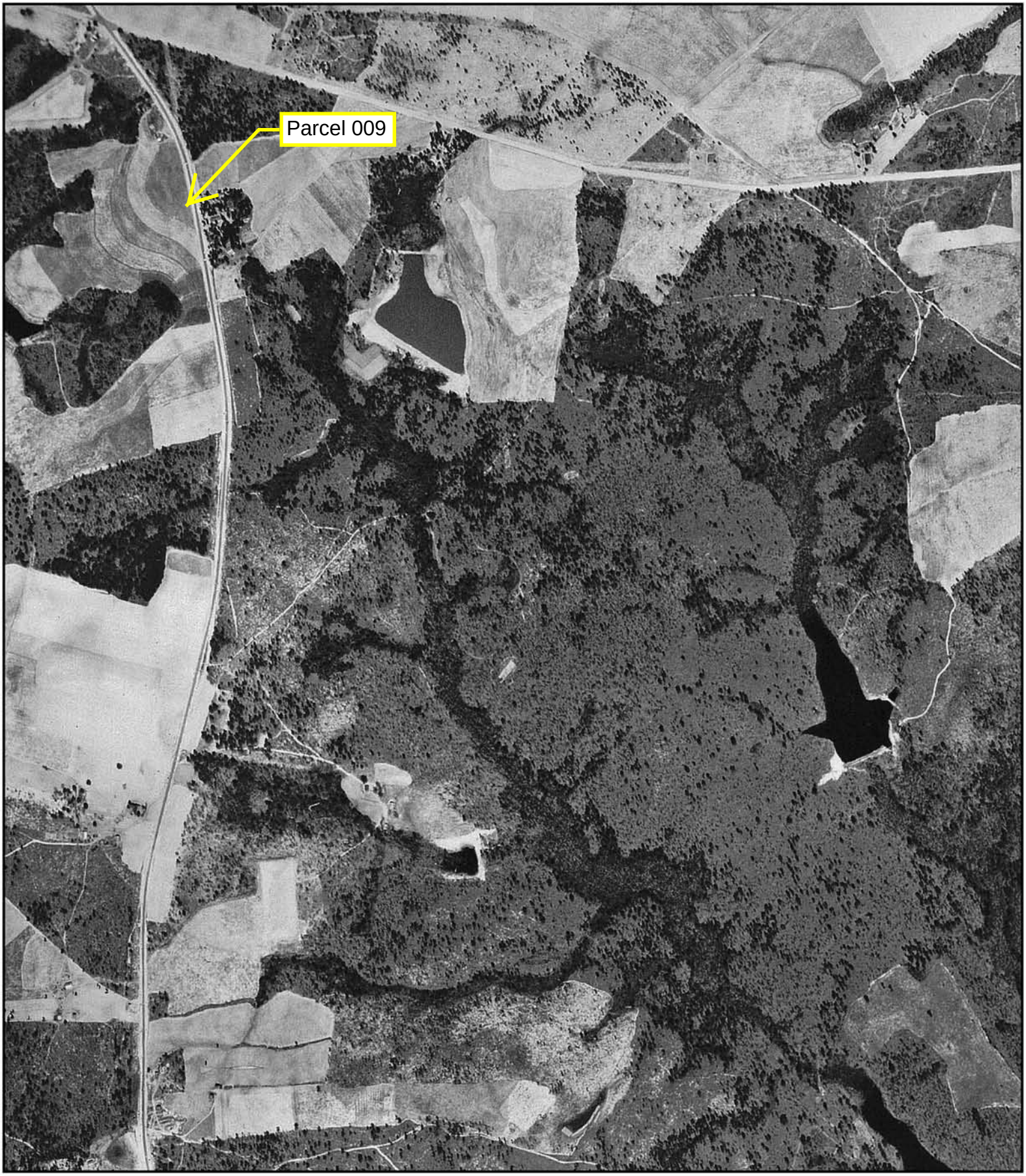
Historical Aerial Photo
1964 - SECTION 1
SR 1121 FROM NC 210 TO SR 1120
SPRING LAKE, NC 28390

Target Site: 35.240729, -78.953625; Job Number: 2012-228

FIRSTSEARCH

N
W E
S

1 inch equals 750 feet



Historical Aerial Photo
1955 - SECTION 1
SR 1121 FROM NC 210 TO SR 1120
SPRING LAKE, NC 28390

FIRSTSEARCH

Target Site: 35.240729, -78.953625; Job Number: 2012-228

N
W E
S

1 inch equals 750 feet

FIRSTSEARCH

Historical Aerial Photo
1938 - SECTION 1
SR 1121 FROM NC 210 TO SR 1120
SPRING LAKE, NC 28390

Target Site: 35.240729, -78.953625; Job Number: 2012-228

N
W E
S

1 inch equals 750 feet

APPENDIX B

FIRSTSEARCH

ENVIRONMENTAL FIRSTSEARCH REPORT

TARGET PROPERTY:

NCDOT PROJECT U-3465

SR 1121 - NC 210 - SR 1120

SPRING LAKE, NC 28390

JOB NUMBER: 2012-228

PREPARED FOR:

Pyramid Environmental & Engineering, PC

503 Industrial Ave.

Greensboro, NC 27406

September 6, 2012

Environmental FirstSearch
Search Summary Report

Target Site: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	07-09-12	1.00	0	0	0	0	0	0	0
NPL Delisted	Y	07-09-12	0.50	0	0	0	0	-	0	0
CERCLIS	Y	08-01-12	0.50	0	0	0	0	-	0	0
NFRAP	Y	08-01-12	0.50	0	0	0	0	-	0	0
RCRA COR ACT	Y	07-10-12	1.00	0	0	0	0	0	0	0
RCRA TSD	Y	07-10-12	0.50	0	0	0	0	-	0	0
RCRA GEN	Y	07-10-12	0.25	0	0	0	-	-	0	0
Federal Brownfield	Y	07-15-12	0.25	0	0	0	-	-	0	0
ERNS	Y	07-05-12	0.12	0	0	-	-	-	1	1
Tribal Lands	Y	12-15-08	1.00	0	0	0	0	0	1	1
State/Tribal Sites	Y	06-08-12	1.00	0	0	0	0	0	0	0
State Spills 90	Y	06-01-12	0.12	3	0	-	-	-	0	3
State/Tribal SWL	Y	05-26-11	0.50	0	0	0	0	-	0	0
State/Tribal LUST	Y	06-01-12	0.50	2	1	0	2	-	2	7
State/Tribal UST/AST	Y	06-01-12	0.25	5	0	0	-	-	1	6
State/Tribal EC	Y	NA	0.25	0	0	0	-	-	0	0
State/Tribal IC	Y	06-08-12	0.25	0	0	0	-	-	0	0
State/Tribal VCP	Y	07-30-07	0.50	0	0	0	0	-	0	0
State/Tribal Brownfields	Y	08-10-12	0.50	0	0	0	0	-	0	0
Federal IC/EC	Y	06-13-12	0.50	0	0	0	0	-	0	0
-TOTALS-				10	1	0	2	0	5	18

Notice of Disclaimer

Due to the limitations, constraints, and inaccuracies and incompleteness of government information and computer mapping data currently available to FirstSearch Technology Corp., certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in FirstSearch Technology Corp.'s databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

Although FirstSearch Technology Corp. uses its best efforts to research the actual location of each site, FirstSearch Technology Corp. does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of FirstSearch Technology Corp.'s services proceeding are signifying an understanding of FirstSeaarch Technology Corp.'s searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

Environmental FirstSearch
Site Information Report

Request Date:	09-06-12	**Search Type:**	LINEAR
Requestor Name:	Brett Higgins		3.499 mile(s)
Standard:	ASTM-05	**Job Number:**	2012-228
		Filtered Report	

Target Site: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

Demographics

Sites:	18	**Non-Geocoded:**	5	**Population:**	NA

Radon: 0 PCI/L

Fire Insurance Map Coverage: No (>350 Ft. From Coverage)

Site Location

	Degrees (Decimal)	Degrees (Min/Sec)		UTMs
Longitude:	-78.953625	-78:57:13	**Easting:**	686206.771
Latitude:	35.240729	35:14:27	**Northing:**	3901460.421
Elevation:	213		**Zone:**	17

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes:

ZIP Code	City Name	ST	Dist/Dir	Sel

Services:

	Requested?	Date
Fire Insurance Maps	No	
Aerial Photographs	Yes	09-06-12
Historical Topos	No	
City Directories	No	
Title Search	No	
Municipal Reports	No	
Liens	No	
Historic Map Works	No	
Online Topos	No	

Environmental FirstSearch
Target Site Summary Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

TOTAL: 18 **GEOCODED:** 13 **NON GEOCODED:** 5 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
1	SPILLS	RYAN S GROCERY 12015/CURRENT RECORD	7939 RAY RD SPRING LAKE NC 28390	0.00 --	+ 106	1
1	UST	RYAN S GROCERY 0-026491/TEMPORARILY CLOSED	7939 RAY RD SPRINGLAKE NC 28390	0.00 --	+ 106	2
1	UST	RYAN S GROCERY FA-675/UNKNOWN	7939 RAY RD SPRING LAKE NC 28390	0.00 --	+ 106	5
1	LUST	RYAN S GROCERY NCI-012015/RESPONSE	7939 RAY RD SPRING LAKE NC 28390	0.00 --	+ 106	7
2	SPILLS	DALTON HOLDER STORE 17793/CURRENT RECORD	6701 RAY RD SPRING LAKE NC 28390	0.00 --	+ 81	8
2	UST	DATON HOLDER 0-017886/PERM CLOSED REMOVED	6701 RAY RD SPRING LAKE NC 28390	0.00 --	+ 81	9
2	LUST	DALTON HOLDER STORE NCI-017793/RESPONSE	6701 RAY RD SPRING LAKE NC 28390	0.00 --	+ 81	12
3	SPILLS	HOLDERS GROCERY 85611/CURRENT RECORD	UNKNOWN SPRING LAKE NC 28390	0.00 --	+ 13	13
4	UST	MATTHEWS GENERAL STORE 0-002736/CURRENTLY OPERATIONAL	7100 RAY RD SPRING LAKE NC 28390	0.00 --	+ 64	14
5	UST	SHORT STOP FOOD MARTS 8 0-021508/CURRENTLY OPERATIONAL	7925 RAY RD SPRING LAKE NC 28390	0.00 --	+ 105	17

Environmental FirstSearch
Sites Summary Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

TOTAL: 18 **GEOCODED:** 13 **NON GEOCODED:** 5 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
1	SPILLS	RYAN S GROCERY 12015/CURRENT RECORD	7939 RAY RD SPRING LAKE NC 28390	0.00 --	+ 106	1
1	UST	RYAN S GROCERY 0-026491/TEMPORARILY CLOSED	7939 RAY RD SPRINGLAKE NC 28390	0.00 --	+ 106	2
1	UST	RYAN S GROCERY FA-675/UNKNOWN	7939 RAY RD SPRING LAKE NC 28390	0.00 --	+ 106	5
1	LUST	RYAN S GROCERY NCI-012015/RESPONSE	7939 RAY RD SPRING LAKE NC 28390	0.00 --	+ 106	7
2	SPILLS	DALTON HOLDER STORE 17793/CURRENT RECORD	6701 RAY RD SPRING LAKE NC 28390	0.00 --	+ 81	8
2	UST	DATON HOLDER 0-017886/PERM CLOSED REMOVED	6701 RAY RD SPRING LAKE NC 28390	0.00 --	+ 81	9
2	LUST	DALTON HOLDER STORE NCI-017793/RESPONSE	6701 RAY RD SPRING LAKE NC 28390	0.00 --	+ 81	12
3	SPILLS	HOLDERS GROCERY 85611/CURRENT RECORD	UNKNOWN SPRING LAKE NC 28390	0.00 --	+ 13	13
4	UST	MATTHEWS GENERAL STORE 0-002736/CURRENTLY OPERATIONAL	7100 RAY RD SPRING LAKE NC 28390	0.00 --	+ 64	14
5	UST	SHORT STOP FOOD MARTS 8 0-021508/CURRENTLY OPERATIONAL	7925 RAY RD SPRING LAKE NC 28390	0.00 --	+ 105	17
6	LUST	HOLDERS GROCERY NCI-085611/ASSESSMENT	1899 RAY RD SPRING LAKE NC	0.11 SW	+ 53	20
7	LUST	LEWIS OIL CO. NCI-005466/	0 HIGHWAY 210 MANCHESTER NC	0.27 SE	+ 4	21
8	LUST	LEWIS OIL GROCERY STORE NCI-014732/RESPONSE	0 NC 210 & SR 1600 SPRING LAKE NC 28390	0.38 SE	- 53	22

Environmental FirstSearch
Sites Summary Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

TOTAL: 18 **GEOCODED:** 13 **NON GEOCODED:** 5 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	ERNS	BETWEEN THE TOWNS SPRING LAKE NRC-554942/FIXED	AND SANFORD ON HWY SPRING LAKE NC	NON GC	N/A	N/A
	UST	STEWARTS OF SPRING LAKE 0-036564/PERM CLOSED REMOVED	SR 2045 AND SR 2048 SPRING LAKE NC	NON GC	N/A	N/A
	LUST	DEVON S GROCERY NCI-015437/RESPONSE	ROUTE 1, BOX 425, SR2048 SPRING LAKE NC 28390	NON GC	N/A	N/A
	LUST	LONG VALLEY FARM NCI-012016/CLOSED OUT	MANCHESTER ROAD SPRING LAKE NC 28390	NON GC	N/A	N/A
	TRIBALLA	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-28390/	UNKNOWN NC 28390	NON GC	N/A	N/A

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

SPILLS

SEARCH ID: 18 **DIST/DIR:** 0.00 -- **ELEVATION:** 319 **MAP ID:** 1

NAME: RYAN S GROCERY
ADDRESS: 7939 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT:
SOURCE: NCDENR

REV: 9/23/11
ID1: 12015
ID2: FA-675
STATUS: CURRENT RECORD
PHONE:

SITE INFORMATION

OWNER/OPERATOR: CHRISTINE RYAN

RT. 3, BOX 599-A
SPRING LAKE NC 28390

DATE OF RELEASE: 12/21/1993
DATE SUBMITTED: 4/11/1994
DESCRIPTION OF INCIDENT: A LEAK WAS DISCOVERED WHEN USTS WERE RMEOVED

CONTAMINATION INFORMATION
GROUNDWATER CONTAMINATED?: Y
MAJOR SOIL CONTAMINATION?: N

MATERIAL INVOLVED (1): GASOLINE
AMOUNT LOST (1):
AMOUNT RECOVERED (1):

MATERIAL INVOLVED (2):
AMOUNT LOST (2):
AMOUNT RECOVERED (2):

MATERIAL INVOLVED (3):
AMOUNT LOST (3):
AMOUNT RECOVERED (3):

NUMBER OF WELLS AFFECTED: 0
NAME(S) OF CONTAMINATED WELLS:

PRIORITY INFORMATION:
RISK SITE?: H
SITE PRIORITY: 085B
PRIORITY CODE: H
PRIORITY UPDATE: 4/15/1998

STATUS INFORMATION:
LAST MODIFIED:
INCIDENT PHASE: RESPONSE
NOV ISSUED:
NORR ISSUED:
45 DAY REPORT:
CORRECTIVE ACTION PLAN:
CLOSURE REQ DATE:
CLOSE-OUT REPORT:

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 4 **DIST/DIR:** 0.00 -- **ELEVATION:** 319 **MAP ID:** 1

NAME: RYAN S GROCERY
ADDRESS: 7939 RAY RD
SPRINGLAKE NC 28390
HARNETT
CONTACT: CHRISTINE RYAN
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-026491
ID2: 00-0-0000026491
STATUS: TEMPORARILY CLOSED
PHONE:

SITE INFORMATION

TOTAL NUMBER OF TANKS: 5

CONTACT INFORMATION: CHRISTINE RYAN
7939 RAY ROAD
SPRINGLAKE NC 28390

TANK NUMBER: 1
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 6000
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:4
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:
COMMERCIAL TANK:YES
REGULATED TANK:YES

TANK NUMBER: 2
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 6000
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:4
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:
COMMERCIAL TANK:YES
REGULATED TANK:YES

TANK NUMBER: 3
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 1000
TANK CONSTRUCTION:3

- Continued on next page -

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 4 **DIST/DIR:** 0.00 -- **ELEVATION:** 319 **MAP ID:** 1

NAME: RYAN S GROCERY
ADDRESS: 7939 RAY RD
SPRINGLAKE NC 28390
HARNETT
CONTACT: CHRISTINE RYAN
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-026491
ID2: 00-0-0000026491
STATUS: TEMPORARILY CLOSED
PHONE:

PIPE CONSTRUCTION:4
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:
COMMERCIAL TANK:NO
REGULATED TANK:YES

TANK NUMBER: 4
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 1000
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:4
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:
COMMERCIAL TANK:NO
REGULATED TANK:YES

TANK NUMBER: 5
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 500
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:4
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:
COMMERCIAL TANK:NO
REGULATED TANK:YES

ARCHIVED INFORMATION AS OF 2011

TANK NUMBER: 1
INSTALLATION DATE: 19841231
CLOSED DATE: 19931221
STATUS: PERMANENTLY CLOSED
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 6000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 4 **DIST/DIR:** 0.00 -- **ELEVATION:** 319 **MAP ID:** 1

NAME: RYAN S GROCERY
ADDRESS: 7939 RAY RD
SPRINGLAKE NC 28390
HARNETT
CONTACT: CHRISTINE RYAN
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-026491
ID2: 00-0-0000026491
STATUS: TEMPORARILY CLOSED
PHONE:

INTERIOR: UNKNOWN
EXTERIOR: UNKNOWN
CORROSION PROTECTION:
LEAK DETECTION:
PIPING MATERIAL: STEEL
PIPE CORROSION PROTECTION:
PIPE LEAK DETECTION:
OVERFLOW PROTECTION:
FINANCIAL RESPONSIBILITY:
CERTIFICATION TYPE:
GPS SITING CONFIRMED:N
PERSON CONFIRMING:

TANK NUMBER: 2
INSTALLATION DATE: 19841231
CLOSED DATE: 19931221
STATUS: PERMANENTLY CLOSED
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 6000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: UNKNOWN
EXTERIOR: UNKNOWN
CORROSION PROTECTION:
LEAK DETECTION:
PIPING MATERIAL: STEEL
PIPE CORROSION PROTECTION:
PIPE LEAK DETECTION:
OVERFLOW PROTECTION:
FINANCIAL RESPONSIBILITY:
CERTIFICATION TYPE:
GPS SITING CONFIRMED:N
PERSON CONFIRMING:

TANK NUMBER: 3
INSTALLATION DATE: 19701231
CLOSED DATE: 19931221
STATUS: PERMANENTLY CLOSED
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 1000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: UNKNOWN
EXTERIOR: UNKNOWN
CORROSION PROTECTION:
LEAK DETECTION:
PIPING MATERIAL: STEEL

- More Details Exist For This Site; Max Page Limit Reached -

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 5 **DIST/DIR:** 0.00 -- **ELEVATION:** 319 **MAP ID:** 1

NAME: RYAN S GROCERY
ADDRESS: 7939 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: CHRISTINE RYAN
SOURCE: NCDENR

REV: 6/1/12
ID1: FA-675
ID2:
STATUS: UNKNOWN
PHONE:

SITE INFORMATION

REGIONAL UST DATA

UST NUMBER:FA-675
INCIDENT NUMBER:12015
CD NUMBER:0
REEL NUMBER:0
REGIONAL CONTACT:JWB
REGIONAL OFFICE:FAY
DATE OCCURRED:12/21/1993

RESPONSIBLE COMPANY:

790 JOHN RYAN LANE
SPRING LAKE ,NC , 28390

SOURCE:LEAK, UST
PETROLEUM TYPE:PETROLEUM
COMMERCIAL/NONCOMMERCIAL:COMMERCIAL
REGULATED:REGULATED
REGULATORY REQUIREMENT:9/28/2001
VIOLATION:

PHASE REQUIRED:
SITE PRIORITY:085B
RISK:H
RISK OF INCIDENT:L
INTERMEDIATE CONDITION:
LAND USE:

CORRECTIVE ACTION PLAN:
RBCA:
CLOSED REVIEW REQUESTED:
CASE CLOSED:
CONTAMINATION:GROUNDWATER/BOTH
SUPPLY WELLS:
MTBE IN WELL:
MTBE IN GROUNDWATER:UNKNOWN

LEAK DISCOVERED:0
LAND USE RESTRICTION FILED:
CLEAN UP:12/21/1993
CURRENT STATUS:CURRENT RECORD

RBCA GROUNDWATER:
POLLUTANT TYPE:GASOLINE/DIESEL/KEROSENE
CD NUMBER:0
RESPONSIBLE OWNER:0

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 5 **DIST/DIR:** 0.00 -- **ELEVATION:** 319 **MAP ID:** 1

NAME:	RYAN S GROCERY	**REV:**	6/1/12
ADDRESS:	7939 RAY RD	**ID1:**	FA-675
	SPRING LAKE NC 28390	**ID2:**	
	HARNETT	**STATUS:**	UNKNOWN
CONTACT:	CHRISTINE RYAN	**PHONE:**	
SOURCE:	NCDENR		

RESPONSIBLE OPERATOR:0
RESPONSIBLE LANDOWNER:0
COMMENTS:

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

LUST

SEARCH ID: 9 **DIST/DIR:** 0.00 -- **ELEVATION:** 319 **MAP ID:** 1

NAME: RYAN S GROCERY
ADDRESS: 7939 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: CHRISTINE RYAN
SOURCE: NCDENR

REV: 6/1/12
ID1: NCI-012015
ID2: 12015
STATUS: RESPONSE
PHONE:

REGIONAL UST DATA

UST NUMBER:FA-675
INCIDENT NUMBER:12015
CD NUMBER:0
REEL NUMBER:0
REGIONAL CONTACT:JWB
REGIONAL OFFICE:FAY
DATE OCCURRED:12/21/1993

RESPONSIBLE COMPANY:

790 JOHN RYAN LANE
SPRING LAKE ,NC , 28390

SOURCE:LEAK, UST
PETROLEUM TYPE:PETROLEUM
COMMERCIAL/NONCOMMERCIAL:COMMERCIAL
REGULATED:REGULATED
REGULATORY REQUIREMENT:9/28/2001
VIOLATION:

PHASE REQUIRED:
SITE PRIORITY:085B
RISK:H
RISK OF INCIDENT:L
INTERMEDIATE CONDITION:
LAND USE:

CORRECTIVE ACTION PLAN:
RBCA:
CLOSED REVIEW REQUESTED:
CASE CLOSED:
CONTAMINATION:GROUNDWATER/BOTH
SUPPLY WELLS:
MTBE IN WELL:
MTBE IN GROUNDWATER:UNKNOWN

LEAK DISCOVERED:0
LAND USE RESTRICTION FILED:
CLEAN UP:12/21/1993
CURRENT STATUS:CURRENT RECORD

RBCA GROUNDWATER:
POLLUTANT TYPE:GASOLINE/DIESEL/KEROSENE
CD NUMBER:0
RESPONSIBLE OWNER:0
RESPONSIBLE OPERATOR:0
RESPONSIBLE LANDOWNER:0

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

SPILLS

SEARCH ID: 1 **DIST/DIR:** 0.00 -- **ELEVATION:** 294 **MAP ID:** 2

NAME: DALTON HOLDER STORE
ADDRESS: 6701 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT:
SOURCE: NCDENR

REV: 9/23/11
ID1: 17793
ID2: FA-934
STATUS: CURRENT RECORD
PHONE:

SITE INFORMATION

OWNER/OPERATOR: GORDON MASON

6701 RAY ROAD
SPRING LAKE NC 28390

DATE OF RELEASE: 8/28/1997
DATE SUBMITTED: 9/16/1997
DESCRIPTION OF INCIDENT: RECEIVED CLOSURE REPORT; SOIL ANALYTICAL RESULTS SHOWED TPH>10PPM FOR ALL SAMPLES COLLECTED AROUND TANKS; GROUNDWATER WAS NOT ENCOUNTERED DURING TK REMOVAL

CONTAMINATION INFORMATION
GROUNDWATER CONTAMINATED?: Y
MAJOR SOIL CONTAMINATION?: N

MATERIAL INVOLVED (1): GASOLINE
AMOUNT LOST (1):
AMOUNT RECOVERED (1): UNKNOWN

MATERIAL INVOLVED (2):
AMOUNT LOST (2):
AMOUNT RECOVERED (2):

MATERIAL INVOLVED (3):
AMOUNT LOST (3):
AMOUNT RECOVERED (3):

NUMBER OF WELLS AFFECTED: 0
NAME(S) OF CONTAMINATED WELLS:

PRIORITY INFORMATION:
RISK SITE?: U
SITE PRIORITY: 10E
PRIORITY CODE: E
PRIORITY UPDATE:

STATUS INFORMATION:
LAST MODIFIED:
INCIDENT PHASE: RESPONSE
NOV ISSUED:
NORR ISSUED:
45 DAY REPORT:
CORRECTIVE ACTION PLAN:
CLOSURE REQ DATE:
CLOSE-OUT REPORT:

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 7 **DIST/DIR:** 0.00 -- **ELEVATION:** 294 **MAP ID:** 2

NAME: DATON HOLDER
ADDRESS: 6701 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: GORDON A MASON
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-017886
ID2: 00-0-0000017886
STATUS: PERM CLOSED REMOVED
PHONE:

SITE INFORMATION

TOTAL NUMBER OF TANKS: 3

CONTACT INFORMATION: GORDON A MASON
6701 B RAY RD
SPRING LAKE NC 28390

TANK NUMBER: 1
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 3000
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:4
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:
COMMERCIAL TANK:YES
REGULATED TANK:YES

TANK NUMBER: 2
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 3000
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:4
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:
COMMERCIAL TANK:YES
REGULATED TANK:YES

TANK NUMBER: 3
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 3000
TANK CONSTRUCTION:3

- Continued on next page -

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 7 **DIST/DIR:** 0.00 -- **ELEVATION:** 294 **MAP ID:** 2

NAME: DATON HOLDER
ADDRESS: 6701 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: GORDON A MASON
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-017886
ID2: 00-0-0000017886
STATUS: PERM CLOSED REMOVED
PHONE:

PIPE CONSTRUCTION:4
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:
COMMERCIAL TANK:YES
REGULATED TANK:YES

REGIONAL UST DATA

UST NUMBER:FA-934
INCIDENT NUMBER:17793
CD NUMBER:0
REEL NUMBER:0
REGIONAL CONTACT:JWB
REGIONAL OFFICE:FAY
DATE OCCURRED:8/28/1997

RESPONSIBLE COMPANY:

6701 RAY ROAD
SPRING LAKE ,NC , 28390

SOURCE:LEAK, UST
PETROLEUM TYPE:PETROLEUM
COMMERCIAL/NONCOMMERCIAL:COMMERCIAL
REGULATED:REGULATED
REGULATORY REQUIREMENT:
VIOLATION:

PHASE REQUIRED:
SITE PRIORITY:
RISK:L
RISK OF INCIDENT:L
INTERMEDIATE CONDITION:
LAND USE:RES

CORRECTIVE ACTION PLAN:
RBCA:
CLOSED REVIEW REQUESTED:
CASE CLOSED:
CONTAMINATION:GROUNDWATER/BOTH
SUPPLY WELLS:0
MTBE IN WELL:0
MTBE IN GROUNDWATER:UNKNOWN

LEAK DISCOVERED:0
LAND USE RESTRICTION FILED:
CLEAN UP:8/27/1997
CURRENT STATUS:CURRENT RECORD

- Continued on next page -

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 7 **DIST/DIR:** 0.00 -- **ELEVATION:** 294 **MAP ID:** 2

NAME:	DATON HOLDER	**REV:**	6/1/12
ADDRESS:	6701 RAY RD	**ID1:**	0-017886
	SPRING LAKE NC 28390	**ID2:**	00-0-0000017886
	HARNETT	**STATUS:**	PERM CLOSED REMOVED
CONTACT:	GORDON A MASON	**PHONE:**	
SOURCE:	NCDENR		

RBCA GROUNDWATER:
POLLUTANT TYPE:GASOLINE/DIESEL/KEROSENE
CD NUMBER:0
RESPONSIBLE OWNER:0
RESPONSIBLE OPERATOR:0
RESPONSIBLE LANDOWNER:0
COMMENTS:

ARCHIVED INFORMATION AS OF 2011

TANK NUMBER: 1
INSTALLATION DATE: 19740420
CLOSED DATE: 19970728
STATUS: PERMANENTLY CLOSED
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 3000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: NONE
EXTERIOR: PAINT
CORROSION PROTECTION:
LEAK DETECTION:
PIPING MATERIAL: STEEL
PIPE CORROSION PROTECTION:
PIPE LEAK DETECTION:
OVERFLOW PROTECTION:
FINANCIAL RESPONSIBILITY:
CERTIFICATION TYPE:
GPS SITING CONFIRMED:N
PERSON CONFIRMING:

TANK NUMBER: 2
INSTALLATION DATE: 19740420
CLOSED DATE: 19970728
STATUS: PERMANENTLY CLOSED
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 3000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: NONE
EXTERIOR: PAINT
CORROSION PROTECTION:
LEAK DETECTION:
PIPING MATERIAL: STEEL
PIPE CORROSION PROTECTION:
PIPE LEAK DETECTION:

- More Details Exist For This Site; Max Page Limit Reached -

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

LUST

SEARCH ID: 8 **DIST/DIR:** 0.00 -- **ELEVATION:** 294 **MAP ID:** 2

NAME: DALTON HOLDER STORE
ADDRESS: 6701 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: GORDON MASON
SOURCE: NCDENR

REV: 6/1/12
ID1: NCI-017793
ID2: 17793
STATUS: RESPONSE
PHONE: 9104978229

REGIONAL UST DATA

UST NUMBER:FA-934
INCIDENT NUMBER:17793
CD NUMBER:0
REEL NUMBER:0
REGIONAL CONTACT:JWB
REGIONAL OFFICE:FAY
DATE OCCURRED:8/28/1997

RESPONSIBLE COMPANY:

6701 RAY ROAD
SPRING LAKE ,NC , 28390

SOURCE:LEAK, UST
PETROLEUM TYPE:PETROLEUM
COMMERCIAL/NONCOMMERCIAL:COMMERCIAL
REGULATED:REGULATED
REGULATORY REQUIREMENT:
VIOLATION:

PHASE REQUIRED:
SITE PRIORITY:
RISK:L
RISK OF INCIDENT:L
INTERMEDIATE CONDITION:
LAND USE:RES

CORRECTIVE ACTION PLAN:
RBCA:
CLOSED REVIEW REQUESTED:
CASE CLOSED:
CONTAMINATION:GROUNDWATER/BOTH
SUPPLY WELLS:0
MTBE IN WELL:0
MTBE IN GROUNDWATER:UNKNOWN

LEAK DISCOVERED:0
LAND USE RESTRICTION FILED:
CLEAN UP:8/27/1997
CURRENT STATUS:CURRENT RECORD

RBCA GROUNDWATER:
POLLUTANT TYPE:GASOLINE/DIESEL/KEROSENE
CD NUMBER:0
RESPONSIBLE OWNER:0
RESPONSIBLE OPERATOR:0
RESPONSIBLE LANDOWNER:0

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

SPILLS

SEARCH ID: 2 **DIST/DIR:** 0.00 -- **ELEVATION:** 226 **MAP ID:** 3

NAME: HOLDERS GROCERY
ADDRESS: UNKNOWN
SPRING LAKE NC 28390
HARNETT
CONTACT:
SOURCE: NCDENR

REV: 6/1/12
ID1: 85611
ID2: FA-85611
STATUS: CURRENT RECORD
PHONE:

SITE INFORMATION

OWNER/OPERATOR: HOPPER-PRESIDENT, RICK
H&H CABLE CONTRACTORS, INC.
1092 PONDEROSA ROAD
CAMERON 9194991130

DATE OF RELEASE: 6/4/2000
DATE SUBMITTED: 4/12/2001
DESCRIPTION OF INCIDENT:

CONTAMINATION INFORMATION
GROUNDWATER CONTAMINATED?: Y
MAJOR SOIL CONTAMINATION?:

MATERIAL INVOLVED (1):
AMOUNT LOST (1):
AMOUNT RECOVERED (1):

MATERIAL INVOLVED (2):
AMOUNT LOST (2):
AMOUNT RECOVERED (2):

MATERIAL INVOLVED (3):
AMOUNT LOST (3):
AMOUNT RECOVERED (3):

NUMBER OF WELLS AFFECTED: 0
NAME(S) OF CONTAMINATED WELLS:

PRIORITY INFORMATION:
RISK SITE?:
SITE PRIORITY:
PRIORITY CODE: B
PRIORITY UPDATE:

STATUS INFORMATION:
LAST MODIFIED: 5/9/2002
INCIDENT PHASE: ASSESSMENT
NOV ISSUED:
NORR ISSUED:
45 DAY REPORT:
CORRECTIVE ACTION PLAN: 5/9/2002
CLOSURE REQ DATE:
CLOSE-OUT REPORT:

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 3 **DIST/DIR:** 0.00 -- **ELEVATION:** 277 **MAP ID:** 4

NAME: MATTHEWS GENERAL STORE
ADDRESS: 7100 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: FOSTER . MATTHEWS
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-002736
ID2: 00-0-0000002736
STATUS: CURRENTLY OPERATIONAL
PHONE:

SITE INFORMATION

TOTAL NUMBER OF TANKS: 3

CONTACT INFORMATION: FOSTER . MATTHEWS
1863 WILL LUCAS RD
LINDEN NC 28356-8523

TANK NUMBER: 001
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 6000
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:1
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:NO
COMMERCIAL TANK:YES
REGULATED TANK:YES

TANK NUMBER: 002
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 6000
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:1
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:NO
COMMERCIAL TANK:YES
REGULATED TANK:YES

TANK NUMBER: 003
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 6000
TANK CONSTRUCTION:3

- Continued on next page -

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 3 **DIST/DIR:** 0.00 -- **ELEVATION:** 277 **MAP ID:** 4

NAME: MATTHEWS GENERAL STORE
ADDRESS: 7100 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: FOSTER . MATTHEWS
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-002736
ID2: 00-0-0000002736
STATUS: CURRENTLY OPERATIONAL
PHONE:

PIPE CONSTRUCTION:1
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:NO
COMMERCIAL TANK:YES
REGULATED TANK:YES

ARCHIVED INFORMATION AS OF 2011

TANK NUMBER: 001
INSTALLATION DATE: 19940504
CLOSED DATE:
STATUS: CURRENTLY OPERATIONAL
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 6000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: UNKNOWN
EXTERIOR: UNKNOWN
CORROSION PROTECTION: IMPRESSED CURRENT
LEAK DETECTION:
PIPING MATERIAL: UNKNOWN
PIPE CORROSION PROTECTION: IMPRESSED CURRENT
PIPE LEAK DETECTION:
OVERFLOW PROTECTION: CATCHMENT BASIN
FINANCIAL RESPONSIBILITY:
CERTIFICATION TYPE:
GPS SITING CONFIRMED:Y
PERSON CONFIRMING:KCC

TANK NUMBER: 002
INSTALLATION DATE: 19940504
CLOSED DATE:
STATUS: CURRENTLY OPERATIONAL
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 6000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: UNKNOWN
EXTERIOR: UNKNOWN
CORROSION PROTECTION: IMPRESSED CURRENT
LEAK DETECTION:
PIPING MATERIAL: UNKNOWN
PIPE CORROSION PROTECTION: IMPRESSED CURRENT
PIPE LEAK DETECTION:
OVERFLOW PROTECTION: CATCHMENT BASIN
FINANCIAL RESPONSIBILITY:

- Continued on next page -

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 3 **DIST/DIR:** 0.00 -- **ELEVATION:** 277 **MAP ID:** 4

NAME: MATTHEWS GENERAL STORE
ADDRESS: 7100 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: FOSTER . MATTHEWS
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-002736
ID2: 00-0-0000002736
STATUS: CURRENTLY OPERATIONAL
PHONE:

CERTIFICATION TYPE:
GPS SITING CONFIRMED:Y
PERSON CONFIRMING:KCC

TANK NUMBER: 003
INSTALLATION DATE: 19940504
CLOSED DATE:
STATUS: CURRENTLY OPERATIONAL
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 6000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: UNKNOWN
EXTERIOR: UNKNOWN
CORROSION PROTECTION: IMPRESSED CURRENT
LEAK DETECTION:
PIPING MATERIAL: UNKNOWN
PIPE CORROSION PROTECTION: IMPRESSED CURRENT
PIPE LEAK DETECTION:
OVERFLOW PROTECTION: CATCHMENT BASIN
FINANCIAL RESPONSIBILITY:
CERTIFICATION TYPE:
GPS SITING CONFIRMED:Y
PERSON CONFIRMING:KCC

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 6 **DIST/DIR:** 0.00 -- **ELEVATION:** 318 **MAP ID:** 5

NAME:	SHORT STOP FOOD MARTS 8	**REV:**	6/1/12
ADDRESS:	7925 RAY RD	**ID1:**	0-021508
	SPRING LAKE NC 28390	**ID2:**	00-0-0000021508
	HARNETT	**STATUS:**	CURRENTLY OPERATIONAL
CONTACT:	LI L THRIFT FOOD MARTS, INC.	**PHONE:**	
SOURCE:	NCDENR		

SITE INFORMATION

TOTAL NUMBER OF TANKS: 3

CONTACT INFORMATION: LI L THRIFT FOOD MARTS, INC.
1007 ARSENAL AVENUE
FAYETTEVILLE NC 28305-5329

TANK NUMBER: 1
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 6000
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:3
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:NO
COMMERCIAL TANK:YES
REGULATED TANK:YES

TANK NUMBER: 2
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 6000
TANK CONSTRUCTION:3
PIPE CONSTRUCTION:3
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:NO
COMMERCIAL TANK:YES
REGULATED TANK:YES

TANK NUMBER: 3
ROOT TANK ID:
TANK STATUS:
INSTALLATION DATE:
PERM CLOSED:
CONTENTS: Gasoline, Gas Mix
CAPACITY IN GALLONS: 4000
TANK CONSTRUCTION:3

- Continued on next page -

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 6 **DIST/DIR:** 0.00 -- **ELEVATION:** 318 **MAP ID:** 5

NAME: SHORT STOP FOOD MARTS 8
ADDRESS: 7925 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: LI L THRIFT FOOD MARTS, INC.
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-021508
ID2: 00-0-0000021508
STATUS: CURRENTLY OPERATIONAL
PHONE:

PIPE CONSTRUCTION:3
MAIN TANK:NO
COMPARTMENT TANK:NO
MANIFOLD TANK:NO
COMMERCIAL TANK:YES
REGULATED TANK:YES

ARCHIVED INFORMATION AS OF 2011

TANK NUMBER: 1
INSTALLATION DATE: 19731003
CLOSED DATE:
STATUS: CURRENTLY OPERATIONAL
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 6000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: INTERNAL LINING
EXTERIOR: CATHODIC PROTECTION
CORROSION PROTECTION: INTERNAL LINING
LEAK DETECTION: PERIODIC TANK TIGHTNESS TESTING
PIPING MATERIAL: FRP
PIPE CORROSION PROTECTION: FRP TANK/PIPING
PIPE LEAK DETECTION: AUTOMATIC LINE LEAK DETECTORS
OVERFLOW PROTECTION: CATCHMENT BASIN
FINANCIAL RESPONSIBILITY:
CERTIFICATION TYPE:
GPS SITING CONFIRMED:Y
PERSON CONFIRMING:KCC

TANK NUMBER: 2
INSTALLATION DATE: 19731003
CLOSED DATE:
STATUS: CURRENTLY OPERATIONAL
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 6000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: INTERNAL LINING
EXTERIOR: CATHODIC PROTECTION
CORROSION PROTECTION: INTERNAL LINING
LEAK DETECTION: PERIODIC TANK TIGHTNESS TESTING
PIPING MATERIAL: FRP
PIPE CORROSION PROTECTION: FRP TANK/PIPING
PIPE LEAK DETECTION: AUTOMATIC LINE LEAK DETECTORS
OVERFLOW PROTECTION: CATCHMENT BASIN
FINANCIAL RESPONSIBILITY:

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

UST

SEARCH ID: 6 **DIST/DIR:** 0.00 -- **ELEVATION:** 318 **MAP ID:** 5

NAME: SHORT STOP FOOD MARTS 8
ADDRESS: 7925 RAY RD
SPRING LAKE NC 28390
HARNETT
CONTACT: LI L THRIFT FOOD MARTS, INC.
SOURCE: NCDENR

REV: 6/1/12
ID1: 0-021508
ID2: 00-0-0000021508
STATUS: CURRENTLY OPERATIONAL
PHONE:

CERTIFICATION TYPE:
GPS SITING CONFIRMED:Y
PERSON CONFIRMING:KCC

TANK NUMBER: 3
INSTALLATION DATE: 19861001
CLOSED DATE:
STATUS: CURRENTLY OPERATIONAL
CONTENTS: GASOLINE, GASOLINE MIXTURE
CAPACITY IN GALLONS: 4000
COMMENTS:
CONSTRUCTION MATERIAL: STEEL
INTERIOR: INTERNAL LINING
EXTERIOR: CATHODIC PROTECTION
CORROSION PROTECTION: INTERNAL LINING
LEAK DETECTION: PERIODIC TANK TIGHTNESS TESTING
PIPING MATERIAL: FRP
PIPE CORROSION PROTECTION: FRP TANK/PIPING
PIPE LEAK DETECTION: AUTOMATIC LINE LEAK DETECTORS
OVERFLOW PROTECTION: CATCHMENT BASIN
FINANCIAL RESPONSIBILITY:
CERTIFICATION TYPE:
GPS SITING CONFIRMED:Y
PERSON CONFIRMING:KCC

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

LUST

SEARCH ID: 10 **DIST/DIR:** 0.11 SW **ELEVATION:** 266 **MAP ID:** 6

NAME:	HOLDERS GROCERY	**REV:**	10/1/01
ADDRESS:	1899 RAY RD	**ID1:**	NCI-085611
	SPRING LAKE NC	**ID2:**	
	HARNETT	**STATUS:**	ASSESSMENT
CONTACT:	RICK HOPPER-PRESIDENT	**PHONE:**	9194991130
SOURCE:			

OWNER/OPERATOR: RICK HOPPER-PRESIDENT
H&H CABLE CONTRACTORS, INC.
1092 PONDEROSA ROAD
CAMERON NORT 28326

DATE OF RELEASE: 6/4/2000
DATE SUBMITTED: 4/12/2001
DESCRIPTION OF INCIDENT:

CONTAMINATION INFORMATION
GROUNDWATER CONTAMINATED?: Y
MAJOR SOIL CONTAMINATION?:

MATERIAL INVOLVED (1):
AMOUNT LOST (1):
AMOUNT RECOVERED (1):

MATERIAL INVOLVED (2):
AMOUNT LOST (2):
AMOUNT RECOVERED (2):

MATERIAL INVOLVED (3):
AMOUNT LOST (3):
AMOUNT RECOVERED (3):

NUMBER OF WELLS AFFECTED: 0
NAME(S) OF CONTAMINATED WELLS:

PRIORITY INFORMATION:
RISK SITE?:
SITE PRIORITY: 160
PRIORITY CODE: B
PRIORITY UPDATE:

STATUS INFORMATION:
LAST MODIFIED:
INCIDENT PHASE: ASSESSMENT
NOV ISSUED:
NORR ISSUED:
45 DAY REPORT:
CORRECTIVE ACTION PLAN: 5/9/2002
CLOSURE REQ DATE:
CLOSE-OUT REPORT:

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

LUST

SEARCH ID: 11 **DIST/DIR:** 0.27 SE **ELEVATION:** 217 **MAP ID:** 7

NAME: LEWIS OIL CO.
ADDRESS: 0 HIGHWAY 210
MANCHESTER NC
HARNETT
CONTACT:
SOURCE:

REV: 10/1/01
ID1: NCI-005466
ID2:
STATUS:
PHONE:

OWNER/OPERATOR:

DATE OF RELEASE:
DATE SUBMITTED: 3/12/1990
DESCRIPTION OF INCIDENT:

CONTAMINATION INFORMATION
GROUNDWATER CONTAMINATED?: NOD
MAJOR SOIL CONTAMINATION?:

MATERIAL INVOLVED (1):
AMOUNT LOST (1):
AMOUNT RECOVERED (1):

MATERIAL INVOLVED (2):
AMOUNT LOST (2):
AMOUNT RECOVERED (2):

MATERIAL INVOLVED (3):
AMOUNT LOST (3):
AMOUNT RECOVERED (3):

NUMBER OF WELLS AFFECTED: 0
NAME(S) OF CONTAMINATED WELLS:

PRIORITY INFORMATION:
RISK SITE?:
SITE PRIORITY: 0
PRIORITY CODE: E
PRIORITY UPDATE:

STATUS INFORMATION:
LAST MODIFIED:
INCIDENT PHASE:
NOV ISSUED:
NORR ISSUED:
45 DAY REPORT:
CORRECTIVE ACTION PLAN:
CLOSURE REQ DATE:
CLOSE-OUT REPORT:

Environmental FirstSearch
Site Detail Report

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

LUST

SEARCH ID: 12 **DIST/DIR:** 0.38 SE **ELEVATION:** 160 **MAP ID:** 8

NAME: LEWIS OIL GROCERY STORE
ADDRESS: 0 NC 210 & SR 1600
SPRING LAKE NC 28390
CUMBERLAND
CONTACT: STEWART LEWIS
SOURCE: NCDENR

REV: 6/1/12
ID1: NCI-014732
ID2: 14732
STATUS: RESPONSE
PHONE:

REGIONAL UST DATA

UST NUMBER:FA-797
INCIDENT NUMBER:14732
CD NUMBER:0
REEL NUMBER:0
REGIONAL CONTACT:JWB
REGIONAL OFFICE:FAY
DATE OCCURRED:10/18/1995

RESPONSIBLE COMPANY:

STUART LEWIS OIL CO.
HWY 210 N.
SPRING LAKE ,NC , 28390

SOURCE:LEAK, UST
PETROLEUM TYPE:PETROLEUM
COMMERCIAL/NONCOMMERCIAL:COMMERCIAL
REGULATED:REGULATED
REGULATORY REQUIREMENT:
VIOLATION:

PHASE REQUIRED:
SITE PRIORITY:090B
RISK:H
RISK OF INCIDENT:L
INTERMEDIATE CONDITION:
LAND USE:

CORRECTIVE ACTION PLAN:
RBCA:
CLOSED REVIEW REQUESTED:
CASE CLOSED:
CONTAMINATION:GROUNDWATER/BOTH
SUPPLY WELLS:
MTBE IN WELL:
MTBE IN GROUNDWATER:UNKNOWN

LEAK DISCOVERED:0
LAND USE RESTRICTION FILED:
CLEAN UP:10/18/1995
CURRENT STATUS:CURRENT RECORD

RBCA GROUNDWATER:
POLLUTANT TYPE:GASOLINE/DIESEL/KEROSENE
CD NUMBER:0
RESPONSIBLE OWNER:0
RESPONSIBLE OPERATOR:0
RESPONSIBLE LANDOWNER:0

Environmental FirstSearch Descriptions

NPL: EPA NATIONAL PRIORITY LIST - The National Priorities List is a list of the worst hazardous waste sites that have been identified by Superfund. Sites are only put on the list after they have been scored using the Hazard Ranking System (HRS), and have been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money. A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.FINAL - Currently on the Final NPLPROPOSED - Proposed for NPL

NPL DELISTED: EPA NATIONAL PRIORITY LIST Subset - Database of delisted NPL sites. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.DELISTED - Deleted from the Final NPL

CERCLIS: EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM (CERCLIS)- CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.PART OF NPL- Site is part of NPL siteDELETED - Deleted from the Final NPLFINAL - Currently on the Final NPLNOT PROPOSED - Not on the NPLNOT VALID - Not Valid Site or IncidentPROPOSED - Proposed for NPLREMOVED - Removed from Proposed NPLSCAN PLAN - Pre-proposal SiteWITHDRAWN - Withdrawn

NFRAP: EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM ARCHIVED SITES - database of Archive designated CERCLA sites that, to the best of EPA's knowledge, assessment has been completed and has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.NFRAP – No Further Remedial Action PlanP - Site is part of NPL siteD - Deleted from the Final NPLF - Currently on the Final NPLN - Not on the NPLO - Not Valid Site or IncidentP - Proposed for NPLR - Removed from Proposed NPLS - Pre-proposal SiteW – Withdrawn

RCRA COR ACT: EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.RCRAInfo facilities that have reported violations and subject to corrective actions.

RCRA TSD: EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM TREATMENT, STORAGE, and DISPOSAL FACILITIES. - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.Facilities that treat, store, dispose, or incinerate hazardous waste.

RCRA GEN: EPA/MA DEP/CT DEP RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM GENERATORS - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.Facilities that generate or transport hazardous waste or meet other RCRA requirements.LGN - Large Quantity GeneratorsSGN - Small Quantity GeneratorsVGN – Conditionally Exempt Generator.Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List) facilities. CONNECTICUT HAZARDOUS WASTE MANIFEST – Database of all shipments of hazardous waste within, into or from Connecticut. The data includes date of shipment, transporter and TSD info, and material shipped and quantity. This data is appended to the details of existing generator records. MASSACHUSETTES HAZARDOUS WASTE GENERATOR – database of generators that are regulated under the MA DEP. VQN-MA = generates less than 220 pounds or 27 gallons per month of hazardous waste or waste oil.SQN-MA = generates 220 to 2,200 pounds or 27 to 270 gallons per month of waste oil.LQG-MA = generates greater than 2,200 lbs of hazardous waste or waste oil per month.

Fed Brownfield: EPA BROWNFIELD MANAGEMENT SYSTEM (BMS) - database designed to assist EPA in collecting, tracking, and updating information, as well as reporting on the major activities and accomplishments of the various Brownfield grant Programs./n CLEANUPS IN MY COMMUNITY (subset) - Sites, facilities and properties that have been contaminated by hazardous materials and are being, or have been, cleaned up under EPA's brownfield's program.

ERNS: EPA/NRC EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) - Database of incidents reported to the National Response Center. These incidents include chemical spills, accidents involving chemicals (such as fires or explosions), oil spills, transportation accidents that involve oil or chemicals, releases of radioactive materials, sightings of oil sheens on bodies of water, terrorist incidents involving chemicals, incidents where illegally dumped chemicals have been found, and drills intended to prepare responders to handle these kinds of incidents. Data since January 2001 has been received from the National Response System database as the EPA no longer maintains this data.

Tribal Lands: DOI/BIA INDIAN LANDS OF THE UNITED STATES - Database of areas with boundaries established by treaty, statute, and (or) executive or court order, recognized by the Federal Government as territory in which American Indian tribes have primary governmental authority. The Indian Lands of the United States map layer shows areas of 640 acres or more, administered by the Bureau of Indian Affairs. Included are Federally-administered lands within a reservation which may or may not be considered part of the reservation.BUREAU OF INDIAN AFFIARS CONTACT - Regional contact information for the Bureau of Indian Affairs offices.

State/Tribal Sites: NCDENR STATE INACTIVE HAZARDOUS SITES LIST - database of sites and Facilities that are being investigated due to reported releases of Hazardous substances. Included within this Inactive Hazardous Waste Sites Inventory database are the following classifications: Inactive Hazardous Waste Sites (IHS), No Further Action Sites (NFA), Duplicate Sites (DS), Inactive Hazardous Waste Sites Priority List Sites (SPL)

State Spills 90: NCDENR INCIDENT MANAGEMENT DATA (UST and Groundwater) - database of possible releases/spills of contaminants. The data includes media effected, material released, source and site priority.

State/Tribal SWL: NCDENR ALL PERMITTED SOLID WASTE FACILITIES - database of C&D Landfill, Compost, House Hold Hazardous Waste landfill, Incinerator (Industrial) Landfill, Incinerator (Medical) Landfill, Industrial Landfill, Land Clearing and Inert Debris Landfill, Mixed Waste Processing Landfill, Municipal Solid Waste Landfill, Tire Treatment and Processing Landfill, and Transfer and Processing Stations.

State/Tribal LUST: NCDENR INCIDENT MANAGEMENT DATA (UST and Groundwater) - database of leaking underground storage tanks. This database is a subset of the Incident Management Data (UST and Groundwater) where the source is a leaking ust. This data is concerned with petroleum storage systems and includes facilities and/or locations that have reported the possible release of contaminants. This database also includes State Spill Sites. REGIONAL UST DATABASE (SUBSET) - database of information obtained from the Regional Offices in which an incident has occurred. It provides a more detailed explanation of current and historic activity for individual sites, as well as what was previously found in the Incident Management Database.

State/Tribal UST/AST: NCDENR/EPA REGISTERED TANKS and FACILITY DATABASE - database of underground storage tanks registered with the North Carolina Department of Environment and Natural Resources. Inclusion on this list indicates the presence of underground petroleum storage tanks and therefore the potential for environmental problems. It does not necessarily indicate existing problems.TRIBAL LAND UNDERGROUND STORAGE TANKS - database of underground storage tanks that are reported to be on Native American lands.REGIONAL UST DATABASE - database of information obtained from the Regional Offices. It provides a more detailed explanation of current and historic activity for individual sites, as well as what was previously found in the Incident Management Database.

State/Tribal IC: NCDENR STATE INACTIVE HAZARDOUS SITES LIST SUBSET - database of sites and Facilities that have land use restrictions and are being investigated due to reported releases of Hazardous substances. Included within this Inactive Hazardous Waste Sites Inventory database are the following classifications: Inactive Hazardous Waste Sites (IHS), No Further Action Sites (NFA), Duplicate Sites (DS), Inactive Hazardous Waste Sites Priority List Sites (SPL)

State/Tribal VCP: NCDENR STATE INACTIVE HAZARDOUS SITES LIST SUBSET- database of sites and Facilities that are being investigated due to reported releases of Hazardous substances and have a voluntary cleanup aggreement. Included within this Inactive Hazardous Waste Sites Inventory database are the following classifications: Inactive Hazardous Waste Sites (IHS), No Further Action Sites (NFA), Duplicate Sites (DS), Inactive Hazardous Waste Sites Priority List Sites (SPL)

State/Tribal Brownfields: NCDENR BROWNFIELD PROJECTS INVENTORY - database of Active Eligible Sites, Projects Pending Eligibility, and Finalized Brownfields Agreements.

Federal IC / EC: EPA FEDERAL ENGINEERING AND INSTITUTIONAL CONTROLS- Superfund sites that have either an engineering or an institutional control. The data includes the control and the media contaminated. RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES (RCRA) – RCRA site the have institutional controls.

Environmental FirstSearch Database Sources

NPL: EPA Environmental Protection Agency

Updated quarterly

NPL DELISTED: EPA Environmental Protection Agency

Updated quarterly

CERCLIS: EPA Environmental Protection Agency

Updated quarterly

NFRAP: EPA Environmental Protection Agency.

Updated quarterly

RCRA COR ACT: EPA Environmental Protection Agency.

Updated quarterly

RCRA TSD: EPA Environmental Protection Agency.

Updated quarterly

RCRA GEN: EPA/MA DEP/CT DEP Environmental Protection Agency, Massachusetts Department of Environmental Protection, Connecticut Department of Environmental Protection

Updated quarterly

Fed Brownfield: EPA Environmental Protection Agency

Updated quarterly

ERNS: EPA/NRC Environmental Protection AgencyNational Response Center.

Updated annually

Tribal Lands: DOI/BIA United States Department of the InteriorBureau of Indian Affairs

Updated annually

State/Tribal Sites: NCDENR North Carolina Department of Environment and Natural Resources, Division of Waste Management

Updated quarterly

State Spills 90: NCDENR North Carolina Department of Environment and Natural Resources, Division of Water Quality/Groundwater Section

Updated quarterly

State/Tribal SWL: NCDENR North Carolina Department of Environment and Natural Resources, Division of Waste Management

Updated annually

State/Tribal LUST: NCDENR North Carolina Department of Environment and Natural Resources, Division of Water Quality/Groundwater Section

Updated quarterly

State/Tribal UST/AST: NCDENR/EPA North Carolina Department of Environment and Natural Resources, Division of Waste ManagementEnvironmental Protection Agency

Updated quarterly

State/Tribal IC: NCDENR North Carolina Department of Environment and Natural Resources, Division of Waste Management

Updated quarterly

State/Tribal VCP: NCDENR North Carolina Department of Environment and Natural Resources, Division of Waste Management

Updated quarterly

State/Tribal Brownfields: NCDENR North Carolina Department of Environment and Natural Resources

Updated quarterly

Federal IC / EC: EPA Environmental Protection Agency

Updated quarterly

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

Street Name	Dist/Dir	Street Name	Dist/Dir
Alan Parker Cir	0.19 NE	Leeks Ln	0.25 SE
Andrew Cox Ln	0.00--	Leopard Ln	0.01 NW
Appaloosa Dr	0.25 SE	Little M Dr	0.00--
Aspen Ave	0.04 NW	Loblolly	0.19 NW
Astor Pl	0.05 NW	Lous Chapel Rd	0.00--
Austin Ave	0.24 SE	Lynx Ln	0.08 NW
Azalea Dr	0.00--	Mckay Dr	0.00--
Balsom Pl	0.09 NW	Mcneil Cemetery Rd	0.00--
Bluegill Ln	0.00--	Misty Cove Ln	0.00--
Burro Ln	0.03 SE	Narcissus Pl	0.03 NW
Burro Rd	0.03 SE	Narcissys	0.02 NW
Camellia Ln	0.00--	Nc Highway 210 S	0.00--
Canopy Ln	0.07 SW	Northpoint Cir	0.05 NE
Capital Dr	0.25 SE	Oakdale Dr	0.02 NW
Capitol Dr	0.22 SE	Old Farms Maple St	0.14 NW
Carnation Cir	0.25 NE	Orchid	0.13 NE
Cedar Dr	0.25 NE	Orchid Dr	0.13 NE
Chestnutt	0.21 NW	Pansey Cir	0.08 NE
Citron Pl	0.08 NW	Pansy Cir	0.08 NE
Clove Ln	0.09 NW	Panther Ln	0.05 NW
Connie Ct	0.14 NE	Peonie Pl	0.21 NW
Cooper Ave	0.00--	Pete Mason Dr	0.14 NW
Creeksville Church Rd	0.09 SE	Pinecrest Dr	0.06 NE
Daffodil Pl	0.09 NW	Primrose	0.21 NW
Daisy Cir	0.1 NE	Primrose St	0.14 NW
Dandelion Pl	0.13 NW	Pvt Rd	0.00--
Dogwood Dr	0.16 NW	Rachel Rd	0.03 SE
Dove Ridge Ln	0.18 NE	Ray Rd	0.00--
E Northpoint St	0.00--	Rolling Springs Dr	0.00--
Elm St	0.22 NW	Rosebud St	0.1 NE
Elma Black Ln	0.09 NW	Ruby Clara Ln	0.00--
Erica Ln	0.18 SE	S and S Ln	0.00--
Eugene Ln	0.03 NE	Sandclay Rd	0.00--
FROM NC 210 TO SR 1120	0.00--	Secondary Road 1121	0.00--
Gardenia Cir	0.16 NE	Secondary Road 1122	0.00--
Gena Ln	0.17 NW	Secondary Road 1123	0.09 SE
Gerber Ln	0.00--	Secondary Road 1142 Rd	0.00--
Gordon Ln	0.01 NW	Secondary Road 1151	0.22 SE
Helen Matthews Dr	0.00--	Secondary Road 1160	0.00--
Holly St	0.18 NW	Secondary Road 1161	0.1 NE
Honey Dr	0.14 NW	Secondary Road 1162	0.00--
Jde St	0.00--	Secondary Road 1163	0.08 NE
Jeff St	0.13 NE	Secondary Road 1165	0.25 NE
John Ryan Ln	0.00--	Secondary Road 1166	0.25 NE
Killdeer Dr	0.16 NW	Secondary Road 2051	0.03 SE
Killdeer Ln	0.00--	Shady Dr	0.04 NE
Lake Ave	0.00--	Slate Dr	0.15 NW
Lakeview Dr	0.22 SE	Sring Valley Dr	0.15 NW

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

Target Property: SR 1121 - NC 210 - SR 1120
SPRING LAKE, NC 28390

JOB: 2012-228

Street Name	Dist/Dir	Street Name	Dist/Dir
Stallion Ln	0.00--		
State Hwy 210	0.00--		
Stone Cross Dr	0.07 NE		
Sweet Ln	0.11 NW		
Tommy Dr	0.00--		
Tommys Dr	0.00--		
Twin Lake Rd	0.00--		
W Northpoint Rd	0.00--		
Ward Ln	0.15 NE		
Wedgewood Dr	0.01 NE		
White Pine Pl	0.02 NW		
Woodbridge Dr	0.25 NE		
Zena Ln	0.1 NW		

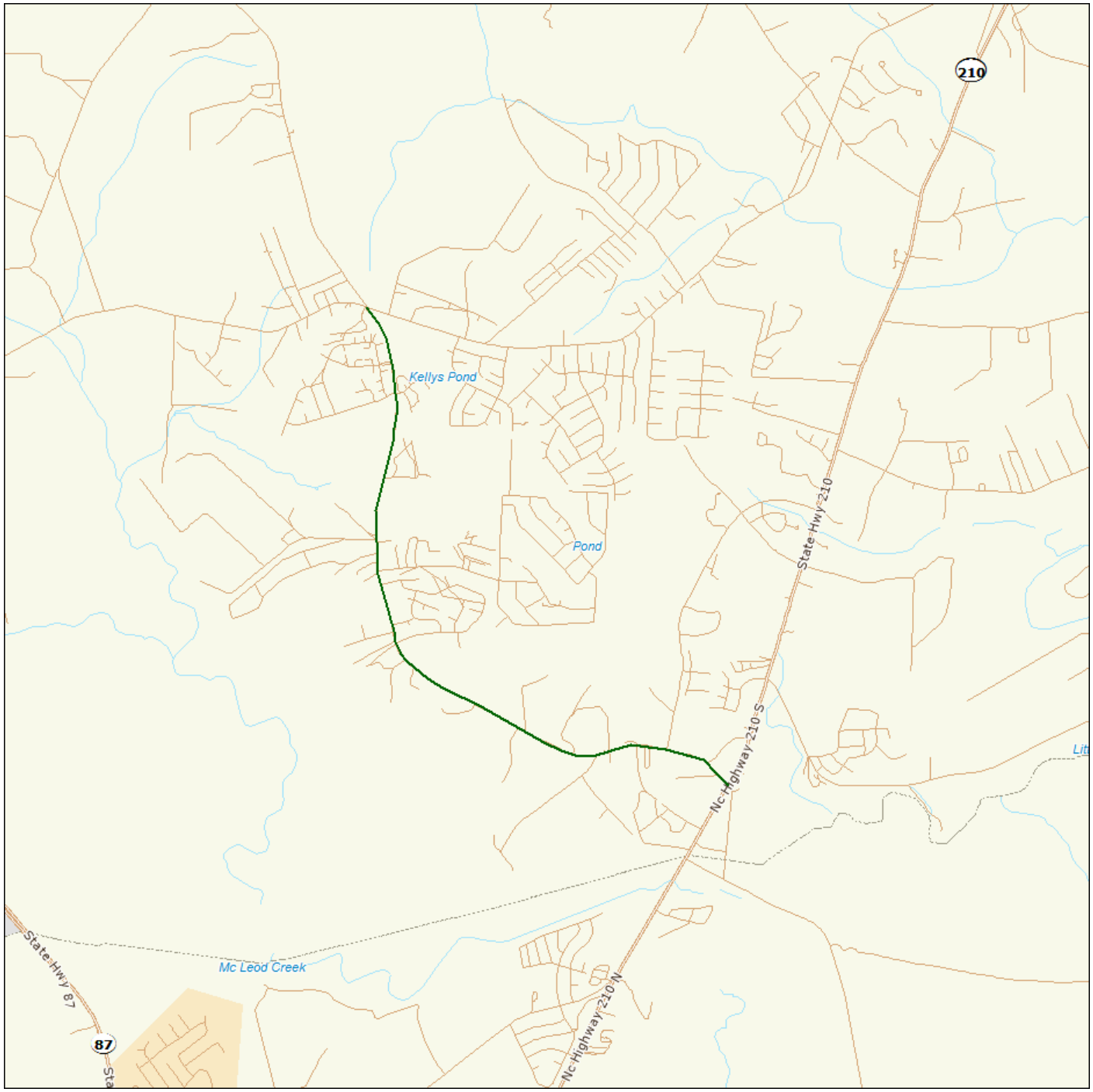
Environmental FirstSearch

1 Mile Radius from Line

ASTM Map: NPL, RCRACOR, STATE Sites

FIRSTSEARCH

SR 1121 - NC 210 - SR 1120 , SPRING LAKE, NC 28390



Source: Tele Atlas

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

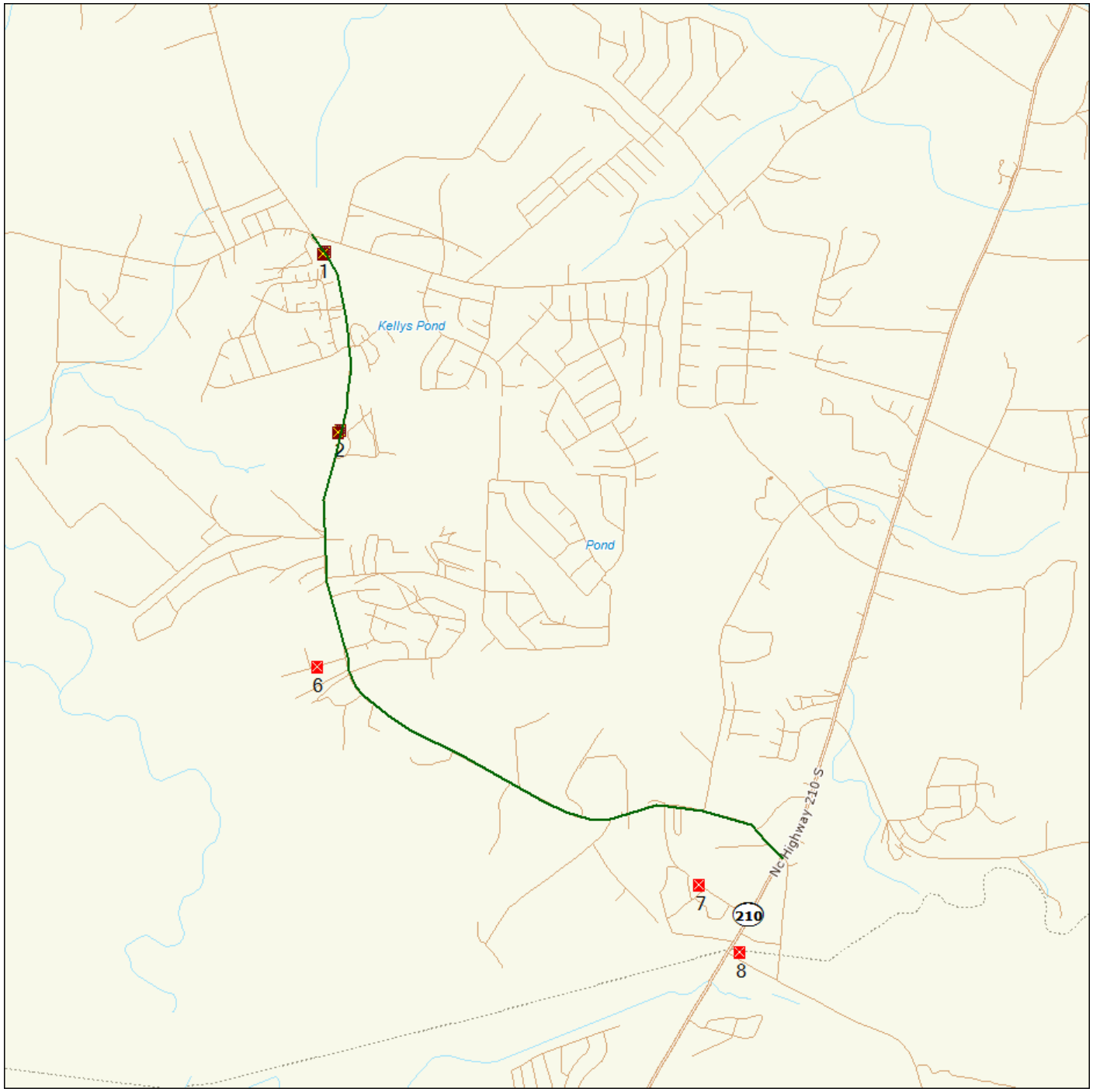
Environmental FirstSearch

.5 Mile Radius from Line

ASTM Map: CERCLIS, RCRATSD, LUST, SWL

FIRSTSEARCH

SR 1121 - NC 210 - SR 1120 , SPRING LAKE, NC 28390



Source: Tele Atlas

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

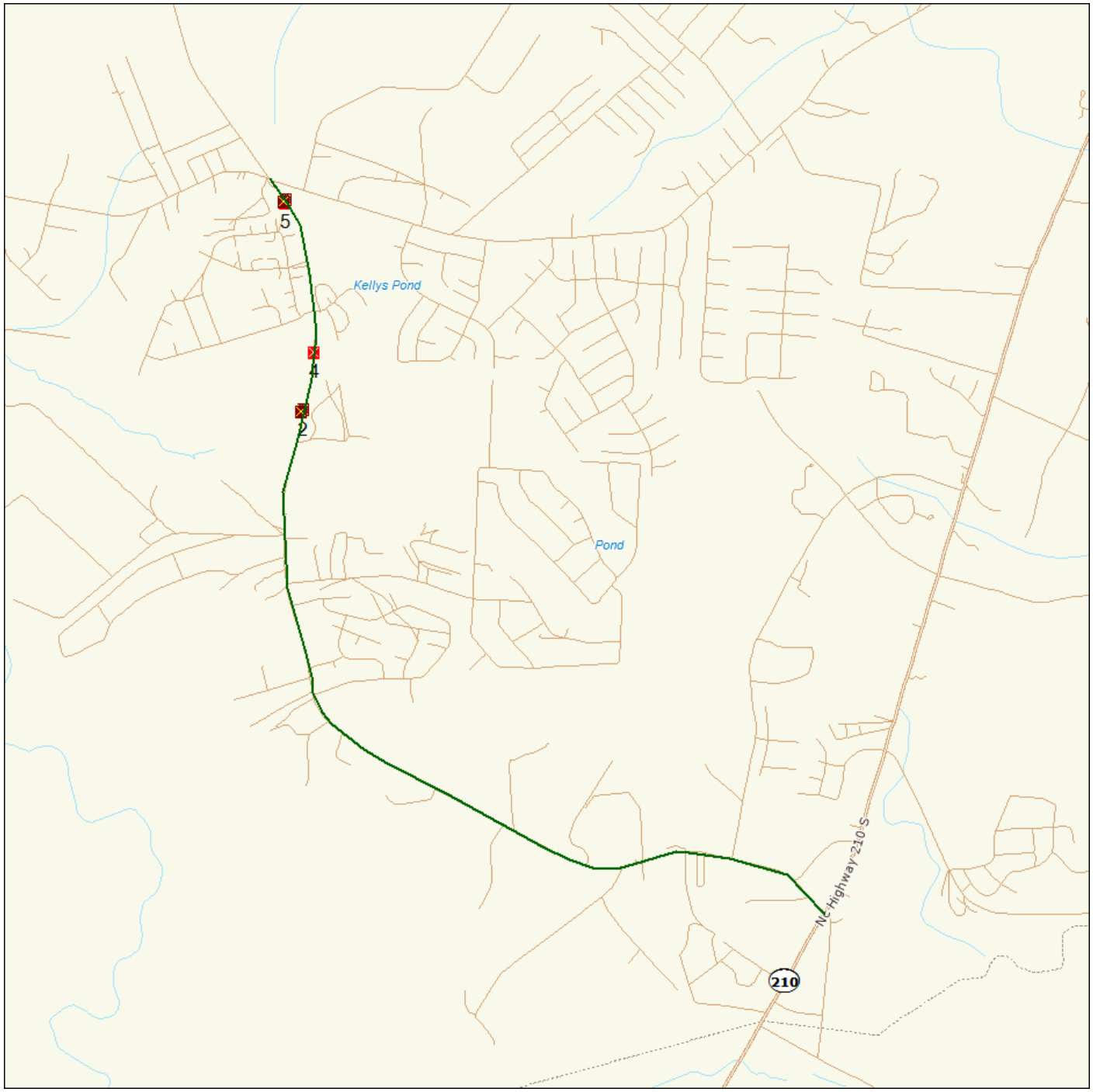
Environmental FirstSearch

.25 Mile Radius from Line

ASTM Map: RCRAGEN, ERNS, UST, FED IC/EC, METH LABS

FIRSTSEARCH

SR 1121 - NC 210 - SR 1120 , SPRING LAKE, NC 28390



Source: Tele Atlas

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

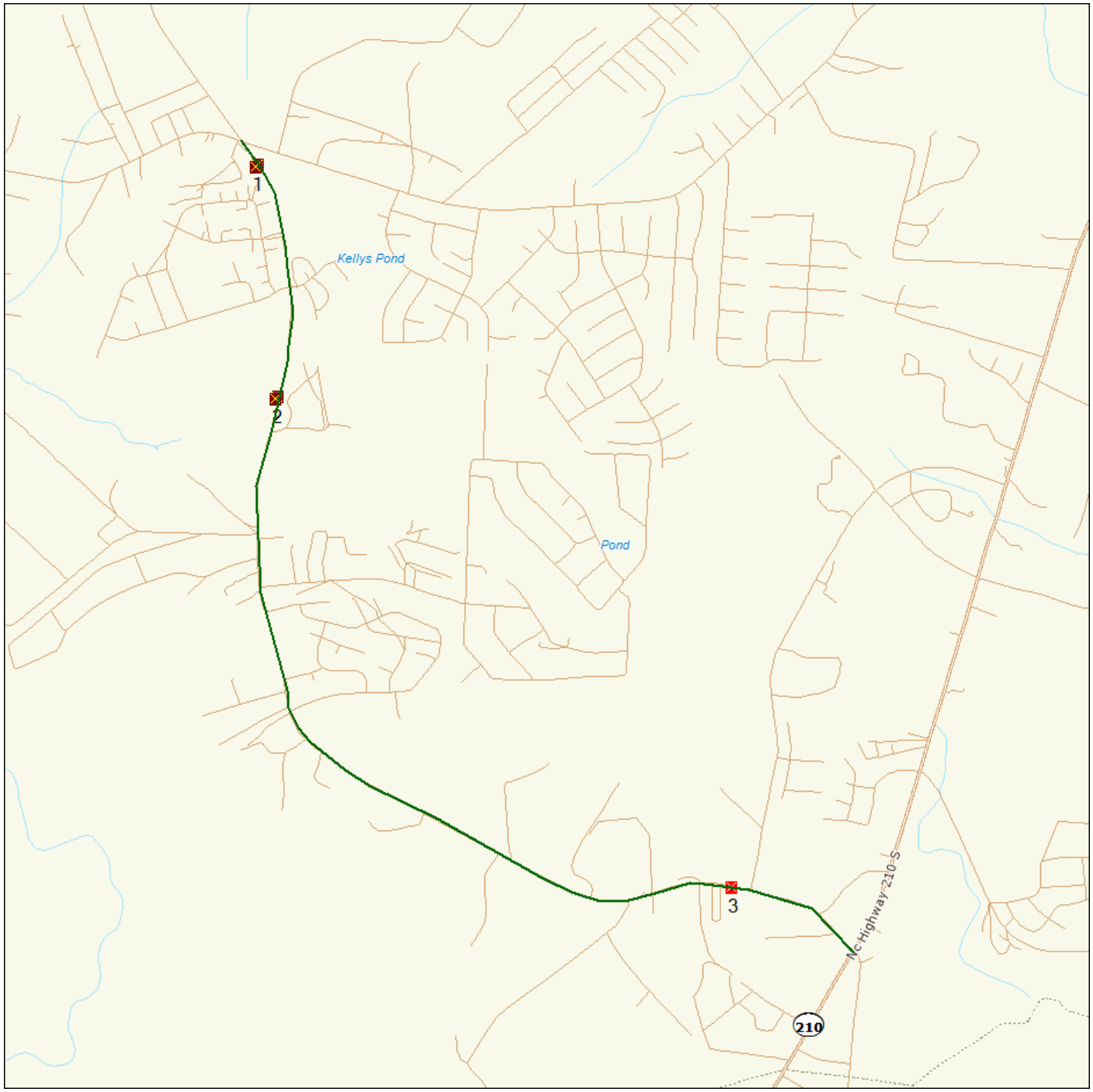
Environmental FirstSearch

.12 Mile Radius from Line

Non-ASTM Map: Spills 90

FIRSTSEARCH

SR 1121 - NC 210 - SR 1120 , SPRING LAKE, NC 28390



Source: Tele Atlas

Linear Search Line .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

National Historic Sites and Landmark Sites .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

APPENDIX C

Pyramid Project # 2012-228

GEOPHYSICAL INVESTIGATION REPORT

EM61 & GPR SURVEYS

NCDOT ROW PROJECT
SHORT STOP EXXON, 3235 RAY ROAD, SPRING LAKE, NC (PARCEL 009)
NCDOT Project U-3465 (39017.1.1)
Harnett County, North Carolina

October 11, 2012

Report prepared for: **Mr. Gordon Box**
North Carolina Department of Transportation
GeoEnvironmental Project Manager
Geotechnical Engineering Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

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NCDOT Contract 700012300
PO# 6300031797

NC Board for Licensing of Geologists C-257
NC Board of Examiners for Engineers & Surveyors C-1251

NCDOT – Geotechnical Engineering Unit
NCDOT ROW PROJECT
SHORT STOP EXXON, 3235 RAY ROAD, SPRING LAKE, NC (PARCEL 009)
NCDOT Project U-3465 (39017.1.1)
Harnett County, North Carolina

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FIGURES

1.0 INTRODUCTION

Pyramid Environmental & Engineering, PC (Pyramid) conducted a geophysical investigation for the North Carolina Department of Transportation (NCDOT) across the entire parcel area of the Short Stop Exxon gas station and convenience store (Parcel 009) located at 3235 Ray Road, Spring Lake, NC. The survey area, as directed by the NCDOT, was a total take of the parcel, and spanned all accessible areas. Conducted on September 11, 2012, the geophysical investigation was performed as part of the NCDOT ROW expansion project to determine if unknown, metallic underground storage tanks (USTs) were present at the site.

The area of the site surveyed was predominantly a concrete and asphalt parking lot, including a canopied gas pump station, with some open grassy area to the west of the building. The convenience store building was located approximately in the center of the survey area. The geophysical survey area had a maximum width (east/west) of approximately 180 feet and a maximum length (north/south) of approximately 100 feet. Photographs of the site are shown in **Figure 1**.

2.0 FIELD METHODOLOGY

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

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection surveys and ground penetrating radar (GPR) surveys. The EM survey was performed on September 11, 2012, using a Geonics EM61-MK2 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 north-south 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 DAT61MK2 and Surfer for Windows Version 7.0 software programs.

GPR data were acquired on September 11, 2012, across selected EM61 differential anomalies using a GSSI SIR-3000 unit equipped with a 400 MHz antenna. Data were collected generally from east to west and north to south across specific EM61 anomalies. All of the GPR data were viewed in real time using a vertical scan of 512 samples, at a rate of 48 scans per second. GPR data were viewed down to a maximum depth of approximately 8 feet, based on an estimated two-way travel time of 8 nanoseconds per foot. Specific GPR transects across probable or confirmed USTs were saved to the hard drive and analyzed further upon completion of the field work.

Preliminary geophysical results were emailed to Gordon Box on September 28, 2012.

3.0 DISCUSSION OF RESULTS

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

A large number of anomalies were detected by the EM survey that were observed on both the bottom coil and differential response maps. The attached figures provide annotations as to the interpreted nature of each anomaly. It should be noted that all minor anomalies not annotated on the maps are interpreted to be the result of either isolated minor buried metallic debris and/or the presence of underground utility lines. The high amplitude EM response observed around the majority of the convenience store building is the result of a combination of reinforcement within the building foundation, reinforcement within the concrete on the east side of the structure, the air conditioning

units on the west side of the structure, and a compressed air tank near the southwest corner. The high amplitude EM response at the northeast corner of the building is the result of the metallic AST at that location. The anomaly centered at coordinates X=35, Y=45 is the result of buried utilities extending from the structure. The high amplitude EM response surrounding the two pump islands is the result of reinforcement within the concrete underneath the pump island canopy. The minor EM anomalies between the pump islands and the building centered at Y=60 are the result of a buried utility line. The high amplitude anomalies centered at X=145, Y=120 and X=165, Y=120 are the result of metal dumpsters and phone booths. The high amplitude anomalies at X=195 along the east side of the map are the result of reinforcement within concrete medians at these locations and buried utility lines. The EM response extending from the gas station sign to the eastern pump island is the result of a buried utility line. The EM response to the north of the AST is also the result of buried utility lines. Lastly, the high amplitude EM response directly to the northwest of the pump islands is the result of active metallic USTs that store the fuel for the gas station. GPR scans were performed across all high amplitude anomalies at the site that could not be readily attributed to visible objects at the ground surface or utilities that had been previously marked by a private locating service.

As stated above, GPR scans were performed and data viewed in real time across all EM61 anomalies that could not be attributed to visible objects at the ground surface, such as metal sign posts, the gas station building itself, or utilities. The GPR scans confirmed the presence of at least three active known USTs at the property, located to the northwest of the pump islands. The approximate locations of the three known USTs are presented on the EM contour maps (**Figures 2 and 3**), and a portion of their outlines that were marked in the field is shown in the photograph included in **Figure 1**. The three known USTs were interpreted to be oriented approximately east/west. The two southern tanks were estimated to be approximately 16 feet long and 8 feet wide. The northern tank was estimated to be approximately 20 feet long and 7 feet wide. The tanks were observed to be at a depth of approximately 4 feet below land surface (bls). It should be noted that the GPR signal was attenuated more strongly at the east end of the north tank, making its east end less clear than the remaining tanks. It is possible that the estimated area containing the north tank may represent two smaller tanks rather than one longer tank. Two specific GPR transects were performed perpendicular to the three USTs, and saved to the hard drive. Additionally, a GPR transect was

performed across the reinforced concrete surrounding the pump islands to show the presence of this metal within the concrete. Figure 4 presents the locations of these GPR transects. Figure 5 presents the GPR transect images from Transects 1, 2 and 3. The remaining reconnaissance transects performed across the property were observed in real time, and due to the lack of any other buried objects these transects were not saved to the hard drive.

The geophysical investigation suggests that the area containing the proposed ROW and easement at Parcel 009 contains at least three known metallic USTs.

In accordance with the scope of work provided to Pyramid by the NCDOT, we also searched the property for any signs of monitor wells or groundwater wells within the proposed ROW or easement areas. No wells were observed at the time of our inspection.

4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected across the property located at 3235 Ray Road, Spring Lake, North Carolina provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the geophysical survey area.

- The majority of the EM61 anomalies located along the east side of the survey area were the result of metallic objects visible at the land surface and/or reinforced concrete and utilities, or were associated with isolated zones of buried metallic debris. The GPR scans also confirmed the presence of at least three active USTs at the property, located to the northwest of the pump islands. The three USTs were interpreted to be oriented approximately east/west. The two southern tanks were estimated to be approximately 16 feet long and 8 feet wide. The northern tank was estimated to be approximately 20 feet long and 7 feet wide. The tanks were observed to be at a depth of approximately 4 feet below land surface (bls). It should be noted that the GPR signal was attenuated more strongly at the east end of

the north tank, making its east end less clear than the remaining tanks. It is possible that the estimated area containing the north tank may represent two smaller tanks rather than one longer tank.

- The geophysical investigation suggests that the property contains at least three metallic USTs.
- Site observations did not indicate the presence of any monitor wells or groundwater wells at the time of our inspection.

5.0 LIMITATIONS

EM61 and GPR surveys have been performed and this report prepared for the NCDOT in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR surveys are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained for this project have not conclusively determined that metallic USTs do not lie within the Harnett County property, but that none were detected.

FIGURES

Photograph of portion of survey area, facing approximately west

Photograph of portion of portion of survey area, including outline of tank locations, facing approximately west

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

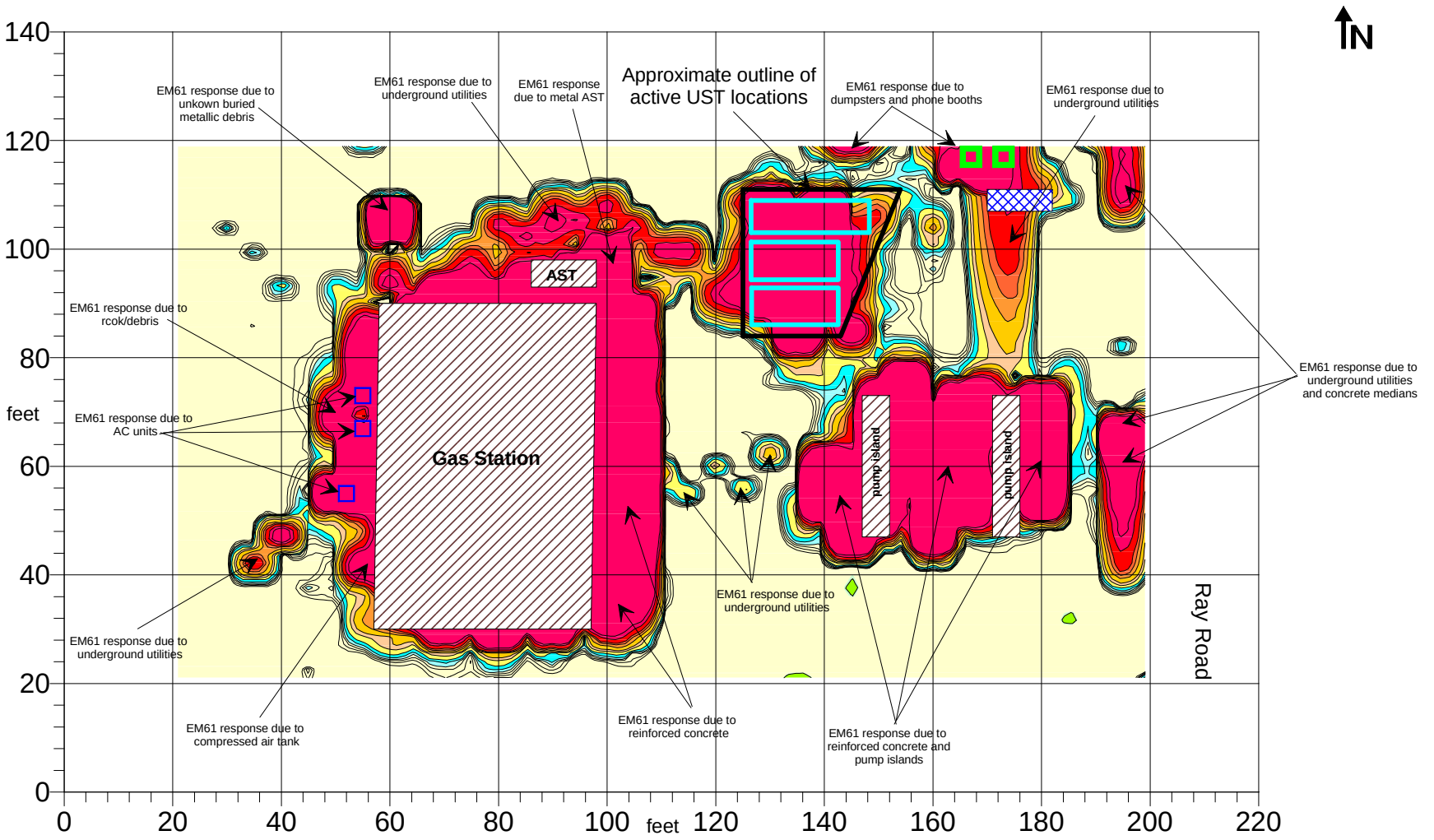
CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	DATE	09/11/12	DRWN	ECC
SITE	NCDOT PROJECT U-3465 - PARCEL 009	LAY		CHKD	
CITY	SPRING LAKE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	JNO.	2012-228	FIGURE	

SITE PHOTOGRAPHS

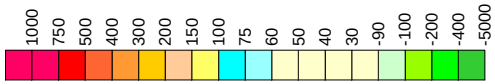
FIGURE 1

FIGURE 2

EM61 BOTTOM COIL RESPONSE CONTOURS



*EM response adjacent to building resulting from reinforcement in the foundation



EM61 Response (millivolts)

Legend

- AC unit
- Phone booth
- Gas station sign

The contour plot shows the bottom coil (most sensitive) results of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM61 data were collected on September 11, 2012 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired across selected EM61 anomalies on September 11, 2012, using a Geophysical Survey Systems SIR 3000 instrument with a 400 MHz antenna.

CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
SITE	NCDOT PROJECT U-3465 - PARCEL 009
CITY	SPRING LAKE
STATE	NORTH CAROLINA
TITLE	GEOPHYSICAL RESULTS
DRWN	ECC
CHKD	
DWG	
FIGURE	
DATE	09/11/12
LAY	
J.NO.	2012-228

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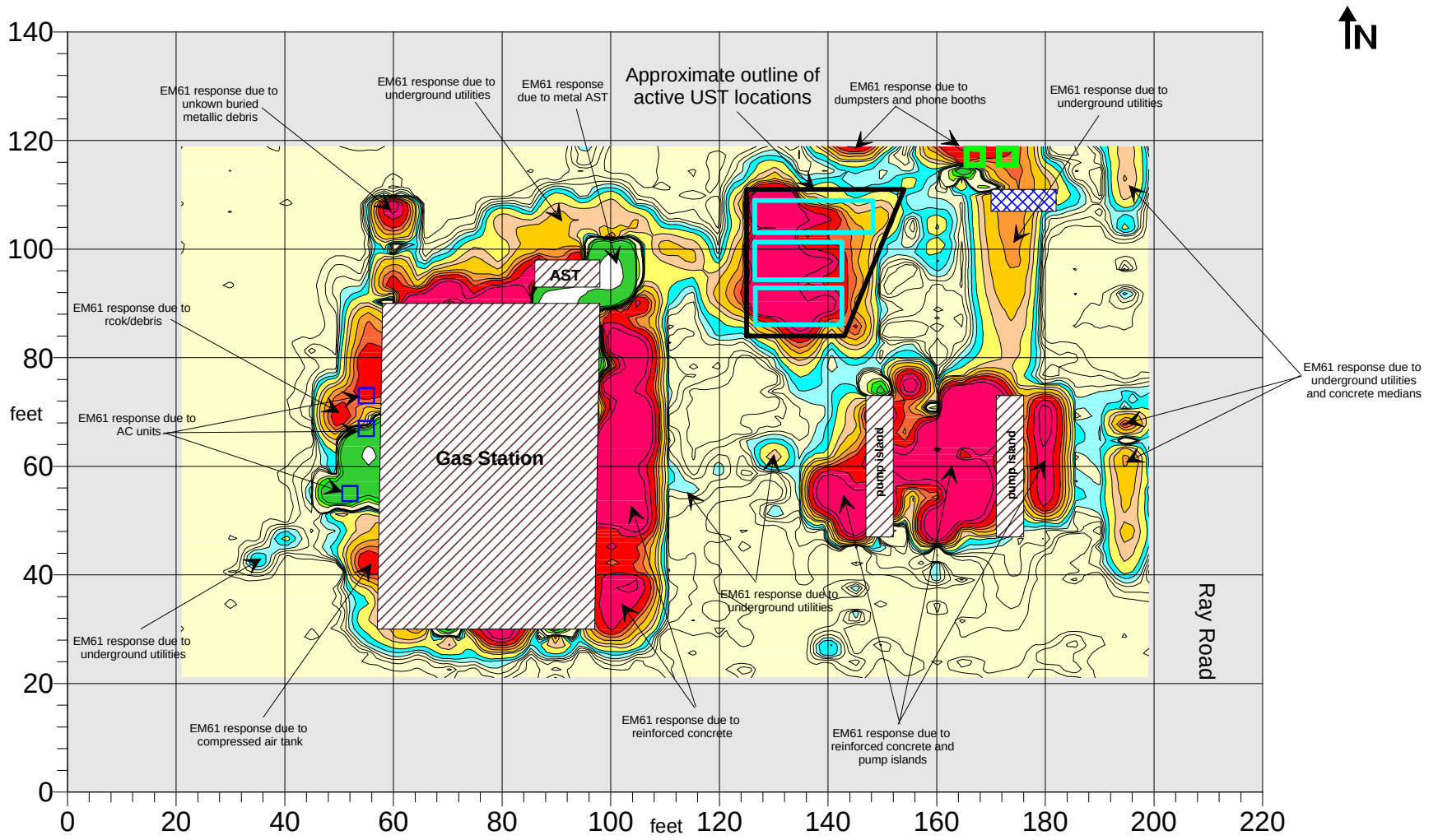
EM61 DIFFERENTIAL RESPONSE CONTOURS

FIGURE 3



*EM response adjacent to building resulting from reinforcement in the foundation

Legend

- AC unit
- Phone booth
- Gas station sign

The contour plot shows the differential results of the EM61instrument 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 data were collected on September 11, 2012 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired across selected EM61 Anomalies on September 11, 2012 using a Geophysical Survey Systems SIR 3000 instrument with a 400 MHz antenna.

CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
SITE	NCDOT PROJECT U-3465 - PARCEL 009
CITY	SPRING LAKE
STATE	NORTH CAROLINA
TITLE	GEOPHYSICAL RESULTS
J.NO.	2012-228
DWG	
LAY	
DATE	09/11/12
CHK'D	
DRWN	ECC
FIGURE	

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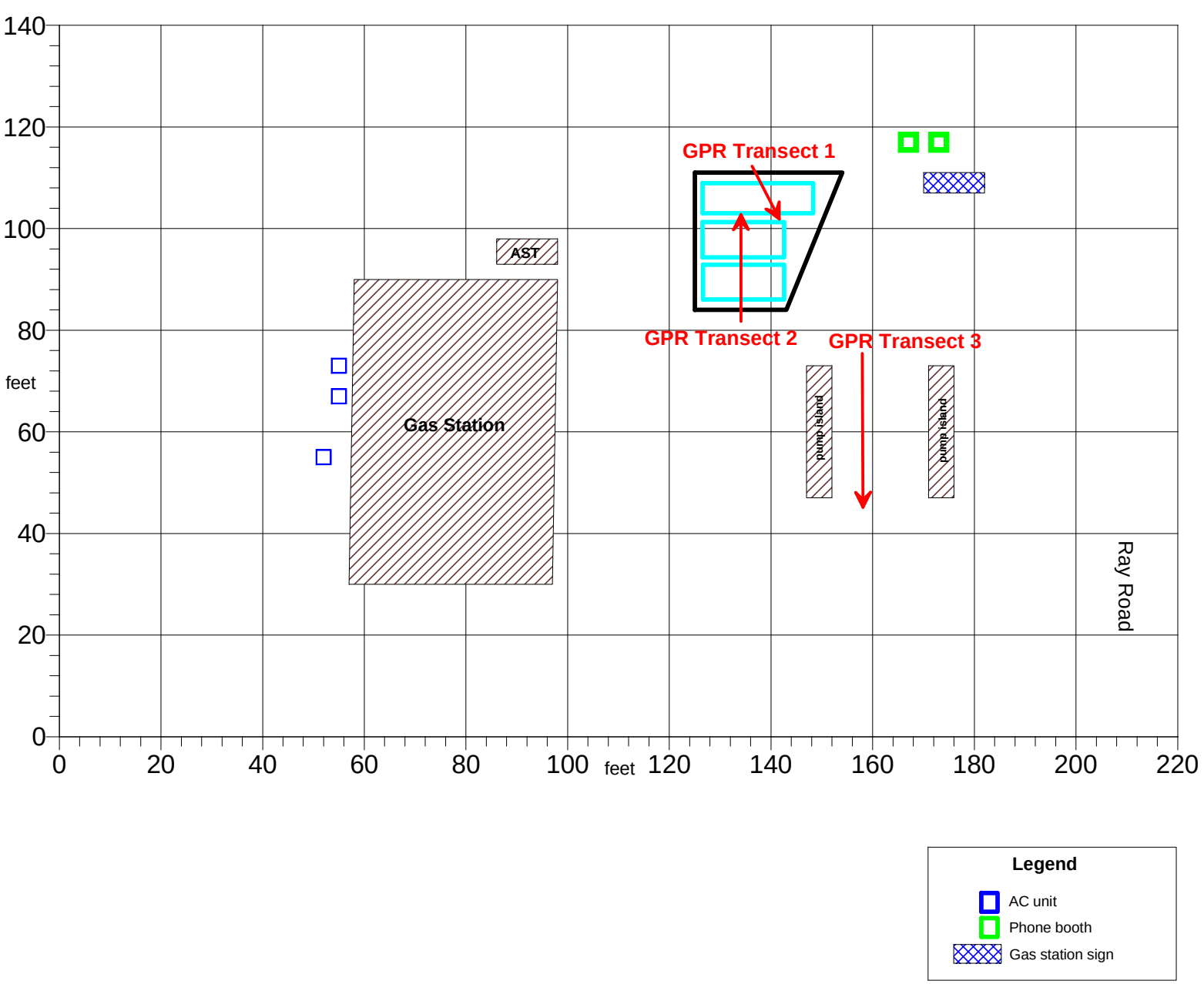

FIGURE 4

SELECT GPR
TRANSECT LOCATIONS

CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
SITE	NCDOT PROJECT U-3465 - PARCEL 009
CITY	SPRING LAKE
STATE	NORTH CAROLINA
TITLE	GEOPHYSICAL RESULTS
J.NO.	2012-228
DWG	
LAY	
DATE	09/11/12
CHK'D	
DRWN	ECC
FIGURE	

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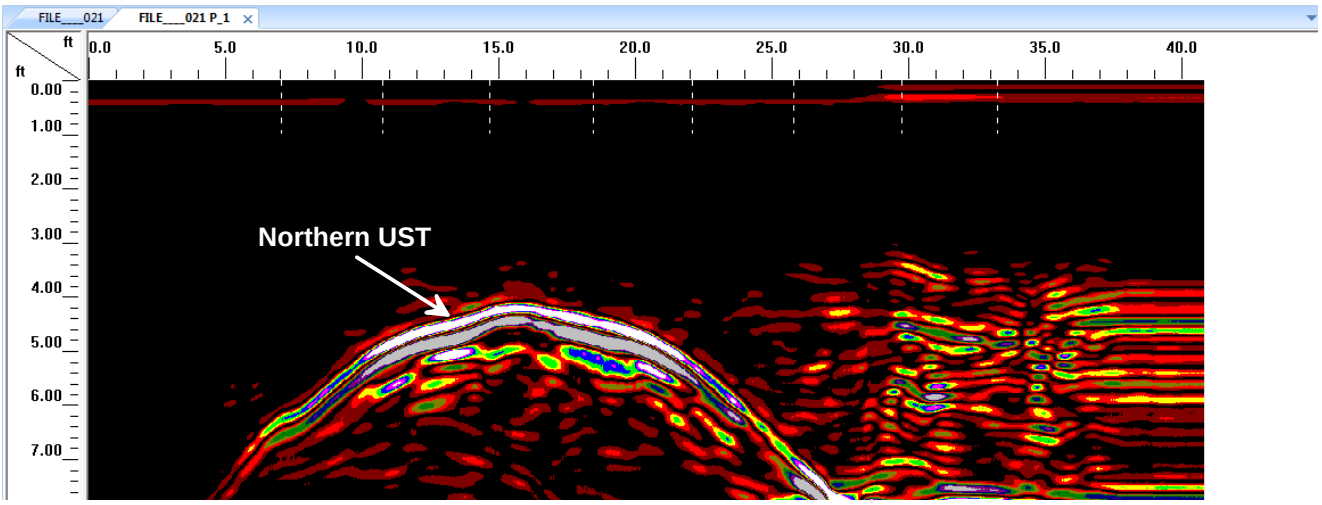
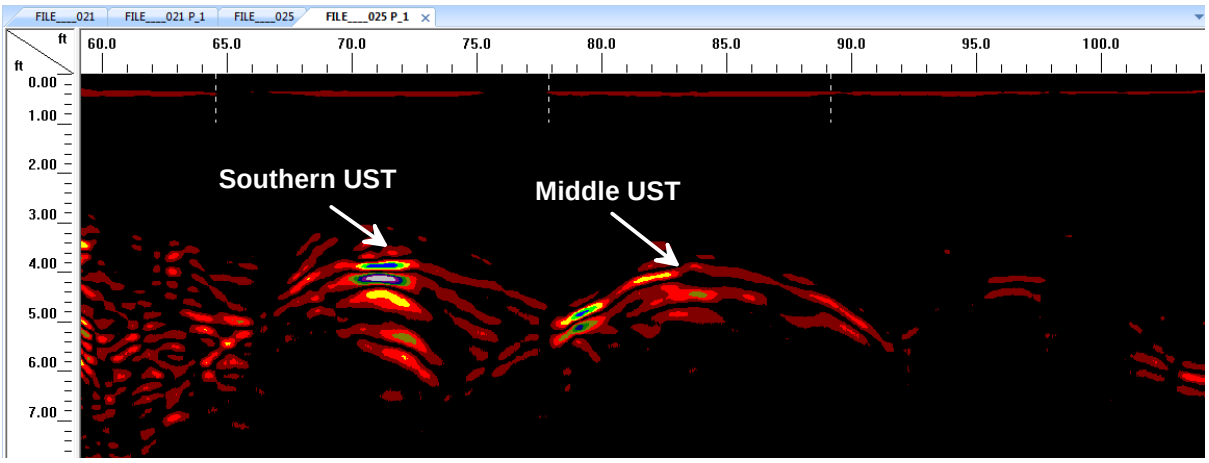
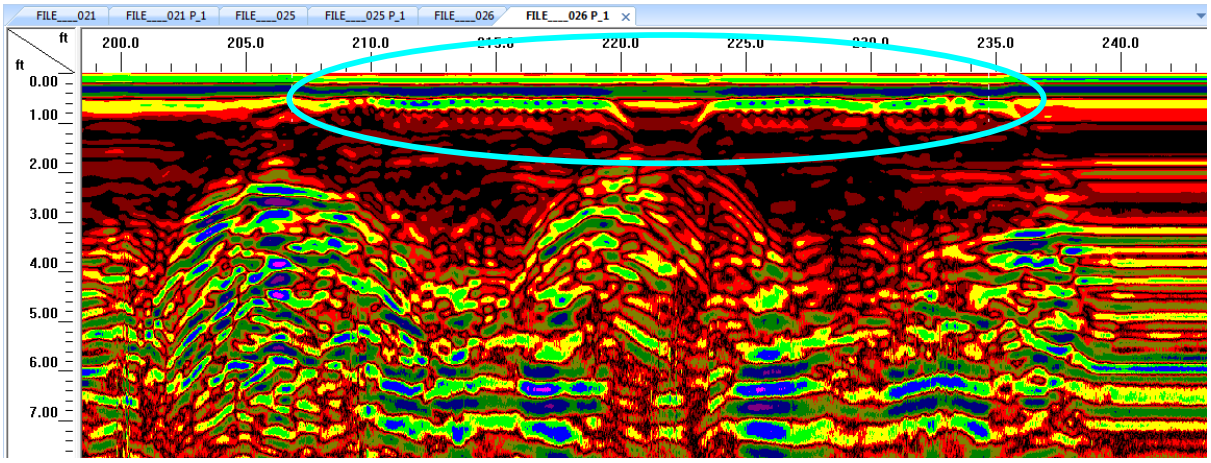


GPR Transect 1 - North to South Across Northern UST



GPR Transect 2 - South to North Across Southern Two USTs



GPR Transect 3 - North to South Across Pump Island Reinforced Concrete

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CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	DATE	09/11/12	DRWN	ECC
SITE	NCDOT PROJECT U-3465 - PARCEL 069	LAY		CHKD	
CITY	SPRING LAKE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	J.NO.	2012-228	FIGURE	

Select GPR Transect Images

FIGURE 5

APPENDIX D

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FIELD DRILLING RECORD

PROJECT NAME: PROJECT NUMBER:	NC DOT U-3465 Harnett County, Ray Road, Spring Lake / 2012-228	**BORING/WELL NO:**	9-1
SITE LOCATION:	3235 Ray Road - Parcel 009 Harnett County	**BORING/WELL LOCATION:**	Parcel 009 - Near Active Dispenser & Product Lines
START DATE:	9/17/12	**COMPLETED:**	9/17/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	None
TOTAL DEPTH:	10 feet	**CASING DEPTH:**	None

DEPTH (ft.)	**VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.**	**OVA RESULTS PERCENT RECOVERY BLOW COUNTS**
0 to 5'	Brown, clayey-sand (SC), moist, no odor	PID=9-1(3-5'): 0 PPM
5 to 10'	Brown to tan, clayey sand grades into sandy-clay (SC to CL),	PID=9-1(5-7.5'): 0 PPM
	moist, no odor	PID=9-1(7.5-10'): 0 PPM

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
SCREEN LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
DEPTH TO TOP OF SAND _____ BAGS OF SAND ___.
DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED ___.

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FIELD DRILLING RECORD

PROJECT NAME: PROJECT NUMBER:	NC DOT U-3465 Harnett County, Ray Road, Spring Lake / 2012-228	**BORING/WELL NO:**	9-2
SITE LOCATION:	3235 Ray Road - Parcel 009 Harnett County	**BORING/WELL LOCATION:**	Parcel 009 - Near Active Dispenser & Product Lines
START DATE:	9/17/12	**COMPLETED:**	9/17/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	None
TOTAL DEPTH:	10 feet	**CASING DEPTH:**	None

DEPTH (ft.)	**VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.**	**OVA RESULTS PERCENT RECOVERY BLOW COUNTS**
0 to 10'	Brown to gray, sand with small amount of fines (SW to SP),	PID=9-2(4-5'): 0 PPM
	moist, no odor	PID=9-2(5-7.5'): 0 PPM

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
SCREEN LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
DEPTH TO TOP OF SAND _____ BAGS OF SAND ___.
DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED ___.

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FIELD DRILLING RECORD

PROJECT NAME: PROJECT NUMBER:	NC DOT U-3465 Harnett County, Ray Road, Spring Lake / 2012-228	**BORING/WELL NO:**	9-3
SITE LOCATION:	3235 Ray Road - Parcel 009 Harnett County	**BORING/WELL LOCATION:**	Parcel 009 - Near Active Underground Storage Tanks
START DATE:	9/17/12	**COMPLETED:**	9/17/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	None
TOTAL DEPTH:	15 feet	**CASING DEPTH:**	None

DEPTH (ft.)	VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.	OVA RESULTS PERCENT RECOVERY BLOW COUNTS
0 to 5'	Brown to dark gray, clayey-sand (SC), moist, no odor	PID=9-3(3-5'): 0 PPM
5 to 10'	Tan to gley (gray), sandy-clay (ML to CL), firm, moist, slight petroleum	PID=9-3(7.5-10'): 45 PPM
	odor	
10 to 15'	Brown to tan to gley, sandy-clay firm to clayey-sand (ML to SC),	PID=9-3(12-15'): 30 PPM
	moist, possible slight petroleum odor	

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
SCREEN LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
DEPTH TO TOP OF SAND _____ BAGS OF SAND ___.
DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED ___.

Pyramid Environmental & Engineering, P.C.

FIELD DRILLING RECORD

PROJECT NAME: PROJECT NUMBER:	NC DOT U-3465 Harnett County, Ray Road, Spring Lake / 2012-228	**BORING/WELL NO:**	9-4
SITE LOCATION:	3235 Ray Road - Parcel 009 Harnett County	**BORING/WELL LOCATION:**	Parcel 009 - Near Active Underground Storage Tanks
START DATE:	9/17/12	**COMPLETED:**	9/17/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	None
TOTAL DEPTH:	15 feet	**CASING DEPTH:**	None

DEPTH (ft.)	**VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.**	**OVA RESULTS PERCENT RECOVERY BLOW COUNTS**
0 to 5'	Brown, clayey-sand (SC), moist, no odor	PID=9-4(2-5'): 0 PPM
5 to 10'	Brown to tan, clayey-sand to sandy-clay (SC to ML), moist, no odor	PID=9-4(5-7.5'): 130 PPM
		PID=9-4(7.5-10'): 0 PPM
10 to 15'	Brown to tan, clayey-sand to sandy-clay (SC to ML) moist to very moist,	PID=9-4(12.5-15'): 55 PPM
	no odor	

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
SCREEN LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
DEPTH TO TOP OF SAND _____ BAGS OF SAND ___.
DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED ___.

Pyramid Environmental & Engineering, P.C.

FIELD DRILLING RECORD

PROJECT NAME: PROJECT NUMBER:	NC DOT U-3465 Harnett County, Ray Road, Spring Lake / 2012-228	**BORING/WELL NO:**	9-5
SITE LOCATION:	3235 Ray Road - Parcel 009 Harnett County	**BORING/WELL LOCATION:**	Parcel 009 - Near Active Underground Storage Tanks
START DATE:	9/17/12	**COMPLETED:**	9/17/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	None
TOTAL DEPTH:	15 feet	**CASING DEPTH:**	None

DEPTH (ft.)	**VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.**	**OVA RESULTS PERCENT RECOVERY BLOW COUNTS**
0 to 5'	Brown to gray, silty-clayey-sand to sandy clay, (ML to CL), moist, no odor	PID=9-5(3-5'): 25 PPM
5 to 10'	Brown to tan, clayey-sand to sandy-clay (SC to ML), moist, no odor	PID=9-5(8-10'): 35 PPM
10 to 15'	Brown to tan, gley, sandy-clay to clayey-sand (ML to SC), firm,	PID=9-5(10-12'): 1400 PPM
	moist, no odor	PID=9-5(13-15'): 25 PPM

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
SCREEN LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
DEPTH TO TOP OF SAND _____ BAGS OF SAND ___.
DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED ___.

Pyramid Environmental & Engineering, P.C.

FIELD DRILLING RECORD

PROJECT NAME: PROJECT NUMBER:	NC DOT U-3465 Harnett County, Ray Road, Spring Lake / 2012-228	**BORING/WELL NO:**	9-6
SITE LOCATION:	3235 Ray Road - Parcel 009 Harnett County	**BORING/WELL LOCATION:**	Parcel 009 - Near Active Product Lines & USTs
START DATE:	9/17/12	**COMPLETED:**	9/17/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	None
TOTAL DEPTH:	10 feet	**CASING DEPTH:**	None

DEPTH (ft.)	**VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.**	**OVA RESULTS PERCENT RECOVERY BLOW COUNTS**
0 to 5'	Brown to dark gray, clayey-sand (SC), moist, no odor	PID=9-6(3-5'): 35 PPM
5 to 10'	Brown to tan, gley, sandy-clay (ML to CL), firm, moist, no odor	PID=9-6(8-10'): 10 PPM

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
SCREEN LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
DEPTH TO TOP OF SAND _____ BAGS OF SAND ___.
DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED ___.

Pyramid Environmental & Engineering, P.C.

FIELD DRILLING RECORD

PROJECT NAME: **PROJECT NUMBER:**	NC DOT U-3465 Harnett County, Ray Road, Spring Lake / 2012-228	**BORING/WELL NO:**	9-7
SITE LOCATION:	3235 Ray Road - Parcel 009 Harnett County	**BORING/WELL LOCATION:**	Parcel 009 - Near Active Product Lines
START DATE:	9/17/12	**COMPLETED:**	9/17/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	None
TOTAL DEPTH:	5 feet	**CASING DEPTH:**	None

DEPTH (ft.)	VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.	OVA RESULTS PERCENT RECOVERY BLOW COUNTS
0 to 5'	Brown to tan, clayey-sand (SC), moist, no odor	PID=9-7(3-5'): 15 PPM

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
SCREEN LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
DEPTH TO TOP OF SAND _____ BAGS OF SAND ___.
DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED ___.

Pyramid Environmental & Engineering, P.C.

FIELD DRILLING RECORD

PROJECT NAME: **PROJECT NUMBER:**	NC DOT U-3465 Harnett County, Ray Road, Spring Lake / 2012-228	**BORING/WELL NO:**	9-8
SITE LOCATION:	3235 Ray Road - Parcel 009 Harnett County	**BORING/WELL LOCATION:**	Parcel 009 - Near Active Kerosene AST & Dispenser
START DATE:	9/17/12	**COMPLETED:**	9/17/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	None
TOTAL DEPTH:	5 feet	**CASING DEPTH:**	None

DEPTH (ft.)	**VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.**	**OVA RESULTS PERCENT RECOVERY BLOW COUNTS**
0 to 5'	Brown to tan, clayey-sand (SC), moist, no odor	PID=9-8(2-5'): 25 PPM

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
SCREEN LENGTH (ft) ___ DEPTH (ft) _____ DIAMETER (in) ___ MATERIAL _____.
DEPTH TO TOP OF SAND _____ BAGS OF SAND ___.
DEPTH TO TOP SEAL _____ BENTONITE USED _____ BAGS OF CEMENT USED ___.

Pyramid Environmental & Engineering, P.C.

FIELD DRILLING RECORD

PROJECT NAME: PROJECT NUMBER:	NC DOT U-3465 Harnett County, Ray Road, Spring Lake / 2012-228	**BORING/WELL NO:**	9-9
SITE LOCATION:	3235 Ray Road - Parcel 009 Harnett County	**BORING/WELL LOCATION:**	Parcel 009 - Near Ray Road & Active Pump Islands
START DATE:	9/17/12	**COMPLETED:**	9/17/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	1-inch
TOTAL DEPTH:	30 feet	**CASING DEPTH:**	30 feet

DEPTH (ft.)	**VISUAL MANUAL SOIL CLASSIFICATION COLOR, TEXTURE, STRUCTURE, CONSISTENCY, ODOR, ETC.**	**OVA RESULTS PERCENT RECOVERY BLOW COUNTS**
0 to 5'	Brown to tan, clayey-sand (SC), moist, no odor	PID=9-9(2-5'): 35 PPM
5 to 10'	Tan to light gray, sandy-clay (ML to CL), firm, moist, no odor	PID=9-9(5-7.5'): 95 PPM
		PID=9-9(7.5-10'): 15 PPM
	Geoprobe refusal at 30 feet.	
	Set 1-inch temporary well at 30 feet with 10 feet of screen.	
	Depth-to-Groundwater = 26.25 feet below land surface (BLS)	

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) 20 DEPTH (ft) 0-20 DIAMETER (in) 1 MATERIAL PVC.
SCREEN LENGTH (ft) 10 DEPTH (ft) 20-30 DIAMETER (in) 1 MATERIAL PVC.
DEPTH TO TOP OF SAND NA BAGS OF SAND NA.
DEPTH TO TOP SEAL NA BENTONITE USED NA BAGS OF CEMENT USED NA.

APPENDIX E

Laboratory Report of Analysis

To: Tim Leatherman
Pyramid
PO Box 16265
Greensboro, NC 27416

Report Number: **31202965**

Client Project: **Ray Rd. Parcel 009**

Dear Tim Leatherman,

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 Barbara A. Hager at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Barbara A. Hager
2012.09.27 15:58:47 -05'00'

Barbara A. Hager
Project Manager
barbara.hager@sgs.com

Date

Print Date: 09/27/2012

N.C. Certification # 481

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

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
9-1 (5-7.5)	31202965001	09/17/2012 10:15	09/18/2012 10:30	Soil-Solid as dry weight
9-2 (5-7.5)	31202965002	09/17/2012 10:30	09/18/2012 10:30	Soil-Solid as dry weight
9-3 (7.5-10)	31202965003	09/17/2012 10:45	09/18/2012 10:30	Soil-Solid as dry weight
9-4 (10-12.5)	31202965004	09/17/2012 11:00	09/18/2012 10:30	Soil-Solid as dry weight
9-5 (10-12)	31202965005	09/17/2012 11:15	09/18/2012 10:30	Soil-Solid as dry weight
9-6 (3-5)	31202965006	09/17/2012 11:20	09/18/2012 10:30	Soil-Solid as dry weight
9-7 (3-5)	31202965007	09/17/2012 11:30	09/18/2012 10:30	Soil-Solid as dry weight
9-8 (2-5)	31202965008	09/17/2012 12:00	09/18/2012 10:30	Soil-Solid as dry weight
9-9 (5-7.5)	31202965009	09/17/2012 12:15	09/18/2012 10:30	Soil-Solid as dry weight
9-9 (TW)	31202965010	09/17/2012 12:30	09/18/2012 10:30	Water
Trip Blanks (Not on COC)	31202965011	09/17/2012 00:00	09/18/2012 10:30	Water

Detectable Results Summary

Client Sample ID: **9-4 (10-12.5)**
Lab Sample ID: 31202965004-C
SW-846 8015C DRO

Parameter	Result	Units	
Diesel Range Organics (DRO)	8.07	mg/kg	

Client Sample ID: **9-7 (3-5)**
Lab Sample ID: 31202965007-C
SW-846 8015C DRO

Parameter	Result	Units	
Diesel Range Organics (DRO)	9.65	mg/kg	

Client Sample ID: **9-9 (TW)**
Lab Sample ID: 31202965010-A
SM 6200-B

Parameter	Result	Units	
Benzene	0.280	ug/L	J
Toluene	0.360	ug/L	J
Xylene (total)	1.59	ug/L	
m,p-Xylene	1.34	ug/L	
o-Xylene	0.250	ug/L	J

Results of **9-1 (5-7.5)**

Client Sample ID: **9-1 (5-7.5)**
Client Project ID: **Ray Rd. Parcel 009**
Lab Sample ID: 31202965001-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 10:15
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 89.90

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

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.41	3.41	mg/kg	1	09/25/2012 14:44
Surrogates							
4-Bromofluorobenzene	107			70.0-130	%	1	09/25/2012 14:44

Batch Information

Analytical Batch: **VGC2155**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**

Prep Batch: **VXX4044**
Prep Method: **SW-846 5035**
Prep Date/Time: **09/18/2012 16:47**
Prep Initial Wt./Vol.: **6.526 g**
Prep Extract Vol: **5 mL**

Print Date: 09/27/2012

N.C. Certification # 481

Results of **9-1 (5-7.5)**

Client Sample ID: **9-1 (5-7.5)**
Client Project ID: **Ray Rd. Parcel 009**
Lab Sample ID: 31202965001-C
Lab Project ID: 31202965

Collection Date: 09/17/2012 10:15
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 89.90

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

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	6.98	6.98	mg/kg	1	09/22/2012 8:00
Surrogates							
o-Terphenyl	95.8			40.0-140	%	1	09/22/2012 8:00

Batch Information

Analytical Batch: **XGC2550**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **XXX3075**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/20/2012 10:09**
Prep Initial Wt./Vol.: **31.89 g**
Prep Extract Vol: **10 mL**

Print Date: 09/27/2012

N.C. Certification # 481

Results of **9-1 (5-7.5)**

Client Sample ID: **9-1 (5-7.5)**
Client Project ID: **Ray Rd. Parcel 009**
Lab Sample ID: 31202965002-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 10:30
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 93.10

Results by **SW-846 80C5G ORu**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.03	3.03	mg/kg	1	09/25/2012 15:10
Sorrgt aseB							
4-Bromofluorobenzene	109			70.0-130	%	1	09/25/2012 15:10

hascl rf rgri asVgf

Analytical Batch: **XOG1C55**
Analytical Method: **SW-846 80C5G ORu**
Instrument: **OG7**
Analyst: **MDY**

Prep Batch: **X33 4044**
Prep Method: **SW-846 50/ 5**
Prep Date/Time: **092C8210C1 C6:47**
Prep Initial Wt./Vol.: **7.084 t**
Prep Extract Vol: **5 i L**

Print Date: 09/27/2012

N.C. Certification # 481

Results of **9-1 (5-7.5)**

Client Sample ID: **9-1 (5-7.5)**
Client Project ID: **Ray Rd. Parcel 009**
Lab Sample ID: 31202965002-C
Lab Project ID: 31202965

Collection Date: 09/17/2012 10:30
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 93.10

Results by **SW-846 80C5D ORu**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	6.T2	6.T2	mg/kg	1	09/22/2012 8:28
Sorrgt aseB							
o-4erphenyl	105			T0.0-1T0	%	1	09/22/2012 8:28

hascl rf ngri asYgf

Analytical Batch: **3GD1550**
Analytical Method: **SW-846 80C5D ORu**
Instrument: **GD6**
Analyst: **OTF**

Prep Batch: **333/075**
Prep Method: **SW-846 / 54C**
Prep Date/4ime: **092102l0C1 C0:09**
Prep Initial Wt./Vol.: **/ / .46 t**
Prep Extract Vol: **C0 i L**

Print Date: 09/27/2012

N.C. Certification # T81

v eyUty oz **9-1 (57. -) Ra**

Client Sample ID: **9-1 (57. -) Ra**
Client Project ID: **y dP y r 7c del 0SRR9**
Lab Sample ID: 31202965003-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 10:R5
v eceide8 Date: 09/1M2012 10:30
x atris: Soil-Soli8 ay 8rwg eih(t
Soli8y %) .: MR0M0

v eyUty bw **W8 -46C 4R) . G Oy u**

Parameter	v eyUt	u Ual	DL	LQu /CL	F nity	Df	Date AnalwGe8
Nayoline v anhe Qrhanicy %Nv Q.	k D	F	3G36	3G36	mh/4h	1	09/25/2012 15:35
Wbeegt ds0B							
R-BromozlUorobenGene	106			700-130	)	1	09/25/2012 15:35

h dsl I rf mgei dsVgf

Analwtical Batc(: **XOG2) . .**
Analwtical x et(o8: **W8 -46C 4R) . G Oy u**
InytrUment: **OG5**
Analwyt: **MDY**

Prep Batc(: **X3 3 6R66**
Prep x et(o8: **W8 -46C . R1.**
Prep Date/Time: **R9/) 4/2R) 2) C:64**
Prep Initial Wt0Vol0 **57R) 9 t**
Prep Estract Vol: **. i L**

v eyUlty oA**9-1 (57. -) Ra**

Client Sample ID: **9-1 (57. -) Ra**
Client Project ID: **y dP y r 7c del 0SRR9**
Lab Sample ID: 31202965003-C
Lab Project ID: 31202965

Collection Date: 09/17/2012 10:R5
v eceide8 Date: 09/1M2012 10:30
x atris: Soil-Soli8 ay 8rwg eih(t
Soli8y %. .: MR0M0

v eyUlty bw**W8 -46C4R) . D Oy u**

Parameter	v eyUlt	u Ual	DL	LQu /CL	Fnity	Df	Date z nalwNe8
Dieyel v anhe Qrhanicy %v Q.	k D	F	609R	609R	mh/Th	1	09/22/2012 M56
Wbeegt ds0B							
o-4erp(enwl	960			R00-1R0	)	1	09/22/2012 M56

h dsl l rf rngei dsYgf

z nalwtical Batc(: **3GD2. . R**
z nalwtical x et(o8: **W8 -46C4R) . D Oy u**
InytrUment: **GDC**
z nalwyt: **OTF**

Prep Batc(: **3331R5.**
Prep x et(o8: **W8 -46C1. 6)**
Prep Date/4ime: **R9/2R/2R) 2) R:R9**
Prep Initial Wt0/VolO **11799 t**
Prep Estract Vol: **) R i L**

Print Date: 09/27/2012

k CCCertiAcation # RMI

v eyUlty oz 9-1 (57-5.)Ra

Client Sample ID: **9-1 (57-5.)Ra**
Client Project ID: **y dP y r) c del 0S779**
Lab Sample ID: 3120296500- A\
Lab Project ID: 31202965

Collection Date: 0971R72012 11:00
v eceide8 Date: 0971M72012 10:30
x atris: SoilASoli8 ay 8rwg eih(t
Soli8y %þ .: MR090

v eyUlty bw W8 -416 475RC Gy O

Parameter	v eyUlt	u Ual	DL	LQu 7CL	F nity	Df	Date / nalwGe8
Nayoline v anhe Qrhanicy %Nv Q.	k D	F	3023	3023	mh74h	1	0972572012 16:01

Wueeogdt0s

- ABromozlUorobenGene	105			R0ODA130	)	1	0972572012 16:01

Bdtl h Infoemdtion

/ nalwtical Batc(: **VGC. 5RR**
/ nalwtical x et(o8: **W8 -416 475RC Gy O**
InytrUment: **GC:**
/ nalwyt: **MDY**

Prep Batc(: **VXX1711**
Prep x et(o8: **W8 -416 R73R**
Prep Date7Time: **79/54/. 75. 56219**
Prep Initial WtO7VolO : **)716 g**
Prep Estract Vol: **R mL**

Print Date: 0972R72012 k OOCertization # - MI

v eyUlty oA9-1 (57-5.)Ra

Client Sample ID: **9-1 (57-5.)Ra**
Client Project ID: **y dP y r) c del 0S779**
Lab Sample ID: 3120296500- /C
Lab Project ID: 31202965

Collection Date: 097 1R72012 11:00
v eceide8 Date: 097 1M72012 10:30
x atris: Soil/Soli8 ay 8rwg eih(t
Soli8y %. .: MRQ90

v eyUlty bw W8 -416 475RC Dy O

Parameter	v eyUlt	u Ual	DL	LQu 7CL	Fnity	Df	Date z nalwNe8
Dieyel v anhe Qrhanicy %v Q.	**4)7u**		RQ21	RQ21	mh7kh	1	097227 2012 9:23
Wbeegt ds0B							
o/Terp(enwl	96Q3			- 0Q0/1- 0	)	1	097227 2012 9:23

h dsl l rf rngei dsYgf

z nalwtical 4 atc(: **3 GC. RR7**
z nalwtical x et(o8: **W8 -416 475RC Dy O**
InytrUment: **GC6**
z nalwyt: **DTF**

Prep 4 atc(: **3 3 3 / 7uR**
Prep x et(o8: **W8 -416 / R15**
Prep Date7Time: **792 72 75. 57:79**
Prep Initial B tQ7WblO **/ 5)R6 t**
Prep Vstract Wbl: **57 i L**

Print Date: 097 2R72012

E QCCertiAcation # - M

Results of **9-1 (57-5.)**

Client Sample ID: **9-1 (57-5.)**
Client Project ID: **Ray RdPr acel 0779**
Lab Sample ID: 31202965005-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 11:15
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 83.60

Results by **SW-846 8751C GRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.78	3.78	mg/kg	1	09/25/2012 16:26
Succogatl s							
4-Bromofluorobenzene	105			70.0-130	%	1	09/25/2012 16:26

Bateh Infocmation

Analytical Batch: **VGC. 511**
Analytical Method: **SW-846 8751C GRO**
Instrument: **GCL**
Analyst: **MDY**

Prep Batch: **VXX4744**
Prep Method: **SW-846 1731**
Prep Date/Time: **79/58/. 75. 56215**
Prep Initial Wt./Vol.: **6R34 g**
Prep Extract Vol: **1 m:**

Print Date: 09/27/2012

N.C. Certification # 481

Results of **9-1 (57-5.)**

Client Sample ID: **9-1 (57-5.)**
Client Project ID: **Ray RdPr acel 0779**
Lab Sample ID: 31202965005-C
Lab Project ID: 31202965

Collection Date: 09/17/2012 11:15
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 83.60

Results by **SW-846 8751C DRO**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	6.80	6.80	mg/kg	1	09/22/2012 9:52
Sucogatl s							
o-Terphenyl	96.6			40.0-140	%	1	09/22/2012 9:52

Bateh Infocmation

Analytical Batch: **XGC. 117**
Analytical Method: **SW-846 8751C DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **XXX37/ 1**
Prep Method: **SW-846 3145**
Prep Date/Time: **792 72 75. 57:79**
Prep Initial Wt./Vol.: **31P g**
Prep Extract Vol: **57 mL**

Print Date: 09/27/2012

N.C. Certification # 481

Results of **9-1 (5-7.**

Client Sample ID: **9-1 (5-7.**
Client Project ID: **) Ra) ydPRrcel 009**
Lab Sample ID: 31202965006-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 11:20
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 87.20

Results by **SW-841 8067C G) O**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.11	3.11	mg/kg	1	09/25/2012 16:51
SurrogRtes							
4-Bromofluorobenzene	107			70.0-130	%	1	09/25/2012 16:51

BRtch InformRtion

Analytical Batch: **VGC/ 677**
Analytical Method: **SW-841 8067C G) O**
Instrument: **GC:**
Analyst: **MDY**

Prep Batch: **VXX4044**
Prep Method: **SW-841 7057**
Prep Date/Time: **093683 06/ 6127/**
Prep Initial Wt./Vol.: **: d5: : g**
Prep Extract Vol: **7 mL**

Print Date: 09/27/2012

N.C. Certification # 481

Results of **9-1 (5-7.**

Client Sample ID: **9-1 (5-7.**
Client Project ID: **) Ra) ydPRrcel 009**
Lab Sample ID: 31202965006-C
Lab Project ID: 31202965

Collection Date: 09/17/2012 11:20
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 87.20

Results by **SW-841 8067C D) O**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	6.69	6.69	mg/kg	1	09/22/2012 10:19
SurrogRtes							
o-Terphenyl	97.7			40.0-140	%	1	09/22/2012 10:19

BRtch InformRtion

Analytical Batch: **XGC2770**
Analytical Method: **SW-841 8067C D) O**
Instrument: **GC1**
Analyst: **DTF**

Prep Batch: **XXX5037**
Prep Method: **SW-841 5746**
Prep Date/Time: **09/20/2062 60:09**
Prep Initial Wt./Vol.: **54d28 g**
Prep Extract Vol: **60 mL**

Print Date: 09/27/2012

N.C. Certification # 481

Results of **9-1 (5-7.**

Client Sample ID: **9-1 (5-7.**
Client Project ID: **) Ra) ydPRrcel 009**
Lab Sample ID: 3120296500-A
Lab Project ID: 31202965

Collection Date: 0971-72012 11:30
Received Date: 097187 2012 10:30
Matrix: SoilASolid as dry weight
Solids (%): 88.00

Results by **SW-846 80C7G O) u**

Parameter	Result	Qual	DL	LOQ7CL	Units	DF	Date / nalyzed
Gasoline Range Organics (GRO)	ND	U	3.25	3.25	mg7kg	1	097257 2012 1-:1-
Sorrgt RseB							
4ABromofluorobenzene	108			- 0.0A130	%	1	097257 2012 1-:1-

hRscl rf rngri RsVgf

/ nalytical Batch: **XOG2C77**
/ nalytical Method: **SW-846 80C7G O) u**
Instrument: **OG1**
/ nalyst: **MDY**

Prep Batch: **X33 4044**
Prep Method: **SW-846 7057**
Prep Date7Time: **09/C8/20C2 C6:72**
Prep Initial Wt.7Vol.: **6d996 t**
Prep Extract Vol: **7 i L**

Print Date: 0972-72012

N.C. Certification # 481

Results of **9-1 (5-7.**

Client Sample ID: **9-1 (5-7.**
Client Project ID: **) Ra) ydPRrcel 009**
Lab Sample ID: 3120296500- /C
Lab Project ID: 31202965

Collection Date: 097l- 72012 11:30
Received Date: 097187 2012 10:30
Matrix: Soil/Solid as dry weight
Solids (%): 88.00

Results by **SW-846 80C7D O) u**

Parameter	Result	Qual	DL	LOQ7CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**9c67**		- .08	- .08	mg7Ng	1	097227 2012 10:k-
Sorrgt RseB							
o/Terphenyl	102			k0.0/1k0	%	1	097227 2012 10:k-

h RsclI rf rngri RsYgf

Analytical 4atch: **3GD2770**
Analytical Method: **SW-846 80C7D O) u**
Instrument: **GD6**
Analyst: **OTF**

Prep 4atch: **3335017**
Prep Method: **SW-846 574C**
Prep Date7Time: **09/20/20C2 C0:09**
Prep Initial B t.7Wol.: **52dCCt**
Prep Vxtract Wol: **C0 i L**

Print Date: 0972- 72012

E.C. Certification # k81

v esults of **9-1 (5-7.**

Client Sample ID: **9-1 (5-7.**
Client Project ID: **) Ra) ydPRrcel 009**
Lab Sample ID: 3120296500- A
Lab Project ID: 31202965

Collection Date: 0971RZ2012 12:00
v eceide8 Date: 0971- 72012 10:30
Matrix: SoilASoli8 as 8ry weight
Soli8s (%): 90.60

v esults by **SW-184 1067C G) O**

Parameter	v esult	Qual	DL	LOQ7CL	Units	DF	Date / nalyze8
Gasoline v ange Organics (Gv O)	ND	U	3.2R	3.2R	mg7kg	1	097257 2012 1R42
SurrogRtes							
4ABromofluorobenzene	104			R0.0A130	%	1	097257 2012 1R42

BRtch InformRtion

/ nalytical Batch: **VGC5677**
/ nalytical Metho8: **SW-184 1067C G) O**
Instrument: **GC:**
/ nalyst: **MDY**

Prep Batch: **VXX8088**
Prep Metho8: **SW-184 7037**
Prep Date7Time: **09/61/5065 64273**
Prep Initial Wt.7Vol.: **4d 7: g**
Prep Extract Vol: **7 mL**

Print Date: 0972RZ2012

N.C. Certification # 4- 1

v esults of **9-1 (5-7.**

Client Sample ID: **9-1 (5-7.**
Client Project ID: **) Ra) ydPRrcel 009**
Lab Sample ID: 3120296500- /C
Lab Project ID: 31202965

Collection Date: 097 1R72012 12:00
v eceide8 Date: 0971- 72012 10:30
Matrix: Soil/Soli8 as 8ry weight
Soli8s (%): 90.60

v esults by **SW-184 1067C D) O**

Parameter	v esult	Qual	DL	LOQ7CL	Units	DF	Date Analyze8
Diesel v ange Organics (Dv O)	ND	U	R10	R10	mg7kg	1	097227 2012 11:15
SurrogRtes							
o/Terphenyl	101			40.0/140	%	1	097227 2012 11:15

BRtch InformRtion

Analytical Batch: **XGC5770**
Analytical Metho8: **SW-184 1067C D) O**
Instrument: **GC4**
Analyst: **DTF**

Prep Batch: **XXX30/ 7**
Prep Metho8: **SW-184 3786**
Prep Date7Time: **092502506 5 60:09**
Prep Initial Wt.7Vol.: **36d0/ g**
Prep Extract Vol: **60 mL**

Print Date: 0972R72012

N.C. Certification # 4- 1

Results of **9-91(-57(.**

Client Sample ID: **9-91(-57(.**
Client Project ID: **) Ra1) y7dRRrce1l 9**
Lab Sample ID: 31202965009-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 12:15
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 87.90

Results by **0S -W841W6(C1G) O**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.33	3.33	mg/kg	1	09/25/2012 18:08
0uPRogRtcs							
4-Bromofluorobenzene	107			70.0-130	%	1	09/25/2012 18:08

BRtrh1nfoRmRtion

Analytical Batch: **VGC26((**
Analytical Method: **0S -W841W6(C1G) O**
Instrument: **GC5**
Analyst: **MDY**

Prep Batch: **VXX8I 88**
Prep Method: **0S -W841(I 3(**
Prep Date/Time: **I 9/6W2I 621164:(8**
Prep Initial Wt./Vol.: **47W8Wg**
Prep Extract Vol: **(1mL**

Print Date: 09/27/2012

N.C. Certification # 481

Results of **9-91(-57(.**

Client Sample ID: **9-91(-57(.**
Client Project ID: **) Ra1) y7dRRrce1l 9**
Lab Sample ID: 31202965009-C
Lab Project ID: 31202965

Collection Date: 09/17/2012 12:15
Received Date: 09/18/2012 10:30
Matrix: Soil-Solid as dry weight
Solids (%): 87.90

Results by **0S -W841W6(C1D) O**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	6.56	6.56	mg/kg	1	09/22/2012 11:T3
0uRogRtcs							
o-4erphenyl	103			T0.0-1T0	%	1	09/22/2012 11:T3

BRtrh1nfoRmRtion

Analytical Batch: **XGC2((l**
Analytical Method: **0S -W841W6(C1D) O**
Instrument: **GC4**
Analyst: **DTF**

Prep Batch: **XXX3l 5(**
Prep Method: **0S -W841(86**
Prep Date/4ime: **l 9/2l /2l 621l6l :l 9**
Prep Initial Wt./Vol.: **387 4Wg**
Prep Extract Vol: **6l 1mL**

Print Date: 09/27/2012

N.C. Certification # T81

Results of **9-9 (TW)**

Client Sample ID: **9-9 (TW)**
Client Project ID: **Ray Rd. Parcel 009**
Lab Sample ID: 31202965010-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 12:30
Received Date: 09/18/2012 10:30
Matrix: Water

Results by **SM 6200-B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1	09/19/2012 16:48
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1	09/19/2012 16:48
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1	09/19/2012 16:48
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1	09/19/2012 16:48
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1	09/19/2012 16:48
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1	09/19/2012 16:48
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1	09/19/2012 16:48
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1	09/19/2012 16:48
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1	09/19/2012 16:48
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1	09/19/2012 16:48
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1	09/19/2012 16:48
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1	09/19/2012 16:48
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1	09/19/2012 16:48
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1	09/19/2012 16:48
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1	09/19/2012 16:48
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1	09/19/2012 16:48
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1	09/19/2012 16:48
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1	09/19/2012 16:48
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1	09/19/2012 16:48
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1	09/19/2012 16:48
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1	09/19/2012 16:48
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1	09/19/2012 16:48
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1	09/19/2012 16:48
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1	09/19/2012 16:48
Benzene	**0.280**	J	0.113	0.500	ug/L	1	09/19/2012 16:48
Bromobenzene	ND	U	0.110	0.500	ug/L	1	09/19/2012 16:48
Bromochloromethane	ND	U	0.211	0.500	ug/L	1	09/19/2012 16:48
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1	09/19/2012 16:48
Bromoform	ND	U	0.0974	0.500	ug/L	1	09/19/2012 16:48
Bromomethane	ND	U	0.237	0.500	ug/L	1	09/19/2012 16:48
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1	09/19/2012 16:48
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1	09/19/2012 16:48
Chlorobenzene	ND	U	0.116	0.500	ug/L	1	09/19/2012 16:48
Chloroethane	ND	U	0.311	0.500	ug/L	1	09/19/2012 16:48
Chloroform	ND	U	0.139	0.500	ug/L	1	09/19/2012 16:48
Chloromethane	ND	U	0.448	0.500	ug/L	1	09/19/2012 16:48
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1	09/19/2012 16:48
Dibromomethane	ND	U	0.168	0.500	ug/L	1	09/19/2012 16:48
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1	09/19/2012 16:48
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1	09/19/2012 16:48
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1	09/19/2012 16:48
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1	09/19/2012 16:48
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1	09/19/2012 16:48

Print Date: 09/27/2012

N.C. Certification # 481

Results of **9-9 (TW)**

Client Sample ID: **9-9 (TW)**
Client Project ID: **Ray Rd. Parcel 009**
Lab Sample ID: 31202965010-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 12:30
Received Date: 09/18/2012 10:30
Matrix: Water

Results by **SM 6200-B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1	09/19/2012 16:48
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1	09/19/2012 16:48
Methylene chloride	ND	U	0.152	5.00	ug/L	1	09/19/2012 16:48
Naphthalene	ND	U	0.0855	0.500	ug/L	1	09/19/2012 16:48
Styrene	ND	U	0.102	0.500	ug/L	1	09/19/2012 16:48
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1	09/19/2012 16:48
Toluene	**0.360**	J	0.133	0.500	ug/L	1	09/19/2012 16:48
Trichloroethene	ND	U	0.125	0.500	ug/L	1	09/19/2012 16:48
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1	09/19/2012 16:48
Vinyl chloride	ND	U	0.124	0.500	ug/L	1	09/19/2012 16:48
Xylene (total)	**1.59**		0.269	1.50	ug/L	1	09/19/2012 16:48
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1	09/19/2012 16:48
m,p-Xylene	**1.34**		0.182	1.00	ug/L	1	09/19/2012 16:48
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1	09/19/2012 16:48
o-Xylene	**0.250**	J	0.0874	0.500	ug/L	1	09/19/2012 16:48
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1	09/19/2012 16:48
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1	09/19/2012 16:48
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1	09/19/2012 16:48
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1	09/19/2012 16:48
Surrogates							
1,2-Dichloroethane-d4	102			64.0-140	%	1	09/19/2012 16:48
4-Bromofluorobenzene	103			85.0-115	%	1	09/19/2012 16:48
Toluene d8	105			82.0-117	%	1	09/19/2012 16:48

Batch Information

Analytical Batch: **VMS2561**
Analytical Method: **SM 6200-B**
Instrument: **MSD8**
Analyst: **BWS**

Prep Batch: **VXX4021**
Prep Method: **SM 6200-B Prep**
Prep Date/Time: **09/19/2012 08:35**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 09/27/2012

N.C. Certification # 481

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

Client Sample ID: **Trip Blanks (Not on COC)**
Client Project ID: **Ray Rd. Parcel 009**
Lab Sample ID: 31202965011-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 00:00
Received Date: 09/18/2012 10:30
Matrix: Water

Results by **SM 6200-B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1	09/19/2012 13:07
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1	09/19/2012 13:07
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1	09/19/2012 13:07
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1	09/19/2012 13:07
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1	09/19/2012 13:07
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1	09/19/2012 13:07
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1	09/19/2012 13:07
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1	09/19/2012 13:07
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1	09/19/2012 13:07
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1	09/19/2012 13:07
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1	09/19/2012 13:07
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1	09/19/2012 13:07
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1	09/19/2012 13:07
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1	09/19/2012 13:07
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1	09/19/2012 13:07
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1	09/19/2012 13:07
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1	09/19/2012 13:07
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1	09/19/2012 13:07
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1	09/19/2012 13:07
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1	09/19/2012 13:07
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1	09/19/2012 13:07
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1	09/19/2012 13:07
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1	09/19/2012 13:07
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1	09/19/2012 13:07
Benzene	ND	U	0.113	0.500	ug/L	1	09/19/2012 13:07
Bromobenzene	ND	U	0.110	0.500	ug/L	1	09/19/2012 13:07
Bromochloromethane	ND	U	0.211	0.500	ug/L	1	09/19/2012 13:07
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1	09/19/2012 13:07
Bromoform	ND	U	0.0974	0.500	ug/L	1	09/19/2012 13:07
Bromomethane	ND	U	0.237	0.500	ug/L	1	09/19/2012 13:07
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1	09/19/2012 13:07
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1	09/19/2012 13:07
Chlorobenzene	ND	U	0.116	0.500	ug/L	1	09/19/2012 13:07
Chloroethane	ND	U	0.311	0.500	ug/L	1	09/19/2012 13:07
Chloroform	ND	U	0.139	0.500	ug/L	1	09/19/2012 13:07
Chloromethane	ND	U	0.448	0.500	ug/L	1	09/19/2012 13:07
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1	09/19/2012 13:07
Dibromomethane	ND	U	0.168	0.500	ug/L	1	09/19/2012 13:07
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1	09/19/2012 13:07
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1	09/19/2012 13:07
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1	09/19/2012 13:07
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1	09/19/2012 13:07
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1	09/19/2012 13:07

Print Date: 09/27/2012

N.C. Certification # 481

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

Client Sample ID: **Trip Blanks (Not on COC)**
Client Project ID: **Ray Rd. Parcel 009**
Lab Sample ID: 31202965011-A
Lab Project ID: 31202965

Collection Date: 09/17/2012 00:00
Received Date: 09/18/2012 10:30
Matrix: Water

Results by **SM 6200-B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1	09/19/2012 13:07
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1	09/19/2012 13:07
Methylene chloride	ND	U	0.152	5.00	ug/L	1	09/19/2012 13:07
Naphthalene	ND	U	0.0855	0.500	ug/L	1	09/19/2012 13:07
Styrene	ND	U	0.102	0.500	ug/L	1	09/19/2012 13:07
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1	09/19/2012 13:07
Toluene	ND	U	0.133	0.500	ug/L	1	09/19/2012 13:07
Trichloroethene	ND	U	0.125	0.500	ug/L	1	09/19/2012 13:07
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1	09/19/2012 13:07
Vinyl chloride	ND	U	0.124	0.500	ug/L	1	09/19/2012 13:07
Xylene (total)	ND	U	0.269	1.50	ug/L	1	09/19/2012 13:07
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1	09/19/2012 13:07
m,p-Xylene	ND	U	0.182	1.00	ug/L	1	09/19/2012 13:07
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1	09/19/2012 13:07
o-Xylene	ND	U	0.0874	0.500	ug/L	1	09/19/2012 13:07
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1	09/19/2012 13:07
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1	09/19/2012 13:07
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1	09/19/2012 13:07
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1	09/19/2012 13:07
Surrogates							
1,2-Dichloroethane-d4	107			64.0-140	%	1	09/19/2012 13:07
4-Bromofluorobenzene	99.9			85.0-115	%	1	09/19/2012 13:07
Toluene d8	109			82.0-117	%	1	09/19/2012 13:07

Batch Information

Analytical Batch: **VMS2561**
Analytical Method: **SM 6200-B**
Instrument: **MSD8**
Analyst: **BWS**

Prep Batch: **VXX4021**
Prep Method: **SM 6200-B Prep**
Prep Date/Time: **09/19/2012 08:35**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 09/27/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SM 6200-B

Prep Method: SW-846 5030B
Prep Batch: VXX4021
Prep Date: 09/19/2012 08:52

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 29035 [VXX/4021]	90096	09/19/2012 10:40	VMS2561	MSD8	BWS
LCSD for HBN 29035 [VXX/4021]	90097	09/19/2012 11:04	VMS2561	MSD8	BWS
MB for HBN 29035 [VXX/4021]	90098	09/19/2012 11:53	VMS2561	MSD8	BWS
Trip Blanks (Not on COC)	31202965011	09/19/2012 13:07	VMS2561	MSD8	BWS
9-9 (TW)	31202965010	09/19/2012 16:48	VMS2561	MSD8	BWS
4-5 (TW)(89998DUP)	90222	09/19/2012 17:12	VMS2561	MSD8	BWS
9-9 (TW)(89985MS)	90223	09/19/2012 17:37	VMS2561	MSD8	BWS

Method Blank

Blank ID: MB for HBN 29035 [VXX/4021]
Blank Lab ID: 90098
QC for Samples:
31202965010, 31202965011

Matrix: Water

Results by **SM 6200-B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1
Chloromethane	ND	U	0.448	0.500	ug/L	1
Vinyl chloride	ND	U	0.124	0.500	ug/L	1
Bromomethane	ND	U	0.237	0.500	ug/L	1
Chloroethane	ND	U	0.311	0.500	ug/L	1
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1
Bromochloromethane	ND	U	0.211	0.500	ug/L	1
Chloroform	ND	U	0.139	0.500	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1
Benzene	ND	U	0.113	0.500	ug/L	1
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1
Trichloroethene	ND	U	0.125	0.500	ug/L	1
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1
Dibromomethane	ND	U	0.168	0.500	ug/L	1
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1
Toluene	ND	U	0.133	0.500	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1
Chlorobenzene	ND	U	0.116	0.500	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1
Bromoform	ND	U	0.0974	0.500	ug/L	1
Bromobenzene	ND	U	0.110	0.500	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1
m,p-Xylene	ND	U	0.182	1.00	ug/L	1

Print Date: 09/27/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 29035 [VXX/4021]
Blank Lab ID: 90098
QC for Samples:
31202965010, 31202965011

Matrix: Water

Results by **SM 6200-B**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Styrene	ND	U	0.102	0.500	ug/L	1
o-Xylene	ND	U	0.0874	0.500	ug/L	1
Xylene (total)	ND	U	0.269	1.50	ug/L	1
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1
Naphthalene	ND	U	0.0855	0.500	ug/L	1
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1
Surrogates						
1,2-Dichloroethane-d4	97.5			64.0-140	%	1
Toluene d8	102			82.0-117	%	1
4-Bromofluorobenzene	101			85.0-115	%	1

Batch Information

Analytical Batch: VMS2561
Analytical Method: SM 6200-B
Instrument: MSD8
Analyst: BWS

Prep Batch: VXX4021
Prep Method: SW-846 5030B
Prep Date/Time: 9/19/2012 8:52:28AM
Prep Initial Wt./Vol.: 40 mL
Prep Extract Vol: 40 mL

Print Date: 09/27/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 29035 [VXX/4021]
Blank Spike Lab ID: 90096
Date Analyzed: 09/19/2012 10:40

Spike Duplicate ID: LCSD for HBN 29035 [VXX/4021]
Spike Duplicate Lab ID: 90097
Date Analyzed: 09/19/2012 11:04
Matrix: Water

QC for Samples: 31202965010, 31202965011

Results by **SM 6200-B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Dichlorodifluoromethane	5.00	5.35	107	5.00	5.76	115	33.0-170	7.4	30.00
Chloromethane	5.00	5.45	109	5.00	5.62	112	57.0-132	3.1	30.00
Vinyl chloride	5.00	4.58	92	5.00	4.76	95	59.0-138	3.9	30.00
Bromomethane	5.00	5.92	118	5.00	5.93	119	51.0-134	0.17	30.00
Chloroethane	5.00	5.49	110	5.00	5.48	110	64.0-145	0.18	30.00
Trichlorofluoromethane	5.00	5.30	106	5.00	5.81	116	64.0-133	9.2	30.00
1,1-Dichloroethene	5.00	5.93	119	5.00	5.44	109	71.0-128	8.6	30.00
Methylene chloride	5.00	5.32	106	5.00	5.78	**116***	70.0-113	8.3	30.00
trans-1,2-Dichloroethene	5.00	5.96	119	5.00	5.86	117	57.0-138	1.7	30.00
tert-Butyl methyl ether (MTBE)	5.00	5.79	116	5.00	5.48	110	47.0-142	5.5	30.00
1,1-Dichloroethane	5.00	6.35	127	5.00	6.13	123	68.0-133	3.5	30.00
Diisopropyl Ether	5.00	6.52	130	5.00	6.16	123	66.0-132	5.7	30.00
2,2-Dichloropropane	5.00	6.88	**138***	5.00	5.91	118	74.0-125	15	30.00
cis-1,2-Dichloroethene	5.00	6.55	**131***	5.00	5.51	110	73.0-128	17	30.00
Bromochloromethane	5.00	5.77	115	5.00	5.66	113	73.0-128	1.9	30.00
Chloroform	5.00	6.61	**132***	5.00	5.59	112	74.0-124	17	30.00
1,1,1-Trichloroethane	5.00	5.83	117	5.00	5.77	115	76.0-119	1.0	30.00
Carbon tetrachloride	5.00	5.89	118	5.00	5.67	113	75.0-120	3.8	30.00
1,1-Dichloropropene	5.00	5.32	106	5.00	5.47	109	76.0-124	2.8	30.00
Benzene	5.00	5.53	111	5.00	5.43	109	76.0-124	1.8	30.00
1,2-Dichloroethane	5.00	5.86	117	5.00	5.56	111	76.0-119	5.3	30.00
Trichloroethene	5.00	5.25	105	5.00	5.19	104	74.0-121	1.1	30.00
1,2-Dichloropropane	5.00	5.29	106	5.00	5.49	110	74.0-124	3.7	30.00
Dibromomethane	5.00	5.07	101	5.00	5.49	110	71.0-128	8.0	30.00
Bromodichloromethane	5.00	5.65	113	5.00	5.42	108	72.0-120	4.2	30.00
cis-1,3-Dichloropropene	5.00	5.11	102	5.00	4.98	100	73.0-122	2.6	30.00
Toluene	5.00	5.12	102	5.00	5.45	109	75.0-123	6.2	30.00
trans-1,3-Dichloropropene	5.00	5.30	106	5.00	5.07	101	70.0-125	4.4	30.00
1,1,2-Trichloroethane	5.00	5.71	114	5.00	5.68	114	76.0-121	0.53	30.00
Tetrachloroethene	5.00	5.50	110	5.00	5.51	110	59.0-112	0.18	30.00
1,3-Dichloropropane	5.00	5.70	114	5.00	5.59	112	74.0-120	1.9	30.00
Dibromochloromethane	5.00	5.65	113	5.00	5.29	106	67.0-122	6.6	30.00
1,2-Dibromoethane	5.00	5.46	109	5.00	5.45	109	74.0-119	0.18	30.00
Chlorobenzene	5.00	5.37	107	5.00	5.36	107	74.0-120	0.19	30.00

Print Date: 09/27/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 29035 [VXX/4021]
Blank Spike Lab ID: 90096
Date Analyzed: 09/19/2012 10:40

Spike Duplicate ID: LCSD for HBN 29035 [VXX/4021]
Spike Duplicate Lab ID: 90097
Date Analyzed: 09/19/2012 11:04
Matrix: Water

QC for Samples: 31202965010, 31202965011

Results by **SM 6200-B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	5.00	5.62	112	5.00	5.43	109	73.0-119	3.4	30.00
Bromoform	5.00	5.47	109	5.00	5.43	109	62.0-127	0.73	30.00
Bromobenzene	5.00	5.00	100	5.00	5.41	108	75.0-120	7.9	30.00
1,1,2,2-Tetrachloroethane	5.00	5.40	108	5.00	5.20	104	68.0-129	3.8	30.00
1,2,3-Trichloropropane	5.00	5.05	101	5.00	5.19	104	67.0-126	2.7	30.00
Ethyl Benzene	5.00	6.02	120	5.00	5.38	108	76.0-123	11	30.00
m,p-Xylene	10.0	10.8	108	10.0	9.81	98	76.0-124	9.6	30.00
Styrene	5.00	5.43	109	5.00	4.87	97	76.0-121	11	30.00
o-Xylene	5.00	6.03	121	5.00	5.03	101	75.0-124	18	30.00
Isopropylbenzene (Cumene)	5.00	5.60	112	5.00	5.27	105	77.0-120	6.1	30.00
n-Propylbenzene	5.00	5.62	112	5.00	5.07	101	77.0-123	10	30.00
2-Chlorotoluene	5.00	5.52	110	5.00	5.29	106	74.0-127	4.3	30.00
4-Chlorotoluene	5.00	5.52	110	5.00	5.05	101	77.0-123	8.9	30.00
1,3,5-Trimethylbenzene	5.00	5.50	110	5.00	5.20	104	76.0-122	5.6	30.00
tert-Butylbenzene	5.00	5.12	102	5.00	5.12	102	67.0-122	0.0	30.00
1,2,4-Trimethylbenzene	5.00	5.32	106	5.00	5.11	102	76.0-124	4.0	30.00
sec-Butylbenzene	5.00	5.22	104	5.00	5.03	101	78.0-121	3.7	30.00
1,3-Dichlorobenzene	5.00	5.63	113	5.00	5.54	111	75.0-120	1.6	30.00
4-Isopropyltoluene	5.00	5.12	102	5.00	4.86	97	77.0-120	5.2	30.00
1,4-Dichlorobenzene	5.00	5.10	102	5.00	5.25	105	70.0-125	2.9	30.00
1,2-Dichlorobenzene	5.00	5.51	110	5.00	4.83	97	76.0-118	13	30.00
n-Butylbenzene	5.00	4.72	94	5.00	4.49	90	78.0-118	5.0	30.00
1,2-Dibromo-3-chloropropane	30.0	32.9	110	30.0	28.4	95	62.0-130	15	30.00
1,2,4-Trichlorobenzene	5.00	4.73	95	5.00	4.16	83	72.0-119	13	30.00
Hexachlorobutadiene	5.00	5.16	103	5.00	4.32	86	69.0-121	18	30.00
Naphthalene	5.00	4.48	90	5.00	4.15	83	67.0-122	7.6	30.00
1,2,3-Trichlorobenzene	5.00	5.21	104	5.00	4.69	94	21.0-193	11	30.00
Surrogates									
1,2-Dichloroethane-d4			96.8			104	64.0-140		
Toluene d8			95.6			98.9	82.0-117		
4-Bromofluorobenzene			99			103	85.0-115		

Print Date: 09/27/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 29035 [VXX/4021]
Blank Spike Lab ID: 90096
Date Analyzed: 09/19/2012 10:40

Spike Duplicate ID: LCSD for HBN 29035 [VXX/4021]
Spike Duplicate Lab ID: 90097
Date Analyzed: 09/19/2012 11:04
Matrix: Water

QC for Samples: 31202965010, 31202965011

Results by **SM 6200-B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL

Batch Information

Analytical Batch: **VMS2561**
Analytical Method: **SM 6200-B**
Instrument: **MSD8**
Analyst: **BWS**

Prep Batch: **VXX4021**
Prep Method: **SW-846 5030B**
Prep Date/Time: **09/19/2012 08:52**
Spike Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**
Dupe Init Wt./Vol.: **40 mL** Extract Vol: **40 mL**

Print Date: 09/27/2012

N.C. Certification # 481

Matrix Spike Summary

Original Sample ID: 31202965010 (9-9 (TW))
MS Sample ID: 90223
MSD Sample ID:

QC for Samples: 31202965010, 31202965011

Analysis Date: 09/19/2012 16:48
Analysis Date: 09/19/2012 17:37
Analysis Date:
Matrix: Water

Results by **SM 6200-B**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	ND	5.00	5.94	119				69.0-120		
1,1,1-Trichloroethane	ND	5.00	6.25	125 *				78.0-121		
1,1,2,2-Tetrachloroethane	ND	5.00	6.11	122				76.0-136		
1,1,2-Trichloroethane	ND	5.00	6.04	121				65.0-128		
1,1-Dichloroethane	ND	5.00	6.59	132 *				76.0-128		
1,1-Dichloroethene	ND	5.00	5.78	116				64.0-130		
1,1-Dichloropropene	ND	5.00	6.19	124 *				73.0-120		
1,2,3-Trichlorobenzene	ND	5.00	5.23	105				61.0-126		
1,2,3-Trichloropropane	ND	5.00	5.72	114				10.0-218		
1,2,4-Trichlorobenzene	ND	5.00	4.80	96				61.0-125		
1,2,4-Trimethylbenzene	ND	5.00	5.44	109				31.0-172		
1,2-Dibromo-3-chloropropane	ND	30.0	29.2	97				20.0-171		
1,2-Dibromoethane	ND	5.00	6.27	125 *				79.0-123		
1,2-Dichlorobenzene	ND	5.00	5.89	118				75.0-120		
1,2-Dichloroethane	ND	5.00	5.99	120				71.0-127		
1,2-Dichloropropane	ND	5.00	6.26	125				77.0-129		
1,3,5-Trimethylbenzene	ND	5.00	5.43	109				68.0-132		
1,3-Dichlorobenzene	ND	5.00	5.75	115				73.0-121		
1,3-Dichloropropane	ND	5.00	6.04	121				79.0-121		
1,4-Dichlorobenzene	ND	5.00	5.41	108				75.0-118		
2,2-Dichloropropane	ND	5.00	6.54	131				32.0-157		
2-Chlorotoluene	ND	5.00	5.69	114				79.0-118		
4-Chlorotoluene	ND	5.00	5.53	111				77.0-120		
4-Isopropyltoluene	ND	5.00	4.79	96				75.0-122		
Benzene	0.280	5.00	6.48	130				62.0-135		
Bromobenzene	ND	5.00	5.78	116				65.0-125		
Bromochloromethane	ND	5.00	6.60	132 *				76.0-126		
Bromodichloromethane	ND	5.00	6.50	130 *				74.0-123		
Bromoform	ND	5.00	5.84	117				52.0-122		
Bromomethane	ND	5.00	5.25	105				10.0-284		
n-Butylbenzene	ND	5.00	4.78	96				70.0-124		
Carbon tetrachloride	ND	5.00	6.14	123 *				72.0-122		
Chlorobenzene	ND	5.00	6.13	123 *				77.0-118		
Chloroethane	ND	5.00	5.23	105				10.0-233		
Chloroform	ND	5.00	6.30	126				74.0-128		
Chloromethane	ND	5.00	5.92	118				72.0-138		
Dibromochloromethane	ND	5.00	5.95	119 *				69.0-117		
Dibromomethane	ND	5.00	6.38	128				72.0-137		

Print Date: 09/27/2012

N.C. Certification # 481

Matrix Spike Summary

Original Sample ID: 31202965010 (9-9 (TW))
MS Sample ID: 90223
MSD Sample ID:

QC for Samples: 31202965010, 31202965011

Analysis Date: 09/19/2012 16:48
Analysis Date: 09/19/2012 17:37
Analysis Date:
Matrix: Water

Results by **SM 6200-B**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Dichlorodifluoromethane	ND	5.00	5.04	101				42.0-166		
cis-1,3-Dichloropropene	ND	5.00	5.48	110				67.0-132		
trans-1,3-Dichloropropene	ND	5.00	5.87	117				45.0-144		
Diisopropyl Ether	ND	5.00	7.04	141 *				79.0-122		
Ethyl Benzene	ND	5.00	6.04	121				74.0-126		
Hexachlorobutadiene	ND	5.00	4.59	92				52.0-134		
Isopropylbenzene (Cumene)	ND	5.00	6.02	120				74.0-123		
Methylene chloride	ND	5.00	6.66	133				49.0-155		
Naphthalene	ND	5.00	4.93	99				55.0-140		
Styrene	ND	5.00	5.70	114				73.0-123		
Tetrachloroethene	ND	5.00	6.00	120				46.0-153		
Toluene	0.360	5.00	6.72	134 *				66.0-128		
Trichloroethene	ND	5.00	6.30	126				35.0-136		
Trichlorofluoromethane	ND	5.00	5.23	105				77.0-132		
Vinyl chloride	ND	5.00	4.75	95				68.0-137		
cis-1,2-Dichloroethene	ND	5.00	6.56	131				73.0-134		
m,p-Xylene	1.34	10.0	11.9	105				80.0-118		
n-Propylbenzene	ND	5.00	5.93	119				72.0-128		
o-Xylene	0.250	5.00	5.95	119				80.0-121		
sec-Butylbenzene	ND	5.00	5.18	104				62.0-133		
tert-Butyl methyl ether (MTBE)	ND	5.00	6.47	129				67.0-136		
tert-Butylbenzene	ND	5.00	4.86	97				74.0-121		
trans-1,2-Dichloroethene	ND	5.00	6.91	138 *				75.0-124		
Surrogates										
1,2-Dichloroethane-d4				98				64.0-140		
4-Bromofluorobenzene				99.5				85.0-115		
Toluene d8				103				82.0-117		

Batch Information

Analytical Batch: **VMS2561**
Analytical Method: **SM 6200-B**
Instrument: **MSD8**
Analyst: **BWS**

Prep Batch: **VXX4021**
Prep Method: **SM 6200-B Prep**
Prep Date/Time: **09/19/2012 08:35**
MS Init Wt./Vol.: **40 mL** Extract Vol.: **40 mL**
MSD Init Wt./Vol.: Extract Vol.:

Print Date: 09/27/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8015C GRO

Prep Method: SW-846 5035
Prep Batch: VXX4044
Prep Date: 09/25/2012 08:52

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 29355 [VXX/4044]	91167	09/25/2012 11:21	VGC2155	GC7	MDY
LCSD for HBN 29355 [VXX/4044]	91168	09/25/2012 11:46	VGC2155	GC7	MDY
MB for HBN 29355 [VXX/4044]	91169	09/25/2012 12:12	VGC2155	GC7	MDY
9-1 (5-7.5)	31202965001	09/25/2012 14:44	VGC2155	GC7	MDY
9-2 (5-7.5)	31202965002	09/25/2012 15:10	VGC2155	GC7	MDY
9-3 (7.5-10)	31202965003	09/25/2012 15:35	VGC2155	GC7	MDY
9-4 (10-12.5)	31202965004	09/25/2012 16:01	VGC2155	GC7	MDY
9-5 (10-12)	31202965005	09/25/2012 16:26	VGC2155	GC7	MDY
9-6 (3-5)	31202965006	09/25/2012 16:51	VGC2155	GC7	MDY
9-7 (3-5)	31202965007	09/25/2012 17:17	VGC2155	GC7	MDY
9-8 (2-5)	31202965008	09/25/2012 17:42	VGC2155	GC7	MDY
9-9 (5-7.5)	31202965009	09/25/2012 18:08	VGC2155	GC7	MDY
4-5 (5-7.5)(89995MS)	91581	09/25/2012 21:04	VGC2155	GC7	MDY
4-5 (5-7.5)(89995MSD)	91582	09/25/2012 21:29	VGC2155	GC7	MDY

Method Blank

Blank ID: MB for HBN 29355 [VXX/4044]
Matrix: Soil-Solid as dry weight
Blank Lab ID: 91169
QC for Samples:
31202965001, 31202965002, 31202965003, 31202965004, 31202965005, 31202965006, 31202965007, 31202965008, 31202965009

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

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Gasoline Range Organics (GRO)	ND	U	4.00	4.00	mg/kg	1
Surrogates						
4-Bromofluorobenzene	101			70.0-130	%	1

Batch Information

Analytical Batch: VGC2155
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY

Prep Batch: VXX4044
Prep Method: SW-846 5035
Prep Date/Time: 9/25/2012 8:52:00AM
Prep Initial Wt./Vol.: 5 g
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 29355 [VXX/4044]
Blank Spike Lab ID: 91167
Date Analyzed: 09/25/2012 11:21

Spike Duplicate ID: LCSD for HBN 29355 [VXX/4044]
Spike Duplicate Lab ID: 91168
Date Analyzed: 09/25/2012 11:46
Matrix: Soil-Solid as dry weight

QC for Samples: 31202965001, 31202965002, 31202965003, 31202965004, 31202965005, 31202965006, 31202965007, 31202965008, 31202965009

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

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics (GRO)	16.0	16.1	101	16.0	17.1	107	70.0-130	6.0	30.00
Surrogates									
4-Bromofluorobenzene			101			104	70.0-130		

Batch Information

Analytical Batch: **VGC2155**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**

Prep Batch: **VXX4044**
Prep Method: **SW-846 5035**
Prep Date/Time: **09/25/2012 08:52**
Spike Init Wt./Vol.: **5 g** Extract Vol: **5 mL**
Dupe Init Wt./Vol.: **5 g** Extract Vol: **5 mL**

Print Date: 09/27/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8015C DRO

Prep Method: SW-846 3541
Prep Batch: XXX3075
Prep Date: 09/20/2012 10:09

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 29081 [XXX/3075]	90342	09/20/2012 19:40	XGC2545	GC6	DTF
LCS for HBN 29081 [XXX/3075]	90343	09/20/2012 20:09	XGC2545	GC6	DTF
9-1 (5-7.5)	31202965001	09/22/2012 08:00	XGC2550	GC6	DTF
9-2 (5-7.5)	31202965002	09/22/2012 08:28	XGC2550	GC6	DTF
9-3 (7.5-10)	31202965003	09/22/2012 08:56	XGC2550	GC6	DTF
9-4 (10-12.5)	31202965004	09/22/2012 09:23	XGC2550	GC6	DTF
9-5 (10-12)	31202965005	09/22/2012 09:52	XGC2550	GC6	DTF
9-6 (3-5)	31202965006	09/22/2012 10:19	XGC2550	GC6	DTF
9-7 (3-5)	31202965007	09/22/2012 10:47	XGC2550	GC6	DTF
9-8 (2-5)	31202965008	09/22/2012 11:15	XGC2550	GC6	DTF
9-9 (5-7.5)	31202965009	09/22/2012 11:43	XGC2550	GC6	DTF
38-1 (7.5-10)(89965MS)	90344	09/24/2012 19:55	XGC2554	GC6	DTF
38-1 (7.5-10)(89965MSD)	90345	09/24/2012 20:23	XGC2554	GC6	DTF

Method Blank

Blank ID: MB for HBN 29081 [XXX/3075]
Matrix: Soil-Solid as dry weight
Blank Lab ID: 90342
QC for Samples:
31202965001, 31202965002, 31202965003, 31202965004, 31202965005, 31202965006, 31202965007, 31202965008, 31202965009

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

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Diesel Range Organics (DRO)	ND	U	6.25	6.25	mg/kg	1
Surrogates						
o-Terphenyl	104			40.0-140	%	1

Batch Information

Analytical Batch: XGC2545
Analytical Method: SW-846 8015C DRO
Instrument: GC6
Analyst: DTF

Prep Batch: XXX3075
Prep Method: SW-846 3541
Prep Date/Time: 9/20/2012 10:09:26AM
Prep Initial Wt./Vol.: 32 g
Prep Extract Vol: 10 mL

Print Date: 09/27/2012
N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 29081 [XXX/3075]
Blank Spike Lab ID: 90343
Date Analyzed: 09/20/2012 20:09

Matrix: Soil-Solid as dry weight

QC for Samples: 31202965001, 31202965002, 31202965003, 31202965004, 31202965005, 31202965006, 31202965007, 31202965008, 31202965009

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

Blank Spike (mg/kg)

Parameter	Spike	Result	Rec (%)	CL
Diesel Range Organics (DRO)	62.5	67.2	107	55.0-137
Surrogates				
o-Terphenyl			113	40.0-140

Batch Information

Analytical Batch: **XGC2545**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **XXX3075**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/20/2012 10:09**
Spike Init Wt./Vol.: **32 g** Extract Vol: **10 mL**
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 09/27/2012

N.C. Certification # 481

CHAIN OF CUSTODY

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

CLIENT: NCDOT U-3465 WBS: 39017.1.1
CONTACT: Gordon Box PHONE NO: 336 335-3174
PROJECT: Ray Rd. Parcel 009 SITE / PWSID / WBS #: 39017.1.1
REPORTS TO: Tim Leatherman / Pyramid Environmental
EMAIL: tim@pyramidenvironmental.com
INVOICE TO: NCDOT QUOTE # NCDOT
Gordon Box P.O. NUMBER 39017.1.1

SGS Reference #: 3120296S

PAGE 1 OF 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	PRESERVATIVES USED: Methanol	None	HCl	ANALYSIS REQUIRED: 5035-GRO	3550-DRO	6200B	REMARKS
	9-1 (5-7.5)	9-17-12	10:15	Soil	3	G				X	X		
	9-2 (5-7.5)	9-17-12	10:30	Soil	3	G				X	X		
	9-3 (7.5-10)	9-17-12	10:45	Soil	3	G				X	X		
	9-4 (10-12.5)	9-17-12	11:00	Soil	3	G				X	X		
	9-5 (10-12)	9-17-12	11:15	Soil	3	G				X	X		
	9-6 (3-5)	9-17-12	11:20	Soil	3	G				X	X		
	9-7 (3-5)	9-17-12	11:30	Soil	3	G				X	X		
	9-8 (2-5)	9-17-12	12:00	Soil	3	G				X	X		
	9-9 (5-7.5)	9-17-12	12:15	Soil	3	G				X	X		
	9-9 (TW)	9-17-12	12:30	Water	3	G			X			X	

COLLECTED/RELINQUISHED BY: (1)	DATE	TIME	RECEIVED BY:
Timothy A. Leatherman	9/17/12	19:00	Fed-X
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Received For Laboratory By:	Date	Time	CoC Seal: INTACT BROKEN ABSENT
	9/18/12	10 30	Sample Receipt Temp: C 2.5°C

REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV
REQUESTED TURNAROUND TIME: ☐ Rush:_____ ☐ Standard
SPECIAL DELIVERABLES: State of Origin:_____ ☐ Trust Fund
☐ DoD ☐ EDD:_____ Other:_____
SPECIAL INSTRUCTIONS:
Shipping Carrier:
Shipping Ticket No:
Notes:

SGS-00055 (06/12)

White - Retained by Lab
Yellow - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **NCDOT-Pyramid** Work Order No.: **31202965**

1. _X_ Shipped
   ___ Hand Delivered

   Notes:

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

3. ___ Custody Tape on Container
   _X_ No Custody Tape

4. _X_ Samples Intact
   ___ Samples Broken / Leaking

5. _X_ Chilled on Receipt Actual Temp.(s) in °C: 2.8
   ___ 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

Comments:

Inspected and Logged in by: JJ

Date: Tue-9/18/12 00:00

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

CHAIN OF CUSTODY

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

SGS ANALYTICAL PERSPECTIVES

CLIENT: NCDOT 11-3465 WBS: 39017.1.1
CONTACT: Gordon Box **PHONE NO:** 336 335-3174
PROJECT: Ray Rd: Pave 1009 **SITE / PWSID / WBS #:** 39017.1.1
REPORTS TO: Tim Leatherman / Pyramid Environmental
EMAIL: tim@pyramidenvironmental.com
INVOICE TO: NCDOT **QUOTE #** NCDOT
Gordon Box **P.O. NUMBER** 39017.1.1

SGS Reference #: 3120965

PAGE 1 **OF** 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	PRESERVATIVES USED: Methanol	None	HCl	ANALYSIS REQUIRED: 5035-GRO	3550-DRO	6200B	REMARKS
	9-1 (5-7.5)	9-17-12	10:15	Soil	3	G				X	X		
	9-2 (5-7.5)	9-17-12	10:30	Soil	3	G				X	X		
	9-3 (7.5-10)	9-17-12	10:45	Soil	3	G				X	X		
	9-4 (10-12.5)	9-17-12	11:00	Soil	3	G				X	X		
	9-5 (10-12)	9-17-12	11:15	Soil	3	G				X	X		
	9-6 (3-5)	9-17-12	11:20	Soil	3	G				X	X		
	9-7 (3-5)	9-17-12	11:30	Soil	3	G				X	X		
	9-8 (2-5)	9-17-12	12:00	Soil	3	G				X	X		
	9-9 (5-7.5)	9-17-12	12:15	Soil	3	G				X	X		
	9-9 (TW)	9-17-12	12:30	Water	3	G						X	

COLLECTED/RELINQUISHED BY: (1)	DATE	TIME	RECEIVED BY:
Timothy A. Leatherman	9/17/12	19:00	Fed-X
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Received For Laboratory By:	Date	Time	CoC Seal: INTACT BROKEN ABSENT
	9/18/12	10 30	Sample Receipt Temp: C 2.5°C

REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV
REQUESTED TURNAROUND TIME: ☐ Rush:_____ ☐ Standard

SPECIAL DELIVERABLES: State of Origin:_____ ☐ Trust Fund
☐ DoD ☐ EDD:_____ Other:_____

SPECIAL INSTRUCTIONS:

Shipping Carrier:
Shipping Ticket No:

Notes:

SGS-00055 (06/12)

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

White - Retained by Lab
Yellow - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **NCDOT-Pyramid** Work Order No.: **31202965**

1. _X_ Shipped
   ___ Hand Delivered

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

3. ___ Custody Tape on Container
   _X_ No Custody Tape

4. _X_ Samples Intact
   ___ Samples Broken / Leaking

5. _X_ Chilled on Receipt Actual Temp.(s) in °C: 2.8
   ___ 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: Tue-9/18/12 00:00

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

APPENDIX F

FIELD PERSONNEL LOG

PROJECT NAME: NCDOT Harnett County ROW
TRACTS: ALL

PROJECT NO.: U-3465

Name: Tim Leatherman **Date:** 9/4/12 **Mon** [Tue] **Wed Th Fri Sat Sun**

TASKS PERFORMED:

11:00 to 12:00 Load

12:30 to 13:00 Lunch

13:00 to 14:30 Travel to Ray Road Sites/Parcels.

14:30 to 17:00 Talked with property tenants and property owners for Parcels 004, 019, 021, 022, 038, and 071. Granted access to all Parcels, but Parcel 071. Denied access to Parcel 071.

FIELD PERSONNEL LOG

PROJECT NAME: NCDOT Harnett County ROW TRACTS: 9,19,22,38 **PROJECT NO.:** U-3465

Name: Tim Leatherman **Date:** 9/5/12 **Mon Tue Wed Th Fri Sat Sun**

TASKS PERFORMED:

8:00 to 9:00 a.m. Meet Eric at Parcel 019 and 022 about starting Geophysics surveys.

9:00 to 9:30 a.m. Talked to property owner and store manager about access to Parcel 038. Property owner and store manager granted access to Parcel 038.

9:30 to 10:30 a.m. Talked to store manager for Parcel 009. Store manager gave me additional contact information for access to Parcel 009.

10:30 to 13:00 Travel back to Office and unload.

FIELD PERSONNEL LOG

PROJECT NAME: NCDOT Harnett County ROW TRACTS: ALL **PROJECT NO.:** U-3465

Name: Tim Leatherman **Date:** 9/10/12 **Mon** **Tue Wed Th Fri Sat Sun**

TASKS PERFORMED:

9:00 to 11:00 Load and Travel to Parcel 038

11:00 to 12:00 Helped Eric with Geophysics Survey at Parcel 038

12:00 to 13:00 Meet with Public Utility Locators at Parcels 004, 009, 019, 021, 022, 038, & 069.

13:00 to 13:30 Lunch

13:30 to 18:00 Helped Eric with Geophysics Survey at Parcels 038 and 009.

FIELD PERSONNEL LOG

PROJECT NAME: NCDOT Harnett County ROW TRACTS: ALL **PROJECT NO.:** U-3465

Name: Tim Leatherman **Date:** 9/11/12 **Mon Tue Wed Th Fri Sat Sun**

TASKS PERFORMED:

8:00 to 9:00 Meet private utility locator North State Locating at Parcels 019 & 021. Discussed project with them and looked at Parcels 004, 009, 019, 021, 022, 038, and 069.

9:00 to 13:00 Travel and NCDENR File Review at the Fayetteville Regional Office

13:00 to 13:30 Discussed the utilities found at each site with utility locators.

13:30 to 14:00 Lunch

14:00 to 15:00 Go over the preliminary geophysical results with Eric for each site/parcel.

15:00 to 17:00 Travel back to office and home to pickup sampling supplies.

FIELD PERSONAL LOG

PROJECT NAME: NCDOT Harnett County ROW **PROJECT NO.:** U-3465
TRACT: 9

Name: Eric Cross/Alan McFadden **Date:** 9/11/12 **Mon** [**Tue**] **Wed Th Fri Sat Sun**

TASKS PERFORMED:

Performed geophysical surveys using EM61 magnetometer and GSSI SIR 2000 ground penetrating radar equipment at Parcel 009. Performed geophysical data analysis/processing in field and from home office in evening.

FIELD PERSONNEL LOG

PROJECT NAME: NCDOT Harnett County ROW TRACT: 9 **PROJECT NO.:** U-3465

Name: Tim Leatherman **Date:** 9/17/12 **Mon Tue Wed Th Fri Sat Sun**

TASKS PERFORMED:

8:00 to 9:45 Travel to Parcel 009

9:45 to 13:00 Completed nine soil borings and collected soil samples.

13:00 to 14:00 Lunch

14:00 to 15:00 Site notes, measurements, and photographs.

15:00 to 17:00 Travel back to office, unload, and ship samples to lab.