PRELIMINARY SITE ASSESSMENT

LOUISE LEE PROPERTY – PARCEL 021
HOME IMPROVEMENTS
2330 RAY ROAD
SPRING LAKE, HARNETT COUNTY, NORTH CAROLINA
STATE PROJECT: U-3465
WBS ELEMENT: 39017.1.1
OCTOBER 23, 2012

Report prepared for:

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

FIGURES :

TABLES :

APPENDICES :

PRELIMINARY SITE ASSESSMENT
LOUISE LEE PROPERTY – PARCEL 021
HOME IMPROVEMENTS
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 Louise Lee Property (Parcel 021). The Louise Lee Property (Parcel 021) contains an active home improvement business located at 2330 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, form 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. 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 4, 2012, Pyramid personnel talked with the tenants of Parcel 021 and received access to the property to complete the PSA field work. 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 Louise Lee Property (Parcel 021) contains an active home improvement business. Site observations indicated a former pump island is located west of the subject property building, between the building and Ray Road.

Pyramid also completed PSAs for an additional six properties along Ray Road (Parcel #'s 004, 009, 019, 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 NCDENR personnel, and reviewed aerial photographs in order to determine past uses of the property. Pyramid reviewed the 1938, 1955, 1964, 1971, 1983, 1993, 1999, and 2010 aerial photographs for past uses. The 1955, 1964, 1971, and 1983 aerial photographs are included in **Appendix A**. Historical information reviewed as part of the PSA indicated that **the subject site was first developed for commercial use between 1964 and 1971**. The 1938 air photo shows the property to be undeveloped wooded land. The 1955 and 1964 aerial photographs indicate the land was most likely used for agricultural purposes. The earliest aerial to show a building was the 1971 aerial. Although the air photographs do not provide sufficient detail to identify a gas station, **the building and observed pump island clearly indicate past use as a gas station.**

On September 4, 2012, Pyramid interviewed 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 did not list Parcel 021 on any Federal, Non-Federal or State database**, **including UST registration lists**. The Environmental FirstSearch Report is included in **Appendix B**.

3.0 Geophysical Investigation

Geophysical investigation results indicate the presence of three probable USTs at the property, located north of the building. Field observations indicated a former pump island was located between the building located on the subject property and Ray Road. Three (3) probable metallic USTs were observed by geophysical methods to be oriented from west to east, directly north of the building. The northernmost tank was approximately 7 feet wide and 11 feet long. The middle tank was approximately 4 feet wide and 8 feet long. The southernmost tank was approximately 6 feet wide and 9 feet long. The tops of the tanks were approximately 2 to 3 feet below land surface (bls).

The geophysical investigation confirms that the area containing the proposed ROW and easement at Parcel 021 contains three probable 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 12, 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 within the proposed NCDOT ROW and easement. Soil borings 21-1 and 21-2 were installed adjacent to the former pump island, and soil borings 21-3, 21-4, 21-5, and 21-6 were advanced near the USTs. Soil borings 21-7, 21-8, and 21-9 were advanced along Ray Road down-gradient of the former pump island and probable USTs. 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**.

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 21-1(7.5-10), 21-4(5-7.5), 21-5(7.5-10), 21-6(7-10), 21-7(7.5-10), and 21-8(7.5-10) detected TPH-DRO at concentrations ranging from 11.9 mg/kg to 965 mg/kg, and TPH-GRO at concentrations ranging from <3.22 mg/kg to 4,360 mg/kg. The soil sample depths ranged from 5 to 10 feet bls. The NCDENR Action Levels for TPH-DRO and TPH-GRO is 10 mg/kg. The laboratory results for soil samples 21-2(7.5-10), 21-3(5-7.5), and 21-9(7.5-10) 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 12, 2012, Pyramid converted soil boring 21-1 into a 1-inch diameter temporary monitoring well. Soil boring 21-1 was completed to a total depth of 35 feet bls. The temporary well was constructed with 25 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 at the bottom of the well.

On September 12, 2012, temporary monitoring well 21-1 was gauged using a properly decontaminated electric water level probe. The depth-to-groundwater was gauged at 31 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 21-1(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 21-1(TW) detected the compound naphthalene (6.06 µg/l) above the NCAC 2L Standard of 6.0 µg/l. The laboratory results detected compounds ethyl benzene (1.83 µg/l), isopropylbenzene (0.810 µg/l), toluene (20.6 µg/l), total xylenes (15.8 µg/l), n-Propylbenzene (1.34 µg/l), 1,2,4-Trimethylbenzene (28.5 µg/l), 1,3,5-Trimethylbenzene (4.35 µg/l), and 4-Isopropyltoluene (2.55 µg/l) above laboratory

detection limits, but below the NCAC 2L Groundwater Standards for each compound. No other compounds were detected above laboratory limits. The groundwater results for sample 21-1(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 021 located 2330 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 confirmed the presence of **three probable metallic USTs** at the site. Specifically, three probable metallic USTs were mapped directly north of the building. The tanks were observed to be oriented west to east. The location of the USTs corresponded to visible caps/valves at the ground surface. The northernmost tank was approximately 7 feet wide and 11 feet long. The middle tank was approximately 4 feet wide and 8 feet long. The southernmost tank was approximately 6 feet wide and 9 feet long. The tops of the tanks were approximately 2 to 3 feet deep.

The geophysical investigation confirms that the area containing the proposed ROW and easement at Parcel 021 contains three probable metallic USTs.

5.2 Limited Soil Assessment

Target analytes were detected in six (6) soil samples collected from Parcel 21. Soil samples 21-1(7.5-10), 21-4(5-7.5), 21-5(7.5-10), 21-6(7-10), 21-7(7.5-10), and 21-8(7.5-10) detected TPH-DRO at concentrations ranging from 11.9 mg/kg to 965 mg/kg, and TPH-GRO at concentrations ranging from <3.22 mg/kg to 4,360 mg/kg. The soil sample depths ranged from 5 to 10 feet bls. The NCDENR Action Levels for TPH-DRO and TPH-GRO is 10 mg/kg. The laboratory results for three (3) soil samples; 21-2(7.5-10), 21-3(5-7.5), and 21-9(7.5-10) did not indicate any TPH-DRO or TPH-GRO above laboratory detection limits.

The detection of TPH-GRO and TPH-DRO at soil borings 21-1, 21-4, 21-5, 21-6, 21-7, and 21-8 above NCDENR Action Levels indicates a possible petroleum release from the former UST system at two locations. Soil samples in the vicinity of the probable UST's on the north side of the building and soil samples in the vicinity of the former pump island on the west side of the building indicate concentrations of hydrocarbons exceeding DENR action levels.

Based on the lab results and PID readings, it appears that petroleum impacted soil in the vicinity of the USTs may extend to 15 feet BLS with a rough diameter of 20 feet, resulting in a possible volume of impacted soil of 200 cubic yards. In the vicinity of the former pump island, the depth of hydrocarbon impact appears to exceed ten (10) feet bls and has a minimum diameter of twenty (20) feet, resulting in a possible volume of impacted soil of 200 cubic yards. In both areas, it is possible that soils from 0 to 5 feet BLS can be segregated and analyzed, and if below detection levels, re-used as fill.

5.3 Limited Groundwater Assessment

Soil boring 21-1 was converted into a 1-inch diameter temporary monitoring well to a depth total depth of 35 feet bls. The depth-to-groundwater was gauged at 31 feet bls. The laboratory results for groundwater sample 21-1(TW) detected the compound naphthalene (6.06 µg/l) above the NCAC 2L Standard of 6.0 µg/l. The laboratory results for groundwater sample 21-1(TW) detected the compounds ethyl benzene (1.83 µg/l), isopropylbenzene (0.810 µg/l), toluene (20.6 µg/l), total xylenes (15.8 µg/l), n-Propylbenzene (1.34 µg/l), 1,2,4-Trimethylbenzene (28.5 µg/l), 1,3,5-Trimethylbenzene (4.35 µg/l), and 4-Isopropyltoluene (2.55 µg/l) above laboratory detection limits, but below the NCAC 2L Groundwater Standards for each compound. No other compounds were detected above laboratory limits.

5.4 Recommendations

The three probable USTs identified north of the building on Parcel 21 appear to encroach partially on the proposed Right of Way. These tanks should be removed in accordance with DENR regulations and properly disposed.

During road and utility construction activities, it is possible the NCDOT may encounter petroleum impacted soil over the NCDENR Action Levels near soil borings 21-1, 21-4, 21-5, 21-6, 21-7 and 21-8.

If the petroleum impacted soil is excavated at the former pump island (soil borings 21-1, 21-7, and 21-8) to a depth of 10 feet, approximately 200 cubic yards of petroleum impacted soil may be encountered. If the impacted soil is excavated at the probable USTs (soil borings 21-4, 21-5, and 21-6) to a depth of 10 feet, approximately 200 cubic yards of petroleum impacted soil may be encountered. Pyramid estimates approximately 100 cubic yards of impacted soil may be encountered from 0 to 5 feet at the former pump island, and approximately 100 cubic yards of impacted soil may be encountered from 0 to 5 feet around the probable USTs.

If impacted soil is encountered and removed from around the UST system, the impacted soil should be managed according to NCDENR DWN 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 DWN 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 and excavation plan for the project within the affected ROW and easement.

The results of this preliminary investigation are limited to the boring locations completed during this limited assessment and presented in this report. Additional petroleum impacted soil may be present on the subject property as well as underneath the existing ROW and Ray Road. The laboratory results only reflect the current conditions at the locations sampled on the date this Preliminary Site Assessment was performed.

7.0 Closure

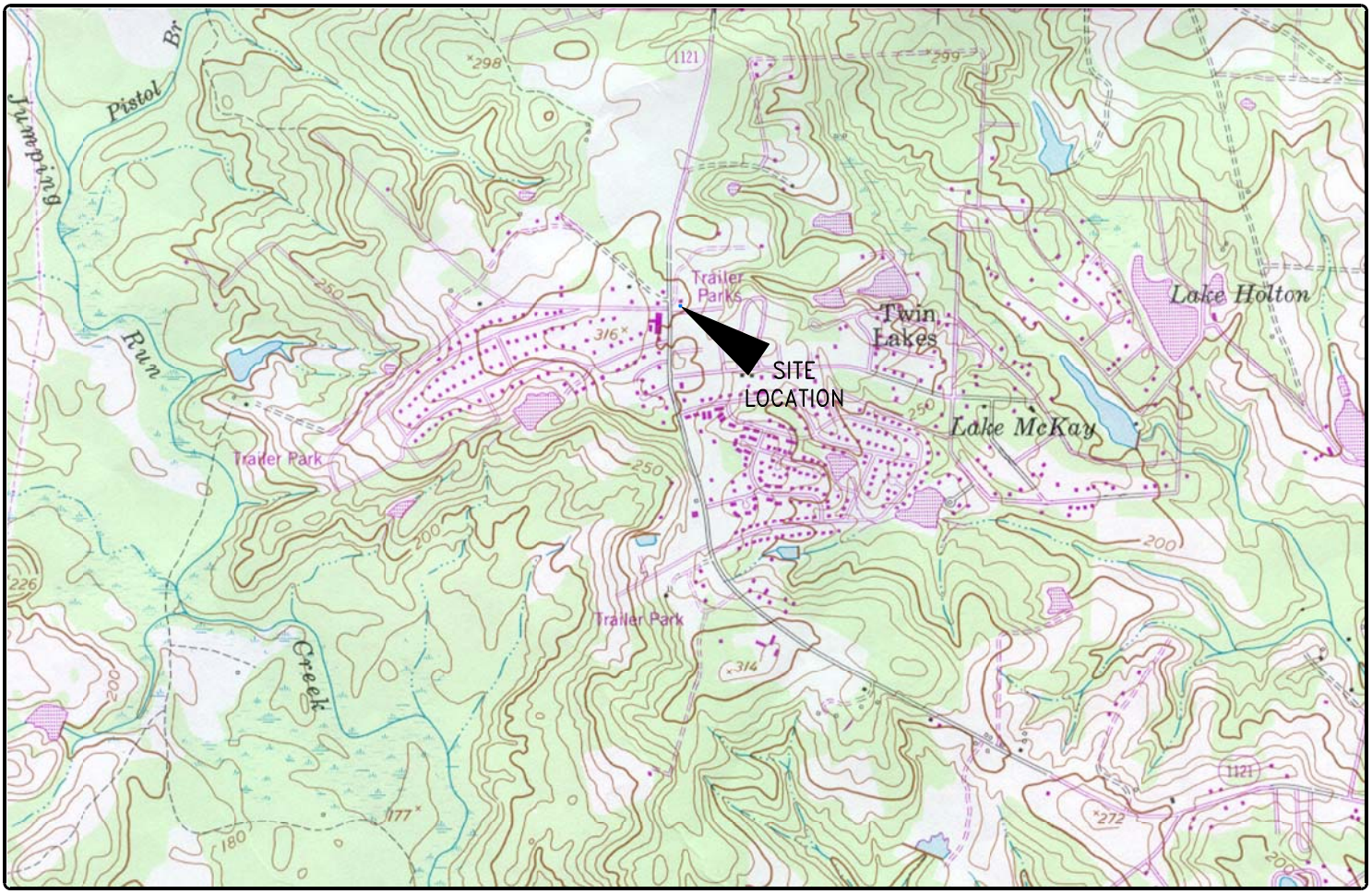
This report was prepared for, and is available solely for use by NCDOT and their designees. The contents thereof may not be used or relied upon by any other person without the express written consent and authorization of Pyramid Environmental & Engineering, P.C. (Pyramid). The observations, conclusions, 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: 2330 RAY ROAD

LOCATION: SPRING LAKE, NORTH CAROLINA



USGS IDENTIFICATION

USGS 7.5 MINUTE MAP	MANCHESTER, NC
ORIGINAL DATE:	1957
PHOTOREVISION DATE:	1987

	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

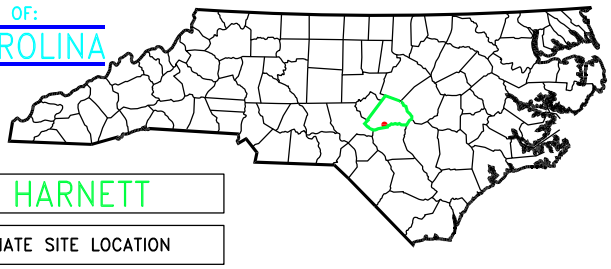
FEET: 1000 0 2000 4000 6000

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:	2330 RAY RD. PARCEL 021
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 019-3(7.5-10')
(8.21)
[<3.24]

B 019-4(3-5')
(<6.99)
[<3.9]

B 019-5(3-5')
(<7.59)
[<3.94]

B 019-6(7.5-10')
(<7.05)
[<3.64]

B 019-2(5-7.5)
(<7.62)
[<3.88]

B 019-7(5-7.5')
(<8.35)
[<5.03]

B 021-5(7.5-10')
(569)
[1250]

B 021-3(5-7.5')
(<6.85)
[<3.54]

B 021-9(7.5-10')
(<6.85)
[<3.54]

B 021-2(7.5-10')
(<7.74)
[<3.58]

B 021-7(7.5-10')
(54.1)
[67]

B 021-8(7.5-10')
(117)
[290]

B 019-1(7.5-10')
(642)
[473]

B 021-6(7-10')
(31.3)
[48.2]

B 021-4(5-7.5')
(11.9)
[<3.22]

B 021-1(7.5-10')
(965)
[4360]

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)

0 50 100
FEET

TITLE: SOIL BORING LOCATIONS AND ESTIMATED AREA OF CONTAMINATION

PROJECT: NCDOT ROW PROJECT U-3465 (3907.1.1)
MARGARET MATTHEWS PROPERTY - PARCEL 019
AND LOUISE LEE PROPERTY - PARCEL 021
RAY ROAD, HARNETT COUNTY, NORTH CAROLINA

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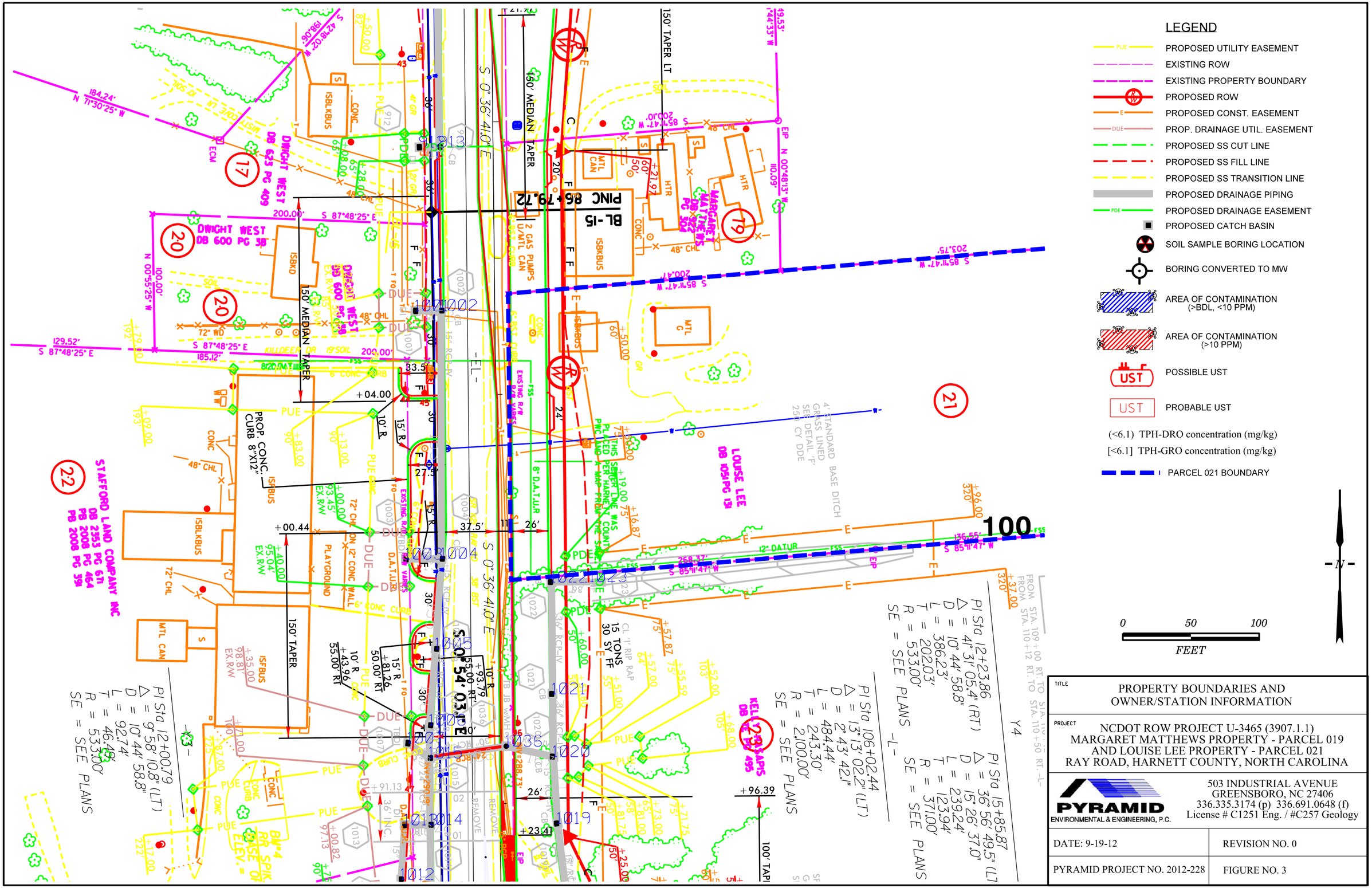
DATE: 9-19-12 | REVISION NO. 0

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



TITLE: PROPERTY BOUNDARIES AND OWNER/STATION INFORMATION

PROJECT: NCDOT ROW PROJECT U-3465 (3907.1.1)
MARGARET MATTHEWS PROPERTY - PARCEL 019
AND LOUISE LEE PROPERTY - PARCEL 021
RAY ROAD, HARNETT COUNTY, NORTH CAROLINA

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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
2330 Ray Road - Parcel 021
Harnett County, Spring Lake, North Carolina

SOIL BORING	SAMPLE ID	DEPTH (feet bgs)	PID READINGS (PPM)
21-1	21-1(3-5)	3 to 5	0
	21-1(5-7.5)	5 to 7.5	1800
	21-1(7.5-10)	7.5 to10	**5100**
	21-1(12.5-15)	12.5 to 15	510
	21-1(17-20)	17 to 20	150
	21-1(22-25)	22 to 25	45
	21-1(27-30)	27 to 30	40
	21-1(32-35)	32 to 35	2150
21-2	21-2(3-5)	3 to 5	25
	21-2(5-7.5)	5 to 7.5	25
	21-2(7.5-10)	7.5 to 10	**40**
21-3	21-3(2-5)	2 to 5	25
	21-3(5-7.5)	5 to 7.5	**40**
	21-3(7.5-10)	7.5 to10	25
21-4	21-4(3-5)	3 to 5	45
	21-4(5-7.5)	5 to 7.5	**110**
	21-4(7.5-10)	7.5 to 10	40
21-5	21-5(3-5)	3 to 5	**45**
	21-5(5-7.5)	5 to 7.5	120
	21-5(7.5-10)	7.5 to 10	**1000**
	21-5(12.5-15)	12.5 to 15	630
21-6	21-6(3-5)	3 to 5	25
	21-6(7-10)	7 to 10	**160**
21-7	21-7(3-5)	3 to 5	35
	21-7(5-7.5)	5 to 7.5	55
	21-7(7.5-10)	7.5 to 10	**3000**
21-8	21-8(3-5)	3 to 5	95
	21-8(5-7.5)	5 to 7.5	95
	21-8(7.5-10)	7.5 to 10	**3300**
21-9	21-9(2-5)	2 to 5	75
	21-9(5-7.5)	5 to 7.5	45
	21-9(7.5-10)	7.5 to 10	**75**

bgs= below ground surface
PID= photo-ionization detector
PPM= parts-per-million

TABLE 2

Summary of Soil Sample Analytical Results

NCDOT Project U-3465

2330 Ray Road - Parcel 021

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)
21-1(7.5-10)	9/12/2012	7.5 to 10	5100	**965**	**4360**
21-2(7.5-10)	9/12/2012	7.5 to 10	40	<7.74	<3.58
21-3(5-7.5)	9/12/2012	5 to 7.5	40	<7.73	<3.54
21-4(5-7.5)	9/12/2012	5 to 7.5	110	**11.9**	<3.22
21-5(7.5-10)	9/12/2012	7.5 to 10	1000	**569**	**1250**
21-6(7-10)	9/12/2012	7 to 10	160	**31.3**	**48.2**
21-7(7.5-10)	9/12/2012	7.5 to 10	3000	**54.1**	**67**
21-8(7.5-10)	9/12/2012	7.5 to 10	3300	**117**	**290**
21-9(7.5-10)	9/12/2012	7.5 to 10	75	<6.85	<3.54
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

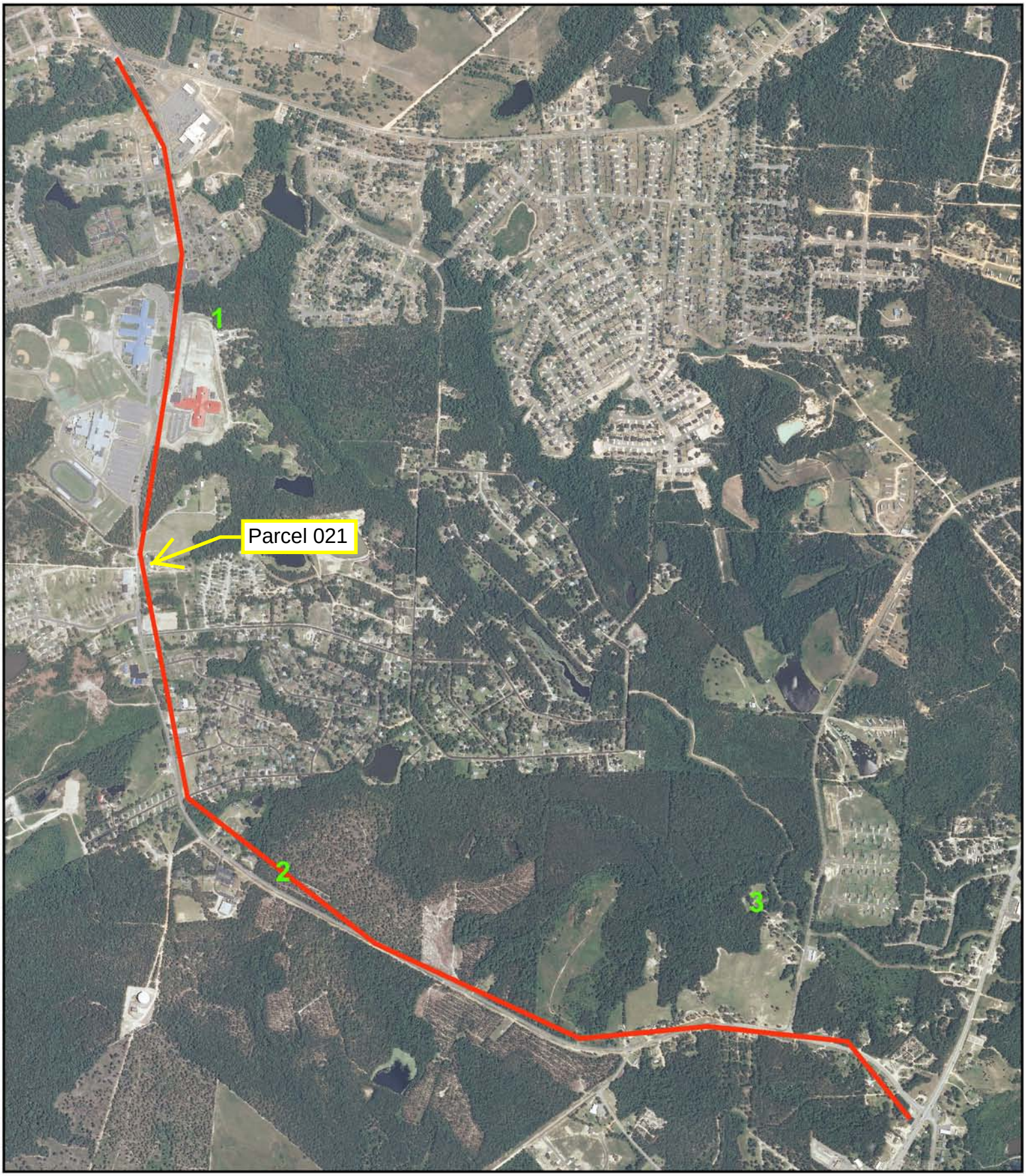
Summary of Groundwater Analytical Results

NCDOT Project U-3465
2330 Ray Road - Parcel 021
Harnett County, Spring Lake, North Carolina

PARAMETER	UNITS	SAMPLE ID	NCAC 2L GROUNDWATER STANDARD
		21-1(TW)	
EPA Method 6200B; Sample Collection Date: 9/12/12			
Benzene	ug/L	ND	1
Chloroform	ug/L	ND	70
Diisopropyl Ether (IPE)	ug/L	ND	70
Ethyl Benzene	ug/L	1.83	600
Isopropylbenzene (Cumene)	ug/L	0.810	70
Naphthalene	ug/L	**6.06**	6
Styrene	ug/L	ND	70
Toluene	ug/L	20.6	600
Total Xylenes	ug/L	15.8	500
n-Propylbenzene	ug/L	1.34	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	28.5	400
1,2-Dichloroethane	ug/L	ND	0.4
1,3,5-Trimethylbenzene	ug/L	4.35	400
4-Isopropyltoluene	ug/L	2.55	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

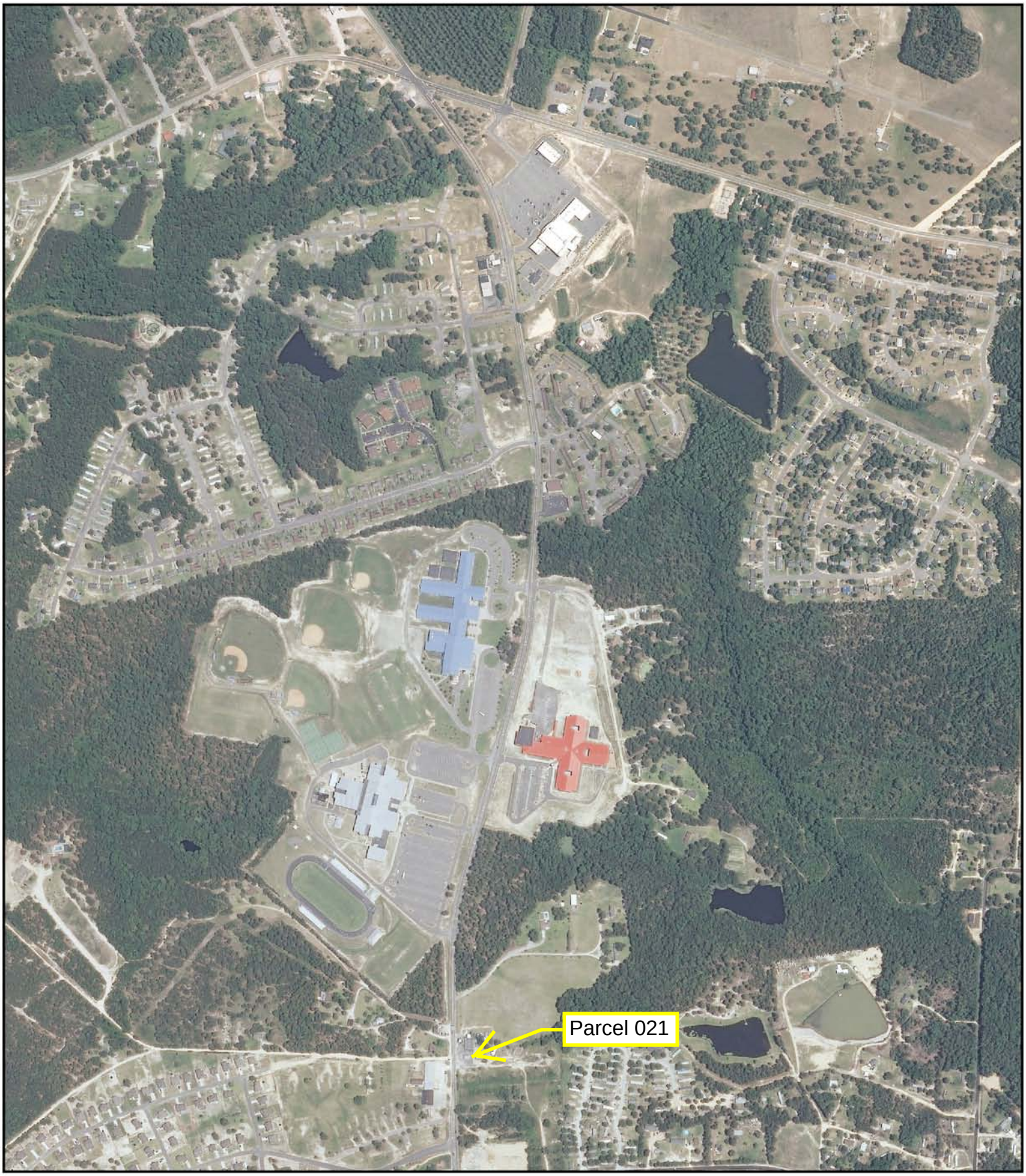
SPRING LAKE, NC 28390

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

FIRSTSEARCH

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

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

FIRSTSEARCH

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

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

FIRSTSEARCH

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

N
W E
S

1 inch equals 750 feet

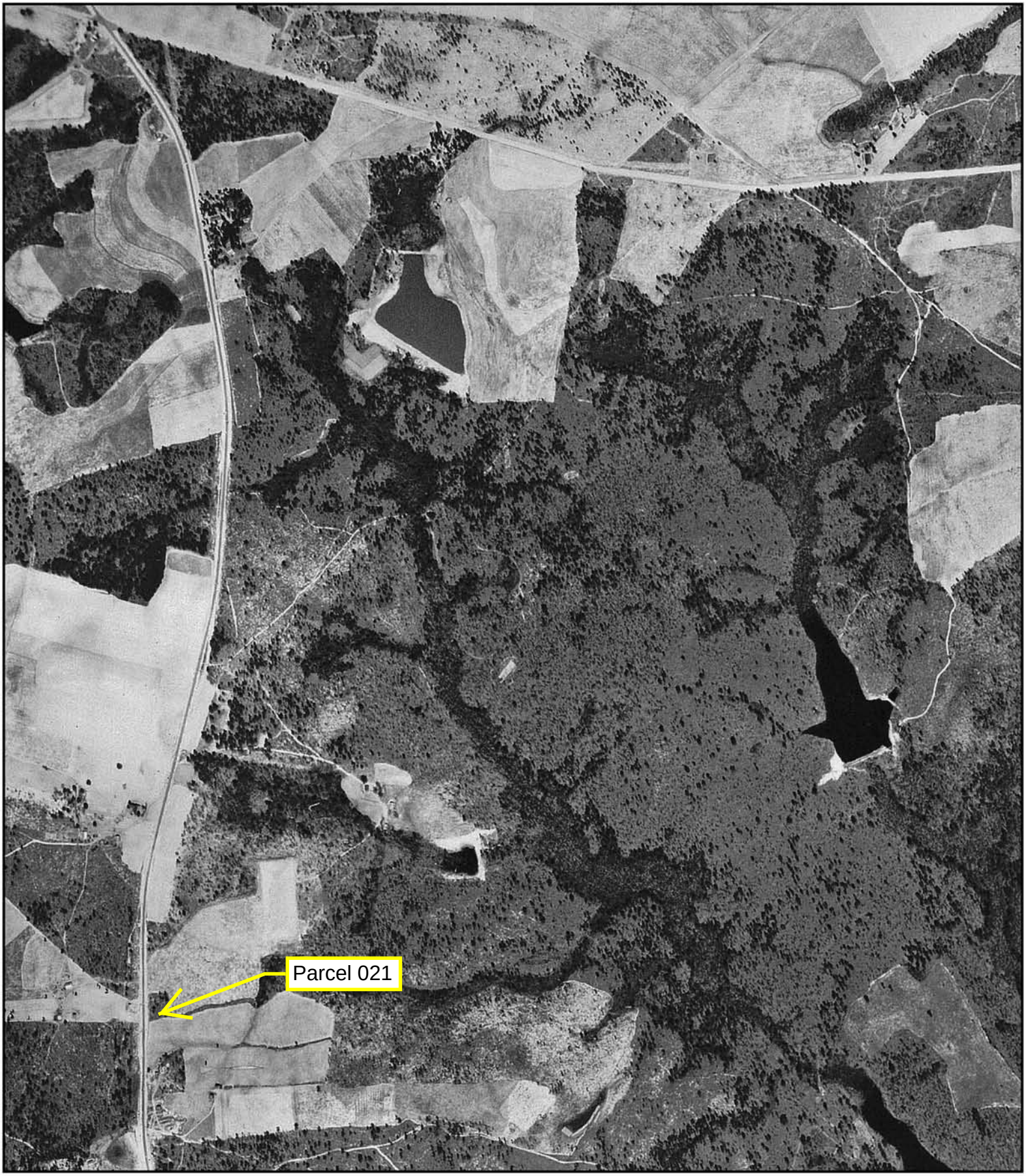
Historical Aerial Photo
1964 - SECTION 1
SR 1121 FROM NC 210 TO SR 1120
SPRING LAKE, NC 28390

FIRSTSEARCH

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

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		

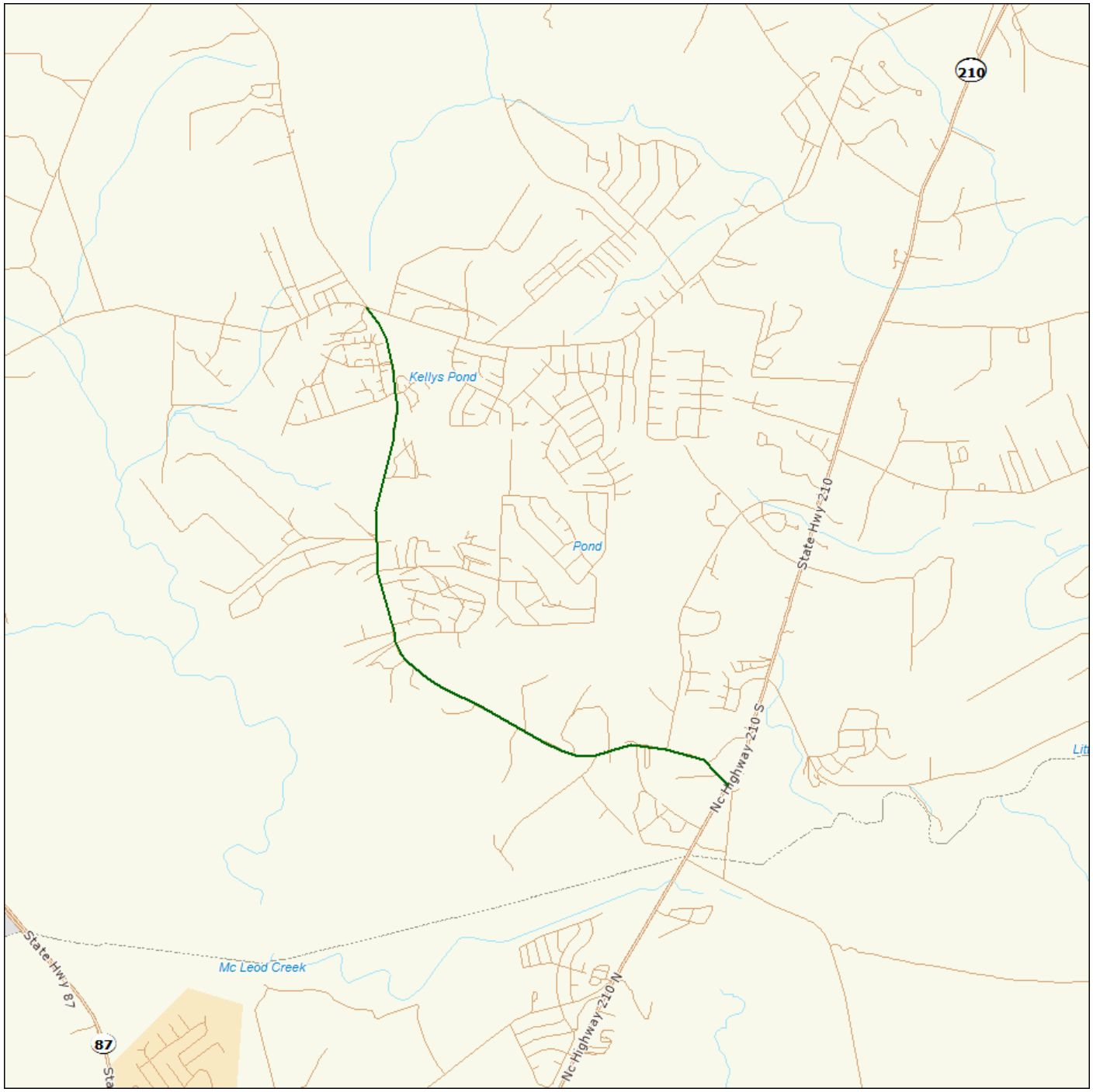
Environmental FirstSearch

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

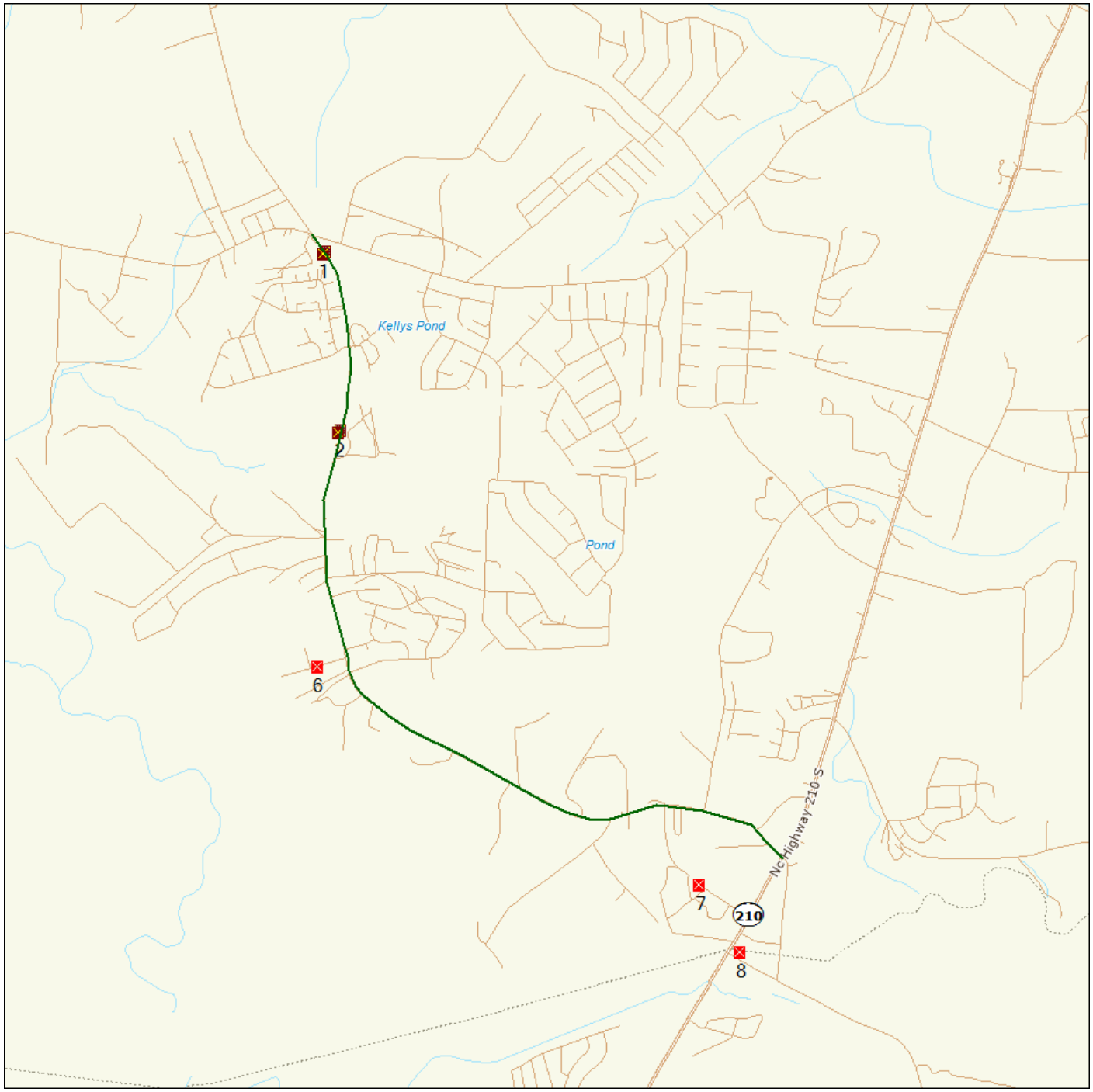
Environmental FirstSearch

.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

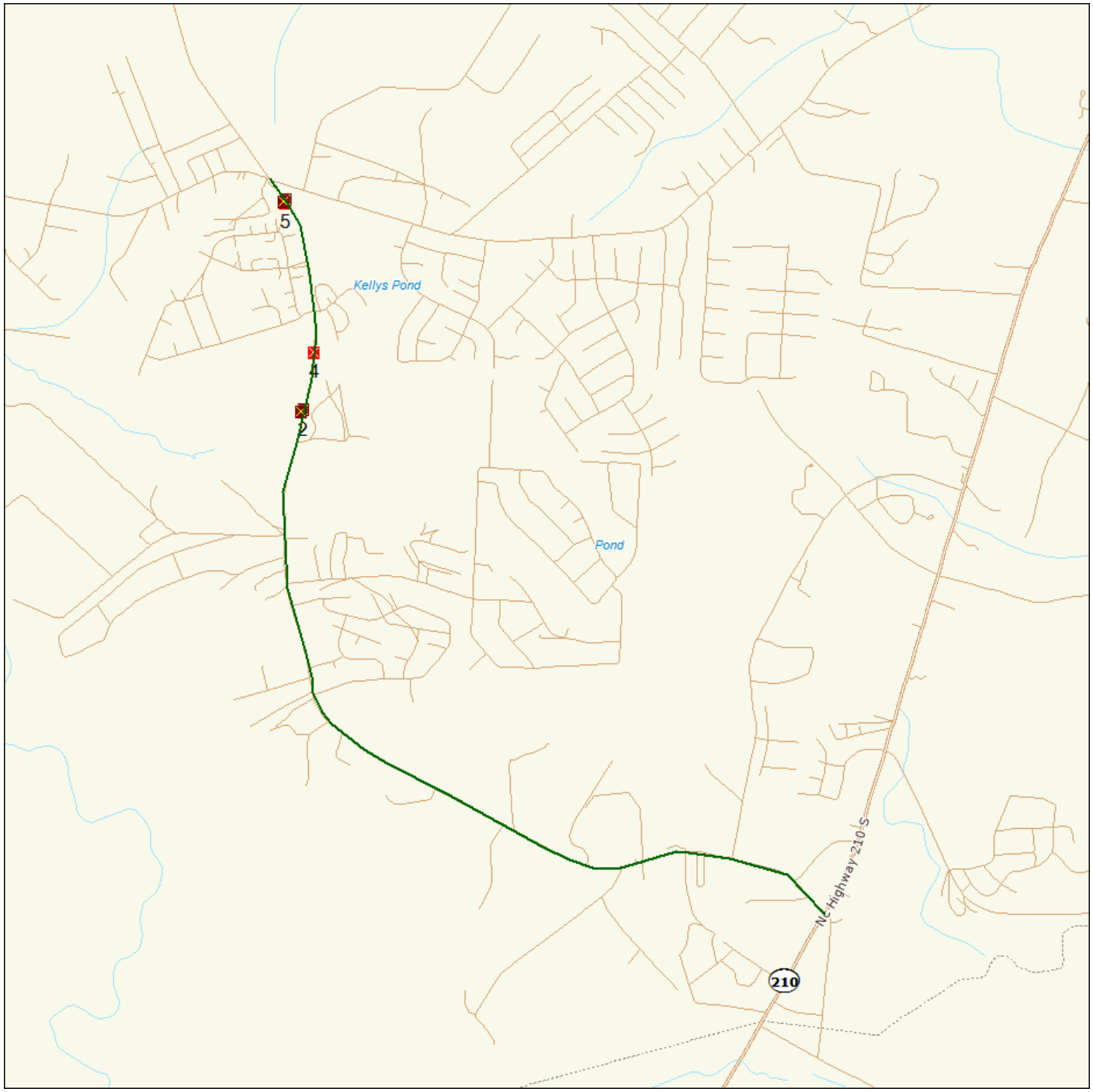
Environmental FirstSearch

.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

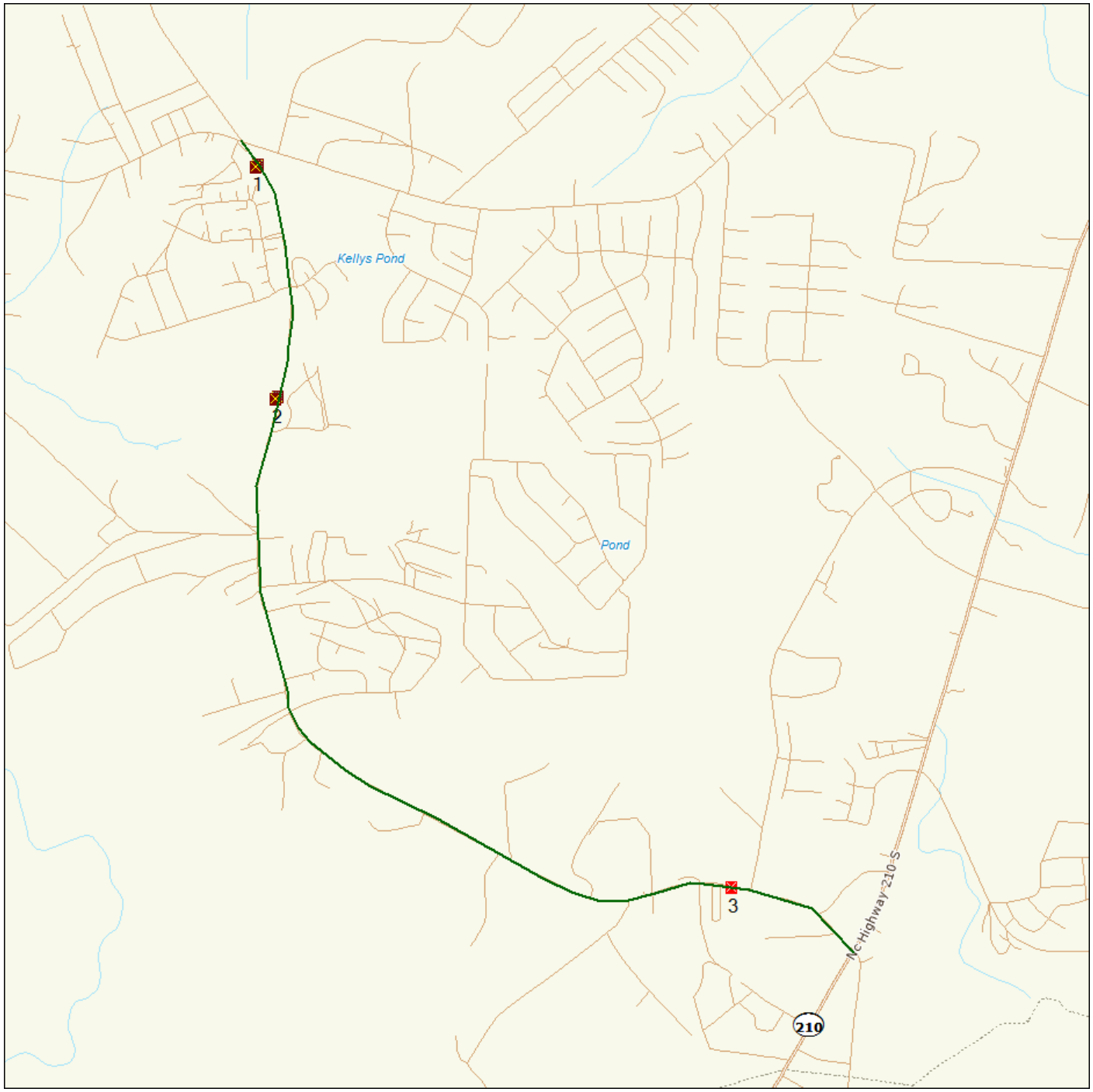
Environmental FirstSearch

.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
2330 RAY ROAD, SPRING LAKE, NC (PARCEL 021)
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

Prepared by: _____
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(336) 335-3174

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
2330 RAY ROAD, SPRING LAKE, NC (PARCEL 021)
NCDOT Project U-3465 (39017.1.1)
Harnett County, North Carolina

TABLE OF CONTENTS PAGE

FIGURES

1.0 INTRODUCTION

Pyramid Environmental and Engineering, P.C. (Pyramid) conducted a geophysical investigation for the North Carolina Department of Transportation (NCDOT) across the proposed right-of way (ROW) and easement areas of the former Home Improvements store (Parcel 021) located at 2330 Ray Road, Spring Lake, NC. The survey area, as directed by the NCDOT, spanned from approximately 110 feet south of the building to approximately 25 feet north of the building, and extended from Ray Road to the east approximately 70 feet. Conducted on September 5 and 6, 2012, the geophysical investigation was performed as part of the North Carolina Department of Transportation (NCDOT) ROW expansion project to determine if unknown, metallic underground storage tanks (USTs) were present beneath the proposed ROW and easements areas of the site.

The area of the site surveyed was predominantly a concrete and asphalt parking lot, with some open grassy area to the south of the building. The geophysical survey area had a maximum width (east/west) of approximately 70 feet and a maximum length (north/south) of approximately 160 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 5, 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 6, 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 proposed ROW and easement areas at 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.

The EM61 features located at coordinates X=30, Y=20 and at X=35, Y=55 are the result of metal sign posts and/or utility boxes at these locations. The elongated, north/south oriented EM feature mapped near the southeast corner of the survey area is the result of a buried utility line extending across this area. The EM response recorded directly adjacent to the former pump island is the result of a metal pole and reinforcement within the concrete pump island. The EM response adjacent to

the building is the result of reinforcement within the building foundation, as well as the presence of metal pipes at the ground surface on the south side of the building. The EM feature between X=30 to 35 and Y=130 to 145 is the result of a concrete traffic median that likely contains reinforcement. The remaining EM responses recorded along the western boundary of the survey area are interpreted to be due to isolated zones of buried metallic debris or utilities. The high amplitude EM61 response to the north of the building between Y=160 and Y=180 was believed to be the result of metallic USTs, and was investigated with the GPR equipment. GPR surveys were also performed across all anomalies not directly attributable to objects at the ground surface to verify the presence or absence of USTs.

As stated above, GPR scans were performed and data viewed in real time across the high amplitude EM61 anomalies that could not be attributed to visible objects at the ground surface. The GPR scans confirmed the presence of three probable metallic USTs at the site. Specifically, three metallic USTs were mapped directly north of the building. The tanks were observed to be oriented west to east. The location of the USTs corresponded to visible caps/valves at the ground surface. The northernmost tank was approximately 7 feet wide and 11 feet long. The middle tank was approximately 4 feet wide and 8 feet long. The southernmost tank was approximately 6 feet wide and 9 feet long. The tops of the tanks were approximately 2 to 3 feet deep. Four specific GPR transects were performed perpendicular and parallel to the three USTs, and saved to the hard drive. Figure 4 presents the locations of these GPR transects, as well as a photograph depicting the approximate locations of the three USTs. Figure 5 presents select GPR transect images (Transects 1, 2 and 4).

The geophysical investigation confirms that the area containing the proposed ROW and easement at Parcel 021 contains at least three probable 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 proposed ROW area at the Former Home Improvements Store property (Parcel 021) located at 2330 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 EM61 features located at coordinates X=30, Y=20 and at X=35, Y=55 are the result of metal sign posts and/or utility boxes at these locations. The elongated, north/south oriented EM feature mapped near the southeast corner of the survey area is the result of a buried utility line extending across this area. The EM response recorded directly adjacent to the former pump island is the result of a metal pole and reinforcement within the concrete pump island. The EM response adjacent to the building is the result of reinforcement within the building foundation, as well as the presence of metal pipes at the ground surface on the south side of the building. The EM feature between X=30 to 35 and Y=130 to 145 is the result of a concrete traffic median that likely contains reinforcement. The remaining EM responses recorded along the western boundary of the survey area are interpreted to be due to isolated zones of buried metallic debris or utilities. The high amplitude EM61 response to the north of the building between Y=160 and Y=180 was believed to be the result of metallic USTs, and was investigated with the GPR equipment.

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- The geophysical investigation suggests that the proposed ROW and easement areas at the property contain three probable 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 proposed ROW and easement area of the Harnett County property, but that none were detected.

FIGURES

Photograph of portion of survey area, facing approximately southwest

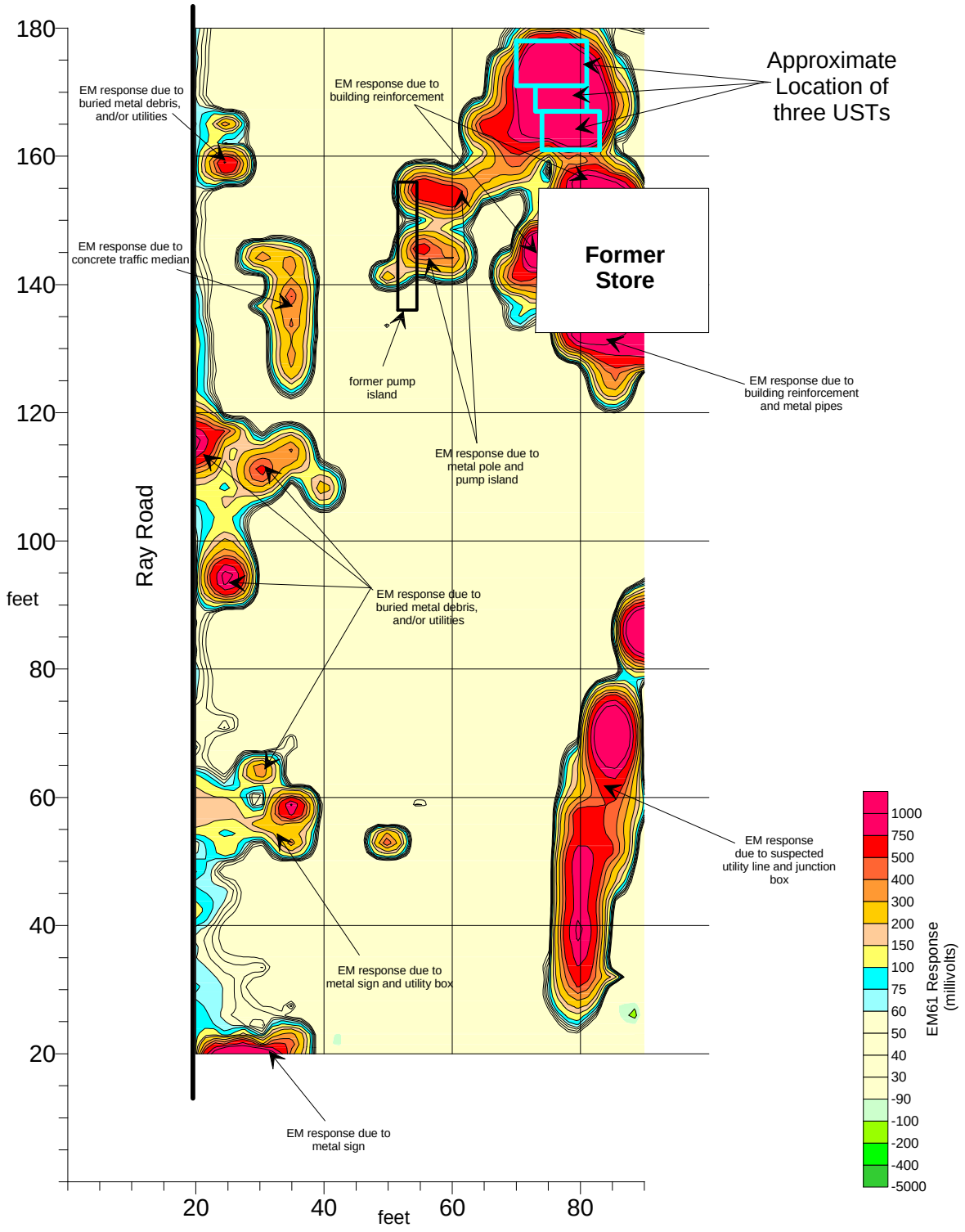
Photograph of portion of portion of survey area, facing approximately south

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	DATE	09/05/12	DRWN	ECC
SITE	NCDOT PROJECT U-3465 (39017.1.1) - PARCEL 021	LAY		CHKD	
CITY	SPRING LAKE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	JOB NO.	2012-228	FIGURE	

SITE PHOTOGRAPHS

FIGURE 1



Three probable USTs confirmed by geophysical survey

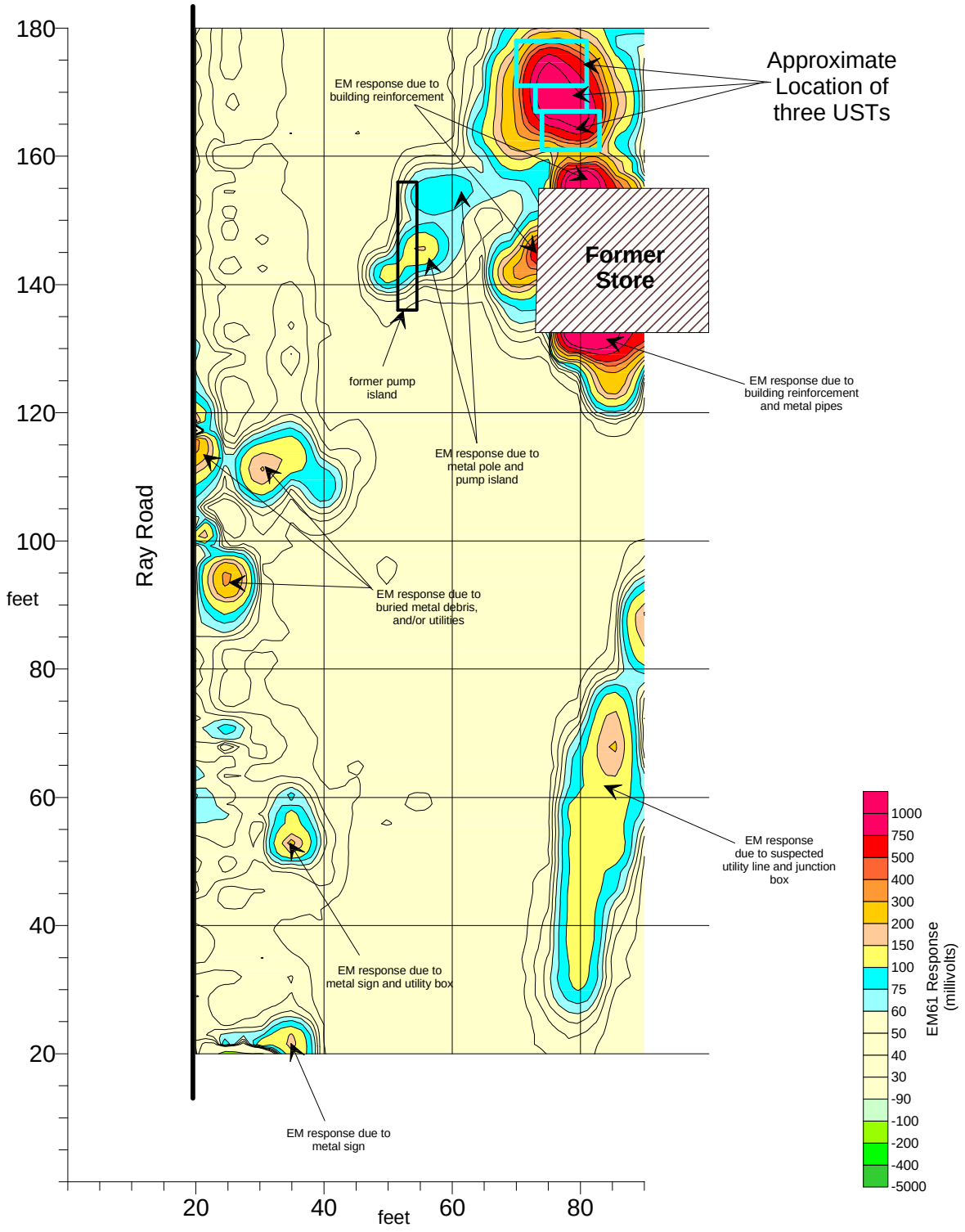
The contour plot shows the bottom coil (most sensitive) results of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM61 data were collected on September 5, 2012 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired across selected EM61 anomalies on September 6, 2012, using a Geophysical Survey Systems SIR 3000 instrument with a 400 MHz antenna.

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	DATE	09/05/12	DRWN	ECC
SITE	NCDOT PROJECT U-3465 (39017.1.1) - PARCEL 021	LAY		CHKD	
CITY	SPRING LAKE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	J-NO.	2012-228	FIGURE	

EM61 BOTTOM COIL RESPONSE CONTOURS

FIGURE 2



Three probable USTs confirmed by geophysical survey

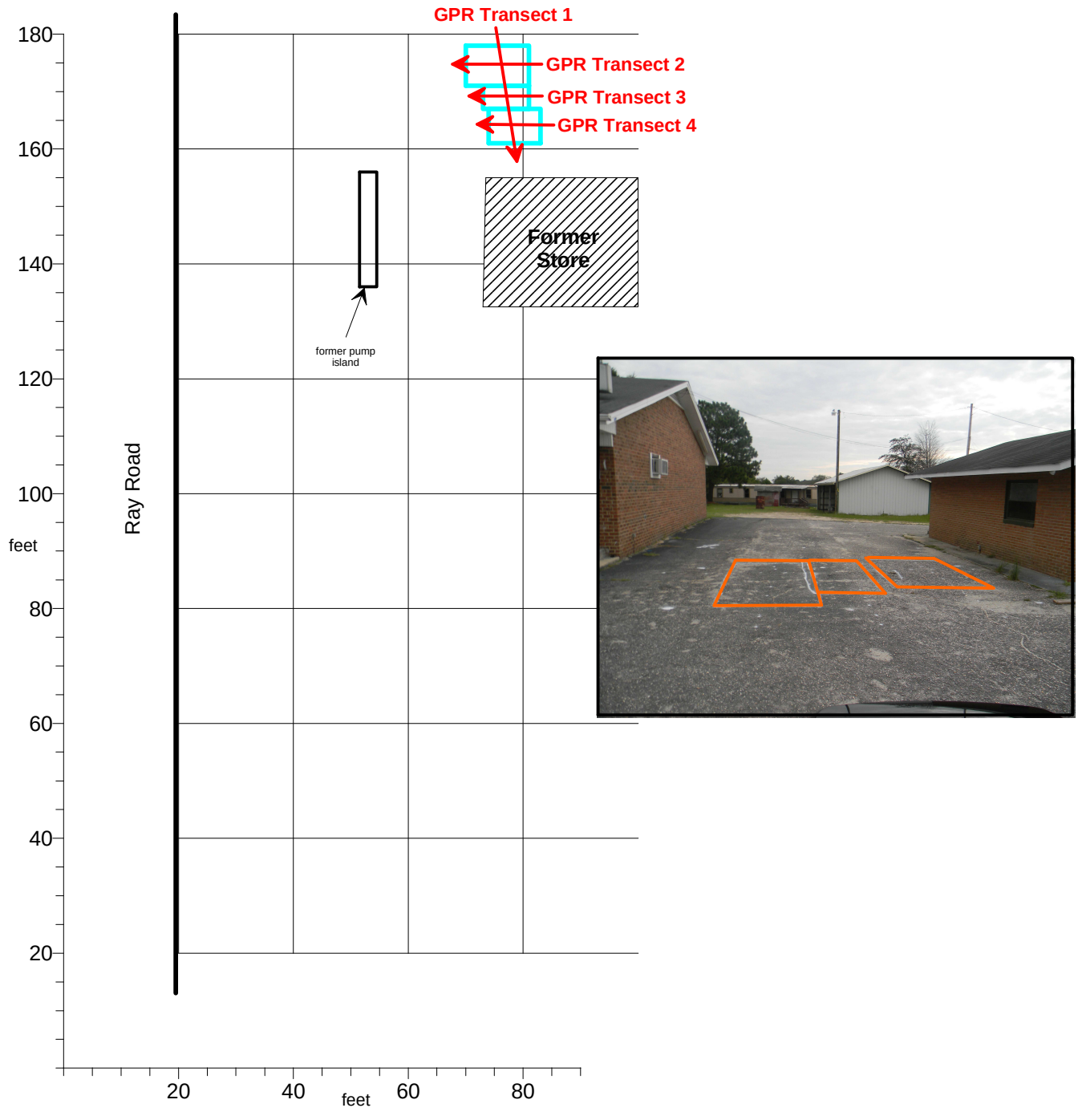
The contour plot shows the differential results of the EM61instrument in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM61 data were collected on September 5, 2012 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired across selected EM61 Anomalies on September 6, 2012 using a Geophysical Survey Systems SIR 3000 instrument with a 400 MHz antenna.

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	DATE	09/05/12	DRWN	ECC
SITE	NCDOT PROJECT U-3465 (39017.1.1) - PARCEL 021	LAY		CHKD	
CITY	SPRING LAKE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	J-NO.	2012-228	FIGURE	

EM61 DIFFERENTIAL RESPONSE CONTOURS

FIGURE 3

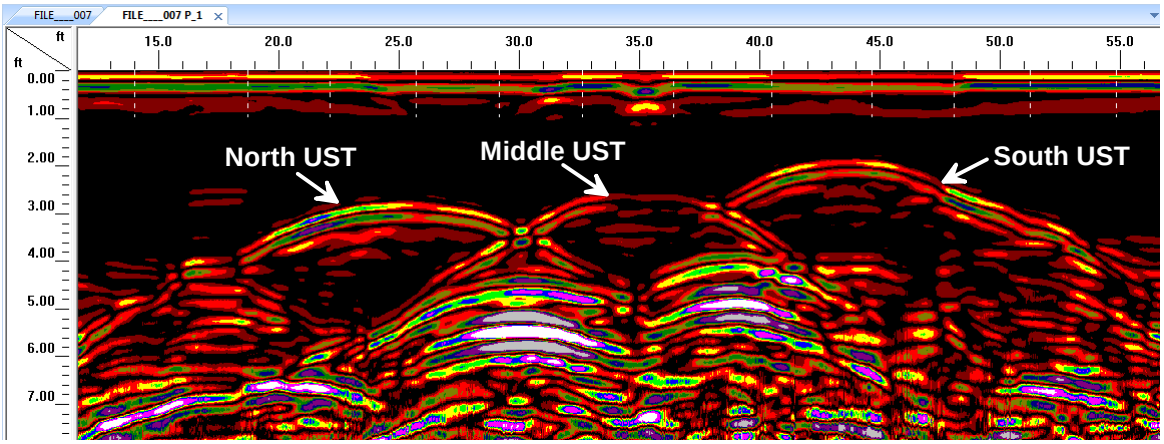


PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

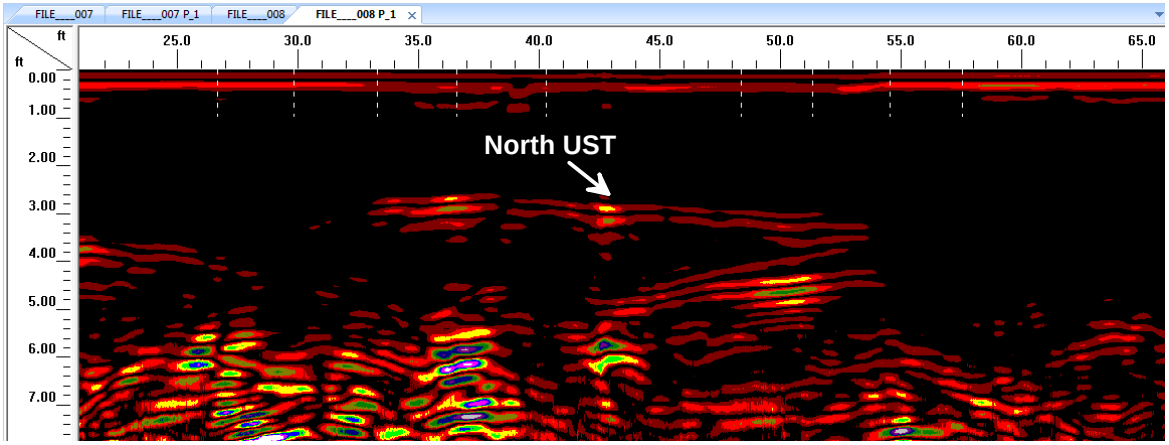
CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	DATE	09/06/12	DRWN	ECC
SITE	NCDOT PROJECT U-3465 (39017.1.1) - PARCEL 021	LAY		CHKD	
CITY	SPRING LAKE	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	J-NO.	2012-228	FIGURE	

GPR TRANSECT LOCATIONS AND APPROXIMATE UST LOCATIONS

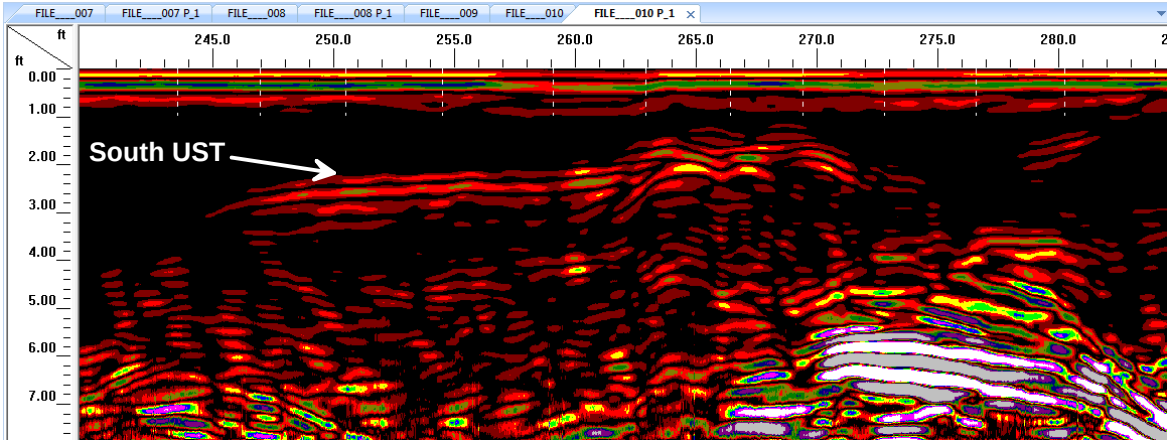
FIGURE 4



GPR Transect 1 - South to North Across the Three USTs



GPR Transect 2 - West to East Along Northern UST



GPR Transect 4 - West to East Along Southern UST

PYRAMID
ENVIRONMENTAL & ENGINEERING, P.C.

CLIENT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	DATE	09/06/12	DRWN	ECC
SITE	NCDOT PROJECT U-3465 (39017.1.1) - PARCEL 021	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

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:**	21-1
SITE LOCATION:	2330 Ray Road - Parcel 021 Harnett County	**BORING/WELL LOCATION:**	Parcel 021 - Near Old Pump Island
START DATE:	9/12/12	**COMPLETED:**	9/12/12
GEOLOGIST:	T. Leatherman	**DRILLER:**	AEDI
DRILL METHOD:	Geoprobe	**SAMPLE METHOD:**	Maco-core
BORING DIA:	2-inch	**CASING DIA:**	1-inch
TOTAL DEPTH:	35 feet	**CASING DEPTH:**	35 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, sand with rock fragments (SW), moist, no petroleum odor	PID=21-1(3-5'): 0.0 PPM
5 to 10'	Brown to tan, clayey-sand to sandy-clay (SC to CL), moist,	PID=21-1(5-5.7'): 1800 PPM
	petroleum odor	PID=21-1(7.5-10'): 5100 PPM
10 to 15'	Tan to white, clayey-sand (SC), moist, petroleum odor	PID=21-1(12.5-15'): 510 PPM
15 to 20'	Tan to white, sand with a small amount of fines (SW to SP), moist,	PID=21-1(17-20'): 150 PPM
	petroleum odor	
20 to 25'	Brown to tan, clayey-sand to sandy-clay (SC to CL), moist,	PID=21-1(22-25'): 45 PPM
	slight petroleum odor	
25 to 30'	Brown, sandy-clay (ML), moist to very moist, slight petroleum odor	PID=21-1(27-30'): 40 PPM
30 to 35'	Brown, sandy-clay to clayey-sand, (SC to CL), saturated,	PID=21-1(32-35'): 2150 PPM
	petroleum odor	
	Set 1-inch temporary well at 35 feet with 10 feet of screen.	
	Depth-to-Groundwater = 31 feet below land surface (BLS)	

MONITORING WELL INFORMATION (IF APPLICABLE)

RISER LENGTH (ft) 25 DEPTH (ft) 0-25 DIAMETER (in) 1 MATERIAL PVC.
SCREEN LENGTH (ft) 10 DEPTH (ft) 25-30 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.

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:**	21-2
SITE LOCATION:	2330 Ray Road - Parcel 021 Harnett County	**BORING/WELL LOCATION:**	Parcel 021 - Near Old Pump Island
START DATE:	9/12/12	**COMPLETED:**	9/12/12
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 tan, sand with quartz rocks/gravel (SW), no odor	PID=21-2(3-5'): 25 PPM
5 to 10'	Brown to tan, clayey-sand to sand with quartz rocks/gravel (SW to CS),	PID=21-2(5-7.5'): 25 PPM
	moist, possible slight petroleum odor	PID=21-2(7.5-10'): 40 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:**	21-3
SITE LOCATION:	2330 Ray Road - Parcel 021 Harnett County	**BORING/WELL LOCATION:**	Parcel 021 - Near Old Product Lines & Old USTs
START DATE:	9/12/12	**COMPLETED:**	9/12/12
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 tan, sand grades into clayey-sand, moist, petroleum odor	PID=21-3(2-5'): 25 PPM
5 to 10'	Brown, clayey-sandy-silt (SC to SM), moist, petroleum odor	PID=21-3(5-7.5'): 40 PPM
		PID=21-3(7.5-10'): 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:**	21-4
SITE LOCATION:	2330 Ray Road - Parcel 021 Harnett County	**BORING/WELL LOCATION:**	Parcel 021 - Near Old USTs
START DATE:	9/12/12	**COMPLETED:**	9/12/12
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 tan, clayey-sand with some rocks/gravel (GP), no odor	PID=21-4(2.5-5'): 45 PPM
5 to 10'	Brown to tan, clayey-sand to sandy-clay with some firm clay layers,	PID=21-4(5-7.5'): 110 PPM
	no odor	PID=21-4(7.5-10'): 40 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:**	21-5
SITE LOCATION:	2330 Ray Road - Parcel 021 Harnett County	**BORING/WELL LOCATION:**	Parcel 021 - Near Old USTs
START DATE:	9/12/12	**COMPLETED:**	9/12/12
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, sand (SP), moist, slight petroleum odor	PID=21-5(3-5'): 45 PPM
5 to 10'	Brown to tan, sandy-clay layer (ML), grades into clayey-sand (SC),	PID=21-5(5-7.5'): 120 PPM
	petroleum odor	PID=21-5(7.5-10'): 1000 PPM
10 to 15'	Tan to white, sand and clay layers - moistly sand (SW to SP), moist,	PID=21-5(12.5-15'):630 PPM
	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:**	21-6
SITE LOCATION:	2330 Ray Road - Parcel 021 Harnett County	**BORING/WELL LOCATION:**	Parcel 021 - Near Old USTs
START DATE:	9/12/12	**COMPLETED:**	9/12/12
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 tan, sand (SP), slightly moist, no odor	PID=21-6(3-5'): 25 PPM
5 to 10'	Brown, sand to clayey-sand (SC), moist, slight odor	PID=21-6(7-10'): 160 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:**	21-7
SITE LOCATION:	2330 Ray Road - Parcel 021 Harnett County	**BORING/WELL LOCATION:**	Parcel 021 - Down-gradient of Old UST System - Near Ray Road
START DATE:	9/12/12	**COMPLETED:**	9/12/12
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, sand to clayey-sand (SC), moist, no odor	PID=21-7(3-5'): 35 PPM
5 to 10'	Brown to tan, clayey-sand with layers of sandy-clay (SC to ML), moist	PID=21-7(5-7.5'): 55 PPM
	petroleum odor	PID=21-7(7.5-10'): 3000 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:**	21-8
SITE LOCATION:	2330 Ray Road - Parcel 021 Harnett County	**BORING/WELL LOCATION:**	Parcel 021 - Down-gradient of Old UST System - Near Ray Road
START DATE:	9/12/12	**COMPLETED:**	9/12/12
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, sand, (SW to SP), moist, no odor	PID=21-8(3-5'): 95 PPM
5 to 10'	Brown to tan, clayey-sand to sandy-clay (SC to ML), moist	PID=21-8(5-7.5'): 95 PPM
	slight petroleum odor	PID=21-8(7.5-10'): 3300 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:**	21-9
SITE LOCATION:	2330 Ray Road - Parcel 021 Harnett County	**BORING/WELL LOCATION:**	Parcel 021 - Down-gradient of Old UST System - Near Ray Road
START DATE:	9/12/12	**COMPLETED:**	9/12/12
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 tan, clayey-sand to sand (SC), moist, no odor	PID=21-9(2-5'): 75 PPM
5 to 10'	Brown to tan, clayey-sand (SC), moist, slight petroleum odor	PID=21-9(5-7.5'): 45 PPM
		PID=21-9(7.5-10'): 75 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 ___.

APPENDIX E

Laboratory Report of Analysis

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

Report Number: **31202948**

Client Project: **Ray Rd., Parcel 021**

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
2012.09.25 09:01:33 -05'00'

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

Date

Print Date: 09/25/2012

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
21-1 (7.5-10)	31202948001	09/12/2012 10:00	09/17/2012 08:40	Soil-Solid as dry weight
21-2 (7.5-10)	31202948002	09/12/2012 10:10	09/17/2012 08:40	Soil-Solid as dry weight
21-3 (5-7.5)	31202948003	09/12/2012 10:20	09/17/2012 08:40	Soil-Solid as dry weight
21-4 (5-7.5)	31202948004	09/12/2012 10:30	09/17/2012 08:40	Soil-Solid as dry weight
21-5 (7.5-10)	31202948005	09/12/2012 10:45	09/17/2012 08:40	Soil-Solid as dry weight
21-6 (7-10)	31202948006	09/12/2012 11:10	09/17/2012 08:40	Soil-Solid as dry weight
21-7 (7.5-10)	31202948007	09/12/2012 11:30	09/17/2012 08:40	Soil-Solid as dry weight
21-8 (7.5-10)	31202948008	09/12/2012 13:40	09/17/2012 08:40	Soil-Solid as dry weight
21-9 (7.5-10)	31202948009	09/12/2012 13:50	09/17/2012 08:40	Soil-Solid as dry weight
21-1 (TW)	31202948010	09/12/2012 16:45	09/17/2012 08:40	Water
Trip Blanks (Not on COC)	31202948011	09/12/2012 00:00	09/17/2012 08:40	Water

Case Narrative

21-1 (7.5-10)
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

21-2 (7.5-10)
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

21-3 (5-7.5)
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

21-4 (5-7.5)
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

21-5 (7.5-10)
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

21-6 (7-10)
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

21-7 (7.5-10)
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

21-8 (7.5-10)
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

21-9 (7.5-10)
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

LCS for HBN 29077 [VXX/4027]
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

LCSD for HBN 29077 [VXX/4027]
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

MB for HBN 29077 [VXX/4027]
8015 GRO- A batch MS/MSD is not reported with batch VGC2149 as the parent sample required additional dilutions.

Trip Blanks (Not on COC)
6200 - This Trip Blank has a reported 'J' concentration for Methylene Chloride.

Detectable Results Summary

Client Sample ID: **21-1 (7.5-10)**
Lab Sample ID: 31202948001-C

SW-846 8015C DRO
SW-846 8015C GRO

Parameter	Result	Units
Diesel Range Organics (DRO)	965	mg/kg
Gasoline Range Organics (GRO)	4360	mg/kg

Client Sample ID: **21-4 (5-7.5)**
Lab Sample ID: 31202948004-C

SW-846 8015C DRO

Parameter	Result	Units
Diesel Range Organics (DRO)	11.9	mg/kg

Client Sample ID: **21-5 (7.5-10)**
Lab Sample ID: 31202948005-C

SW-846 8015C DRO
SW-846 8015C GRO

Parameter	Result	Units
Diesel Range Organics (DRO)	569	mg/kg
Gasoline Range Organics (GRO)	1250	mg/kg

Client Sample ID: **21-6 (7-10)**
Lab Sample ID: 31202948006-C

SW-846 8015C DRO
SW-846 8015C GRO

Parameter	Result	Units
Diesel Range Organics (DRO)	31.3	mg/kg
Gasoline Range Organics (GRO)	48.2	mg/kg

Client Sample ID: **21-7 (7.5-10)**
Lab Sample ID: 31202948007-C

SW-846 8015C DRO
SW-846 8015C GRO

Parameter	Result	Units
Diesel Range Organics (DRO)	54.1	mg/kg
Gasoline Range Organics (GRO)	67.0	mg/kg

Client Sample ID: **21-8 (7.5-10)**
Lab Sample ID: 31202948008-C

SW-846 8015C DRO
SW-846 8015C GRO

Parameter	Result	Units
Diesel Range Organics (DRO)	117	mg/kg
Gasoline Range Organics (GRO)	290	mg/kg

Client Sample ID: **21-1 (TW)**
Lab Sample ID: 31202948010-A

SM 6200-B

Parameter	Result	Units
1,2,4-Trimethylbenzene	28.5	ug/L
1,3,5-Trimethylbenzene	4.35	ug/L
4-Isopropyltoluene	2.55	ug/L
Ethyl Benzene	1.83	ug/L
Isopropylbenzene (Cumene)	0.810	ug/L
Naphthalene	6.06	ug/L
Toluene	20.6	ug/L
Xylene (total)	15.8	ug/L
m,p-Xylene	9.84	ug/L
n-Propylbenzene	1.34	ug/L
o-Xylene	5.97	ug/L

Client Sample ID: **Trip Blanks (Not on COC)**
Lab Sample ID: 31202948011-A

SM 6200-B

Parameter	Result	Units	
Methylene chloride	0.560	ug/L	J

Results of **21-1 (7.5-10)**

Client Sample ID: **21-1 (7.5-10)**
Client Project ID: **Ray Rd., Parcel 021**
Lab Sample ID: 31202948001-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 10:00
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 87.60

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

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	**4360**		770	770	mg/kg	250	09/21/2012 12:20
Surrogates							
4-Bromofluorobenzene	103			70.0-130	%	250	09/21/2012 12:20

Batch Information

Analytical Batch: **VGC2150**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**

Prep Batch: **VXX4033**
Prep Method: **SW-846 5035**
Prep Date/Time: **09/18/2012 09:07**
Prep Initial Wt./Vol.: **7.41 g**
Prep Extract Vol: **5 mL**

Print Date: 09/25/2012

N.C. Certification # 481

Results of **21-1 (7.5-10)**

Client Sample ID: **21-1 (7.5-10)**
Client Project ID: **Ray Rd., Parcel 021**
Lab Sample ID: 31202948001-C
Lab Project ID: 31202948

Collection Date: 09/12/2012 10:00
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 87.60

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

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**965**		35.7	35.7	mg/kg	5	09/21/2012 11:16
Surrogates							
o-Terphenyl	95.0			40.0-140	%	5	09/21/2012 11:16

Batch Information

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

Prep Batch: **XXX3067**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/19/2012 11:45**
Prep Initial Wt./Vol.: **31.97 g**
Prep Extract Vol: **10 mL**

Print Date: 09/25/2012

N.C. Certification # 481

Results of **21-2 (7.5-10)**

Client Sample ID: **21-2 (7.5-10)**
Client Project ID: **Ray Rd., Parcel 021**
Lab Sample ID: 31202948002-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 10:10
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 78.30

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

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.58	3.58	mg/kg	1	09/21/2012 14:51
S3rruoagt							
4-Bromofluorobenzene	107			70.0-130	%	1	09/21/2012 14:51

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Analytical Batch: **i GC2150**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**

Prep Batch: **i VV40XX**
Prep Method: **SW-846 50X5**
Prep Date/Time: **09/18/2012 09:09**
Prep Initial Wt./Vol.: **7.1X o**
Prep Extract Vol: **5 f L**

Print Date: 09/25/2012

N.C. Certification # 481

Results of **21-2 (7.5-10)**

Client Sample ID: **21-2 (7.5-10)**
Client Project ID: **Ray Rd., Parcel 021**
Lab Sample ID: 31202948002-C
Lab Project ID: 31202948

Collection Date: 09/12/2012 10:10
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 78.30

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

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	7.74	7.74	mg/kg	1	09/20/2012 21:33
S9rruoagt							
o-Terphenyl	86.3			40.0-140	%	1	09/20/2012 21:33

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Analytical Batch: **i GC2545**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **i i i X067**
Prep Method: **SW-846 X541**
Prep Date/Time: **03/13/2012 11:45**
Prep Initial Wt./Vol.: **XX.01 o**
Prep Extract Vol: **10 f L**

Print Date: 09/25/2012

N.C. Certification # 481

ResQts oF21- (7. -50)

Client Sample ID: **21- (7. -50)**
Client Project ID: **Ray(Rd0(Parcel(S21**
Lab Sample ID: 31202948003-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 10:20
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 78.80

ResQts by W8 -46C(4S1. G(OR3

Parameter	ResQt	OQal	DL	L6 O/CL	u nits	DU	Date Analyf ed
z asoline Range 6 rganics (z R6)	GD	u	3.54	3.54	mg/kg	1	09/20/2012 1B:2B
Wurrogates							
4-TromoffQbrobenf ene	102			70.0-130	%	1	09/20/2012 1B:2B

Batch(Information

Analytical Tatch: **VOG2169**
Analytical Method: **W8 -46C(4S1. G(OR3**
InstrQment: **OG5**
Analyst: **MDY**

Prep Tatch: **VXX6S25**
Prep Method: **W8 -46C(. S .**
Prep Date/Wime: **S9/14/2S12((S9:1**
Prep Initial V t./Eol.: **50l4(g**
Prep Nxtract Eol: **. (mL**

Print Date: 09/25/2012

G.C. Certification # 481

Results of **21- (7. -50)**

Client Sample ID: **21- (7. -50)**
Client Project ID: **Ray(Rd0(Parcel(S21**
Lab Sample ID: 31202948003-C
Lab Project ID: 31202948

Collection Date: 09/12/2012 10:20
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 78.80

Results by **W8 -46C(4S1. D(OR9**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	7.73	7.73	mg/kg	1	09/20/2012 22:02
Wurrogates							
o-Terphenyl	91.9			40.0-140	%	1	09/20/2012 22:02

Batch(Information

Analytical Batch: **XGD2. 6.**
Analytical Method: **W8 -46C(4S1. D(OR9**
Instrument: **GDC**
Analyst: **OTF**

Prep Batch: **XXX SC5**
Prep Method: **W8 -46C(. 61**
Prep Date/Time: **S3/13/2S12((11:6.**
Prep Initial Wt./Vol.: **204. (g**
Prep Extract Vol: **1S(mL**

Print Date: 09/25/2012

N.C. Certification # 481

ResQts oF21- (7. -50)

Client Sample ID: **21- (7. -50)**
Client Project ID: **Ray(Rd0(Parcel(S21**
Lab Sample ID: 31202948004-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 10:30
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 87.70

ResQts by W8 -4 6(4S1. C(GRO

Parameter	ResQt	OQal	DL	L6 O/CL	u nits	DU	Date Analyf ed
z asoline Range 6 rganics (z R6)	GD	u	3.22	3.22	mg/kg	1	09/20/2012 15:B1
W8rruoagt							
4-TromoffQbrobenf ene	103			70.0-130	%	1	09/20/2012 15:B1

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Analytical Tatch: **i GC21 9**
Analytical Method: **W8 -4 6(4S1. C(GRO**
InstrQment: **GC5**
Analyst: **MDY**

Prep Tatch: **i VV S25**
Prep Method: **W8 -4 6(. SX.**
Prep Date/Wime: **S9/14/2S12((S9:1.**
Prep Initial V t./Eol.: **50S4(o**
Prep Nxtract Eol: **. (f L**

Print Date: 09/2B/2012

G.C. Certification # 481

Results of 21- (7. -50)

Client Sample ID: **21- (7. -50)**
Client Project ID: **Ray(Rd0(Parcel(S21**
Lab Sample ID: 31202948004-C
Lab Project ID: 31202948

Collection Date: 09/12/2012 10:30
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 87.70

Results by W8 -4 6(4S1. C(DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**1109**		7.01	7.01	mg/kg	1	09/20/2012 22:30
Wurrogates							
o-Terphenyl	105			40.0-140	%	1	09/20/2012 22:30

Batch(Information

Analytical Batch: **XGC2. .**
Analytical Method: **W8 -4 6(4S1. C(DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **XXX3S65**
Prep Method: **W8 -4 6(3. 1**
Prep Date/Time: **S9/19/2S12((11: .**
Prep Initial Wt./Vol.: **320 . (g**
Prep Extract Vol: **1S(mL**

Print Date: 09/25/2012

N.C. Certification # 481

v eyUlty oz **21- (7. 5 -10)**

Client Sample ID: **21- (7. 5 -10)**
Client Project ID: **Ray(Rd5(Parcel(021**
Lab Sample ID: 3120294800- A(
Lab Project ID: 31202948

Collection Date: 09R12R2012 10:4-
v eceide7 Date: 09R1MR2012 08:40
x atris: SoilASoli7 ay 7rwg eih(t
Soli7y %) .: 86O10

v eyUlty bw **SW-846(801 C(GRO**

Parameter	v eyUlt	u Ual	DL	LQu RCL	F nity	Df	Date / nalwGe7
k ayoline v anhe Qrhanicy % v Q.	**12 0**		142	142	mhR5h	40	09R21R2012 12:4-
S3rruoaget							
4ABromozlUorobenGene	10M			M0O A130	)	40	09R21R2012 12:4-

s agcB(lt rurf agol

/ nalwtical Batc(: **i GC21 0**
/ nalwtical x et(o7: **SW-846(801 C(GRO**
InytrUment: **GC.**
/ nalwyt: **MDY**

Prep Batc(: **i VV40XX**
Prep x et(o7: **SW-846(0X**
Prep DateRTime: **09/18/2012((09:16**
Prep Initial WtORVolO **65 (o**
Prep Estract Vol: **(f L**

v eyUty oA21- (7. 5 -10)

Client Sample ID: **21- (7. 5 -10)**
Client Project ID: **Ray(Rd5(Parcel(021**
Lab Sample ID: 3120294800- /C
Lab Project ID: 31202948

Collection Date: 09R12R2012 10:4-
v eceide7 Date: 09R1MR2012 08:40
x atris: Soil/Soli7 ay 7rwg eih(t
Soli7y %) .: 86C10

v eyUty bw **SW-846(801 C(DRO**

Parameter	v eyUlt	u Ual	DL	LQu RCL	F nity	Df	Date z nalwke7
Dieyel v anhe Qrhanicy %Dv Q.	**69**		MC16	MC16	mhR5h	1	09R20R2012 22:- 9
Surrogates							
o/Terp(enwl	9- C			400/140	)	1	09R20R2012 22:- 9

Batch(Information

z nalwtical Batc(: **XGC2 4**
z nalwtical x et(o7: **SW-846(801 C(DRO**
InytrUment: **GC6**
z nalwyt: **DTF**

Prep Batc(: **XXX306.**
Prep x et(o7: **SW-846(3 41**
Prep DateRTime: **09/19/2012((11:4**
Prep Initial WtCRVolC **325 43(g**
Prep Estract Vol: **10(mL**

Print Date: 09R2- R2012

NCCCertiAcation # 481

v eyulty of **21- (7. -150**

Client Sample ID: **21- (7. -150**
Client Project ID: **) Ra() yd(PRrcel(521**
Lab Sample ID: 3120294800- A
Lab Project ID: 31202948

Collection Date: 09R12R2012 11:10
v eceide7 Date: 09R1MR2012 08:40
x atris: SoilASoli7 ay 7rwg eih(t
Soli7y %) .: 806M0

v eyulty bw **SW-84 (8516C(G) O**

Parameter	v eyult	Qual	DL	LOQRCL	Unity	DF	Date / nalwze7
Gayoline v anhe Orhanicy %Gv O.	**48d2**		- 628	- 628	mhRh	2	09R21R2012 14:2-
S3rruoRget							
4A5romofluorobenzene	108			M06OA130	)	2	09R21R2012 14:2-

s RgcB(hl nurf Rgul

/ nalwtical 5atc(: **i GC2165**
/ nalwtical x et(o7: **SW-84 (8516C(G) O**
Inytrument: **GC.**
/ nalwyt: **MDY**

Prep 5atc(: **i VV45XX**
Prep x et(o7: **SW-84 (65X6**
Prep DateRBime: **59/18/2512((59:1.**
Prep Initial T t6RVol8 **. d89(o**
Prep Vstract Wol: **6(f L**

Print Date: 09R2ER2012

N6C6Certification # 481

v eyulty of 21- (7. -150

Client Sample ID: **21- (7. -150**
Client Project ID: **) Ra() yd(PRrcel(521**
Lab Sample ID: 3120294800- /C
Lab Project ID: 31202948

Collection Date: 09R12R2012 11:10
v eceide7 Date: 09R1M2012 08:40
x atris: Soil/Soli7 ay 7rwg eih(t
Soli7y %) .: 806M0

v eyulty bw SW-84 (8516C(D) O

Parameter	v eyult	Qual	DL	LOQRCL	Unity	DF	Date Analwze7
Dieyel v anhe Orhanicy %Dv O.	**91d9**		M6-9	M6-9	mhRh	1	09R20R2012 23:2M
SurrogRtes							
o/5erp(enwl	846T			406)/140	)	1	09R20R2012 23:2M

BRtch(InformRtion

Analwtical Batc(: **XGC2646**
Analwtical x et(o7: **SW-84 (8516C(D) O**
Inytrument: **GC**
Analwyt: **DTF**

Prep Batc(: **XXX95 .**
Prep x et(o7: **SW-84 (9641**
Prep DateR5ime: **53/13/2512((11:46**
Prep Initial Wt6RVol6 **92d2 (g**
Prep Estract Vol: **15(mL**

Print Date: 09R2TR2012

N6C6Certification # 481

v esults of **21- (7 .5-10)**

Client Sample ID: **21- (7 .5-10)**
Client Project ID: **Ray(Rd.,(Parcel(021**
Lab Sample ID: 3120294800- A
Lab Project ID: 31202948

Collection Date: 09/12/2012 11:30
v eceide7 Date: 09/1 -/2012 08:40
Matrix: SoilA Soli7 as 7ry weight
Soli7s (%): 83.- 0

v esults by **SW-846(8015C(GRO**

Parameter	v esult	Qual	DL	LOQ/CL	Units	DF	Date / nalyze7
Gasoline v ange Organics (Gv O)	**6 .0**		1k.8	1k.8	mg/Kg	k	09/21/2012 14:01
S3rruoagt							
4A5romofluorobenzene	104			- 0.0A130	%	k	09/21/2012 14:01

s agcB(hl nurf agul

/ nalytical 5atch: **i GC2150**
/ nalytical Metho7: **SW-846(8015C(GRO**
Instrument: **GC**
/ nalyst: **MDY**

Prep 5atch: **i VV40XX**
Prep Metho7: **SW-846(50X5**
Prep Date/Bime: **09/18/2012((09:20**
Prep Initial T t.R/Vol.: **.5 (o**
Prep Vxtract Vol: **5(f L**

Print Date: 09/2k/2012

E.C. Certification # 481

v esults of **21- (7 .5-10)**

Client Sample ID: **21- (7 .5-10)**
Client Project ID: **Ray(Rd.,(Parcel(021**
Lab Sample ID: 3120294800- /C
Lab Project ID: 31202948

Collection Date: 09R12R2012 11:30
v eceide7 Date: 09R1- R2012 08:40
Matrix: Soil/Soli7 as 7ry weight
Soli7s (%): 83.- 0

v esults by **SW-846(8015C(DRO**

Parameter	v esult	Qual	DL	LOQR CL	Units	DF	Date Analyze7
Diesel v ange Organics (Dv O)	**54.1**		- .24	- .24	mgRkg	1	09R20R2012 23:TT
S9rruoagt							
o/5erphenyl	100			40.0/140	%	1	09R20R2012 23:TT

s agcB(H nurf agul

Analytical Batch: **i GC2545**
Analytical Metho7: **SW-846(8015C(DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **i i i X06**
Prep Metho7: **SW-846(X541**
Prep DateR5ime: **03/13/2012((11:45**
Prep Initial Wt.RVol.: **XX.02(o**
Prep Extract Vol: **10(f L**

Print Date: 09R2TR2012

N.C. Certification # 481

Results of 21- (7. 50-1) R

Client Sample ID: 21- (7. 50-1) R
Client Project ID: a yd(a , 5Rr ycel S) 21
Lab Sample ID: 31202948008-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 13:40
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 84.60

Results by W8 - 46( ) 10C(Ga O

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	23)		74.9	74.9	mg/kg	25	09/21/2012 13:10
Wuccogytl s							
4-Bromofluorobenzene	104			70.0-130	%	25	09/21/2012 13:10

Byteh(Infoamytion

Analytical Batch: VGC210)
Analytical Method: W8 - 46( ) 10C(Ga O
Instrument: GC.
Analyst: MDY

Prep Batch: VXX4) 99
Prep Method: W8 - 46(0) 90
Prep Date/Time:) 3/1 /2) 12(() 3:21
Prep Initial Wt./Vol.: . 5 3(g
Prep Extract Vol: 0(mL

Print Date: 09/25/2012

N.C. Certification # 481

Results of **21- (7. 5D-1) R**

Client Sample ID: **21- (7. 5D-1) R**
Client Project ID: **a yd(a , 5Rr ycel S) 21**
Lab Sample ID: 31202948008-C
Lab Project ID: 31202948

Collection Date: 09/12/2012 13:40
Received Date: 09/17/2012 08:40
Matrix: Soil-Solid as dry weight
Solids (%): 84.60

Results by **W8 - 46( ) 10C(Da O**

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**11.**		7.38	7.38	mg/kg	1	09/21/2012 0:24
W9ccuoygt							
o-5erphenyl	100			40.0-140	%	1	09/21/2012 0:24

s ygeB(hi nucf ygnl

Analytical Tatch: **i GC2040**
Analytical Method: **W8 - 46( ) 10C(Da O**
Instrument: **GC6**
Analyst: **DTF**

Prep Tatch: **i i i X) 6.**
Prep Method: **W8 - 46(X041**
Prep Date/5ime: **) 3/13/2) 12((11:40**
Prep Initial B t./Wol.: **X25) 6(o**
Prep Vxtract Wol: **1) (f L**

Print Date: 09/2E/2012

N.C. Certification # 481

v eyulty of **21- (7. 50-1) R**

Client Sample ID: **21- (7. 50-1) R**
Client Project ID: **a yd(a , 5Rr yœl S) 21**
Lab Sample ID: 31202948009-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 13:R0
v eceide7 Date: 09/1M2012 08:40
x atris: Soil-Soli7 ay 7rwg eih(t
Soli7y %. .: 80640

v eyulty bw **W8 -46C(4) 10G(Oa 3**

Parameter	v eyult	Qual	DL	LOQ/CL	Unity	DF	Date Analwze7
Gayoline v anhe Orhanicy %Gv O.	k D	U	36R4	36R4	mh/5h	1	09/20/2012 18:R8
Wuccogytl s							
4-Bromofluorobenzene	10T			M060-130	)	1	09/20/2012 18:R8

Byteh(Infoamytion

Analwtical Batc(: **VOG216**
Analwtical x et(o7: **W8 -46C(4) 10G(Oa 3**
Inytrument: **OG.**
Analwyt: **MDY**

Prep Batc(: **VXX6) 2.**
Prep x et(o7: **W8 -46C(0) 90**
Prep Date/Wime: **) /14/2) 12(() :22**
Prep Initial V t6Eol8 **. 5) 2(g**
Prep Nstract Eol: **0(mL**

Print Date: 09/2R/2012

k 6C6Certification # 481

v eyulty of **21- (7. 50-1) R**

Client Sample ID: **21- (7. 50-1) R**
Client Project ID: **a yd(a , 5Rr yœl S) 21**
Lab Sample ID: 31202948009-C
Lab Project ID: 31202948

Collection Date: 09/12/2012 13:R0
v eceide7 Date: 09/1M2012 08:40
x atris: Soil-Soli7 ay 7rwg eih(t
Soli7y %. .: 80640

v eyulty bw **W8 -46C(4) 10D(Oa 9**

Parameter	v eyult	Qual	DL	LOQ/CL	Unity	DF	Date Analwze7
Dieyel v anhe Orhanicy %v O.	k D	U	T68R	T68R	mh/5h	1	09/21/2012 0:R2
Wuccogytl s							
o-Berp(enwl	846R			4060-140	)	1	09/21/2012 0:R2

Byteh(Infoamytion

Analwtical Watc(: **XGD2060**
Analwtical x et(o7: **W8 -46C(4) 10D(Oa 9**
Inytrument: **GDC**
Analwyt: **OTF**

Prep Watc(: **XXX3) C.**
Prep x et(o7: **W8 -46C(3061**
Prep Date/Bime: **) /1 /2) 12((11:60**
Prep Initial V t6Eol6 **3C524(g**
Prep Nstract Eol: **1) (mL**

Print Date: 09/2R/2012

k 6C6Certification # 481

Results of **21-1 (TW)**

Client Sample ID: **21-1 (TW)**
Client Project ID: **Ray Rd., Parcel 021**
Lab Sample ID: 31202948010-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 16:45
Received Date: 09/17/2012 08:40
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 13:31
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1	09/19/2012 13:31
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1	09/19/2012 13:31
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1	09/19/2012 13:31
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1	09/19/2012 13:31
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1	09/19/2012 13:31
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1	09/19/2012 13:31
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1	09/19/2012 13:31
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1	09/19/2012 13:31
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1	09/19/2012 13:31
1,2,4-Trimethylbenzene	**28.5**		0.0961	0.500	ug/L	1	09/19/2012 13:31
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1	09/19/2012 13:31
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1	09/19/2012 13:31
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1	09/19/2012 13:31
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1	09/19/2012 13:31
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1	09/19/2012 13:31
1,3,5-Trimethylbenzene	**4.35**		0.113	0.500	ug/L	1	09/19/2012 13:31
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1	09/19/2012 13:31
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1	09/19/2012 13:31
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1	09/19/2012 13:31
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1	09/19/2012 13:31
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1	09/19/2012 13:31
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1	09/19/2012 13:31
4-Isopropyltoluene	**2.55**		0.0769	0.500	ug/L	1	09/19/2012 13:31
Benzene	ND	U	0.113	0.500	ug/L	1	09/19/2012 13:31
Bromobenzene	ND	U	0.110	0.500	ug/L	1	09/19/2012 13:31
Bromochloromethane	ND	U	0.211	0.500	ug/L	1	09/19/2012 13:31
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1	09/19/2012 13:31
Bromoform	ND	U	0.0974	0.500	ug/L	1	09/19/2012 13:31
Bromomethane	ND	U	0.237	0.500	ug/L	1	09/19/2012 13:31
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1	09/19/2012 13:31
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1	09/19/2012 13:31
Chlorobenzene	ND	U	0.116	0.500	ug/L	1	09/19/2012 13:31
Chloroethane	ND	U	0.311	0.500	ug/L	1	09/19/2012 13:31
Chloroform	ND	U	0.139	0.500	ug/L	1	09/19/2012 13:31
Chloromethane	ND	U	0.448	0.500	ug/L	1	09/19/2012 13:31
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1	09/19/2012 13:31
Dibromomethane	ND	U	0.168	0.500	ug/L	1	09/19/2012 13:31
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1	09/19/2012 13:31
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1	09/19/2012 13:31
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1	09/19/2012 13:31
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1	09/19/2012 13:31
Ethyl Benzene	**1.83**		0.0877	0.500	ug/L	1	09/19/2012 13:31

Print Date: 09/25/2012

N.C. Certification # 481

Results of **21-1 (TW)**

Client Sample ID: **21-1 (TW)**
Client Project ID: **Ray Rd., Parcel 021**
Lab Sample ID: 31202948010-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 16:45
Received Date: 09/17/2012 08:40
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 13:31
Isopropylbenzene (Cumene)	**0.810**		0.0869	0.500	ug/L	1	09/19/2012 13:31
Methylene chloride	ND	U	0.152	5.00	ug/L	1	09/19/2012 13:31
Naphthalene	**6.06**		0.0855	0.500	ug/L	1	09/19/2012 13:31
Styrene	ND	U	0.102	0.500	ug/L	1	09/19/2012 13:31
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1	09/19/2012 13:31
Toluene	**20.6**		0.133	0.500	ug/L	1	09/19/2012 13:31
Trichloroethene	ND	U	0.125	0.500	ug/L	1	09/19/2012 13:31
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1	09/19/2012 13:31
Vinyl chloride	ND	U	0.124	0.500	ug/L	1	09/19/2012 13:31
Xylene (total)	**15.8**		0.269	1.50	ug/L	1	09/19/2012 13:31
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1	09/19/2012 13:31
m,p-Xylene	**9.84**		0.182	1.00	ug/L	1	09/19/2012 13:31
n-Propylbenzene	**1.34**		0.113	0.500	ug/L	1	09/19/2012 13:31
o-Xylene	**5.97**		0.0874	0.500	ug/L	1	09/19/2012 13:31
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1	09/19/2012 13:31
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1	09/19/2012 13:31
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1	09/19/2012 13:31
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1	09/19/2012 13:31
Surrogates							
1,2-Dichloroethane-d4	103			64.0-140	%	1	09/19/2012 13:31
4-Bromofluorobenzene	101			85.0-115	%	1	09/19/2012 13:31
Toluene d8	109			82.0-117	%	1	09/19/2012 13:31

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: 09/25/2012

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 021**
Lab Sample ID: 31202948011-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 00:00
Received Date: 09/17/2012 08:40
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 12:18
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1	09/19/2012 12:18
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1	09/19/2012 12:18
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1	09/19/2012 12:18
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1	09/19/2012 12:18
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1	09/19/2012 12:18
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1	09/19/2012 12:18
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1	09/19/2012 12:18
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1	09/19/2012 12:18
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1	09/19/2012 12:18
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1	09/19/2012 12:18
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1	09/19/2012 12:18
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1	09/19/2012 12:18
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1	09/19/2012 12:18
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1	09/19/2012 12:18
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1	09/19/2012 12:18
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1	09/19/2012 12:18
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1	09/19/2012 12:18
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1	09/19/2012 12:18
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1	09/19/2012 12:18
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1	09/19/2012 12:18
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1	09/19/2012 12:18
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1	09/19/2012 12:18
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1	09/19/2012 12:18
Benzene	ND	U	0.113	0.500	ug/L	1	09/19/2012 12:18
Bromobenzene	ND	U	0.110	0.500	ug/L	1	09/19/2012 12:18
Bromochloromethane	ND	U	0.211	0.500	ug/L	1	09/19/2012 12:18
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1	09/19/2012 12:18
Bromoform	ND	U	0.0974	0.500	ug/L	1	09/19/2012 12:18
Bromomethane	ND	U	0.237	0.500	ug/L	1	09/19/2012 12:18
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1	09/19/2012 12:18
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1	09/19/2012 12:18
Chlorobenzene	ND	U	0.116	0.500	ug/L	1	09/19/2012 12:18
Chloroethane	ND	U	0.311	0.500	ug/L	1	09/19/2012 12:18
Chloroform	ND	U	0.139	0.500	ug/L	1	09/19/2012 12:18
Chloromethane	ND	U	0.448	0.500	ug/L	1	09/19/2012 12:18
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1	09/19/2012 12:18
Dibromomethane	ND	U	0.168	0.500	ug/L	1	09/19/2012 12:18
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1	09/19/2012 12:18
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1	09/19/2012 12:18
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1	09/19/2012 12:18
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1	09/19/2012 12:18
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1	09/19/2012 12:18

Print Date: 09/25/2012

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 021**
Lab Sample ID: 31202948011-A
Lab Project ID: 31202948

Collection Date: 09/12/2012 00:00
Received Date: 09/17/2012 08:40
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 12:18
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1	09/19/2012 12:18
Methylene chloride	**0.560**	J	0.152	5.00	ug/L	1	09/19/2012 12:18
Naphthalene	ND	U	0.0855	0.500	ug/L	1	09/19/2012 12:18
Styrene	ND	U	0.102	0.500	ug/L	1	09/19/2012 12:18
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1	09/19/2012 12:18
Toluene	ND	U	0.133	0.500	ug/L	1	09/19/2012 12:18
Trichloroethene	ND	U	0.125	0.500	ug/L	1	09/19/2012 12:18
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1	09/19/2012 12:18
Vinyl chloride	ND	U	0.124	0.500	ug/L	1	09/19/2012 12:18
Xylene (total)	ND	U	0.269	1.50	ug/L	1	09/19/2012 12:18
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1	09/19/2012 12:18
m,p-Xylene	ND	U	0.182	1.00	ug/L	1	09/19/2012 12:18
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1	09/19/2012 12:18
o-Xylene	ND	U	0.0874	0.500	ug/L	1	09/19/2012 12:18
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1	09/19/2012 12:18
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1	09/19/2012 12:18
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1	09/19/2012 12:18
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1	09/19/2012 12:18
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	09/19/2012 12:18
4-Bromofluorobenzene	97.3			85.0-115	%	1	09/19/2012 12:18
Toluene d8	106			82.0-117	%	1	09/19/2012 12:18

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: 09/25/2012

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)	31202948011	09/19/2012 12:18	VMS2561	MSD8	BWS
21-1 (TW)	31202948010	09/19/2012 13:31	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:
31202948010, 31202948011

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: 09/25/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 29035 [VXX/4021]
Blank Lab ID: 90098
QC for Samples:
31202948010, 31202948011

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: 09/25/2012

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: 31202948010, 31202948011

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: 09/25/2012

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: 31202948010, 31202948011

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: 09/25/2012

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: 31202948010, 31202948011

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: 09/25/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8015C GRO

Prep Method: SW-846 5035
Prep Batch: VXX4027
Prep Date: 09/20/2012 08:58

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 29077 [VXX/4027]	90312	09/20/2012 11:21	VGC2149	GC7	MDY
LCSD for HBN 29077 [VXX/4027]	90313	09/20/2012 11:47	VGC2149	GC7	MDY
MB for HBN 29077 [VXX/4027]	90314	09/20/2012 12:12	VGC2149	GC7	MDY
21-3 (5-7.5)	31202948003	09/20/2012 16:26	VGC2149	GC7	MDY
21-4 (5-7.5)	31202948004	09/20/2012 16:51	VGC2149	GC7	MDY
21-9 (7.5-10)	31202948009	09/20/2012 18:58	VGC2149	GC7	MDY

Method Blank

Blank ID: MB for HBN 29077 [VXX/4027]
Blank Lab ID: 90314
QC for Samples:
31202948003, 31202948004, 31202948009

Matrix: Soil-Solid as dry weight

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	98.7			70.0-130	%	1

Batch Information

Analytical Batch: VGC2149
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY

Prep Batch: VXX4027
Prep Method: SW-846 5035
Prep Date/Time: 9/20/2012 8:58:02AM
Prep Initial Wt./Vol.: 5 g
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 29077 [VXX/4027]
Blank Spike Lab ID: 90312
Date Analyzed: 09/20/2012 11:21

Spike Duplicate ID: LCSD for HBN 29077 [VXX/4027]
Spike Duplicate Lab ID: 90313
Date Analyzed: 09/20/2012 11:47
Matrix: Soil-Solid as dry weight

QC for Samples: 31202948003, 31202948004, 31202948009

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	15.7	98	16.0	16.7	104	70.0-130	6.2	30.00
Surrogates									
4-Bromofluorobenzene			92.5			97.6	70.0-130		

Batch Information

Analytical Batch: **VGC2149**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**

Prep Batch: **VXX4027**
Prep Method: **SW-846 5035**
Prep Date/Time: **09/20/2012 08:58**
Spike Init Wt./Vol.: **5 g** Extract Vol: **5 mL**
Dupe Init Wt./Vol.: **5 g** Extract Vol: **5 mL**

Print Date: 09/25/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8015C GRO

Prep Method: SW-846 5035
Prep Batch: VXX4033
Prep Date: 09/21/2012 08:45

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 29120 [VXX/4033]	90654	09/21/2012 11:04	VGC2150	GC7	MDY
LCSD for HBN 29120 [VXX/4033]	90655	09/21/2012 11:29	VGC2150	GC7	MDY
MB for HBN 29120 [VXX/4033]	90656	09/21/2012 11:55	VGC2150	GC7	MDY
21-1 (7.5-10)	31202948001	09/21/2012 12:20	VGC2150	GC7	MDY
21-5 (7.5-10)	31202948005	09/21/2012 12:45	VGC2150	GC7	MDY
21-8 (7.5-10)	31202948008	09/21/2012 13:10	VGC2150	GC7	MDY
21-7 (7.5-10)	31202948007	09/21/2012 14:01	VGC2150	GC7	MDY
21-6 (7-10)	31202948006	09/21/2012 14:26	VGC2150	GC7	MDY
21-2 (7.5-10)	31202948002	09/21/2012 14:51	VGC2150	GC7	MDY
3DPT-04 (2-3ft)(89899MS)	91068	09/21/2012 20:44	VGC2150	GC7	MDY
3DPT-04 (2-3ft)(89899MSD)	91069	09/21/2012 21:10	VGC2150	GC7	MDY

Method Blank

Blank ID: MB for HBN 29027 [VXX/47]] L MairxS: - oxld- olxs ay srwe gxhRi
Blank ba3 ID: 971t 1
CU for - aO8lgy:
] 027294, 770G] 027294, 772G] 027294, 77t G] 027294, 771G] 027294, 77cG] 027294, 77,

ugyPliy 3w **SW-846 8015C GRO**

maraOgigr	ugyPli	CPal	Db	bQC/Ub	Fnxiy	Dp
(ayolxng u anhg Qrhanx)y .(uQz	ND	F	4%7	4%7	Oh/kh	0
Surrogates						
4cBroOoflPoro3gnWging	072			c7%d0] 7	6	0

Batch Information

Analwix)al Bai)R V(U20t 7
Analwix)al MgiRos: - 5 d 41 , 70t U (uQ
InyirPOgni: (Uc
Analwyi: MDY

mrg8 Bai)R VXX47]]
mrg8 MgiRos: - 5 d 41 t 7] t
mrg8 Daig/TxOg: 9/20/2702 , :4t :] 1AM
mrg8 Inxixal 5 i%/ol% t h
mrg8 ESira)i Vol: t Ob

Blank Spike Summary

Blank Spike ID: LCS for HBN 29027 [VXX/47]] b
Blank Spike La3 ID: 971t 4
DaAe y nalzdeu: 79/20/2702 00:74

Spike DcpliRaAe ID: LCSD for HBN 29027 [VXX/47]] b
Spike DcpliRaAe La3 ID: 971t t
DaAe y nalzdeu: 79/20/2702 00:29
x aAi- : SoilvSoliu aMurz g eihPA

OC for Sa(pleM] 027294, 770Q] 027294, 772Q] 027294, 77t Q] 027294, 771Q] 027294, 77GQ] 027294, 77,

s eMctlAM3z **SW-846 8015C GRO**

	Blank Spike % h/kh8			Spike DcpliRaAe % h/kh8					
mara(eAer	Spike	s eMctlA	s eR% 8	Spike	s eMctlA	s eR% 8	CL	s mD % 8	s mD CL
6 aMoline s anhe . rhaniRM%6 s . 8	0157	0t 59	99	0157	0151	07]	G757v0] 7	45]	] 7577
Surrogates									
4vBro(oflcoro3endene			074			072	G757v0] 7		

Batch Information

y nalzARal BaARP: **VGC2150**
y nalzARal x eARou: **SW-846 8015C GRO**
InMkc(enA **GC9**
y nalzMA **7 MD**

mrep BaARP: **VYY40XX**
mrep x eARou: **SW-846 50X5**
mrep DaAe/Ti(e: **03/21/2012 08:45**
Spike IniAWA5Vol5 **5 g** E-AxaRAVol: **5 mL**
Dcpe IniAWA5Vol5 **5 g** E-AxaRAVol: **5 mL**

Batch Summary

Analytical Method: SW-846 8015C DRO

Prep Method: SW-846 3541
Prep Batch: XXX3067
Prep Date: 09/19/2012 11:45

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 29051 [XXX/3067]	90167	09/20/2012 02:53	XGC2541	GC6	DTF
LCS for HBN 29051 [XXX/3067]	90168	09/20/2012 03:21	XGC2541	GC6	DTF
21-2 (7.5-10)	31202948002	09/20/2012 21:33	XGC2545	GC6	DTF
21-3 (5-7.5)	31202948003	09/20/2012 22:02	XGC2545	GC6	DTF
21-4 (5-7.5)	31202948004	09/20/2012 22:30	XGC2545	GC6	DTF
21-5 (7.5-10)	31202948005	09/20/2012 22:59	XGC2545	GC6	DTF
21-6 (7-10)	31202948006	09/20/2012 23:27	XGC2545	GC6	DTF
21-7 (7.5-10)	31202948007	09/20/2012 23:55	XGC2545	GC6	DTF
21-8 (7.5-10)	31202948008	09/21/2012 00:24	XGC2545	GC6	DTF
21-9 (7.5-10)	31202948009	09/21/2012 00:52	XGC2545	GC6	DTF
19-4 (3-5)(89755MS)	90169	09/21/2012 06:34	XGC2545	GC6	DTF
19-4 (3-5)(89755MSD)	90170	09/21/2012 07:02	XGC2545	GC6	DTF
21-1 (7.5-10)	31202948001	09/21/2012 11:16	XGC2545	GC6	DTF

Method Blank

Blank ID: MB for HBN 29051 [XXX/3067]
Matrix: Soil-Solid as dry weight
Blank Lab ID: 90167
QC for Samples:
31202948001, 31202948002, 31202948003, 31202948004, 31202948005, 31202948006, 31202948007, 31202948008, 31202948009

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	111			40.0-140	%	1

Batch Information

Analytical Batch: XGC2541
Analytical Method: SW-846 8015C DRO
Instrument: GC6
Analyst: DTF

Prep Batch: XXX3067
Prep Method: SW-846 3541
Prep Date/Time: 9/19/2012 11:45:21AM
Prep Initial Wt./Vol.: 32 g
Prep Extract Vol: 10 mL

Print Date: 09/25/2012
N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 29051 [XXX/3067]
Blank Spike Lab ID: 90168
Date Analyzed: 09/20/2012 03:21

Matrix: Soil-Solid as dry weight

QC for Samples: 31202948001, 31202948002, 31202948003, 31202948004, 31202948005, 31202948006, 31202948007, 31202948008, 31202948009

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

Blank Spike (mg/kg)

Parameter	Spike	Result	Rec (%)	CL
Diesel Range Organics (DRO)	62.5	54.0	86	55.0-137
Surrogates				
o-Terphenyl			112	40.0-140

Batch Information

Analytical Batch: **XGC2541**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **XXX3067**
Prep Method: **SW-846 3541**
Prep Date/Time: **09/19/2012 11:45**
Spike Init Wt./Vol.: **32 g** Extract Vol: **10 mL**
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 09/25/2012

N.C. Certification # 481

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(1)

CLIENT: Pyramid Environ./NCDOT - 39017.1.1

CONTACT: Tim Leatherman PHONE NO:(336 335-3174

PROJECT: Ray Rd. Parcel 021 SITE/PWSID# :

REPORTS TO: Pyramid Environmental/Eng. Tim Leatherman FAX NO.:( )

INVOICE TO: NCDOT GordonBox U-3465 WBS: 39017.1.1 QUOTE #: NCDOT U-3465

P.O. NUMBER: 39017.1.1

SGS Reference: 312 02948

PAGE 1 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used: Method / None	Analysis Required (3): 5035 - GRO; 3550 - DRO	REMARKS
	21-1(7.5-10)	9/12/12	10:00	Soil	3	G		X X	
	21-2(7.5-10)	9/12/12	10:10	Soil	3	G		X X	
	21-3(7.5								
	21-3(5-7.5)	9/12/12	10:20	Soil	3	G		X X	
	21-4(5-7.5)	9/12/12	10:30	Soil	3	G		X X	
	21-5(7.5-10)	9/12/12	10:45	Soil	3	G		X X	
	21-6(7-10)	9/12/12	11:10	Soil	3	G		X X	
	21-7(7.5-10)	9/12/12	11:30	Soil	3	G		X X	
	21-8(7.5-10)	9/12/12	13:40	Soil	3	G		X X	
	21-9(7.5-10)	9/12/12	13:50	Soil	3	G		X X	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
Tim Leatherman	9-13-12	17:30	
Relinquished By: (2)	Date	Time	Received By:
	9/14/12	1530	
Relinquished By: (3)	Date	Time	Received By:
	9/17/12	0840	
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 0.2° C.

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☑ STD

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

White - Retained by Lab
Pink - Retained by Client

CHAIN OF CUSTODY RECORD
SGS North America Inc.

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

www.us.sgs.com

104685

(1)
CLIENT: Pyramid Environ./NCDOT-39017.1.1
CONTACT: Tim Leatherman PHONE NO: 336 335-3174
PROJECT: Ray Rd. Parcel 021 SITE/PWSID# :
REPORTS TO: Tim Leatherman
Pyramid Environmental FAX NO.:( )
INVOICE TO: NCDOT Gordon Box QUOTE #: NCDOT U-3465
U-3465 WBS: 39017.1.1 P.O. NUMBER: WBS 39017.1.1

SGS Reference: 3202948

PAGE 2 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP, G=GRAB)	Preservatives Used: HCl	Analysis Required: (3) 6200B	REMARKS
	21-1(TW)	9.12.12	16:45	Water	3	G		X	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
Tim Leatherman	9.13.12	17:30	
Relinquished By: (2)	Date	Time	Received By:
	9/14/12	1530	
Relinquished By: (3)	Date	Time	Received By:
	9/17/12	0840	
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:
Shipping Ticket No:
Samples Received Cold? (Circle) YES NO
Temperature°C: 0.2°C
Special Deliverable Requirements:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Special Instructions:
Requested Turnaround Time:
☐ RUSH _____ Date Needed ☑ STD

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

White - Retained by Lab
Pink - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **NCDOT-Pyramid** Work Order No.: **31202948**

1. ___ Shipped
   _X_ Hand Delivered

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

3. ___ Custody Tape on Container
   _X_ No Custody Tape

4. _X_ Samples Intact
   ___ Samples Broken / Leaking

5. _X_ Chilled on Receipt Actual Temp.(s) in °C: 0.2
   ___ Ambient on Receipt
   _X_ Walk-in on Ice; Coming down to temp.
   ___ Received Outside of Temperature Specifications

6. _X_ Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

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

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

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

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

Notes:

Comments:

Inspected and Logged in by: JJ

Date: Mon-9/17/12 00:00

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

SGS

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SGS North America Inc.

Locations Nationwide
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- Maryland
- New York
- Ohio

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104636

(1)

CLIENT: Pyramid Environ./NCDOT - 39017.1.1

CONTACT: Tim Leatherman PHONE NO:(336) 335-3174

PROJECT: Ray Rd. Parcel 021 SITE/PWSID#:

REPORTS TO: Pyramid Environmental/Eng. Tim Leatherman FAX NO.:( )

INVOICE TO: NCDOT Gordon Box U-3465 WBS: 39017.1.1 QUOTE #: NCDOT U-3465

P.O. NUMBER: 39017.1.1

SGS Reference: 312 02948

PAGE 1 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used: Method / None	(3) Analysis Required: 5035 - GRO	3550 - DRO	REMARKS
	21-1(7.5-10)	9/12/12	10:00	Soil	3	G		X	X	
	21-2(7.5-10)	9/12/12	10:10	Soil	3	G		X	X	
	~~21-3(7.5~~									
	21-3(5-7.5)	9/12/12	10:20	Soil	3	G		X	X	
	21-4(5-7.5)	9/12/12	10:30	Soil	3	G		X	X	
	21-5(7.5-10)	9/12/12	10:45	Soil	3	G		X	X	
	21-6(7-10)	9/12/12	11:10	Soil	3	G		X	X	
	21-7(7.5-10)	9/12/12	11:30	Soil	3	G		X	X	
	21-8(7.5-10)	9/12/12	13:40	Soil	3	G		X	X	
	21-9(7.5-10)	9/12/12	13:50	Soil	3	G		X	X	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
Timothy D. Leatherman	9-13-12	17:30	
Relinquished By: (2)	Date	Time	Received By:
	9/14/12	1530	
Relinquished By: (3)	Date	Time	Received By:
	9/17/12	0840	
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 0.2° C.

Special Deliverable Requirements:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☑ STD

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

White - Retained by Lab
Pink - Retained by Client

CHAIN OF CUSTODY RECORD
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104685

(1)
CLIENT: Pyramid Environ./NCDOT-39017.1.1
CONTACT: Tim Leatherman PHONE NO: 336 335-3174
PROJECT: Ray Rd. Parcel 021 SITE/PWSID# :
REPORTS TO: Tim Leatherman
Pyramid Environmental FAX NO.:( )
INVOICE TO: NCDOT Gordon Box QUOTE #: NCDOT U-3465
U-3465 WBS: 39017.1.1 P.O. NUMBER: WBS 39017.1.1

SGS Reference: 3202948

PAGE 2 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used: HCl	Analysis Required: (3) 6200B	REMARKS
	21-1(TW)	9.12.12	16:45	Water	3	G		X	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
Tim Leatherman	9.13.12	17:30	
Relinquished By: (2)	Date	Time	Received By:
	9/14/12	1530	
Relinquished By: (3)	Date	Time	Received By:
	9/17/12	0840	
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:
Shipping Ticket No:
Special Deliverable Requirements:

Samples Received Cold? (Circle) YES NO
Temperature °C: 0.2°C
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:
☐ RUSH _____ Date Needed ☑ STD

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

White - Retained by Lab
Pink - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **NCDOT-Pyramid** Work Order No.: **31202948**

1. ___ Shipped
   X Hand Delivered

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

3. ___ Custody Tape on Container
   X No Custody Tape

4. X Samples Intact
   ___ Samples Broken / Leaking

5. X Chilled on Receipt Actual Temp.(s) in °C: 0.2
   ___ Ambient on Receipt
   X Walk-in on Ice; Coming down to temp.
   ___ Received Outside of Temperature Specifications

6. X Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

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

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

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

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

Notes:

Comments:

Inspected and Logged in by: JJ

Date: Mon-9/17/12 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:19,21 **PROJECT NO.:** U-3465

Name: Eric Cross/Alan McFadden **Date:** 9/5/12 **Mon Tue** [**Wed**] **Th Fri Sat Sun**

TASKS PERFORMED:

Performed geophysical surveys using EM61 magnetometer at Parcels 021and 019. Performed geophysical data analysis/processing in field and from home office in evening.

FIELD PERSONNEL LOG

PROJECT NAME: NCDOT Harnett County ROW TRACTS:19,21,22,69 **PROJECT NO.:** U-3465

Name: Eric Cross/Alan McFadden **Date:** 9/6/12 **Mon Tue Wed [Th] Fri Sat Sun**

TASKS PERFORMED:

Performed geophysical surveys using EM61 magnetometer and/or GSSI SIR 2000 ground penetrating radar equipment at Parcels 019, 021, 022, and 069. Performed geophysical data analysis/processing in field and from home office in evening.

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 PERSONNEL LOG

PROJECT NAME: NCDOT Harnett County ROW **PROJECT NO.:** U-3465
TRACTS: 19,21,22,38,69

Name: Tim Leatherman **Date:** 9/13/12 **Mon Tue Wed Th Fri Sat Sun**

TASKS PERFORMED:

8:00 to 8:45 Site notes and measurements for Parcels 019 and 021. Site measurements for soil boring locations.

8:45 to 11:30 Completed 4 soil borings a Parcel 022 and measured soil boring locations.

11:30 to 12:30 Lunch

12:30 to 15:15 Installed 3 soil borings and collects soil samples at Parcel 069.

15:15 to 17:30 Completed 3 soil borings and collected soil samples at Parcel 038. Finalized COCs, packed samples in coolers, and Adam with SGS Laboratories picked up samples.