P S A R E P O R T

PRELIMINARY SITE ASSESSMENT
PARCEL #008
JHM PROPERTIES PROPERTY
1215 CONCORD PARKWAY NORTH
CONCORD, CABARRUS COUNTY, NC
STATE PROJECT B-5136
WBS ELEMENT 42295.1.1

Prepared for

North Carolina Department of Transportation
Geotechnical Engineering Unit
Geoenvironmental Section
Century Center Complex, Building B
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Raleigh, NC 27610
Tel. (919) 250-4088

March 15, 2013, Revised April 24, 2013

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URS Job No. 3182 7879

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Certification

This Report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my thorough inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Walter Plekan, L.G.	2061	4-24-13
Project Manager	NC License No.	Date
URS Corporation – North Carolina		

1.1 INTRODUCTION

This report documents a Preliminary Site Assessment (PSA) conducted by URS Corporation – North Carolina (URS) on behalf of the North Carolina Department of Transportation (NCDOT). The assessment area includes a site located on the north side of US 29, just east of the Southern Railroad. This PSA was conducted in Concord, Cabarrus County, North Carolina (**Figure 1**) for the Shoppes at Davidson retail stores, owned by JHM Properties, located at 1215 Concord Parkway North (the Site). The PSA was performed only within the proposed right-of-way and/or easement for this parcel.

This PSA was performed in general accordance with:

- NCDOT's 30 November 2012 Request for Technical and Cost Proposal (RFP) for the Site property. The RFP established the following scope of work (SOW) for the project:
  - Locate USTs and estimate approximate size and contents (if any).
  - Evaluate whether contaminated soils are present with emphasis along planned drainage lines and ditches.
  - If contamination is evident, estimate the quantity of impacted soils and indicate the approximate area of soil contamination on a site map.
  - Prepare a report including field activities, findings, and recommendations for each site and submit to this office in triplicate and one electronic copy.
- URS's 21 December 2012 Technical and Cost Proposal for the Site property.
- NCDOT's 8 January 2013 Notice to Proceed for the Site property.

The scope of work included a geophysical survey, soil sampling using a direct push technology (DPT) rig, and laboratory analyses (Total Petroleum Hydrocarbons or TPH) of selected soil samples from within the Site property. The geophysical survey was first conducted by URS in order to identify potential UST and/or anomaly locations within the Site property. Based on the results of the geophysical survey and anecdotal evidence, boring locations were identified and the DPT borings were completed by a drilling subcontractor (Probe Technology of Concord, North Carolina) under the supervision of a URS geologist. Soil borings were located in areas that were cleared of underground utilities by NC One-Call. Analysis of soil samples were performed by Pace Analytical Services under direct contract with NCDOT.

1.2 BACKGROUND

The objective for this PSA is to assess the Site for USTs, impacted soil, and to delineate potential impacts found in soils. The major Site features and the surrounding area are shown on **Figures 1** and **2**. The parcel is bounded by Southern Railroad and Piedmont Block Company to the west, Davidson Drive NW and wooded land to the north, and Concord Parkway North to the south. The Site is bounded by the intersection of Concord parkway North and Davidson Drive NW to the east, followed by commercial properties. The property currently serves as a multi-tenant retail shopping center.

A review of historical aerials (**Appendix A**) obtained from the Cabarrus County GIS indicates that the first structure was erected prior to 1950 and looks to be a warehouse to serve the trucking industry. Smaller buildings are located to the north and northwest of the main building. The property looks unchanged through 1975, wherein this aerial photograph many vehicles are located along the proposed right-of-way/easement. Between 1975 and 1986, two additional buildings were added to the property, north and northwest of the main building. Additionally, to the west of the main building, three rows of buildings (storage units) were added to the property.

Between 1986 and 2001 the property appears to have been razed and redeveloped at a retail shopping center, anchored by a grocery store and a series of smaller shops, and the property remains relatively unchanged through present day.

A review of NCDENR's UST on-line Registration Database indicated that the Site formerly operated as M&M Cash Grocery and had several USTs registered to the property. NCDENR assigned Incident Number 17150 to the property. A file review was conducted at the Mooresville Regional office of NCDENR's URS section. Records from that file review are included in **Appendix A**. The file review included a UST Closure Report and associated correspondence. The closure report indicates that three UST's were closed between November 30, 1994 and December 1, 1994. The three USTs were located on the northern half of the parcel, away from the proposed right-of-way/easement acquisition. Soil removed during excavation activities was returned to their respective excavations as field screening did not detect impacts to soils. Closure soil samples and additional samples from adjacent soil borings (17 in total) reported diesel range organic (DRO) results from non-detect to 964 milligrams per kilogram (mg/kg). An April 4, 1997 letter from the regulatory authority granted "no further action" at that time.

2.1 GEOPHYSICAL SURVEY

The primary objective of the geophysical survey was to locate potential USTs or anomalies within the property, and a secondary objective was to identify the general locations of underground utilities at the property in advance of the planned subsurface investigation. The geophysical survey for the property was conducted by URS between January 22 and 24, 2010. Ground surface conditions consisted primarily of concrete or asphalt with some grassy areas.

The geophysical investigation was conducted using the electromagnetic (EM) method augmented by ground-penetrating radar (GPR). The EM survey was completed using the hand-held Schonstedt GA-52Cx Magnetic Locator and the Geonics, Ltd. EM-61 MKII (EM-61). The GPR survey was completed using a Sensors & Software, Inc. Noggin PLUS Smart Cart System with a 250 MHz scanning antenna.

EM-61 data were collected along parallel profiles with a nominal spacing of 5 feet where accessible. EM-61 data were recorded at a rate of 8 readings per second, which equates to an along-profile data point spacing of less than 1 foot. URS utilized the Schonstedt GA-52Cx to conduct a search of the portions of the survey area not accessible due to the size of the EM-61 instrument in order to identify anomalies indicative of USTs (i.e. between trees, man-made obstructions, etc.).

A Trimble ProXRT global positioning system (GPS) was used to record positional data coincident with the EM-61 data. The ProXRT system provided real-time differential corrections via an Omnistar subscription service. The horizontal accuracy of the differential GPS (DGPS) data is generally 3 feet or better. URS also used the GPS system to record the locations of relevant site features within the survey area.

Prior to conducting the GPR investigation, URS performed in-field analysis of the EM-61 data to identify anomalies indicative of potential USTs. Preliminary interpretations were based on an evaluation of the magnitude of the EM response as well as the dimensions of the anomaly in plan view.

The GPR was used to conduct a broad search of the parcel in areas where metal detection methods proved unreliable due to metallic interference, or where further investigation of EM anomalies were determined necessary. GPR surveying consisted of in-field analysis of real-time data. As a result, no post-processing of the GPR data was completed. However, GPR anomalies that appeared to be indicative of USTs were saved to a data file. The objective of augmenting the EM-61 survey with follow-up GPR surveying was to further characterize EM-61 anomalies that could not be readily attributed to existing site features.

The EM-61 data were pre-processed using the program DAT61 MK2 (Geonics Ltd). The program was used to prepare the data for contouring in Surfer (Golden Software, Inc.). Contoured data represent EM-61 Channel 1 and differential responses. The Channel 1 response represents data recorded at the earliest time interval along the EM-61 response decay curve. These data are applicable to detection of subsurface objects including USTs and other underground obstructions (e.g. utility lines). Soil Boring Installation and Media Sampling

2.2 SOIL BORING INSTALLATION AND MEDIA SAMPLING

Twelve direct-push soil borings, P8-SB1 through P8-SB12, were installed from February 6-7, 2013 to assess the Site for impacted soil as shown on **Figure 2**. Soil samples were collected and logged continuously at each soil boring location. Soil sample aliquots were field screened for organic vapors with a MiniRae® brand photo-ionization detection (PID) instrument calibrated daily with 100 parts per million (ppm) isobutylene.

Soil samples from select intervals were collected from each boring during the soil investigations for laboratory analysis. The samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO) using USEPA Method 8015B.

2.3 QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES

While in the field, pertinent observations were recorded in a logbook maintained by the URS field representative. This included pertinent field data collection activities and other observations as appropriate. Each sample collected for laboratory analysis was assigned a unique sample identification number and placed in laboratory supplied containers appropriate for the parameters being analyzed. Samples collected for laboratory analyses were stored on ice in insulated coolers immediately following collection. Information on the custody, transfer, handling, and shipping of all samples was recorded on a chain-of-custody form that accompanied the samples to the laboratory.

Soil analytical data were evaluated based on the *Contract Laboratory Program National Functional Guidelines for Organic Data Review* (USEPA, October 1999). Sample results have been qualified based on the results of the data review process and are considered representative and valid for the purpose of this report.

3.1 GEOPHYSICAL SURVEY RESULTS

The results of the geophysical survey are presented in accordance with the NCDOT guidelines, dated May 19, 2009, for identifying and ranking potential USTs on NCDOT projects.

The EM-61 Channel 1 and differential response results are provided as plan view, color-enhanced contour maps in **Figures 3** and **4**, respectively. The results presented in **Figures 3** and **4** are superimposed on the parcel base drawing provided by NCDOT. The interpreted background response is represented by the light blue to light green contours and corresponds to the range of 0 to 100 milliVolts (mV).

The Channel 1 results in **Figure 3** indicate high response anomalies, red in color, where known surface or near-surface features exist. Features of note include utility poles, two monitoring well covers, a manhole cover, and a parked vehicle.

In addition, Channel 1 results in **Figure 3** indicate a slight increase in negative response values across the surveyed area. This slight increase in negative response values is indicated in **Figure 3** by the light yellow contours. Because the ground surface consists of asphalt across this portion of the site, the localized increase in negative response values suggests a slightly elevated background metallic signature of the materials beneath the asphalt. These near-surface conditions may include sub-base or fill materials with a relatively higher metallic mineral content. The effects of these conditions appear to be more prevalent in the Channel 1 data (**Figure 3**) compared to the differential response data (**Figure 4**).

The effects of surface and near-surface conditions appear to be muted in the differential response data, thus facilitating the identification of deeper anomalies characteristic of USTs. Because the differential response data in **Figure 4** depict more well-defined footprints of EM signatures and enable muting of surface effects, these response data were utilized to select the target locations for inclusion in the follow-up GPR survey. One anomaly indicative of a potential UST is identified in **Figure 4**. The anomaly is characterized in the EM-61 data by dimensions and response amplitude consistent with the characteristics of a UST. The footprint of the interpreted peak EM-61 signature is approximately 3 feet by 5 feet, and the response magnitude appears to be greater than background condition, approximately 300 mV.

The results of the follow-up GPR survey across the anomaly identified in the EM-61 data indicated reflections consistent with the characteristic of a UST. Therefore, this anomaly is considered a “Possible UST” in accordance with the NCDOT guidelines for identifying and ranking potential USTs. The footprint of the anomaly measures approximately 3 feet by 5 feet, with the long axis oriented perpendicular to the road. The footprint of this EM-61 anomaly is depicted in **Figures 3** and **4** by the solid, orange-filled area. A representative GPR cross section across the possible UST is included in **Figure 4**.

The results of the sweep search with the Schonstedt in areas inaccessible by the EM-61 and GPR within the wooded area of the northeastern portion of the survey area did not identify anomalies indicative of buried metallic obstructions.

3.2 SOIL SAMPLING RESULTS

A total of 12 soil borings were advanced to depths between 3 and 10 ft bgs during the PSA investigation at the Site property. Boring locations are shown in **Figure 5** and analytical results (TPH) are summarized in **Table 1**. The soil was described as reddish silty clay. The boring logs are included as **Appendix B** and the complete laboratory report is included in **Appendix C**.

As shown in **Appendix B**, soil headspace screening in the field did not detect organic vapors above approximately 3.8 parts per million (ppm). TPH (GRO) was not detected in any of the soil samples collected for laboratory analysis. TPH (DRO) was detected in soil sample P8-SB5-5 (27.6 mg/kg). This concentration exceeds the NCDENR Non-UST Petroleum Action Level of 10 mg/kg, but a constituent analysis of VOCs and SVOCs would likely not exceed action levels. TPH (DRO) was not detected in any other soil samples collected from the Site.

The approximate extents of potential impacts associated with P8-SB5-5 are depicted as a conservative approach. The areas shown is approximately 100 square feet, using a uniform depth of 3-ft; the volume of impacted soil that potentially could be encountered at depth is approximately 11 cubic yards.

3.3 SUMMARY

The following summarizes the findings of NCDOT Parcel 8 - Shoppes at Davidson retail stores, owned by JHM Properties, located at 1215 Concord Parkway North:

- Historical files reviewed indicate that several USTs were removed from the property in the late 1994. Incident number 17150 was assigned to the release. After several rounds of soil excavation the site received a “no further action” notification;
- The geophysical survey detected the presence of a metallic anomaly near the southwestern corner of the parcel along the proposed easement. The location of the “ possible” UST is depicted in Figures 2 through 4;
- Field screening did not detected the presence of organic vapors above background concentrations in soil boring at the site;
- Soil sample SB8-5 reported concentrations in excess of the regulatory standards for TPH (DRO), however, a constituent analysis of this sample for VOCs and SVOCs would likely not exceed NCDENRs’ more stringent soil-to-groundwater maximums soil contaminant concentration action levels; and
- Future site workers are unlikely to encounter the impacted soil due to the depth (approx. 5 ft bls).

SECTION FOUR Limitations

Opinions relating to environmental, geologic, and geotechnical conditions at this parcel are based on limited data, and actual conditions may vary from those encountered at the times and locations where the data was obtained, despite the use of due professional care. The geophysical investigation was conducted in accordance with reasonable and accepted engineering geophysics practices, and the interpretations and conclusions are rendered in a manner consistent with other consultants in our profession. All geophysical techniques have some level of uncertainty and limitations. No other representations of the reported information is expressed or implied, and no warranty or guarantee is included or intended. The results of the geophysical survey are presented in accordance with the NCDOT guidelines, dated May 19, 2009, for identifying and ranking potential USTs on NCDOT projects.

URS Corporation, *Technical and Cost Proposal, Preliminary Site Assessment, Rev*, December 21, 2012.

United States Environmental Protection Agency, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, 1999.

North Carolina Department of Transportation, Request for Technical and Cost Proposal, Preliminary Site Assessment, B-5136(42295.1.1), November 30, 2012.

North Carolina Department of Transportation, Notice to Proceed - Preliminary Site Assessment, B-5136(42295.1.1), January 8, 2013.

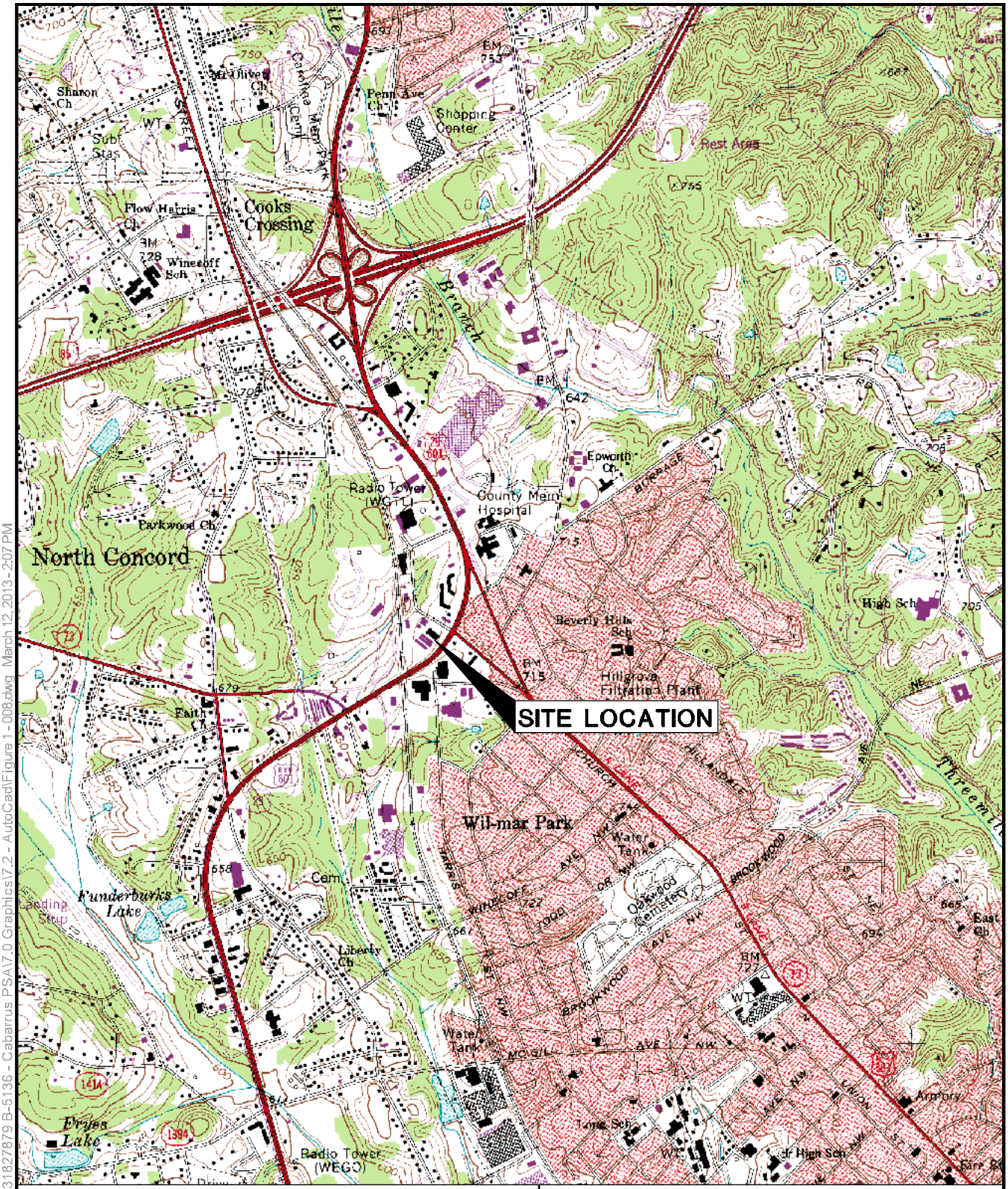
Tables

Table 1
Parcel 008 - JHM Properties Property
Summary of Analytical Results - Solid Samples
TIP# B-5136 42295.1.1

Analytical Method			EPA 8015 Modified by EPA 3546	EPA 8015 Modified by EPA 5035A/5030B
Sample ID	**Constituent of Concern**		TPH - Diesel Range Organics (DRO)	TPH - Gasoline Range Organics (GRO)
	Date Collected (mm/dd/yy)	Sample Depth (ft. BGS)	mg/kg	mg/kg
P8-SB1-3	02/06/2013	3	ND	ND
P8-SB2-8	02/06/2013	8	ND	ND
P8-SB3-8	02/07/2013	8	ND	ND
P8-SB4-10	02/07/2013	10	ND	ND
P8-SB5-5	02/07/2013	5	**27.6**	ND
P8-SB6-10	02/07/2013	10	ND	ND
P8-SB7-10	02/07/2013	10	ND	ND
P8-SB8-9	02/07/2013	9	ND	ND
P8-SB9-10	02/07/2013	10	ND	ND
P8-SB10-10	02/07/2013	10	ND	ND
P8-SB11-10	02/07/2013	10	ND	ND
P8-SB12-10	02/07/2013	10	ND	ND
NCDENR UST Section Action Levels			10	10
NCDENR Non-UST Petroleum Action Levels			10	10

NOTES:
ND = Not Detected
TPH - Total Petroleum Hydrocarbons
ft. BGS = feet below ground surface
mg/kg = milligrams per kilogram
Bold data above the NCDENR Action Levels

Figures



SOURCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE
CONCORD, NC – DATED 1969, PHOTOREVISED 1987

FIGURE 1. LOCATION MAP

PARCEL 008, 1215 CONCORD PKWY N
STATE PROJECT B-5136, CONCORD, NC

Prepared for: NC DOT	URS RDU, NORTH CAROLINA 27560
DRAWN BY: TSH	
DATE: 01/26/13	
PROJECT NO. 31827879	Fig. 1

P:\Jobs4_Projects\NCDOT\31827879 B-5136 - Cabarrus PSA\7.0 Graphics\7.2 - AutoCad\Figure 1 - 008.dwg March 12, 2013 - 2:07 PM

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJECT REFERENCE NO.	SHEET
B-5136	

GeoEnvironmental

0 50 100
FEET

JHM PROPERTIES LLC
DB 1353 PG 134
8

NAD 83/07

LEGEND

- SB2 — SOIL BORING LOCATION
- R/W — PROPOSED RIGHT-OF-WAY
- E — PROPOSED EASEMENT
- PROPOSED DRAINAGE STRUCTURE
- KNOWN SOIL CONTAMINATION
- EXISTING MONITORING WELL

SBI-10	ID - DEPTH
ND	TPH / DRO
ND	TPH / GRO

SOIL RESULTS ARE IN mg/kg

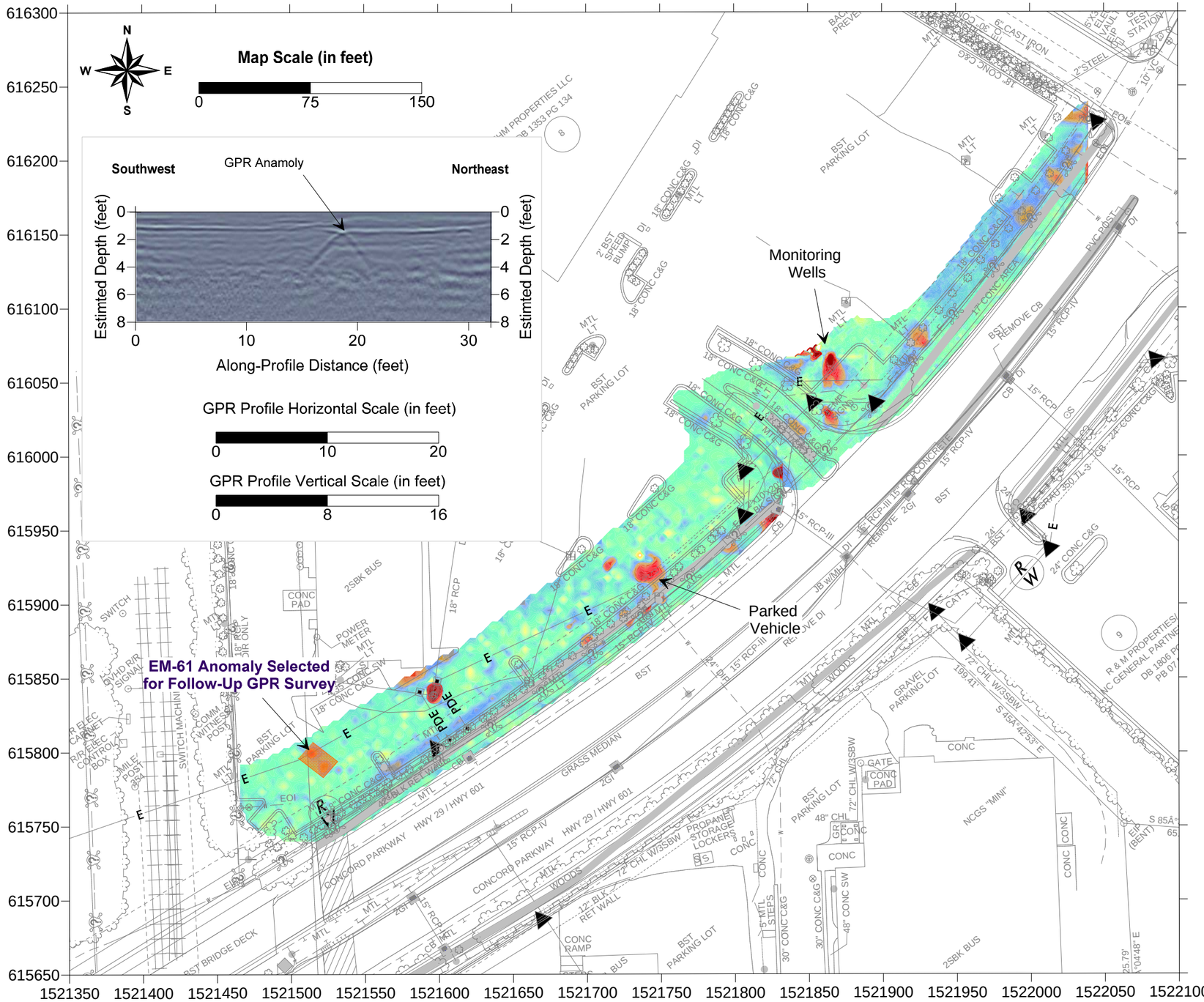
SB2-8	ND	ND
SB4-10	ND	ND
SB5-5	27.6	ND
SB6-10	ND	ND
SB8-9	ND	ND
SB7-10	ND	ND
SB9-10	ND	ND
SB10-10	ND	ND
SB11-10	ND	ND
SB12-10	ND	ND
SBI-3	ND	ND
SB3-8	ND	ND

FIGURE 2 SOIL SAMPLING LOCATIONS
PARCEL 008 - JHM PROPERTIES
STATE PROJECT B-5136
CABARRUS COUNTY, CONCORD, NC

URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
NC LIC # C-2243
TELEPHONE (919) 461-1100 FAX (919) 461-1415

	DRN BY: LHM	DATE: 3-13-13	STATE PROJECT:
	CHECKED BY: VK	DATE: 3-13-13	B-5136

PARCEL LOCATION MAP — FIGURE 2



EM-61 MKII Channel 1 Response (milliVolts)

Interpreted Increasing Response from Subsurface Metal	10000
	1900
	1760
	1620
	1480
	1340
	1200
	1060
	920
	780
	640
	500
	360
	220
Interpreted Background Response	80
Interpreted Increasing Response from Surface Metal	-60
	-200

Legend

- Interpreted Subsurface Utility Center Line
- ? Utility Termination Point not Known
- GPR Survey Area

Notes:

1. Coordinates in NC State Plane NAD 83 grid.
2. Data from Geonics, Ltd. EM-61 MKII instrument.
3. Base drawing after file "i3819a_ls_prlp_l2650-10400.dgn" provided by NCDOT.
4. Location control from DGPS survey by URS.

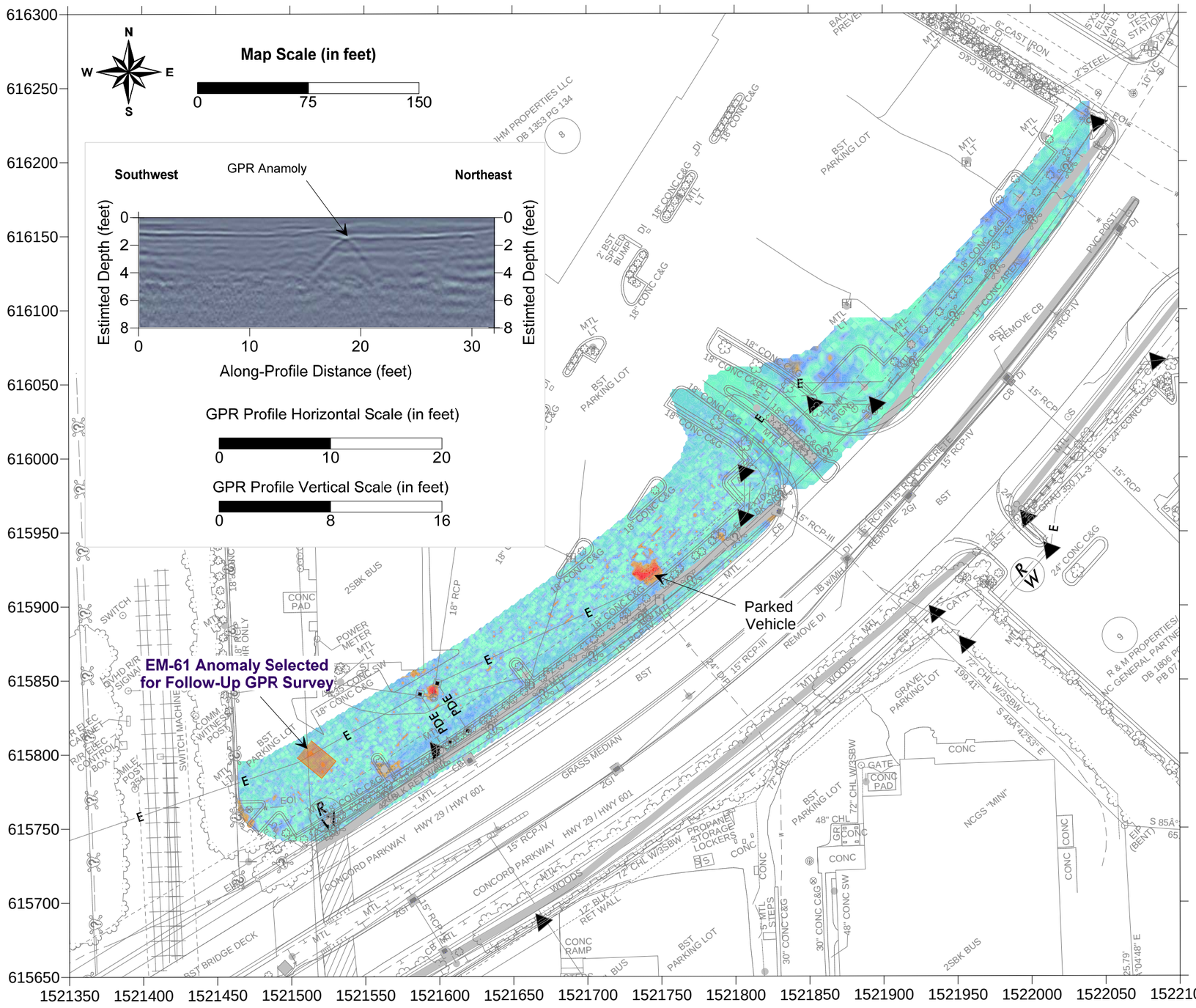
URS Geophysical Services
6135 Park South Dr., Ste. 300
Charlotte, NC 28210
(704) 522-0330

EM-61 MKII Channel 1 Response Contours
JHM PROPERTIES PROPERTY
(Parcel #008)

NCDOT WBS 42295.1.1, Cabarrus County

Concord, North Carolina

DESIGNED BY		DRAWN BY		CHECKED BY		JOB NUMBER	Figure
MJM	02/01/13	MJM	02/01/13	VEK	03/01/13	31827879	3



EM-61 MKII Differential Response (milliVolts)

Interpreted Increasing Response from Subsurface Metal	10000
	1900
	1760
	1620
	1480
	1340
	1200
	1060
	920
	780
	640
	500
	360
Interpreted Background Response	220
	80
Interpreted Increasing Response from Surface Metal	-60
	-200

Legend

- Interpreted Subsurface Utility Center Line
- ? Utility Termination Point not Known
- GPR Survey Area

Notes:

1. Coordinates in NC State Plane NAD 83 grid.
2. Data from Geonics, Ltd. EM-61 MKII instrument.
3. Base drawing after file "i3819a_ls_prlp_l2650-10400.dgn" provided by NCDOT.
4. Location control from DGPS survey by URS.

URS Geophysical Services
6135 Park South Dr., Ste. 300
Charlotte, NC 28210
(704) 522-0330

EM-61 MKII Differential Response Contours
JHM PROPERTIES PROPERTY
(Parcel #008)

NCDOT WBS 42295.1.1, Cabarrus County

Concord, North Carolina

DESIGNED BY		DRAWN BY		CHECKED BY		JOB NUMBER	Figure
MJM	02/01/13	MJM	02/01/13	VEK	03/01/13	31827879	4

Appendix A
Historical Information

Cabarrus County Map

Legend

BaseMap Service

Railroad

Streets

Parcels

Counties

Aerial 1950

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 10:45}

Comments 1"-2000'

Disclaimer Cabarrus County shall not be held liable for any errors in the data represented on this map. This includes errors of omission, commission, concerning the content of the data, and relative positional accuracy of the data. The data cannot be construed to be a legal document . Primary sources from which this data was compiled must be consulted for verification of information represented on this map document.

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Cabarrus County Map

Legend

BaseMap Service

Railroad

Streets

Counties

Aerial 1950

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 09:34}

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Cabarrus County Map

Legend

BaseMap Service

Railroad

Streets

Parcels

Counties

Aerial 1956

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 10:41}

Powered by **ROLTA OnPoint™**

Cabarrus County Map

Legend

BaseMap Service

Railroad

Streets

Counties

Aerial 1956

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 09:35}

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Cabarrus County Map

Legend

BaseMap Service

Railroad

Streets

Parcels

Counties

Aerial 1964

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 10:40}

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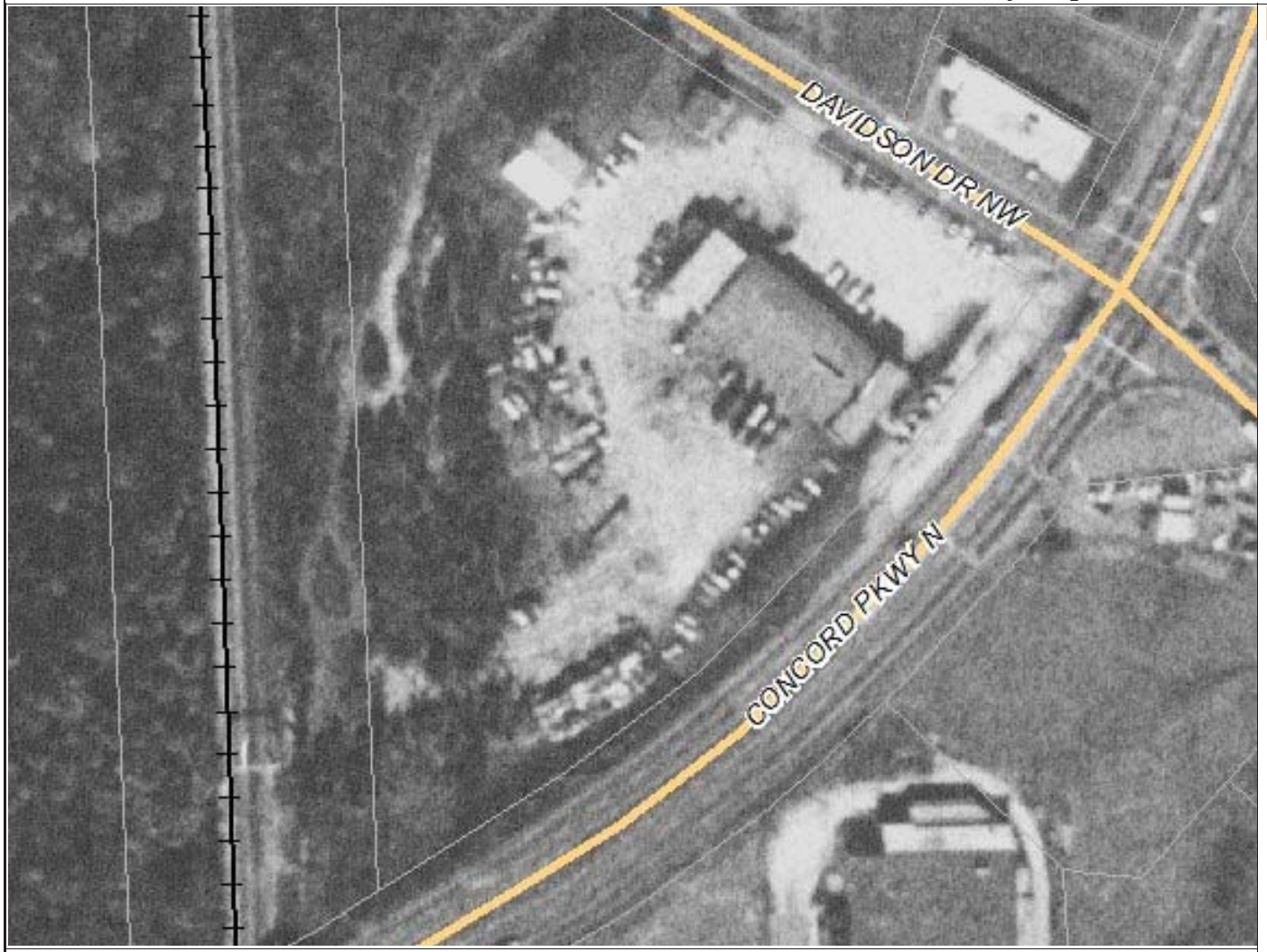
Cabarrus County Map



Legend

BaseMap Service

Railroad

Streets

Parcels

Counties

Aerial 1975

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 10:45}

Comments 1"-2000'

Cabarrus County Map

Legend

BaseMap Service

Railroad

Streets

Parcels

Counties

Aerial 1986

Value

High : 255

Low : 0

Cabarrus County

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Comments 1"-2000'

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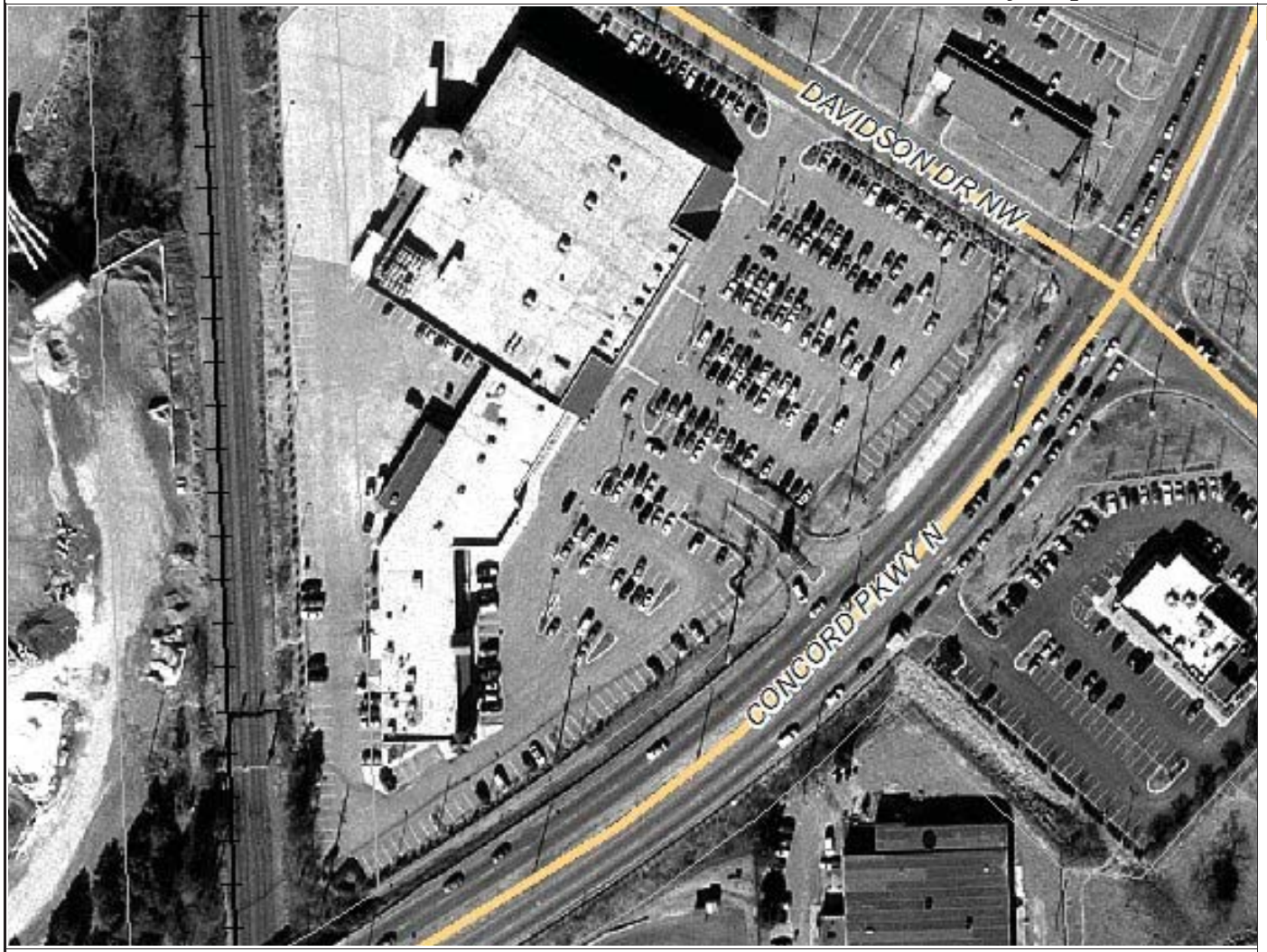
Cabarrus County Map



Legend

BaseMap Service

- Railroad
- Streets
- Parcels
- Counties

Aerial 2001

Value

- High : 255
- Low : 0

- Cabarrus County

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Comments 1"-2000'

Cabarrus County Map

Legend

BaseMap Service

- Railroad
- Streets
- Parcels
- Counties

Aerial 2005

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3
- Cabarrus County

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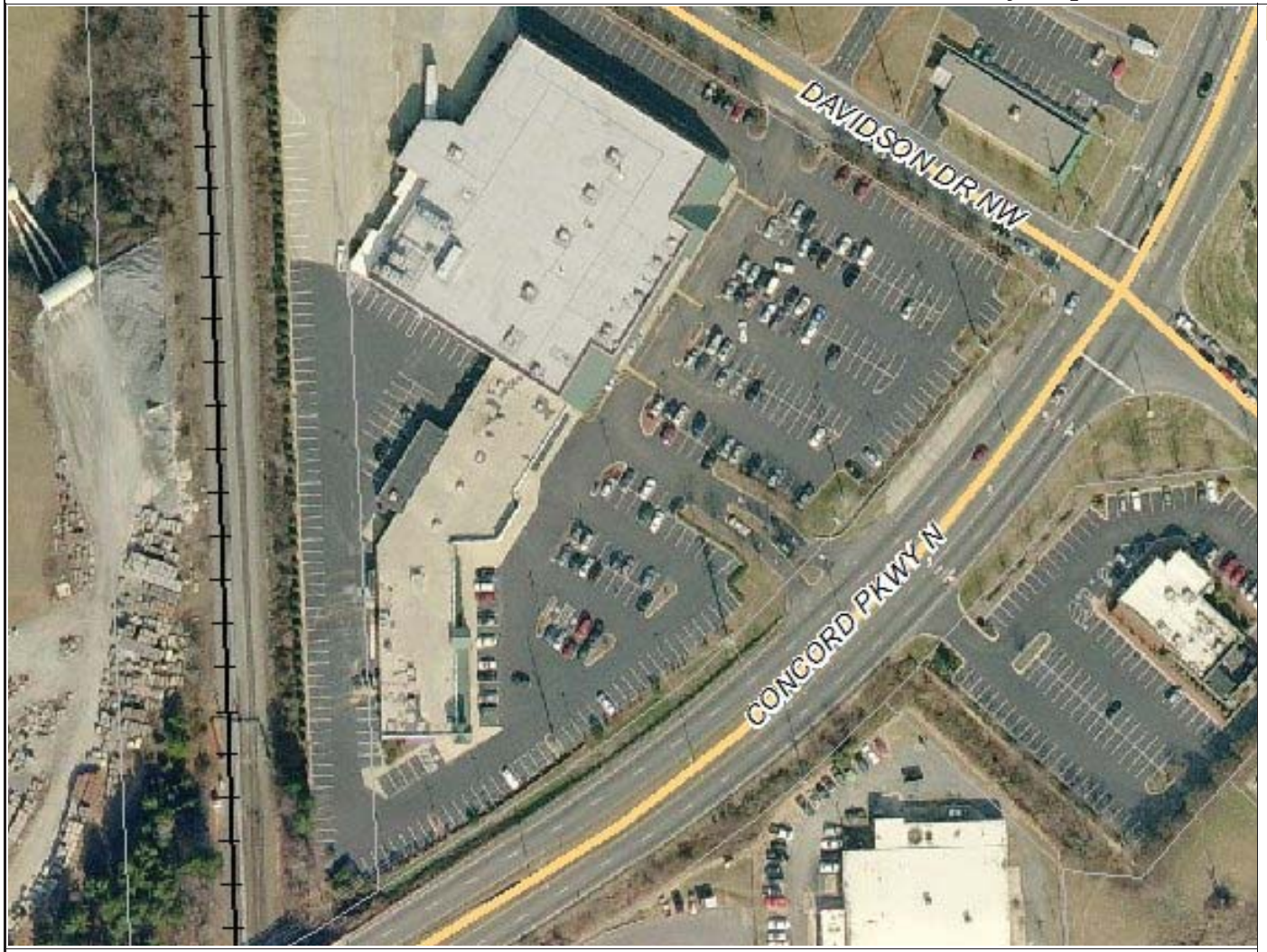
Comments 1"-2000'

Cabarrus County Map



Legend

BaseMap Service

- Railroad
- Streets
- Parcels
- Counties

Aerial 2009

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3
- Cabarrus County

Map Printed On {2012-12-14 10:54}

Comments 1"-2000'

Powered by ROLTA OnPoint™

Cabarrus County Map

Legend

BaseMap Service

- Railroad
- Streets
- Parcels
- Counties
- Cabarrus County

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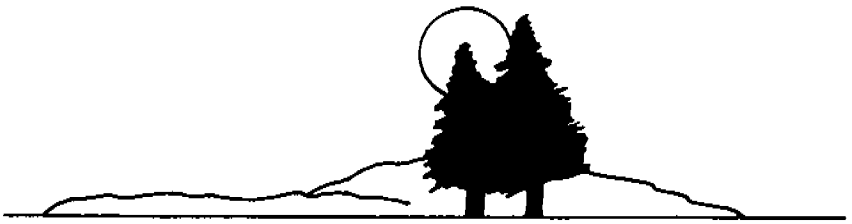
Comments 1"-2000'



Rowland Environmental Services, Inc.

January 16, 1995

North Carolina Department of Environmental Management
Mooresville Regional Office
919 North Main Street
Mooresville, North Carolina

Reference: UST Closure Report
Intersection of US Highway 29 and Davidson Drive
Concord, North Carolina 28216

Dear Mr. Morrison:

Rowland Environmental Services, Inc. (RES) has completed an investigation in conjunction with the closure of the following underground storage tanks (USTs).

One - 6,000 gallon heating oil UST
One - 550 gallon gasoline UST
One - 8,000 gallon diesel UST.

The following report documents the tank removal procedures, field activities, field data, and analytical results of soil samples collected during the investigation.

If you have any questions please feel free to contact this office.

Sincerely,
Rowland Environmental Services, Inc.

David Howell

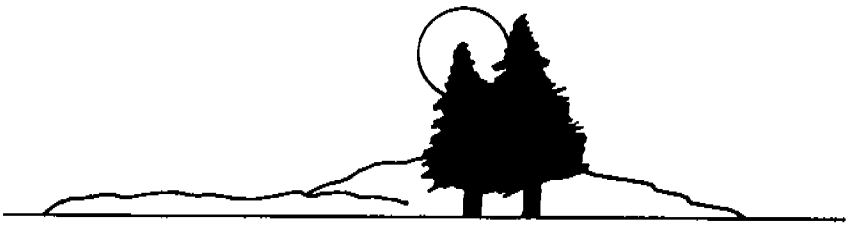
David Howell
Project Manager

enclosure

cc: John Morrison
Files

5697 (653)

717-N Atando Avenue • Charlotte, North Carolina 28206
704/376-7732 Fax 704/376-5137



Rowland Environmental Services, Inc.

UST Closure Report

US Highway 29 and Davidson Drive
Concord, North Carolina

Project Number : RES 1219411-1

January 16, 1995

Completed for: John Morrison

JHM
P.O. Box 145
Concord, North Carolina 28025

David Howell

David Howell Project Manager
Rowland Environmental Services, Inc.

717-N Atando Avenue • Charlotte, North Carolina 28206
704/376-7732 Fax 704/376-5137

Table of Contents

1.0 Site Information

The subject site is located at the intersection of US Highway 29 and Davidson Drive, Concord, North Carolina. The site location is indicated in Figure 1. The site is currently owned by JHM and was being used for commercial space leasing at the time of the underground storage tank (UST) closures. The tanks were discovered during a Phase I Environmental Site Assessment performed on the site by Rowland Environmental Services, Inc. (RES).

2.0 UST Information and Removal Procedures

On November 30, 1994 and December 1, 1994, Rowland Environmental Services, Inc. (RES) supervised the closure of the following USTs at the referenced site:

One - 6,000 gallon heating oil UST (UST-1)
One - 550 gallon diesel UST (UST-2)
One - 8,000 gallon diesel UST (UST-3)

The fill pipes for UST-2 and UST-3 were not accessible prior to the removal of the tanks. Therefore, product and/or water could not be measured in these tanks. After the tanks were uncovered, it was discovered that all of the USTs contained product/water. The removal of product/water from the USTs was performed by Spectrum Environmental, Inc. A special transportation manifest for the transportation and proper disposal of the recovered contents is included in Appendix A. A total of approximately 700 gallons was removed from the three USTs.

After the contents were removed from the tanks, the USTs were removed. The excavation and removal of the USTs was performed by Dirt Works, Inc. Disposal of the USTs was performed by Southern Tank and Environmental Inc. (STE).

The 6,000 gallon heating oil UST (UST-1) was excavated and removed without incident. During the closure of UST-1, RES observed two copper lines running from the UST into the structure located approximately 20 feet to the south of the tank. The tank dimensions for UST-1 were 8' diameter by 16'. The base of the tank was buried approximately 12 feet below grade. The excavation dimensions were approximately 12' x 20' x 12'. Following the excavation of UST-1, two soil samples (UST-1A and UST-1B) were collected from native soils two feet beneath the bottom of the tank.

One 550 gallon gasoline UST (UST-2) was excavated and removed without incident. The tank dimensions were 46" diameter by 74". The base of UST-2 was buried approximately 5 feet below grade. The excavation dimensions were approximately 6' x 8' x 5'. Following the excavation of UST-2, two soil samples (UST-2A and UST-2B) were collected from native soil, two feet beneath the bottom of the tank. One soil sample (UST-2PL-1) was also collected along the product line approximately half way between UST-2 and the product dispenser. Another soil sample (UST-2D-1) was collected approximately two feet below the product dispenser.

One 8,000 gallon diesel UST (UST-3) was excavated and removed without incident. The tank dimensions were 8' diameter x 21'4". The base of UST-3 was buried approximately 10 feet below grade. The excavation dimensions were approximately 12' x 25' x 10'. Following the excavation of UST-3, three soil samples (UST-3A through UST-3C) were collected from native soil two feet beneath the bottom of the tank. Two soil samples (UST-3PL-1 and UST-3PL-2) were collected along the product line at even increments between the UST and the product dispenser. Another soil sample (UST-3D-1) was collected from three feet below the product dispenser.

The tanks were of steel construction with no fiberglass coating or cathodic protection. No evidence of petroleum staining or odor was noticed in soils around the tanks, and no evidence of free-phase petroleum product was observed upon the removal of each of the USTs. No perforations were evident in any of the tanks. Minor pitting was visible on UST-2. A certificate of disposal was generated for all three USTs by STE and is included in Appendix B. No water or bedrock was encountered in any of the UST basins. All product and vent lines were removed during tank closure activities. The dispenser island associated with UST-3 was removed. There was no dispenser attached to the piping at the time of the tank closure. The dispenser island and dispenser associated with UST-2 was left in place.

Soils excavated from around the tanks were screened for organic vapors with a Foxboro 128 Organic Vapor Analyzer (OVA). These samples were collected for screening purposes only, and were not submitted for analysis. Detectable levels of organic vapors were not discovered in the samples, and the excavated soils were subsequently returned to the excavations and the excavations were backfilled to grade with clean fill transported from off-site. A description of sample collection and decontamination procedures is detailed in Appendix B.

3.0 Soil Screening and Sampling Procedures

All soil samples were collected from either the excavator bucket or a decontaminated stainless steel hand auger. Decontamination procedures are documented in Appendix C. Care was taken to assure that the soils were collected from native material and that samples collected from the excavator bucket did not come in contact with the bucket itself.

After the collection of each soil sample, the sample was divided in half. One-half of the sample

was screened for organic vapors. The remaining half of the sample was placed in a new glass container, sealed, labeled and stored on ice until delivery under chain-of-custody control to a subcontract laboratory. Sample collection and screening procedures are explained in Appendix C. A copy of the laboratory results and chain-of-custody (COC) are included in Appendix D. Table 1 summarizes the OVA screening and the analytical results.

4.0 Soil Sample Analytical Results

All of the soil samples were analyzed by modified California GC Method SW-846 for total petroleum hydrocarbon (TPH) with EPA methods 5030 and 3550 used as sample preparation. Two of the samples (UST-2PL-1 and UST-3D-1) exceeded North Carolina Division of Environmental Management (NCDEM) guidelines of 40 parts per million (ppm) for diesel range TPH. The analytical results are summarized in Table 1.

5.0 Installation of Soil Borings

Due to elevated levels of diesel range TPH in three soil samples collected during the UST closure, RES installed three soil borings (UST-2PL-1A, UST-2D-1A and UST-3D-1A). The borings were installed to vertically delineate the extent of diesel range TPH.

The soil borings were installed to approximately six to seven feet below grade on January 5, 1995 using a decontaminated hand auger. Soil samples were collected from the hand auger bucket at three-foot intervals and screened with an OVA. The borings were continued until OVA screening results indicated that elevated levels of TPH had diminished. Two soil samples were collected from each boring for analyses. The two samples submitted from each boring were:

- The sample with the highest OVA reading.
- The deepest sample.

Soil field screening and laboratory analytical results are indicated in Table 2. Soil boring logs are included in Appendix E.

6.0 Conclusions

According to analytical results of the soil samples collected during the UST closure, concentrations of diesel range TPH were above current North Carolina guidelines of 40 ppm for samples UST-2 PL-1 and UST-3 D-1. Soil sample UST-2 D-1 also exhibited evidence of contamination although below NCDEM action levels. No evidence of free phase petroleum was observed in the excavation during this investigation. In addition, no evidence of bedrock or groundwater was observed during excavation.

Due to levels of diesel range TPH in the UST closure soil samples, soil borings were installed in these areas, and additional samples collected to determine the vertical extent of diesel range TPH. Six soil samples were collected from the borings and analyzed. Analyses indicated that TPH concentrations ranged from 964 ppm to non-detectable and extended to approximately four below grade.

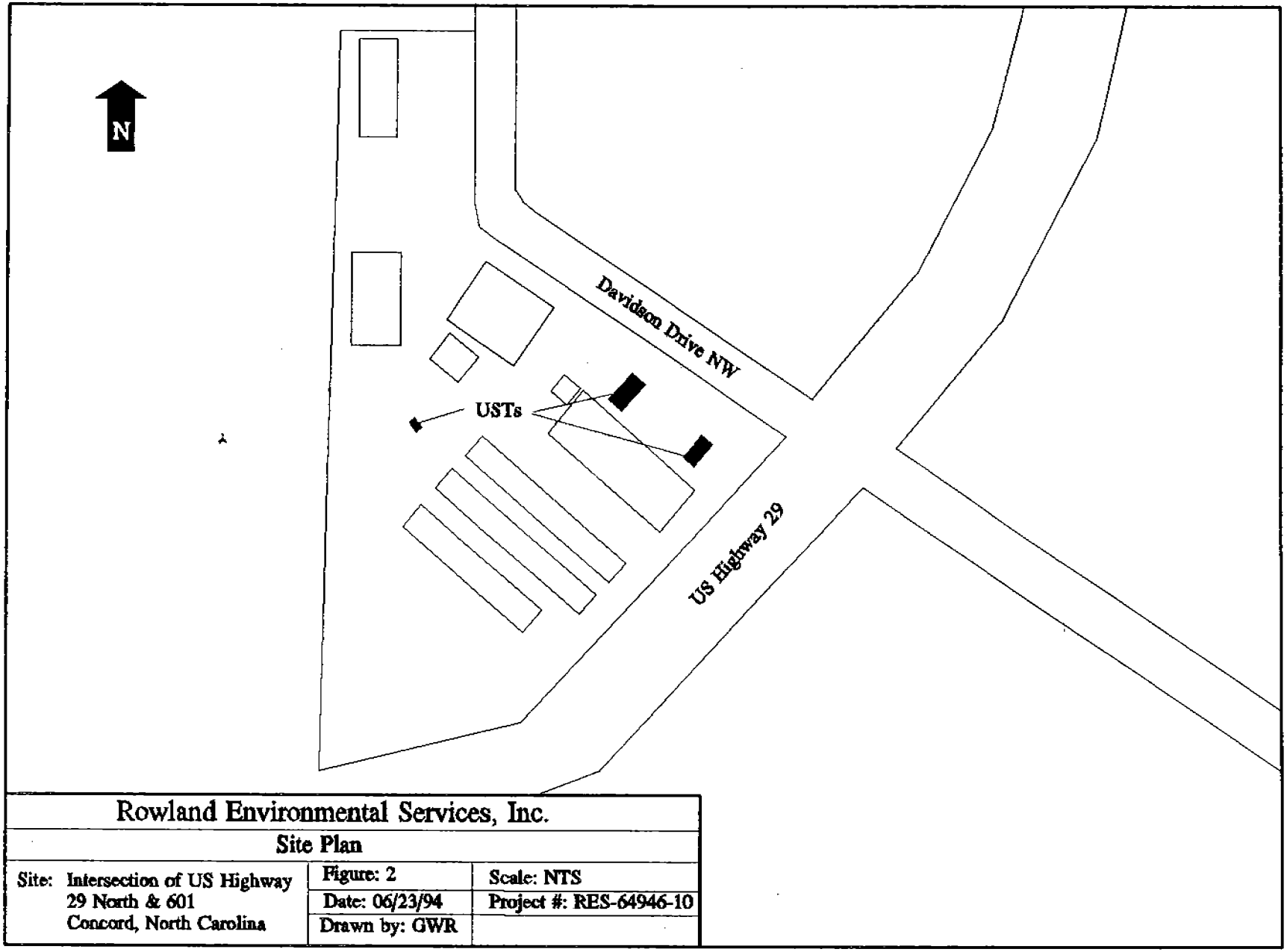
A copy of this report should be forwarded to:

North Carolina Division of Environmental Management
Mooresville Regional Office
Groundwater Section
919 North Main Street
Mooresville, NC 28115 - 0950

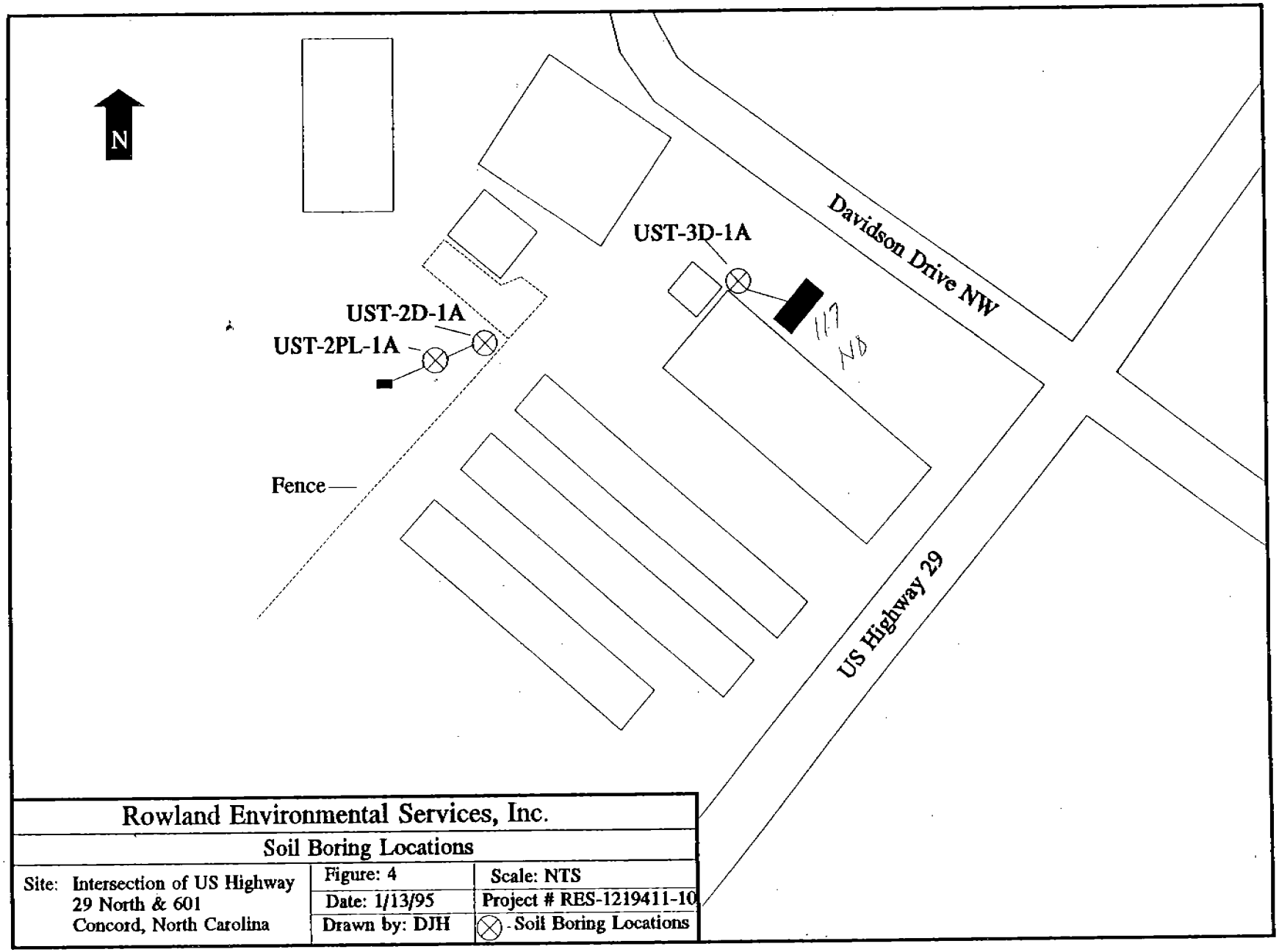
Figure: 1
Project Number: RES-1219411-11
Site:
JHM
Davidson and Highway 601 Bypass
Concord, North Carolina
Project Manager: GWR
Date: 01/16/95
Scale: Unknown

Site Location

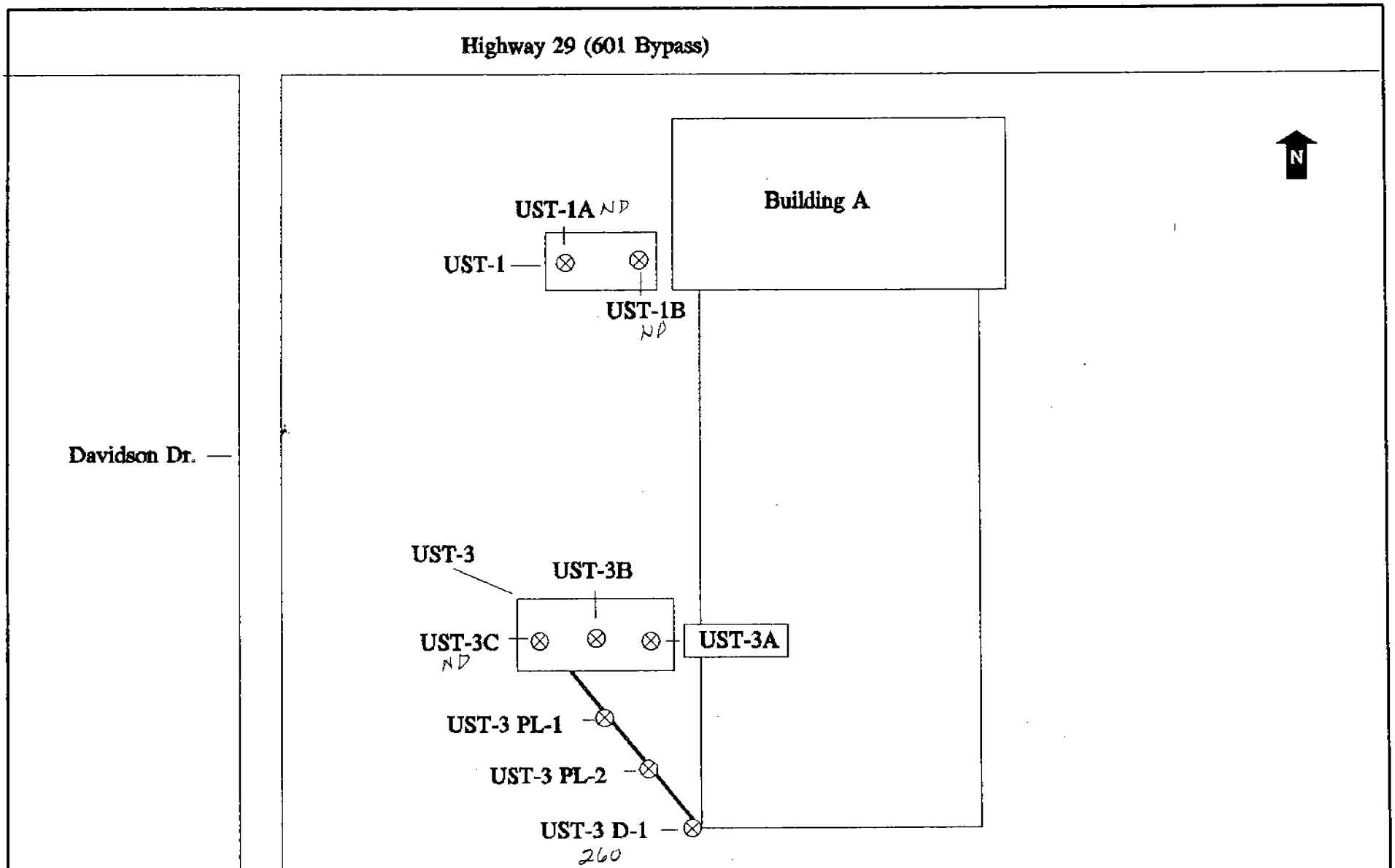
N



Rowland Environmental Services, Inc.		
Site Plan		
Site: Intersection of US Highway 29 North & 601 Concord, North Carolina	Figure: 2	Scale: NTS
	Date: 06/23/94	Project #: RES-64946-10
	Drawn by: GWR	



Rowland Environmental Services, Inc.		
Soil Boring Locations		
Site: Intersection of US Highway 29 North & 601 Concord, North Carolina	Figure: 4	Scale: NTS
	Date: 1/13/95	Project # RES-1219411-10
	Drawn by: DJH	⊗ - Soil Boring Locations



Rowland Environmental Services, Inc.		
UST/Sampling Locations		
Site: Intersection of US Highway 29 North & 601 Concord, North Carolina	Figure: 3	Date: 1/13/95
	Drawn by: DJH	Scale: NTS
	Project # RES-1219411-1	

Table 1.
Soil Field Screening and Laboratory Data for
UST Closure Assessment

JHM
Highway 29 and Davidson Drive
Concord, North Carolina

Project Number: RES-1219411-1

Sample ID	Sample Submittal Date	Sample Type	Sample Depth (feet)	Soil Description	TPH 3550 (mg/kg)	TPH 5030 (mg/kg)	Organic Vapor Readings (ppm)
UST-1A	11/30/94	Soil	12	Orange, Clayey Micascious Silt	ND	ND	-
UST-2A	"	"	12	Orange, Clayey Micascious Silt	ND	ND	-
UST-2A	12/1/94	"	6	Orange, Tan Silt	ND	ND	-
UST-2B	"	"	6	Orange, Tan Silt	ND	ND	-
UST-2 D-1	"	"	2	Brown, Clayey Silt	34	ND	12
UST-2 PL-1	"	"	2	Brown, Clayey Silt	**66**	ND	-
UST-3A	"	"	15	Tan Sand	ND	ND	-
UST-3B	"	"	15	Tan Sand w/ Red Clay	ND	ND	-
UST-3 C	"	"	15	Tan Sand w/ Red Clay	ND	ND	-
UST-3 D-1	"	"	3	Orange, Clayey, Micasious Silt	**260**	ND	4
UST-3 PL-1	"	"	3	Orange, Tan Clay	N/A	N/A	-
UST-3 PL-2	"	"	3	Orange, Tan Clay	ND	ND	-

mg/kg = parts per million (ppm).
BOLD = Concentrations exceed North Carolina Division of Environmental Management guidelines.
ND = Not detected at or above detection limits.
N/A = Not applicable.
- = No detectable organic vapors were discovered

Table 2.
Soil Field Screening and Laboratory Data for
Soil Borings

JHM
Highway 29 and Davidson Drive
Concord, North Carolina

Project Number: RES-1219411-11

Sample ID	Sample Date	Sample Type	Sample Depth (feet)	Soil Description	TPH 3550 (mg/kg)	Organic Vapor Readings (ppm)
UST-2 PL-1A S004	1/5/94	Soil	4	Red Clayey Silt	ND	2
UST-2 PL-1A S006	"	"	6	Red Clayey Silt	ND	-
UST-2 D-1A S004	"	"	4	Red Clayey Silt	**964**	15
UST-2 D-1A S006	"	"	6	Red Clayey Silt	ND	-
UST-3 D-1A S004	"	"	4	Red Clayey Silt	**117**	10
UST-3 D-1A S007	"	"	7	Red Clayey Silt	ND	-

mg/kg = parts per million (ppm).
ND = Not detected at or above detection limits.
BOLD= Diesel range TPH concentrations above NCDEM guidelines of 40 ppm.
- = No detectable organic vapors were discovered in the sample.

APPENDIX A

Special Transportation Manifest

SPECTRUM-NATIONWIDE ENVIRONMENT, INC.
SPECIAL TRANSPORTATION MANIFEST No. 1549

GENERATOR INFORMATION

Generator Roland Environmental As Agent for A.K. Project # _____

717 Atando Ave. Suite N Phone 376-7732

Charlotte NC 28206 Contact David Howell

Shipment origination 825 Davidson Dr. Concord

I certify that the materials being shipped under this special transportation manifest are properly described, classified, packaged, marked, labeled and are in proper condition for transport in commerce under the applicable regulations of the state, U.S. Department of Transportation, and the U.S. Environmental Protection Agency. I further certify that this material is not a "hazardous waste", and has been delivered to the transporter below, for shipment as indicated on this manifest document.

Generator Signature: Hugh H Munson Date: _____

Material Description	Contaminant	Container	Total Quantity	Unit
1) NOS NA 1993 Combustible liquid	Fuel oil	2 Tanks	~~500~~ 700	gallons
2)				

TRANSPORTER INFORMATION

Spectrum-Nationwide Environmental, Inc. EPA # NCD986172435
P.O. Box 7351 Emergency Phone: 704-346-5451

Charlotte, NC 28241 Phone: 704-334-2164

As the transporter, I certify that the materials described above being shipped under this special transportation manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designated.

Transporter Signature: Robert A. Bell SSF Date: 11-30-94

FACILITY INFORMATION

The transporter will deliver the materials described above to one or more of the facilities listed below for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

____ **Cunningham Brick Co., Route 2 Cunningham Brick Road Thomasville, NC 27360**
Disposal via incineration manifest number _____

X **Energy Recovery Resources, Inc., P.O. Box 5651, Charlotte, NC 28225**
Disposal via a reusable fuels blending program manifest number 12158

____ **Other** _____

_____ manifest number _____

APPENDIX B

Certificate of UST Disposal

SOUTHERN TANK & ENVIRONMENTAL, INC.

CERTIFICATE OF DISPOSAL

FEDERAL/CERTIFICATE # 56-1669418/10122 DATE 12/2/94

CONTRACTOR	LOCATION
Rowland Environmental	859 Davidson Dr.
717 N. Atando Ave.	Concord, N.C.
Charlotte, N.C. 28206	

TYPE OF TANK	SIZE	CONTENT IN GAL.	TANK ID#
UST 8,000 gallon	8' x 21'4"	Less than 1%	STDS-4087
UST 6,000 gallon	10'x13'5"	Less than 1%	STDS-4088
UST 550 gallon	STD	Less than 1%	STDS-4089

Southern Tank & Environmental, Inc. certifies that the above mentioned tanks have been properly disposed of at 319 Lawyers Rd., Indian Trail, NC, and the contents and sludges processed in full compliance with Local, State and Federal regulations.

Southern Tank & Environmental, Inc.

Randy L. Williams

APPENDIX C

Soil Sample Screening Procedures

All samples were screened with an organic vapor analyzer (OVA) utilizing the following procedure. One half of each sample was placed in a sealable storage bag and sealed. The sample was then disaggregated and allowed to volatilize for approximately fifteen minutes. The probe of the OVA was then inserted into the bag, and the head space screened for organic vapors. The other half of each sample was placed in a new glass container, sealed, labeled and stored on ice until delivery under chain-of-custody control to a subcontract laboratory.

Decontamination Procedures

Sampling equipment was decontaminated before each sampling event using a soap and tap water wash, a tap water rinse followed by an alcohol rinse and finally a de-ionized water rinse.

APPENDIX D

Laboratory Results and Chain-of-Custody (C.O.C.)

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

CHAIN OF CUSTODY RECORD

449 Springbrook Road ▲ Charlotte, NC 28217
P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Fax: 704/525-0409

PRESS DOWN FIRMLY - 3 COPIES

Client: Rowland Environmental Services
Address: 919 N Alondo Ave
Charlotte NC 28206
Phone: 704-376-9732

Report To: G. L. Rowland
Bill To: RES
P.O.#/Billing Reference:
Project Name: RES-64946-1

Lab Location Requested for Certified Analysis NC X SC ___ Other ___
Water Chlorinated Yes ___ No ___ NA X
Sample Iced Upon Collection Yes X No ___
Requested Due Date 12-9-94

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	SAMPLE CONTAINER NO.	SAMPLE CONTAINER SIZE	PRESERVATIVES	ANALYSES REQUESTED 3550	5030					REMARKS	SUB LAB CERT. ID NO.	PRISM LAB ID NO.
UST-1A	11-30-94	15:45	Soil	CG	1	4oz.	None	X	X							27094
UST 1B	"	15:55	"	"	"	"	"	X	X							27095
UST 2A	12-1-94	14:05	"	"	"	"	"	X	X							27096
UST 2B	"	14:10	"	"	"	"	"	X	X							27097
UST 2 D-1	"	14:25	"	"	"	"	"	X	X							27098
UST 2 PL-1	"	14:30	"	"	"	"	"	X	X							27099
UST 3A	"	11:40	"	"	"	"	"	X	X							27100
UST-3B	"	11:48	"	"	"	"	"	X	X							27101
UST-3C	"	12:00	"	"	"	"	"	X	X							27102
UST 3 D1	"	13:45	"	"	"	"	"	X	X							27103

Sampler's Signature: David Howell Sampled By (Print Name): David Howell Affiliation: RES

Relinquished By: (Signature)	Received By: (Signature)	Date	Military/Hours
David Howell			
Relinquished By: (Signature)	Received By: (Signature)	Date	
Relinquished By: (Signature)	Received For Prism Laboratories By: [illegible]	Date 12/1/94	1750
Method of Shipment:		Date	

Additional Comments:
6120A12

NPDES: NC ___ SC ___ OTHER ___
UST: NC X SC ___ OTHER ___
GROUNDWATER: NC ___ SC ___ OTHER ___
DRINKING WATER: NC ___ SC ___ OTHER ___
SOLID WASTE: NC ___ SC ___ OTHER ___
OTHER: NC ___ SC ___ OTHER ___

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

FINAL REPORT COPY

Lab Report

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Full Service Analytical & Environmental Solutions

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27094 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-1A
Sample collection date: 11/30/94 Time: 15:45
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	78	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Full Service Analytical & Environmental Solutions

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27095 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-1B
Sample collection date: 11/30/94 Time: 15:55
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	77	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

Full Service Analytical & Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27096 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-2A
Sample collection date: 12/01/94 Time: 14:05
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	78	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

Full Service Analytical & Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27097 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-2B
Sample collection date: 12/01/94 Time: 14:10
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	77	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

Full Service Analytical & Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27098 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-2D-1
Sample collection date: 12/01/94 Time: 14:25
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	90	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	34	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

Full Service Analytical & Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27099 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-2PL-1
Sample collection date: 12/01/94 Time: 14:30
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	86	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	66	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

Full Service Analytical & Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27100 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-3A
Sample collection date: 12/01/94 Time: 11:40
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	88	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

Full Service Analytical & Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27101 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-3B
Sample collection date: 12/01/94 Time: 11:48
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	81	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Full Service Analytical & Environmental Solutions

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27103 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-3D-1
Sample collection date: 12/01/94 Time: 13:45
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	80	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	260	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

Full Service Analytical & Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27104 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-3PL-1
Sample collection date: 12/01/94 Time: 12:25
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	81	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

Full Service Analytical & Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27105 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-3PL-2
Sample collection date: 12/01/94 Time: 12:15
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	81	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Full Service Analytical & Environmental Solutions

December 12, 1994

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206

Dear: Mr. Rowland:

Below are the results of analysis of 1 sample received for examination on December 1, 1994:

Sample I.D. AA27102 Customer Code: ROWLAND
Login Group #: 6120A12 Prism Customer Number: 7123
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: UST-3C
Sample collection date: 12/01/94 Time: 12:00
Lab submittal date: 12/01/94 Time: 17:50

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	90	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10
PREP. METHOD 5030		Completed	
TPH - GASOLINE RANGE	mg/kg	Less than	1.0

Sample comments:

Project Name: RES-64946-1

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Toll Free Number: 1-800/529-6364 ▲ Fax: 704/525-0409

Lab Report

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert. No. 37735

Full Service Analytical & Environmental Solutions

January 13, 1995

Rowland Environmental
Attn: Gil Rowland
717-N. Atando Ave.
Charlotte, N.C. 28206
RES-1219401-11

Dear: Mr. Rowland:

Below are the results of analysis of 6 samples received for examination on January 5, 1995:

Sample I.D. AA28118 Customer Code: ROWLAND
Login Group #: 6485A6 Prism Customer Number: RES
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: #2 PL-1A 5004
Sample collection date: 01/05/95 Time: 10:15
Lab submittal date: 01/05/95 Time: 14:48

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	81	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10

Sample comments:

RES-1219401-11

Sample I.D. AA28119 Customer Code: ROWLAND
Login Group #: 6485A6 Prism Customer Number: RES
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: #2 PL-1A 5006
Sample collection date: 01/05/95 Time: 11:00
Lab submittal date: 01/05/95 Time: 14:48

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	78	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10

449 Springbrook Road ▲ P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ■ Toll Free Number: 1-800/529-6364 ■ Fax: 704/525-0409

Sample comments:

RES-1219401-11

Sample I.D. AA28120 Customer Code: ROWLAND
Login Group #: 6485A6 Prism Customer Number: RES
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: #2 D-1A 5004
Sample collection date: 01/05/95 Time: 10:30
Lab submittal date: 01/05/95 Time: 14:48

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	80	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	964	100

Sample comments:

RES-1219401-11

Sample I.D. AA28121 Customer Code: ROWLAND
Login Group #: 6485A6 Prism Customer Number: RES
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: #2 D-1A 5006
Sample collection date: 01/05/95 Time: 11:15
Lab submittal date: 01/05/95 Time: 14:48

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	81	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10

Sample comments:

RES-1219401-11

Sample I.D. AA28122 Customer Code: ROWLAND
Login Group #: 6485A6 Prism Customer Number: RES
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: #3 D-1A 5004
Sample collection date: 01/05/95 Time: 10:50
Lab submittal date: 01/05/95 Time: 14:48

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	76	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	117	10

Sample comments:

RES-1219401-11

Sample I.D. AA28123 Customer Code: ROWLAND
Login Group #: 6485A6 Prism Customer Number: RES
Phone Number: (704)376-7732 fax 376-5137
Customer Sample I.D#: #3 D-1A 5007
Sample collection date: 01/05/95 Time: 11:45
Lab submittal date: 01/05/95 Time: 14:48

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
CALCULATIONS BASED ON DRY WEIGHT	% DRY WT.	81	
PREP. METHOD 3550		Completed	
TPH - DIESEL RANGE	mg/kg	Less than	10

Sample comments:

RES-1219401-11

Please advise should you have questions concerning these data.

Respectfully submitted,

Angela D. Overcash
Laboratory Director

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

CHAIN OF CUSTODY RECORD

449 Springbrook Road ▲ Charlotte, NC 28217
P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Fax: 704/525-0409

PRESS DOWN FIRMLY - 3 COPIES

Client: Rowland Environmental Services
Address: 717-N Atando Ave.
Charlotte, N.C. 28206
Phone: 704-376-7932

Report To: Gil Rowland
Bill To: RES
P.O.#/Billing Reference:
Project Name: RES-121940I-11

Lab Location Requested for Certified Analysis: NC X SC ___ Other ___
Water Chlorinated: Yes ___ No ___ NA X
Sample Iced Upon Collection: Yes X No ___
Requested Due Date: ___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSES REQUESTED 3550						REMARKS	SUB LAB CERT. ID NO.	PRISM LAB ID NO.
UST-2 PL-1A S004	1-5-95	10:15	Soil	CG	1	4oz	Done	X								
UST-2 PL-1A S005	"	11:00	"	"	1	"	"	X								
UST-2 D-1A S004	"	10:30	"	"	1	"	"	X								
UST-2 D-1A S006	"	11:15	"	"	1	"	"	X								
UST-3 D-1A S004	"	10:50	"	"	1	"	"	X								
UST-3 D-1A S007	"	11:45	"	"	1	"	"	X								

Sampler's Signature: David Howell Sampled By (Print Name): David Howell Affiliation: RES

Relinquished By: (Signature)	Received By: (Signature)	Date	Military/Hours
X David Howell			
Relinquished By: (Signature)	Received By: (Signature)	Date	
Relinquished By: (Signature)	Received For Prism Laboratories By:	Date 11/5/95	14:48
Method of Shipment:		Date	

Additional Comments:

NPDES: NC ___ SC ___ OTHER ___ UST: NC ___ SC ___ OTHER ___ GROUNDWATER: NC ___ SC ___ OTHER ___ DRINKING WATER: NC ___ SC ___ OTHER ___ SOLID WASTE: NC ___ SC ___ OTHER ___ OTHER: NC ___ SC ___ OTHER ___

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

CUSTOMER COPY

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

CHAIN OF CUSTODY RECORD

449 Springbrook Road ▲ Charlotte, NC 28217
P.O. Box 240543 ▲ Charlotte, NC 28224-0543
Phone: 704/529-6364 ▲ Fax: 704/525-0409

PRESS DOWN FIRMLY - 3 COPIES

Client: Rowland Environmental Services
Address: 717-N Mando Ave
Charlotte, N.C. 28206
Phone: 704-376-7932

Report To: Gil Rowland
Bill To: RES
P.O.#/Billing Reference:
Project Name: RES-6496-1

Lab Location Requested for Certified Analysis: NC X SC ___ Other ___
Water Chlorinated: Yes ___ No ___ NA X
Sample Iced Upon Collection: Yes X No ___
Requested Due Date: 12-9-94

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	SAMPLE CONTAINER NO.	SAMPLE CONTAINER SIZE	PRESERVATIVES	ANALYSES REQUESTED 3550	ANALYSES REQUESTED 5030	ANALYSES REQUESTED	ANALYSES REQUESTED	ANALYSES REQUESTED	ANALYSES REQUESTED	REMARKS	SUB LAB CERT. ID NO.	PRISM LAB ID NO.
UST-3 Pt-1	12-1-94	12:25	Soil	CG	1	4oz	None	X	X							27104
UST-3 Pt 2	"	12:15	"	"	"	"	"	X	X							27105

Sampler's Signature: David Howell Sampled By (Print Name): David Howell Affiliation: RES

Relinquished By: (Signature)	Received By: (Signature)	Date	Military/Hours
David Howell			
Relinquished By: (Signature)	Received By: (Signature)	Date	
Relinquished By: (Signature)	Received For Prism Laboratories By:	Date 12/1/94	1750
Method of Shipment:		Date	

Additional Comments: 6120412

NPDES: NC ___ SC ___ OTHER ___ UST: NC ___ SC ___ OTHER ___ GROUNDWATER: NC ___ SC ___ OTHER ___ DRINKING WATER: NC ___ SC ___ OTHER ___ SOLID WASTE: NC ___ SC ___ OTHER ___ OTHER: NC ___ SC ___ OTHER ___

*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

FINAL REPORT COPY

APPENDIX E

Soil Boring Logs

Soil Boring Log

Boring Number: UST-2 PL-1A
Project Number: RES-1219411-11
Date: 1/5/95

Client: JHM
Personnel: David Howell
*** - Submitted to laboratory**

Depth Interval	Strata Change	Sample ID	Blow Counts	Time	OVA Reading (ppm)	Soil Discription	USCS Symbol
2' - 4'		UST-2 PL-1A S004 *	N/A	10:15	2	Red Clayey Silt	ML
5' - 6'		UST-2 PL-1A S006 *	N/A	11:00	0	Red Clayey Silt	ML
						Terminated Boring 6'	

Soil Boring Log

Boring Number: UST-2 D-1A
Project Number: RES-1219411-11
Date: 1/5/95

Client: JHM
Personnel: David Howell
*** - Submitted to laboratory**

Depth Interval	Strata Change	Sample ID	Blow Counts	Time	OVA Reading (ppm)	Soil Discription	USCS Symbol
2' - 4'		UST-2 D-1A S004 *	N/A	10:30	15	Red Clayey Silt	ML
6' - 7'		UST-2 D-1A S006 *	N/A	11:15	0	Red Clayey Silt	ML
						Terminated Boring 7'	

Soil Boring Log

Boring Number: UST-3 D-1A
Project Number: RES-1219411-11
Date: 1/5/95

Client: JHM
Personnel: David Howell
*** - Submitted to laboratory**

Depth Interval	Strata Change	Sample ID	Blow Counts	Time	OVA Reading (ppm)	Soil Discription	USCS Symbol
0' - 6'						Gravel Backfill	
2' - 4'		UST-3 D-1A S004 *	N/A	10:50	15	Red Clayey Silt	ML
6' - 7'		UST-3 D-1A S007 *	N/A	11:45	0	Red Clayey Silt	ML
						Terminated Boring 7'	

November 14, 1996

CAPITAL ADVISORS
Real Estate Financial Services

Mr. Dan Graham
North Carolina Department of Environmental Management
Mooresville Regional Office
919 N. Main Street
Mooresville, NC 28115-0950

Re: Underground Storage Tank Closure Report
Shoppes at Davidson Corner
US Highway 29 at Davidson Corner
Concord, NC

Dear Dan:

Per our conversation this morning, I have enclosed a copy of the 1995 UST Closure Report prepared by Rowland Environmental on the above-referenced property. As I indicated, Principal Mutual Life Insurance Company, the lender on this shopping center, would like verification from your department that a copy of this report has been provided to your department.

At your earliest convenience, please issue a letter confirming your receipt and review of the enclosed. If you would like to see a copy of the recently completed Phase I Environmental Report prepared by Trigon Engineering, please let me know and I will obtain a copy for your review.

Thank you again for your assistance.

Sincerely,

CAPITAL ADVISORS

Suzanne Lail

Suzanne D. Lail

/sl
Enclosure

cc: Mr. Hugh Morrison, JHM Properties, LLC
Mr. Troy Kort, Principal Mutual Life Insurance Company

CARILLON, SUITE 2020, 227 W. TRADE STREET, CHARLOTTE, NC 28202
Telephone 704-332-0162 Fax 704-332-0166

MORRISON BROTHERS COMPANIES
E.L. Morrison Lumber Co. Inc. • White Park Co. • JHM Properties, LLC • Hermitage Assoc.

JOHN H. MORRISON, JR.
HUGH H. MORRISON

Mr. Dan Graham
Mooresville Regional Office
N. C. Dept. Of Environmental Health and Natural Resources
919 N. Main Street
Mooresville, NC 28115

Re: Shoppes at Davidson Corner
8.85 acre shopping center development
Intersection of Highway 73 and Davidson Drive
Concord, Cabarrus County, North Carolina

Dear Mr. Graham:

I understand you have reviewed the 1995 Underground Storage Tank Removal Report prepared by Rowland Environmental for the above-referenced site. Please be advised that, while we have not performed a formal well water survey, all of the homes and businesses within a one-quarter mile radius of the shopping center site do have access to public utilities provided by the City of Concord. Further, two Phase I Environmental Assessment Surveys have been made of this site and no contamination was noted and no follow-up investigation was recommended by either survey.

We would appreciate your issuing a statement that no further action is required by the State. Feel free to call me at (704) 722-2222 if you have any questions or need additional information.

JHM Properties, LLC

Hugh Morrison

Hugh Morrison

267 Corban Avenue SW • PO Box 145 • Concord, NC 28025 • Phone (704) 792-2222 • Fax (704) 792-2255

State of North Carolina
Department of Environment,
Health and Natural Resources
Mooresville Regional Office

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary

DIVISION OF WATER QUALITY

March 26, 1997

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

JHM
Post Office Box 145
Concord, North Carolina 28025
Attention: John Morrison

Subject: Water Supply Well Inventory

Shoppes at Davidson Corner
US Highway 29 and Davidson Drive
GW Incident Nº Pending
Site Priority Rank: E?
Cabarrus County, N.C.

Dear Mr. Morrison:

The Groundwater Section of the Mooresville Regional Office has reviewed the underground storage tank closure report, submitted by Capital Advisors, and noted that the required water supply well inventory report has not been received. As the owner or operator of the subject UST systems, you are required to conduct a water supply well survey within a 1,500 foot radius of each site. In particular, this survey must include a potable well inventory and a sketch showing the distances to public and private water supply wells. If no wells are located within the above stated radius for each site, submit a statement to that effect. Also, please complete the required GW/UST-2 form (enclosed). This information should be submitted to this office within 30 days of receipt of this letter.

Should you have any questions, please call me at (704) 663-1699, ext. 235.

Sincerely,

Dan Graham

Dan Graham
Hydrogeological Technician II

Enclosure

cc: Suzanne D. Lail - Capital Advisors

DSG

919 North Main Street,
Mooresville, North Carolina 28115
Voice 704-663-1699

FAX 704-663-6040

State of North Carolina
Department of Environment,
Health and Natural Resources
Mooresville Regional Office

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary

DIVISION OF WATER QUALITY

April 4, 1997

Morrison Brothers Companies
Post Office Box 145
Concord, North Carolina 28025
Attention: Hugh Morrison

RE: Soil Sample Results from
Underground Storage Tank Closure
Shoppes at Davidson Corner
Site Priority Rank E
Cabarrus County, N.C.

Dear Mr. Morrison:

The Groundwater Section of the Division of Water Quality at the Mooresville Regional Office has received the laboratory analyses from six soil samples collected during the closure of three underground storage tanks at the subject site. The report arrived on November 15, 1996. Based on the reported results, no further action is required at this time. Please send soil disposal manifests for all excavated contaminated soil. Also, please complete the GW/UST-2 form (enclosed) and return it to the address on the back of the form.

Should you have any questions, please do not hesitate to call me.

Sincerely,

Dan Graham

Dan Graham
Hydrogeological Technician II

Enclosure

cc: Faye Sweat - Groundwater Section

DSG

919 North Main Street,
Mooresville, North Carolina 28115
Voice 704-663-1699

FAX 704-663-6040

POLLUTION INCIDENT/U.S.T. LEAK REPORTING FORM

Department of Environment, Health, Natural Resources
Division of Environmental Management
GROUNDWATER SECTION

ATTN: Faye Sweat

Confirm. GW Contamination (Y/N) ____
Major Soil Contamination (Y/N) ____
Minor Soil Contaminatin (Y/N) Y

Incident # 17112

Date Incident Occurred or Leak Detected 12/1/94

INCIDENT DESCRIPTION

Incident Location/Name Shoppes @ Davidson Corner

Address @ Hwy 29 at Davidson Corner

City/Town Concord | County Cabarrus | Region MRO

Briefly Describe Incident

During ~~[illegible]~~ tanks excavation petroleum contaminated soil was documented.

3550 = 964 ppm

POTENTIAL SOURCE OWNER-OPERATOR

Potential Source Owner-Operator John Morrison | Telephone

Company JHM | Street Address P.O. Box 145

City Concord | County Cabarrus | State NC | Zip Code 28025

OWNERSHIP
0. N/A 1. Municipal 2. Military 3. Unknown (4. Private) 5. Federal 6. County 7. State

OPERATION TYPE
0. N/A 1. Public Service 2. Agricultural 3. Residential 4. Educational/Relig. 5. Industrial (6. Commercial) 7. Mining

POLLUTANTS INVOLVED

MATERIALS INVOLVED	AMOUNT LOST	AMOUNT RECOVERED
Diesel		

SOURCE OF POLLUTION

PRIMARY SOURCE OF POLLUTION (Select one)
1. Intentional dump
2. Pit, pond, lagoon
3. (Leak-underground)
4. Spray irrigation
5. Land application
6. Animal feedlot
7. Source unknown
8. Septic tank
9. Sewer line
10. Stockpile
11. Landfill
12. Spill-surface
13. Well
14. Above-ground Storage Tank
15. Nonpoint source

PRIMARY POLLUTANT TYPE (Select one)
1. Pesticide/herbicide
2. Radioactive waste
3. Gasoline/(diesel)
4. Heating oil
5. Other petroleum prod.
6. Sewage/septage
7. Fertilizers
8. Sludge
9. Solid waste leachate
10. Metals
11. Other inorganics
12. Other organics

LOCATION
(1. Facility)
2. Railroad
3. Waterway
4. Pipeline
5. Dumpsite
6. Highway
7. Residence
8. Other

SETTING
1. Residential
2. Industrial
(3. Urban)
4. Rural

Site Priority Ranking E?

D.E.M. Regional Contact Dan Graham

Signature Dan Graham

Date 3/26/97

GW-61 Revised 2/95

IMPACT ON DRINKING WATER SUPPLIES

WELLS AFFECTED 1. YES (2. NO)

NUMBER OF WELLS AFFECTED _____

Well(s) Contaminated: (Users Name)

1.

2.

3.

4.

5.

Circle Appropriate Responses

Lab Samples Taken By: 1. DEM 2. DHS (3. Responsible Party) 4. Other 5. None

Samples Taken Include: 1. Groundwater (2. Soil)

LOCATION OF INCIDENT

7 1/2 Min. Quad Name: Concord NC

Lat. : Deg : Min : Sec : 35° 25' 48"

5 Min. Quad Number: 630 V

Long. : Deg : Min : Sec : 80° 36' 18"

Draw Sketch of Area or Attach Additional Maps

GW/UST-2 **Site Investigation Report For Permanent Closure or Change-in-Service of U.S.T.**

FOR TANKS IN **NC**

Return Completed Form To:
The appropriate DWQ Regional Office according to the county of the facility's location. [SEE MAP ON REVERSE SIDE OF OWNER'S COPY (PINK) FOR REGIONAL OFFICE ADDRESS].

State Use Only
I.D. Number
Date Received APR 1 0 1997

INSTRUCTIONS

Complete and return within (30) days following completion of site investigation.

I. Ownership of Tank(s)

Owner Name: JHM PROPERTIES LLC
(Corporation, Individual, Public Agency, or Other Entity)
Street Address: 1235 HIGHWAY 29 S.
County: CABARRUS
City: CONCORD State: NC Zip Code: 28025
Telephone Number: (704) 792-2222
(Area Code)

II. Location of Tank(s)

Facility Name:
(or Company)
Facility ID # (if available): SAME
Street Address
(or State Road)
County: City: Zip Code:
Telephone Number: ( )
(Area Code)

III. Contact Person

Name: HUGH MORRISON Job Title: MEMBER Tel. No.: 704-792-2222
Closure Contractor: ROWLAND ENVIRONMENTAL Address: 717 ATANDO AVE CHARLOTTE Tel. No.: 704-376-7732
Primary Consultant: PRISM LABS Address: 449 Springbrook Rd Charlotte Tel. No.: 704-529-6364
Lab: Address: Tel. No.:

IV. U.S.T. Information

Tank No.	Size in Gallons	Tank Dimensions	Last Contents
1	6000		heating oil
2	550		gasoline
3	8000		diesel

V. Excavation Condition

Water In Excavation		Free Product		Notable Odor or Visible Soil Contamination	
Yes	No	Yes	No	Yes	No

VI. Additional Information Required

See reverse side of pink copy (owner's copy) for additional information required by N.C. - DWQ in the written report and sketch.

NOTE: If a release from the tank(s) has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G.

VII. Check List (Check the activities completed)

PERMANENT CLOSURE (For Removing or Abandoning-in-place)

- ☐ Contact local fire marshal.
- ☐ Notify DWQ Regional Office before abandonment.
- ☐ Drain & flush piping into tank.
- ☐ Remove all product and residuals from tank.
- ☐ Excavate down to tank.
- ☐ Clean and inspect tank.
- ☐ Remove drop tube, fill pipe, gauge pipe, vapor recovery tank connections, submersible pumps and other tank fixtures.
- ☐ Cap or plug all lines except the vent and fill lines.
- ☐ Purge tank of all product & flammable vapors.
- ☐ Cut one or more large holes in the tanks.
- ☐ Backfill the area.

Date Tank(s) Permanently closed: 12/30 and 12/1/94
Date of Change-in-Service:

ABANDONMENT IN PLACE

- ☐ Fill tank until material overflows tank opening.
- ☐ Plug or cap all openings.
- ☐ Disconnect and cap or remove vent line.
- ☐ Solid inert material used - specify:

REMOVAL

- ☐ Create vent hole.
- ☐ Label tank.
- ☐ Dispose of tank in approved manner.

Final tank destination:

VIII. Certification (Read and Sign)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Print name and official title of owner or owner's authorized representative	Signature	Date Signed
HUGH H. MORRISON MEMBER	Hugh H Morrison	4/9/97

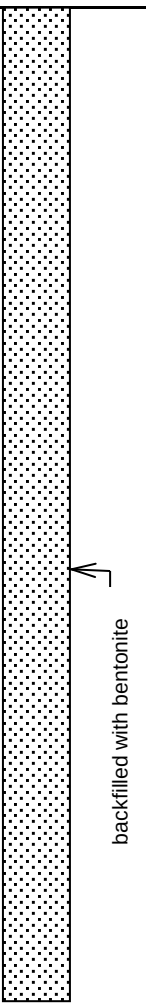
Appendix B
Boring Logs

BORING LOG: P8-SB1

Permit #		Drill Date	***02/06/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0					Asphalt/gravel substrate
				1.5 ppm	Light brown/red, clay, dry, micaceous
				3.3 ppm	Brown, medium- to coarse-grained sandy clay, dry
2				3.8 ppm	Red-brown, clay, dry, micaceous
	P8-SB1-3	3'		3.5 ppm	
4				1.0 ppm	Red, fine- to medium-grained sandy clay, dry, micaceous
				3.4 ppm	
6				3.3 ppm	
				2.8 ppm	Red-orange, fine- to medium-grained sandy silt
8				2.4 ppm	
				1.6 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

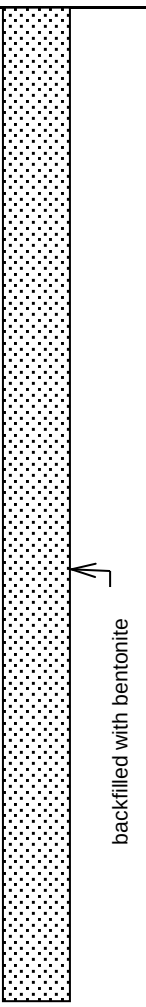
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P8-SB2

Permit #		Drill Date	***02/06/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered in boring***	TOC Elevation		Sample Method	***Acetate liner***

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0					Asphalt/gravel substrate
				1.5 ppm	Light brown to brown, silty clay, dry
				3.3 ppm	Red-brown, clay, dry, micaceous
2				3.8 ppm	
				3.5 ppm	
4				1.0 ppm	
				3.4 ppm	
6				3.3 ppm	Red-brown, clay, dry, micaceous
				2.8 ppm	
8	P8-SB2-8	8'		2.4 ppm	
				1.6 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

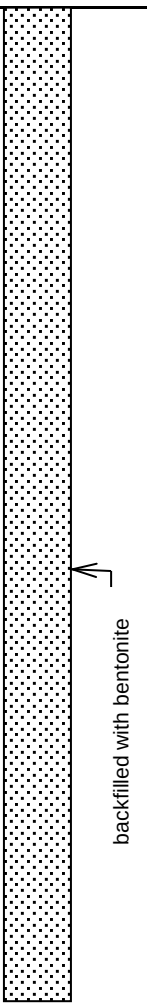
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P8-SB3

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0					Topsoil/gravel substrate
				0.0 ppm	Brown, f/m sandy silt, dry
				0.0 ppm	Red-brown silt
2				0.0 ppm	
				0.0 ppm	Orange-brown clayey silt, moist
4				0.0 ppm	
				0.1 ppm	
6				0.2 ppm	Lt brown, some orange, f sandy clayey silt, moist
				0.4 ppm	
8	P8-SB3-8	8'		0.3 ppm	
					Red-brown micaceous clay, moist
				0.2 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

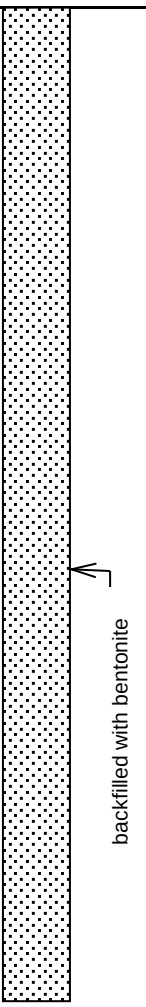
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P8-SB4

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	Asphalt/gravel sub-base
				0.0 ppm	Brown and red-orange silty clay
2				0.0 ppm	
				0.0 ppm	
4				0.0 ppm	
				0.0 ppm	
6				0.0 ppm	Brown and red-orange clayey silt
				0.0 ppm	
8				0.0 ppm	
				0.0 ppm	
10	P8-SB4-10	10'			Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

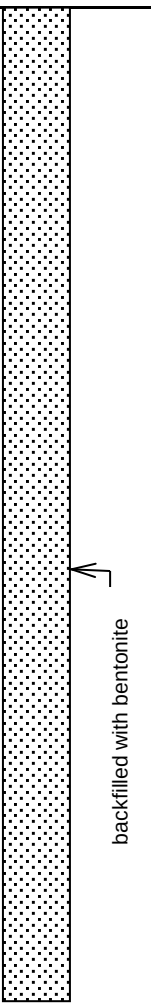
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P8-SB5

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	Topsoil/grass
				0.0 ppm	
2				0.0 ppm	Red-brown, f/m sandy clay, moist
				0.0 ppm	
4	P8-SB-55	5'		0.7 ppm	Soil mixed with asphalt
				0.2 ppm	
6				0.1 ppm	Lt brown with orange, clayey silt with mica
				0.0 ppm	
8				0.0 ppm	Brownish red clay, dry
				0.0 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

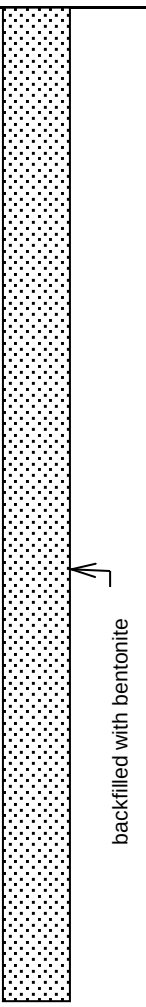
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P8-SB6

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0					Topsoil/grass
				0.0 ppm	Red-brown, f/m sandy clay, moist
				0.0 ppm	
2				0.0 ppm	Red to Lt brown silty clay
				0.0 ppm	
4				0.7 ppm	Red-orange clayey silt, slightly moist, some mica
				0.1 ppm	
6				0.3 ppm	
				0.2 ppm	
8				0.3 ppm	Brownish red clay, dry
	P8-SB6-10	10'		0.4 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

Geologist: ***Brandy Costner***

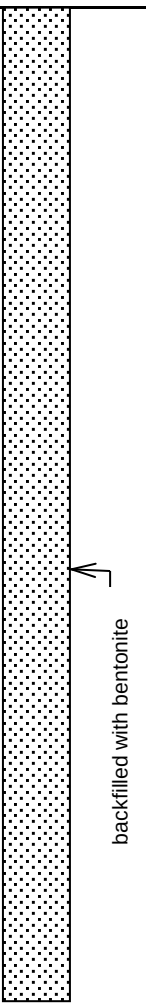
Driller: ***Probe Tech***

BORING LOG: P8-SB7

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	Topsoil/grass
				0.0 ppm	Brown to red, f/m sandy siltmoist
2				0.0 ppm	
				0.0 ppm	
4				0.0 ppm	
				0.1 ppm	Red, silty clay, slightly moist
				0.1 ppm	
6				0.2 ppm	Red-orange clayey silt, slighty moist, some mica
				0.2 ppm	
8				0.2 ppm	
				0.2 ppm	Brown to lt brown and orange f/m sandy clay
	P8-SB7-10	10'		0.2 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

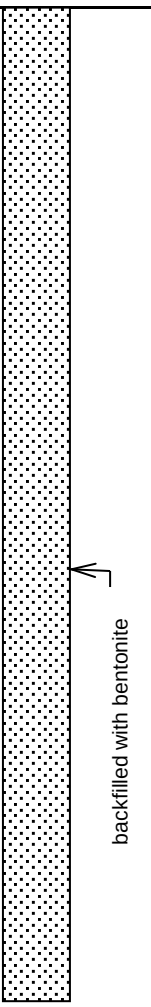
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P8-SB8

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	Topsoil/grass
				0.0 ppm	
2				0.0 ppm	
				0.0 ppm	
4				0.1 ppm	Brown, red-orange silty clay, mica throughout
				0.1 ppm	
6				0.2 ppm	
				0.2 ppm	
8	P8-SB8-9	9'		0.2 ppm	Lt brown orange to brown f/m sandy silt, moist
				0.2 ppm	Lt brown -ornage clay, slightly moist
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

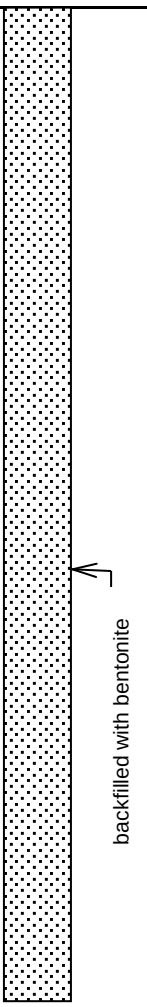
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P8-SB9

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	Topsoil/grass
				0.0 ppm	Brown, red-orange silty clay, mica throughout
2				0.0 ppm	
				0.0 ppm	
				0.2 ppm	Red f/m sandy clay, dry, some mica
4				0.1 ppm	
				0.1 ppm	
6				0.3 ppm	Brown m/c sand
				0.5 ppm	Red-orange clay, slightly moist
8				0.5 ppm	
	P8-SB9-10	10'			Boring terminated at 10 ft bgs
10					
12					

Typical Diagram



Not to Scale

Notes:

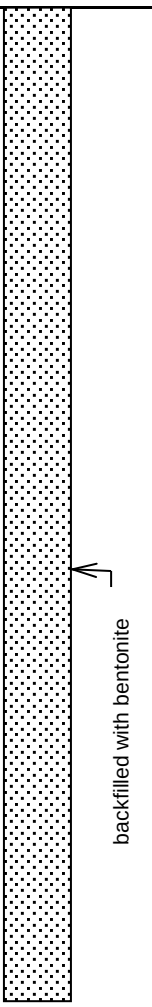
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P8-SB10

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	Red-orange f/m sandy clay
				0.3 ppm	
2				0.4 ppm	
				0.4 ppm	Red-brown f/m sandy clay
4				0.6 ppm	
				0.6 ppm	
6				0.7 ppm	
				0.8 ppm	
8				0.9 ppm	Red-orange silty clay, slightly moist
	P8-SB10-10	10'		0.9 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

Geologist: ***Brandy Costner***

Driller: ***Probe Tech***

BORING LOG: P8-SB11

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description	Typical Diagram
0				0.3 ppm	Red-orange f/m sandy clay	
				0.1 ppm		
2				0.4 ppm		
				0.4 ppm		
4				0.4 ppm	Lt brown to red-orange silty clay	
				0.5 ppm		
6				0.6 ppm		
				0.4 ppm		
8				0.6 ppm		
	P8-SB11-10	10'		0.7 ppm		
10					Boring terminated at 10 ft bgs	
12						

backfilled with bentonite

Not to Scale

Notes:

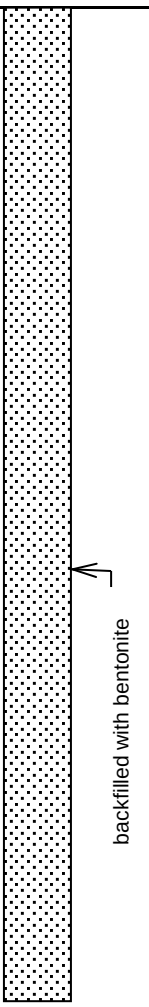
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P8-SB12

Permit #		Drill Date	***02/07/13***	Site	***Parcel 008***
Client	***NCDOT***	Use		URS Corporation	
Address	***1215 Concord Pkwy N, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.2 ppm	Red-brown f/m sandy clay
				0.1 ppm	
2				0.0 ppm	
				0.3 ppm	Red-brown silty clay, slightly moist
4				0.3 ppm	
				0.2 ppm	Red-orange, silty clay, some mica
6				0.3 ppm	
				0.5 ppm	
8				0.6 ppm	
	P8-SB12-10	10'		0.6 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

Appendix C
Laboratory Report

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

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

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

February 19, 2013

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

RE: Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on February 08, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,

Kevin Godwin for
Kevin Herring
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Project Manager

Enclosures

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CERTIFICATIONS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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SAMPLE SUMMARY

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92147546001	**P8-SB1-3**	Solid	02/06/13 17:05	02/08/13 16:05
92147546002	**P8-SB2-8**	Solid	02/06/13 17:10	02/08/13 16:05
92147546003	**P8-SB3-8**	Solid	02/07/13 15:05	02/08/13 16:05
92147546004	**P8-SB4-10**	Solid	02/07/13 15:10	02/08/13 16:05
92147546005	**P8-SB5-5**	Solid	02/07/13 15:15	02/08/13 16:05
92147546006	**P8-SB6-10**	Solid	02/07/13 15:20	02/08/13 16:05
92147546007	**P8-SB7-10**	Solid	02/07/13 15:25	02/08/13 16:05
92147546008	**P8-SB8-9**	Solid	02/07/13 15:30	02/08/13 16:05
92147546009	**P8-SB9-10**	Solid	02/07/13 15:35	02/08/13 16:05
92147546010	**P8-SB10-10**	Solid	02/07/13 15:40	02/08/13 16:05
92147546011	**P8-SB11-10**	Solid	02/07/13 15:45	02/08/13 16:05
92147546012	**P8-SB12-10**	Solid	02/07/13 15:50	02/08/13 16:05

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SAMPLE ANALYTE COUNT

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92147546001	**P8-SB1-3**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546002	**P8-SB2-8**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546003	**P8-SB3-8**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546004	**P8-SB4-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546005	**P8-SB5-5**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546006	**P8-SB6-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546007	**P8-SB7-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546008	**P8-SB8-9**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546009	**P8-SB9-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546010	**P8-SB10-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546011	**P8-SB11-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C
92147546012	**P8-SB12-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	JEA	1	PASI-C

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HITS ONLY

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92147546001	**P8-SB1-3**					
ASTM D2974-87	Percent Moisture	11.6	%	0.10	02/12/13 08:16	
92147546002	**P8-SB2-8**					
ASTM D2974-87	Percent Moisture	19.3	%	0.10	02/12/13 08:17	
92147546003	**P8-SB3-8**					
ASTM D2974-87	Percent Moisture	14.9	%	0.10	02/12/13 08:17	
92147546004	**P8-SB4-10**					
ASTM D2974-87	Percent Moisture	28.4	%	0.10	02/12/13 08:18	
92147546005	**P8-SB5-5**					
EPA 8015 Modified	Diesel Components	27.6	mg/kg	6.3	02/12/13 00:13	
ASTM D2974-87	Percent Moisture	20.9	%	0.10	02/12/13 08:18	
92147546006	**P8-SB6-10**					
ASTM D2974-87	Percent Moisture	21.6	%	0.10	02/12/13 08:18	
92147546007	**P8-SB7-10**					
ASTM D2974-87	Percent Moisture	20.5	%	0.10	02/12/13 08:18	
92147546008	**P8-SB8-9**					
ASTM D2974-87	Percent Moisture	10	%	0.10	02/12/13 08:18	
92147546009	**P8-SB9-10**					
ASTM D2974-87	Percent Moisture	21.3	%	0.10	02/12/13 08:18	
92147546010	**P8-SB10-10**					
ASTM D2974-87	Percent Moisture	22.4	%	0.10	02/12/13 08:18	
92147546011	**P8-SB11-10**					
ASTM D2974-87	Percent Moisture	19.6	%	0.10	02/12/13 08:18	
92147546012	**P8-SB12-10**					
ASTM D2974-87	Percent Moisture	19.8	%	0.10	02/12/13 08:18	

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PROJECT NARRATIVE

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Method: **EPA 8015 Modified**
Description: 8015 GCS THC-Diesel
Client: NCDOT West Central
Date: February 19, 2013

General Information:
12 samples were analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Method: **EPA 8015 Modified**
Description: Gasoline Range Organics
Client: NCDOT West Central
Date: February 19, 2013

General Information:
12 samples were analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 5035A/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB1-3 **Lab ID: 92147546001** Collected: 02/06/13 17:05 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	5.7	5.1	1	02/10/13 12:18	02/11/13 23:26	68334-30-5	
Surrogates									
n-Pentacosane (S)	67	%	41-119		1	02/10/13 12:18	02/11/13 23:26	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	5.6	5.6	1	02/13/13 14:11	02/15/13 12:52	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-167		1	02/13/13 14:11	02/15/13 12:52	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**11.6**	%	0.10	0.10	1		02/12/13 08:16		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB2-8 **Lab ID: 92147546002** Collected: 02/06/13 17:10 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.2	5.6	1	02/10/13 12:18	02/11/13 23:26	68334-30-5	
Surrogates									
n-Pentacosane (S)	71	%	41-119		1	02/10/13 12:18	02/11/13 23:26	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	5.7	5.7	1	02/13/13 14:11	02/15/13 13:15	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-167		1	02/13/13 14:11	02/15/13 13:15	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.3**	%	0.10	0.10	1		02/12/13 08:17		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB3-8 **Lab ID: 92147546003** Collected: 02/07/13 15:05 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	5.9	5.3	1	02/10/13 12:18	02/11/13 23:49	68334-30-5	
Surrogates									
n-Pentacosane (S)	78	%	41-119		1	02/10/13 12:18	02/11/13 23:49	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	4.9	4.9	1	02/13/13 14:11	02/15/13 13:38	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-167		1	02/13/13 14:11	02/15/13 13:38	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.9**	%	0.10	0.10	1		02/12/13 08:17		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB4-10 **Lab ID: 92147546004** Collected: 02/07/13 15:10 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	7.0	6.3	1	02/10/13 12:18	02/11/13 23:49	68334-30-5	
Surrogates									
n-Pentacosane (S)	70	%	41-119		1	02/10/13 12:18	02/11/13 23:49	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.9	6.9	1	02/13/13 14:11	02/15/13 14:01	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-167		1	02/13/13 14:11	02/15/13 14:01	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**28.4**	%	0.10	0.10	1		02/12/13 08:18		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB5-5 **Lab ID: 92147546005** Collected: 02/07/13 15:15 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	**27.6**	mg/kg	6.3	5.7	1	02/10/13 12:18	02/12/13 00:13	68334-30-5	
Surrogates									
n-Pentacosane (S)	64	%	41-119		1	02/10/13 12:18	02/12/13 00:13	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	5.7	5.7	1	02/13/13 14:11	02/15/13 14:24	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-167		1	02/13/13 14:11	02/15/13 14:24	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.9**	%	0.10	0.10	1		02/12/13 08:18		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB6-10 **Lab ID: 92147546006** Collected: 02/07/13 15:20 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.4	5.7	1	02/10/13 12:18	02/12/13 00:13	68334-30-5	
Surrogates									
n-Pentacosane (S)	70	%	41-119		1	02/10/13 12:18	02/12/13 00:13	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	5.5	5.5	1	02/13/13 14:11	02/15/13 14:47	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-167		1	02/13/13 14:11	02/15/13 14:47	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.6**	%	0.10	0.10	1		02/12/13 08:18		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB7-10 **Lab ID: 92147546007** Collected: 02/07/13 15:25 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.3	5.7	1	02/10/13 12:18	02/12/13 00:36	68334-30-5	
Surrogates									
n-Pentacosane (S)	67	%	41-119		1	02/10/13 12:18	02/12/13 00:36	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.2	6.2	1	02/13/13 14:11	02/15/13 15:10	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-167		1	02/13/13 14:11	02/15/13 15:10	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.5**	%	0.10	0.10	1		02/12/13 08:18		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB8-9 **Lab ID: 92147546008** Collected: 02/07/13 15:30 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	5.6	5.0	1	02/10/13 12:18	02/12/13 01:00	68334-30-5	
Surrogates									
n-Pentacosane (S)	73	%	41-119		1	02/10/13 12:18	02/12/13 01:00	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	5.0	5.0	1	02/13/13 14:11	02/15/13 15:33	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-167		1	02/13/13 14:11	02/15/13 15:33	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**10**	%	0.10	0.10	1		02/12/13 08:18		

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(828)254-7176

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

ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB9-10 **Lab ID: 92147546009** Collected: 02/07/13 15:35 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.4	5.7	1	02/10/13 12:18	02/12/13 01:23	68334-30-5	
Surrogates									
n-Pentacosane (S)	73	%	41-119		1	02/10/13 12:18	02/12/13 01:23	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.2	6.2	1	02/13/13 14:11	02/15/13 15:56	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-167		1	02/13/13 14:11	02/15/13 15:56	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.3**	%	0.10	0.10	1		02/12/13 08:18		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB10-10 **Lab ID: 92147546010** Collected: 02/07/13 15:40 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.4	5.8	1	02/10/13 12:18	02/12/13 01:23	68334-30-5	
Surrogates									
n-Pentacosane (S)	77	%	41-119		1	02/10/13 12:18	02/12/13 01:23	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.3	6.3	1	02/13/13 14:11	02/15/13 16:19	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-167		1	02/13/13 14:11	02/15/13 16:19	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.4**	%	0.10	0.10	1		02/12/13 08:18		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB11-10 **Lab ID: 92147546011** Collected: 02/07/13 15:45 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.2	5.6	1	02/10/13 12:18	02/12/13 01:46	68334-30-5	
Surrogates									
n-Pentacosane (S)	64	%	41-119		1	02/10/13 12:18	02/12/13 01:46	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	5.8	5.8	1	02/13/13 14:11	02/15/13 16:41	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	89	%	70-167		1	02/13/13 14:11	02/15/13 16:41	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.6**	%	0.10	0.10	1		02/12/13 08:18		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Sample: P8-SB12-10 **Lab ID: 92147546012** Collected: 02/07/13 15:50 Received: 02/08/13 16:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.2	5.6	1	02/10/13 12:18	02/12/13 01:46	68334-30-5	
Surrogates									
n-Pentacosane (S)	71	%	41-119		1	02/10/13 12:18	02/12/13 01:46	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.2	6.2	1	02/13/13 14:11	02/15/13 17:04	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	109	%	70-167		1	02/13/13 14:11	02/15/13 17:04	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.8**	%	0.10	0.10	1		02/12/13 08:18		

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QUALITY CONTROL DATA

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

QC Batch: GCV/6640 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 92147546001, 92147546002, 92147546003, 92147546004, 92147546005, 92147546006, 92147546007, 92147546008, 92147546009, 92147546010, 92147546011, 92147546012

METHOD BLANK: 921268 Matrix: Solid
Associated Lab Samples: 92147546001, 92147546002, 92147546003, 92147546004, 92147546005, 92147546006, 92147546007, 92147546008, 92147546009, 92147546010, 92147546011, 92147546012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.7	02/15/13 10:12	
4-Bromofluorobenzene (S)	%	102	70-167	02/15/13 10:12	

LABORATORY CONTROL SAMPLE: 921269

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	23.7	25.4	107	70-165	
4-Bromofluorobenzene (S)	%			99	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 921746 921747

Parameter	Units	92147464014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Gasoline Range Organics	mg/kg	ND	22.5	22.5	30.0	26.8	132	117	47-187	12	30	
4-Bromofluorobenzene (S)	%						101	99	70-167			

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QUALITY CONTROL DATA

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

QC Batch: OEXT/20733 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92147546001, 92147546002, 92147546003, 92147546004, 92147546005, 92147546006, 92147546007, 92147546008, 92147546009, 92147546010, 92147546011, 92147546012

METHOD BLANK: 919679 Matrix: Solid
Associated Lab Samples: 92147546001, 92147546002, 92147546003, 92147546004, 92147546005, 92147546006, 92147546007, 92147546008, 92147546009, 92147546010, 92147546011, 92147546012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Components	mg/kg	ND	5.0	02/11/13 23:03	
n-Pentacosane (S)	%	74	41-119	02/11/13 23:03	

LABORATORY CONTROL SAMPLE: 919680

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Components	mg/kg	66.7	44.5	67	49-113	
n-Pentacosane (S)	%			72	41-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 919681 919682

Parameter	Units	92147546007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diesel Components	mg/kg	ND	83.9	83.9	60.2	69.2	69	80	10-146	14	30	
n-Pentacosane (S)	%						75	74	41-119			

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QUALITY CONTROL DATA

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

QC Batch: PMST/5302 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92147546001, 92147546002, 92147546003, 92147546004, 92147546005, 92147546006, 92147546007, 92147546008, 92147546009, 92147546010, 92147546011, 92147546012

SAMPLE DUPLICATE: 919407

Parameter	Units	92147555001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	22.2	17.2	26	25	R1

SAMPLE DUPLICATE: 919430

Parameter	Units	92147546001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	11.6	11.6	0	25	

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QUALIFIERS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92147546

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92147546001	**P8-SB1-3**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546002	**P8-SB2-8**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546003	**P8-SB3-8**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546004	**P8-SB4-10**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546005	**P8-SB5-5**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546006	**P8-SB6-10**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546007	**P8-SB7-10**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546008	**P8-SB8-9**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546009	**P8-SB9-10**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546010	**P8-SB10-10**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546011	**P8-SB11-10**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546012	**P8-SB12-10**	EPA 3546	OEXT/20733	EPA 8015 Modified	GCSV/13926
92147546001	**P8-SB1-3**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546002	**P8-SB2-8**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546003	**P8-SB3-8**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546004	**P8-SB4-10**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546005	**P8-SB5-5**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546006	**P8-SB6-10**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546007	**P8-SB7-10**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546008	**P8-SB8-9**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546009	**P8-SB9-10**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546010	**P8-SB10-10**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546011	**P8-SB11-10**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546012	**P8-SB12-10**	EPA 5035A/5030B	GCV/6640	EPA 8015 Modified	GCV/6641
92147546001	**P8-SB1-3**	ASTM D2974-87	PMST/5302		
92147546002	**P8-SB2-8**	ASTM D2974-87	PMST/5302		
92147546003	**P8-SB3-8**	ASTM D2974-87	PMST/5302		
92147546004	**P8-SB4-10**	ASTM D2974-87	PMST/5302		
92147546005	**P8-SB5-5**	ASTM D2974-87	PMST/5302		
92147546006	**P8-SB6-10**	ASTM D2974-87	PMST/5302		
92147546007	**P8-SB7-10**	ASTM D2974-87	PMST/5302		
92147546008	**P8-SB8-9**	ASTM D2974-87	PMST/5302		
92147546009	**P8-SB9-10**	ASTM D2974-87	PMST/5302		
92147546010	**P8-SB10-10**	ASTM D2974-87	PMST/5302		
92147546011	**P8-SB11-10**	ASTM D2974-87	PMST/5302		
92147546012	**P8-SB12-10**	ASTM D2974-87	PMST/5302		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1682229

Section A
Required Client Information:

Company:	URS Corp
Address:	6000 Fairview Rd
	Charlotte, NC 28210
Email To:	walt.plekan@urs.com
Phone:	704-522-0330
Fax:	
Requested Due Date/TAT:	Standard

Section B
Required Project Information:

Report To:	Walt plekan
Copy To:	vernon.keys@urs.com
Purchase Order No.:	
Project Name:	TIP# B-5126 WBS# 42295.1.1
Project Number:	31827879

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	5697-1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER ______

Site Location STATE: NC

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED – COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test: TPH GRO	TPH DRO	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92147546
1	P8-SB1-3	SL	G			2/6/13	1705		4	2						2		X	X		001
2	P8-SB2-8					2/6/13	1710											X	X		002
3	P8-SB3-8					2/7/13	1505											X	X		003
4	P8-SB4-10						1510											X	X		004
5	P8-SB5-5						1515											X	X		005
6	P8-SB6 10						1520											X	X		006
7	P8-SB7-10						1525											X	X		007
8	P8-SB8-9						1530											X	X		008
9	P8-SB9-10						1535											X	X		009
10	P8-SB10-10						1540											X	X		010
11	P8-SB11-10						1545											X	X		011
12	P8-SB12-10						1550											X	X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Brandy Costner / URS	2/8/13	0800	G Moody / Pace	2-8-13	17:00				
	G Moody	2-8-13	16:10	[illegible]	2/8/13	16:[illegible]	1.4	Y	N	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brandy Costner

SIGNATURE of SAMPLER: Brandy Costner

DATE Signed (MM/DD/YY): 2/8/13

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical®	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: October 31, 2012 Page 1 of 2
	Document Number: F-CHR-CS-03-rev.08	Issuing Authority: Pace Huntersville Quality Office

Client Name: URS **Project #** 92147546

Where Received: ☑ Huntersville ☐ Asheville ☐ Eden ☐ Raleigh

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ (Pace) Other________

Optional Proj. Due Date: Proj. Name:

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

Lmm 4/8/13

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other________

Thermometer Used: IR Gun T1101 (T1102) **Type of Ice:** (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor **T1101**: No Correction **T1102**: No Correction

Corrected Cooler Temp.: 5.7 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: Lmm 4/8/13

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

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: ____________________ Date/Time: ____________

Comments/ Resolution: ____________________

SCURF Review: [signature] **Date:** 2/8/13 **SRF Review:** [signature] **Date:** 2/11/13

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