PSA REPORT

PRELIMINARY SITE ASSESSMENT PARCEL #4 CARLENE GREEN CRISP PROPERTY 101 PARK STREET CANTON, HAYWOOD COUNTY, NC 28716 STATE PROJECT B-3656 WBS ELEMENT 33202.1.2

Prepared for

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14 May 2010



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URS Job No. 3182 6802

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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.

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

SECTIONONE Introduction

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 west bank of the Pigeon River on the south side of Park Street for project B-3656, Bridge 419 over the Pigeon River on US 19-23-74. This PSA was conducted in Canton, Haywood County, North Carolina (**Figure 1**) for the Carlene Green Crisp Property, located at 101 Park Street (the Site). The PSA was performed only within the proposed right-of-way and/or easement for this parcel. **Figure 2** shows the property relative to the proposed Bridge 419 project.

This PSA was performed in general accordance with:

- NCDOT's 29 January 2010 Request for Technical and Cost Proposal (RFP) for the Site property. The RFP established the following scope of work (SOW) for the project:
 - Locate underground storage tanks (USTs) and estimate approximate size and contents (if any).
 - Determine if contaminated soils are present.
 - 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 the Site and submit the report to NCDOT in triplicate.
- URS's 19 February 2010 Technical and Cost Proposal for the Site property.
- NCDOT's 2 March 2010 Notice to Proceed for the Site property.

The project included a geophysical survey, soil sampling using a direct push technology (DPT) rig, and laboratory analyses of selected soil samples from within Site property and laboratory analyses of a groundwater sample. 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 qualified 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 URS. Analysis of soil samples were performed by Prism Laboratories under direct contract with NCDOT.

1.2 BACKGROUND

The objective for this PSA is to assess the Site for USTs and 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 the Pigeon River to the east, Park Street to the north, commercial properties to the west, and commercial properties to the south. The property includes a one story brick building. The building currently serves as a Napa Auto Parts store. According to a 1930 Sanborn map (provided by NCDOT), the property operated as a gas station at one time. According to NCDENR's UST Section Registry there are no USTs registered to this site.

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 mark the 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 March 15 and 17, 2010. Ground surface conditions consisted primarily of gravel.

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 Fisher Labs GEMINI-3 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.

URS utilized the GEMINI-3 to first conduct a broad search of the portions of the survey area not covered by reinforced concrete in order to identify anomalies indicative of USTs. EM-61 data were collected along parallel profiles with a nominal spacing of 3 feet and also extending across the portions of the survey area not covered with reinforced concrete. 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. The GPR was used to conduct a broad search of the parcel in areas where metal detection methods proved unreliable.

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 at Parcel #7.

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. URS utilized the ProXRT GPS to navigate to each potential UST location and temporarily marked these locations using semi-permanent marking paint. Follow-up GPR surveying was subsequently conducted across the EM-61 anomalies identified during in-field analysis in order to further characterize the shape and depth of the anomalies. Additional follow-up GPR surveying was conducted in portions of the survey area along Park Street with suspected reinforced concrete because reinforced concrete can potentially mask the presence of USTs in EM-61 data.

The GPR survey consisted of in-field analysis of real-time data. No post-processing of the data was completed, although representative GPR profiles were saved to a data file.

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 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).

The differential response data were also processed for this survey because the effectiveness of the EM-61 for locating buried objects may be negatively affected by interference from metallic surface clutter and remnant cultural features (e.g. building foundations). Differential channel data typically provide enhanced discrimination between anomalies arising from surface or near-surface effects versus utilities and other potentially deeper targets of interest.

2.2 SOIL BORING INSTALLATION AND MEDIA SAMPLING

Eight Geoprobe[®] direct-push soil borings, P4-1 through P4-8, were installed on April 13, 2010 to assess the Site for impacted soil. 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 this geophysical survey are presented in accordance with the NCDOT guidelines, dated May 19, 2009, for identifying and ranking potential USTs on NCDOT projects.

The results of the search with the GENINI-3 and the results of the EM-61 survey across the non-reinforced sections of Parcel #4 did not reveal anomalies indicative of USTs.

The EM-61 Channel 1 and differential response results are provided as plan view, color-enhanced contour maps in **Figures 3A** and **3B**, respectively. The interpreted background response is represented by the light green contours and corresponds to the range of 0 to 25 milliVolts (mV). Elevated EM-61 responses represented by the blue contour interval are interpreted to be smaller near-surface metallic objects or metal objects buried at greater depths. The highest EM responses represented by the range of responses in the pink to red interval in **Figures 3A** and **3B** as well as negative EM responses are interpreted to be large metal objects. Sources of known EM interference are annotated accordingly on **Figures 3A** and **3B**, and one linear feature indicative of an underground sewer line is identified with a black dashed line. It is important to note that this utility center line is identified in **Figures 3A** and **3B** because the EM-61 data and visible site features (e.g. cut in concrete) support this level of interpretation. The results of this geophysical survey do not represent a comprehensive underground utility avoidance or locating survey.

The results of the GPR survey indicated the presence of two suspected side-by-side USTs located near the fill ports to the northeast of Napa Auto Parts store. Cross-section O-O' in **Figure 3C** depicts the two suspected side-by-side USTs at an estimated depth of 3 feet at Parcel #4. These suspected USTs were identified within the vicinity of the observed fill port, and as a result, these suspected USTs are categorized as "Probable USTs" in accordance with the NCDOT guidelines.

The parabolic shape of the anomaly in cross-section O-O' in **Figure 3C** suggests that the long axis of the probable USTs is oriented perpendicular to Park Street. The brown rectangles shown in **Figures 3A** and **3B** depict the extents of the suspected USTs based on the GPR survey. **Figure 3C** also presents a photograph of the two side-by-side probable USTs.

3.2 SOIL SAMPLING RESULTS

A total of 8 soil borings were advanced to depths of approximately 10 ft bgs during the PSA investigation at the Site property. Boring locations are shown in **Figure 4** and analytical results (TPH) are summarized in **Table 1**. The soil was described as brown to brown and gray sandy silt/clay. The boring logs are included as **Appendix A** and the complete laboratory report is included in **Appendix B**.

As shown in **Appendix A**, soil headspace screening in the field detected organic vapors ranged from 0.8 to 8.9 ppm. TPH (DRO) was detected in sample P4-4 at 13 milligrams per kilogram (mg/kg), just above the UST Section Action Level of 10 mg/kg. This sample location is located adjacent to the southern end of the probable USTs. Other sample results were either below the action levels or were not detected. If the USTs are removed, it is anticipated that only a limited amount of impacted soils (one to two truckloads) would be encountered and need to be properly disposed.

SECTIONFOUR 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.

SECTIONFIVE References

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, Carlene Greene Crisp Property, January 29, 2010.
- North Carolina Department of Transportation, *Notice to Proceed Preliminary Site Assessment, Carlene Greene Crisp Property*, March 2, 2010

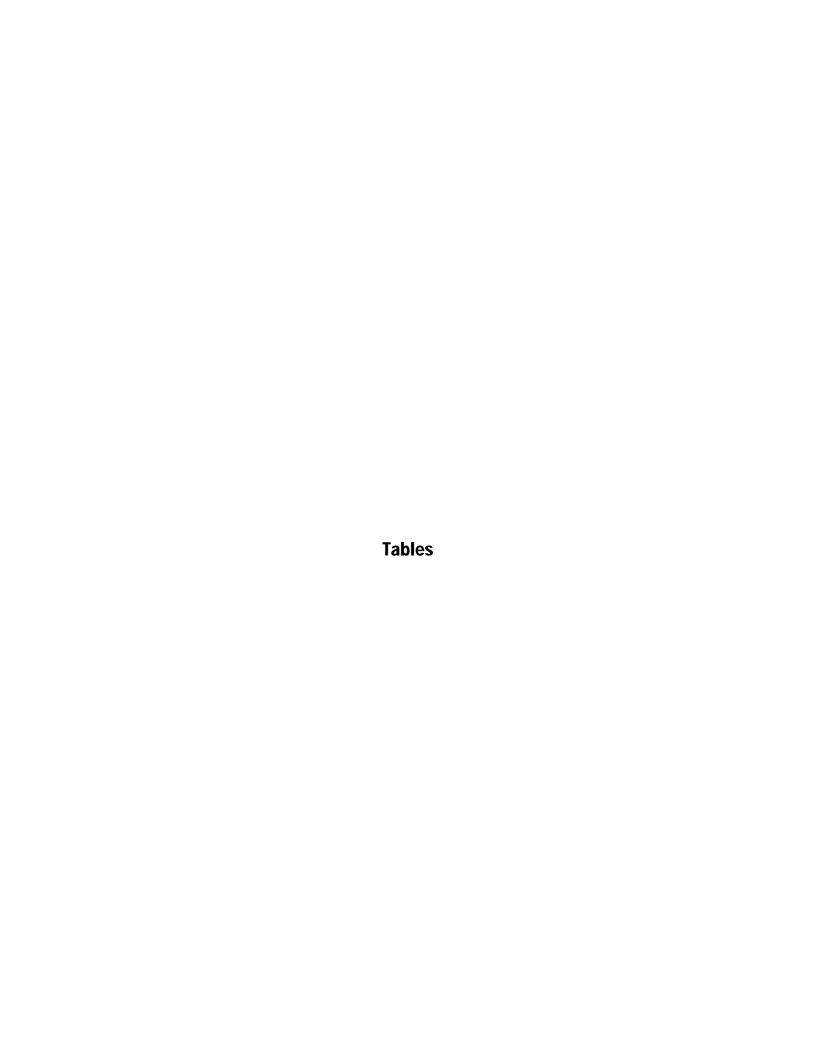


TABLE 1 SUMMARY OF SOIL TPH ANALYTICAL RESULTS

Parcel #4 Carlene Green Crisp Property Canton, Haywood County, North Carolina

			ORATOR H RANGE		
LOCATION	DEPTH (ft bgs)		RO J/kg)		RO /kg)
P4-1	10	ND	1.5	4.	7 J
P4-2	10	ND	1.5	ND	0.87
P4-3	10	ND	1.4	ND	0.79
P4-4	10	13	3.0	ND	0.84
P4-5	10	ND	1.5	ND	0.85
P4-6	10	4.	2 J	ND	0.87
P4-7	10	ND	1.4	ND	0.79
P4-8	10	ND	1.4	ND	0.80

NCDENR UST Section Action Levels: 10 10 NCDENR Non-UST Petroleum Action Levels: 10 40

LEGEND:

TPH - Total Petroleum Hydrocarbons

GRO - Gasoline Range Organics (determined by laboratory via EPA Method 8015B)

DRO - Diesel Range Organics (determined by laboratory via EPA Method 8015B)

ft bgs - feet below ground surface

mg/kg - milligrams per kilogram

ND - Not Detected above the indicated limit

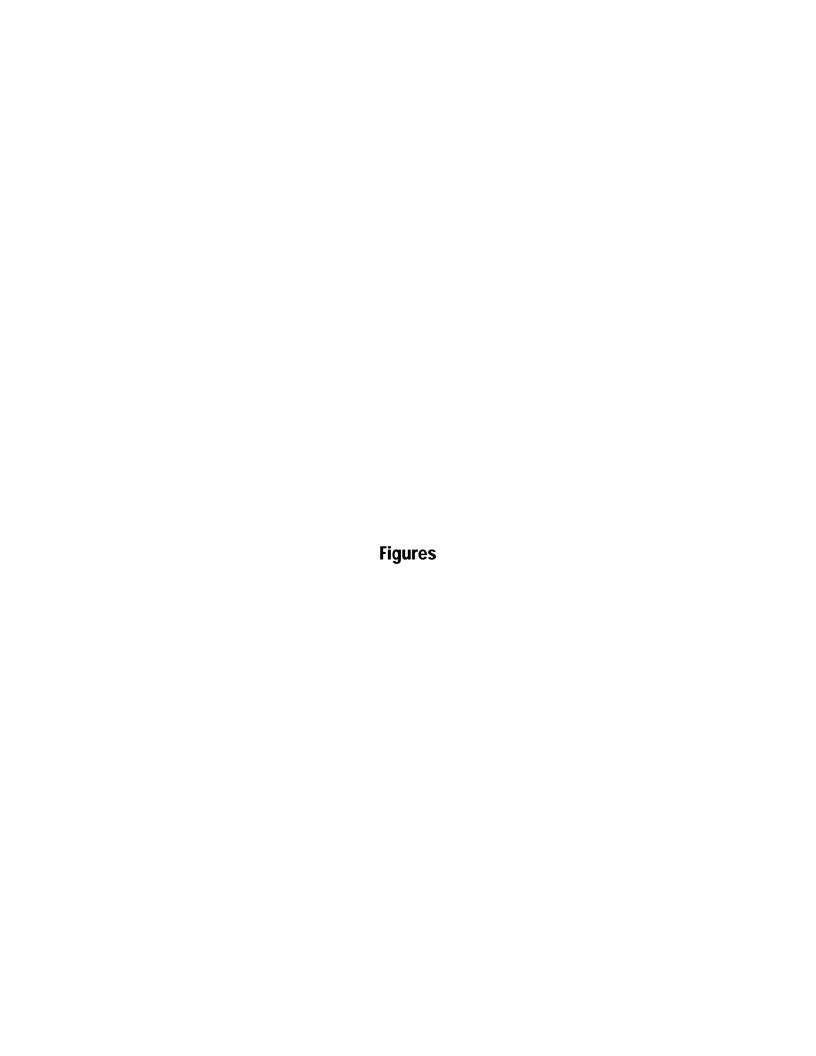
J - Estimated concentration

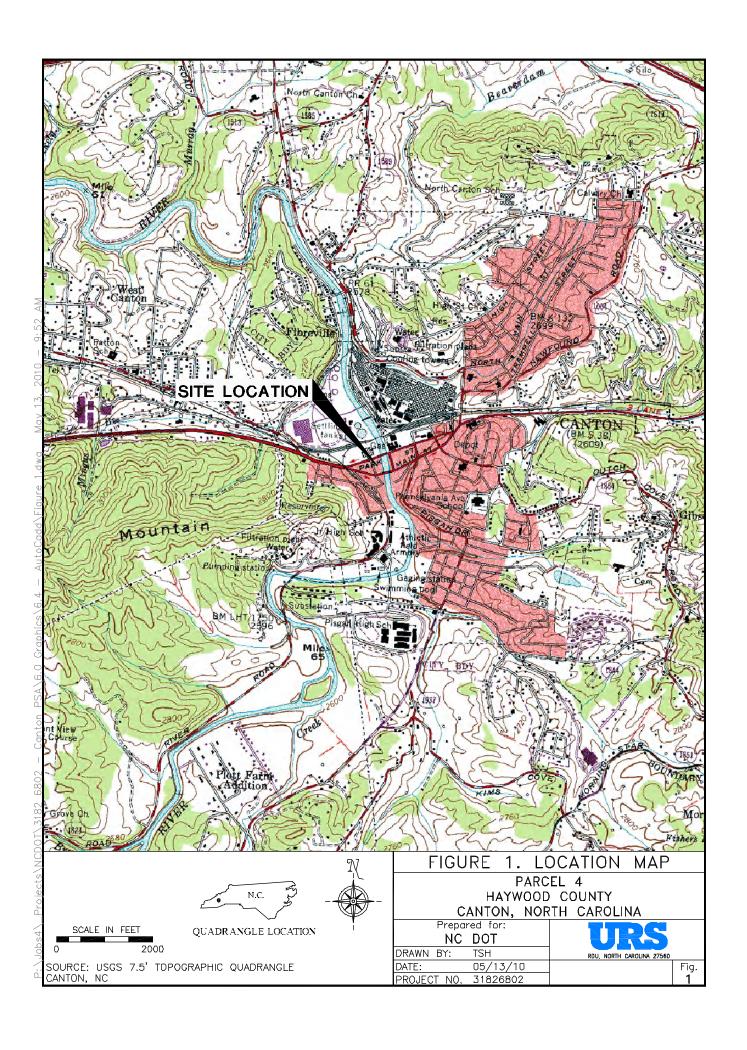
NOTES:

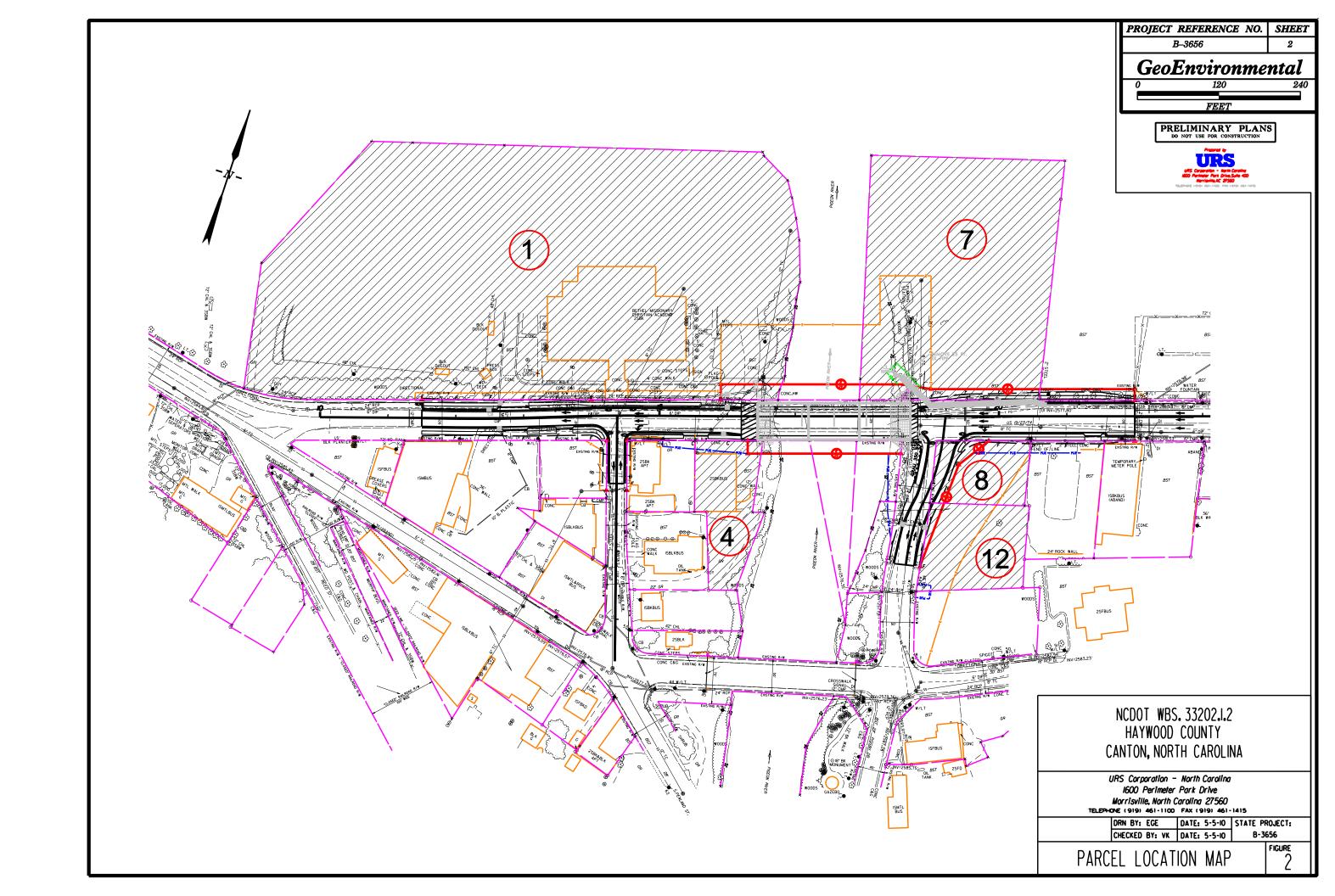
Soil samples were collected by URS on April 13, 2010.

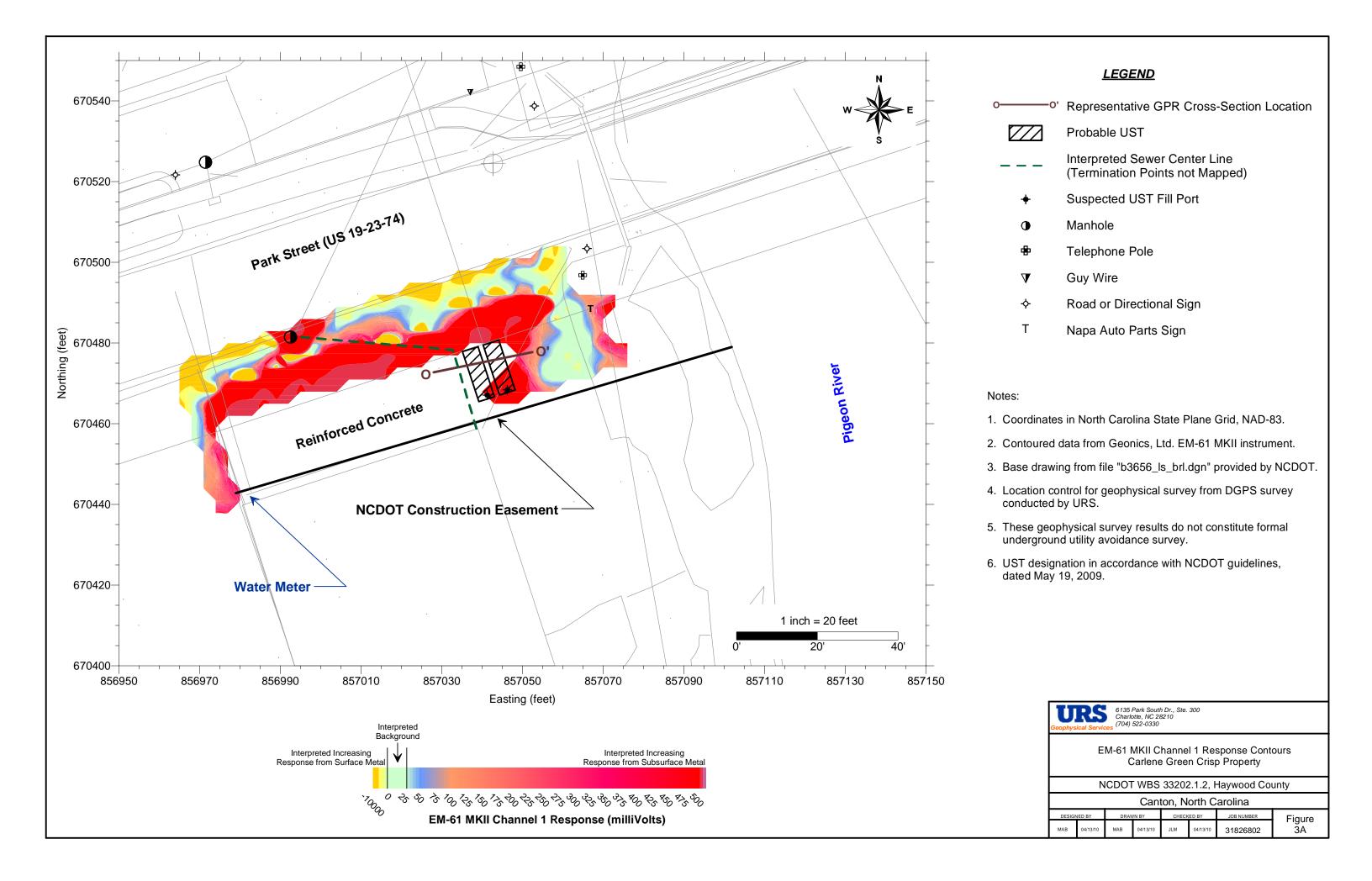
All results reported on a dry-weight basis.

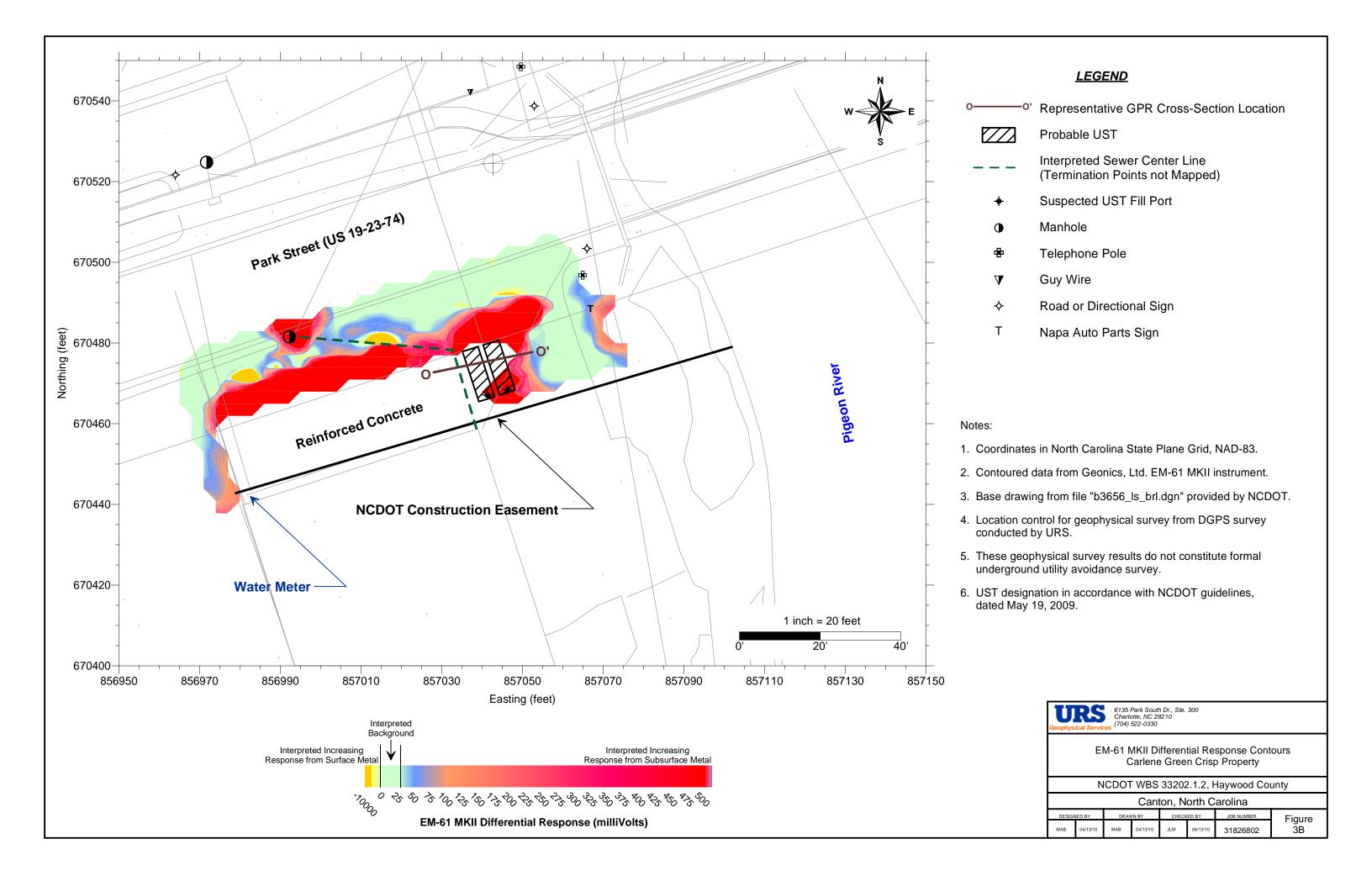
Action Levels were taken from the NCDENR UST Section, *Guidelines for Assessment and Corrective Action* (NCDENR, UST Section, Effective December 1, 2008) and *Guidelines for the Investigation and Remediation of Contamination from Non-UST Petroleum Releases* (NCDENR, UST Section, July 2007).



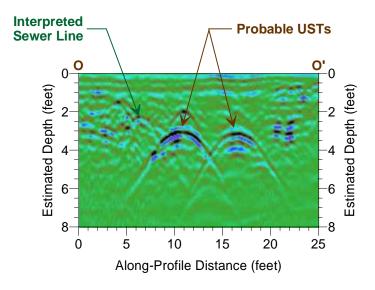


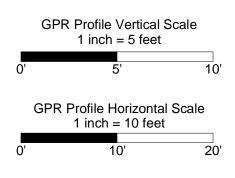








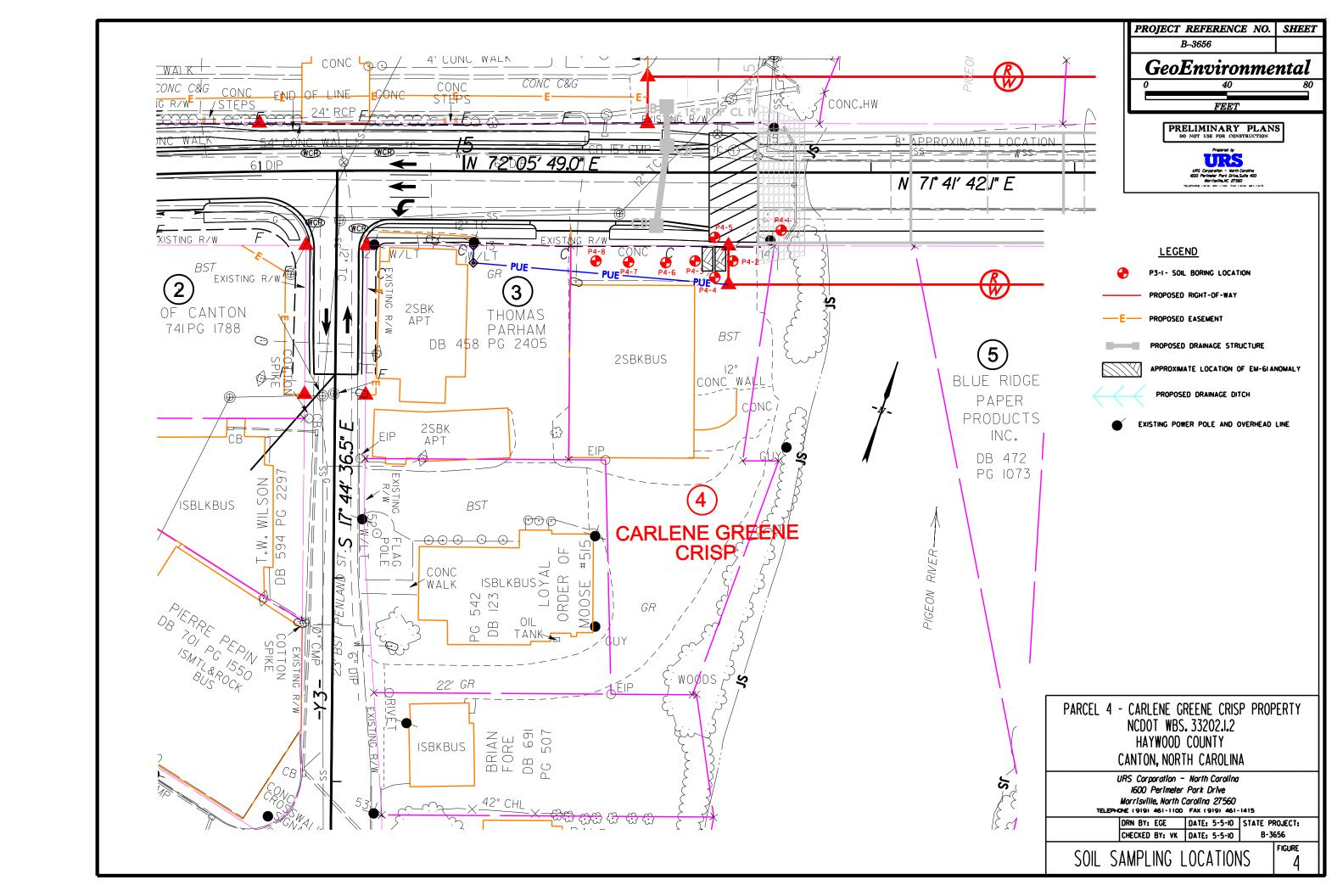




Notes:

- 1. See Figures 3A & 3B for location of O-O'.
- 2. GPR data from Sensors & Software, Inc. Noggin PLUS Smart Cart system with 250 MHz antenna; Cross-section generated using GPR-SLICE, issued by Geophysical Archaeometry Laboratory.
- 3. UST designation in accordance with NCDOT guidelines, dated May 19, 2009.

	6135 Park South Dr., Ste. 300 Charlotte, NC 28210 Geophysical Services (704) 522-0330												
	GPR Cross-Section O-O' Carlene Green Crisp Property												
I		N	CDOT	WBS	33202	2.1.2, H	laywood Co	unty					
I				Can	ton, N	orth C	arolina						
I	DESIGNED BY DRAWN BY CHECKED BY JOB NUMBER FIGURE												
	MAB	Figure											



Appendix A Boring Logs



Permit #				Drill Date	04/13/1	10	Site	Parcel 4
	NCDOT			Use			URS Corporation	
Address		Canton		h Carolina			Total Depth (ft)	10
Drilling N	Method			ect push	Boring Depth (ft)	10	Boring Diam. (in)	2.25
Backfill N		benton		-	NA		Static Water Level	unknown
Rmrks	Groundwater	not enc	ounter	red	TOC Elevation		Sample Method	Acetate liner
in borin	g							
Depth (ft.)					Geo	ologic Des	cription	Typical Diagram
0				2.4 ppm				
				2.6 ppm				
4				2.5 ppm	med. Stiff, dry	brown, sand	dy Clay, trace mica	<1
8 —	1			3.0 ppm				backfilled with bentonite
		10'		3.2 ppm		Rattam of ba	ring	back
10 —	P4-1-10	10'				Bottom of bo	iing	Not to Socie
12								Not to Scale
Notes:	ļ	1	l	1				
Geologis	st:	Michae	l Mees	se	Driller: Probe 7	ech		



Permit #				Drill Date	04/13/1	10	Site	Parcel 4
	NCDOT			Use	04/13/1	10	URS Corporation	Parcer 4
Address		Canton	Norti	h Carolina			Total Depth (ft)	10
Drilling N				ect push	Boring Depth (ft)	10	Boring Diam. (in)	2.25
Backfill N		benton		cot pusii	NA	10	Static Water Level	unknown
	Groundwater			red	TOC Elevation		Sample Method	Acetate liner
in borin		1100 0110	<u> </u>	-	100 2.014		Campio Modica	7100tato mior
Depth (ft.)					Geo	ologic Des	cription	Typical Diagram
2 —				0.0 ppm				
4 —				1.8 ppm	loose, dry, d	k. Brown, cla	yey Sand, gravel	
				3.0 ppm				
6				3.2 ppm	med. Stiff, dry,	, brown, sand	dy Clay, trace mica	backfilled with bentonite
- - -]			8.9 ppm				pacl
10	P4-2-10	10'				Bottom of bo	ring	
_								
_								
								Not to Scale
12								710110 00010
Notes:					T		<u> </u>	
Geologis	st:	Michae	I Mees	se	Driller: Probe T	ech		



Permit #				Drill Date	04/13/1	0	Site	Parcel 4
	NCDOT			Use		-	URS Corporation	
Address		Canton		h Carolina			Total Depth (ft)	10
Drilling M	Method			ect push	Boring Depth (ft)	10	Boring Diam. (in)	2.25
Backfill N	Material	benton	ite		NA		Static Water Level	unknown
Rmrks	Groundwater	r not enc	ounter	ed	TOC Elevation		Sample Method	Acetate liner
in borin	g							
Depth (ft.)					Geo	ologic Des	cription	Typical Diagram
0				0.0 ppm				
				1.0 ppm	loose, dry, d	k.brown, cla	yey Sand, gravel	
4 —				1.8 ppm				<-
8 —				3.0 ppm	med. Stiff, dry,	brown, sand	dy Clay, trace mica	backfilled with bentonite
	D4 0 40	40		3.4 ppm		Datter of		pacy
10 <u> </u>	P4-3-10	10'				Bottom of bo	ring	Not to Scale
12								NOT TO SCALE
Notes: Geologis	st:	Michae	el Mees	se .	Driller: Probe T	ech		



Permit #			<u> </u>	Drill Date	04/13/1	0	Site	Parcel 4
	NCDOT			Use	U-7/13/1	<u> </u>	URS Corporation	1 41 0G1 1
Address Canton, North Carolina Total Depth (ft)								10
Drilling N				ect push	Boring Depth (ft)	10	Boring Diam. (in)	2.25
Backfill N		benton		,	NA	-	Static Water Level	unknown
	Groundwater	not enc	ounter	red	TOC Elevation		Sample Method	Acetate liner
in borin								
Depth (ft.)					Geo	ologic Des	cription	Typical Diagram
0				0.0 ppm				
2 — 2 — 4 — 4 — 6 —				0.4 ppm				
6 —				1.0 ppm	med. Stiff, dry, brown	, sandy Clay	, some gravel, trace mica	\
8 —	ļ			2.1 ppm				backfilled with bentonite
		401		3.0 ppm		Pottom of ho	ring	pac
10 —	P4-4-10	10'				3ottom of bo	iiig	
12								Not to Scale
Notes:	<u> </u>		<u> </u>	<u> </u>	<u> </u>		<u> </u>	
Geologis	st:	Michae	Mees	se	Driller: Probe T	ech		



BORING LOG: P4-5

			I.	1				
Permit #				Drill Date	04/13/10		Site	Parcel 4
Client	NCDOT			Use			URS Corporation	
Address	i	Canton	, Nort	h Carolina	T		Total Depth (ft)	10
Drilling N				ect push	Boring Depth (ft) 10		Boring Diam. (in)	2.25
Backfill I	Material	benton	ite		NA		Static Water Level	unknown
Rmrks	Groundwater	not enc	ounter	red	TOC Elevation		Sample Method	Acetate liner
in boring								
Depth (ft.)	Sample ID Sample Depth (ft) Blows/ 6" OVA (ppm)				Geologic	Des	cription	Typical Diagram
0				1.8 ppm	loose, dry, lt. gr	ay, S	Sand, gravel	
2 —				3.0 ppm				
6 —				3.0 ppm	med. Stiff, dry, brown,	sano	dy Clay, trace mica	4
				3.6 ppm		backfilled with bentonite		
	B4.5.40	101		3.8 ppm				bac
10	P4-5-10	10'			Bottom	od to	ring	
	+							
-	†							
]							Not to Scale
12								
Notes:					.			
Geologis	st:	Michae	I Mees	e	Driller: Probe Tech			



Permit #	:		<u> </u>	Drill Date	04/13/1	0	Site	Parcel 4
					0-7/10/10	-	URS Corporation	, w. 401 T
Address		Canton	, Norti	h Carolina			Total Depth (ft)	10
Drilling M				ect push	Boring Depth (ft)	10	Boring Diam. (in)	2.25
Backfill N		benton			NA		Static Water Level	unknown
Rmrks	Groundwater	not enc	ounter	ed	TOC Elevation		Sample Method	Acetate liner
in borin	g		1	ı	_			
Depth (ft.)					Geo	ologic Des	cription	Typical Diagram
0				1.0 ppm	loose, di	ry, lt. gray, S	Sand, gravel	
4 —				1.2 ppm				
6 —				2.0 ppm				\< 1
8 —	1			1.8 ppm	med. Stiff, dry,	brown, sand	dy Clay, trace mica	backfilled with bentonite
		40		2.2 ppm		2-11-2-1		pac
10 —	P4-6-10	10'			E	3ottom of bo	ring	
12								Not to Scale
Notes:	ļ		I	l .				
Geologis	st:	Michae	l Mees	se	Driller: Probe Te	ech		



D '' ''			<u> </u>	D.:II D.:	04/40/40		0:4-		Daniel 4	
Permit #				Drill Date	04/13/10		Site		Parcel 4	
Client	NCDOT			Use			URS Corporation			
Address				h Carolina		Total Depth (ft)			10	
Drilling N				ect push	Boring Depth (ft) 10		Boring Diam. (in)		2.25	
Backfill I		benton			NA NA		Static Water Level		ınknown	
	Groundwater	not enc	ounter	red	TOC Elevation		Sample Method	Ac	etate liner	
in borin			1	I _			Г			
Depth (ft.)	Sample ID Sample Depth (ft) Blows/ 6" OVA (ppm)				Geologic I	Des	cription	Typi Diag		
0 2				1.8 ppm	loose, dry, lt. gra	ay, S	and, gravel			
4 —				2.0 ppm						
4				2.1 ppm					~ 1	
— — — — 8 —				2.2 ppm	med. Stiff, dry, brown,	sand	ly Clay, trace mica		backfilled with bentonite	
	D4.7.40	401		2.2 ppm					bacl	
10	P4-7-10	10'			Bottom o	סמ זכ	ring			
	1									
_										
12								Not to	Scale	
Notes:	I.	<u> </u>	l	<u> </u>	l					
Geologis	st:	Michae	l Mees	se	Driller: Probe Tech					
					•					



Permit #				Drill Date	04/13/1	0	Site	Parcel 4
	NCDOT			Use	0 7 /10/10	-	URS Corporation	, wivei 7
Address		Canton	, Norti	h Carolina				10
Drilling M				ect push	Boring Depth (ft)	10	Boring Diam. (in)	2.25
Backfill N		benton		-	NA		Static Water Level	unknown
Rmrks	Groundwater	not enc	ounter	ed	TOC Elevation		Sample Method	Acetate liner
in boring	g				•		•	
Depth (ft.)	Sample ID Sample Depth (ft) Blows/ 6" OVA (ppm)				Geo	logic Des	cription	Typical Diagram
2 —				0.8 ppm	loose, di	ry, It. gray, S	and, gravel	
2 — ———————————————————————————————————				1.0 ppm	loose, dry, br	own, silty Sa	and, trace gravel	
6				3.0 ppm	soft, dry,	brown, sand	dy Silt, mica	backfilled with bentonite
10	P4-8-10	10'		3.8 ppm		3ottom of bo		pac
12								Not to Scale
Notes: Geologis	st:	Michae	l Mees	se .	Driller: Probe Te	ech		

Appendix B
Laboratory Report



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

Case Narrative

04/30/2010 Revised

URS Corp Morrisville (NCDOT) Martha Myers-Lee 1600 Perimeter Park Dr. Suite 4 Morrisville, NC 27560 Project: NC DOT: Canton, NC (Parcel 4)

Project No.: WBS #3.3202.1.2 Lab Submittal Date: 04/14/2010 Prism Work Order: 0040056

This data package contains the analytical results for the project identified above and includes a Case Narrative, Sample Results and Chain of Custody. Unless otherwise noted, all samples were received in acceptable condition and processed according to the referenced methods.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative.

Please call if you have any questions relating to this analytical report.

Respectfully,

PRISM LABORATORIES, INC.

President/Project Manager

Reviewed By

Kori a.

Data Qualifiers Key Reference:

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A Surrogate recovery is outside control limits.

BRL Below Reporting Limit
MDL Method Detection Limit
RPD Relative Percent Difference

* Results reported to the reporting limit. All other results are reported to the MDL with values between MDL and

reporting limit indicated with a J.



Sample Receipt Summary

04/30/2010

Prism Work Order: 0040056

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received
P4-1-10	0040056-01	Solid	04/13/10	04/14/10
P4-2-10	0040056-02	Solid	04/13/10	04/14/10
P4-3-10	0040056-03	Solid	04/13/10	04/14/10
P4-4-10	0040056-04	Solid	04/13/10	04/14/10
P4-5-10	0040056-05	Solid	04/13/10	04/14/10
P4-6-10	0040056-06	Solid	04/13/10	04/14/10
P4-7-10	0040056-07	Solid	04/13/10	04/14/10
P4-8-10	0040056-08	Solid	04/13/10	04/14/10

Samples received in good condition at 3.7 degrees C unless otherwise noted.







1600 Perimeter Park Dr. Suite 400

Morrisville, NC 27560

Project: NC DOT: Canton, NC (Parcel

4)

Project No.: WBS #3.3202.1.2

Sample Matrix: Solid

Client Sample ID: P4-1-10 Prism Sample ID: 0040056-01 Prism Work Order: 0040056 Time Collected: 04/13/10 08:30 Time Submitted: 04/14/10 09:45

Parameter	Result	Units	Report	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydro	ocarbons by GC/FID		Limit		1 actor		Date/Time		ID.
Diesel Range Organics	BRL	mg/kg dry	9.0	1.5	1	8015C	4/22/10 4:0	7 JMV	P0D0110
			Surrogate			Recov	ery	Control	Limits
			o-Terphenyl			77	%	49-124	
General Chemistry Paramete	ers								
% Solids	77.7	% by Weight	0.100	0.100	1	*SM2540 G	4/16/10 9:0	6 JAB	P0D003
Volatile Petroleum Hydrocarl	bons by GC/FID								
Gasoline Range Organics	4.7 J	mg/kg dry	6.4	0.84	50	8015C	4/16/10 20:1	5 HPE	P0D0048
			Surrogate			Recov	ery	Control	Limits
			a.a.a-Trifluor	otoluene		127	7 %	55-129	







1600 Perimeter Park Dr. Suite 400

Morrisville, NC 27560

Project: NC DOT: Canton, NC (Parcel

4)

Project No.: WBS #3.3202.1.2

Sample Matrix: Solid

Client Sample ID: P4-2-10 Prism Sample ID: 0040056-02 Prism Work Order: 0040056 Time Collected: 04/13/10 09:00 Time Submitted: 04/14/10 09:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydro	carbons by GC/FID								
Diesel Range Organics	BRL	mg/kg dry	9.3	1.5	1	8015C	4/22/10 15:	35 JMV	P0D0110
			Surrogate			Recov	ery	Control	Limits
			o-Terphenyl		81 %		49-124	49-124	
General Chemistry Paramete	ers								
% Solids	74.9	% by Weight	0.100	0.100	1	*SM2540 G	4/16/10 9:0	6 JAB	P0D0033
Volatile Petroleum Hydrocarl	bons by GC/FID								
Gasoline Range Organics	BRL	mg/kg dry	6.7	0.87	50	8015C	4/16/10 20:	47 HPE	P0D0048
			Surrogate			Recov	ery	Control	Limits
			a,a,a-Trifluor	rotoluene		103	3 %	55-129	







1600 Perimeter Park Dr. Suite 400

Morrisville, NC 27560

Project: NC DOT: Canton, NC (Parcel

4)

Project No.: WBS #3.3202.1.2

Sample Matrix: Solid

Client Sample ID: P4-3-10 Prism Sample ID: 0040056-03 Prism Work Order: 0040056 Time Collected: 04/13/10 09:20 Time Submitted: 04/14/10 09:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydro	carbons by GC/FID								
Diesel Range Organics	BRL	mg/kg dry	8.4	1.4	1	8015C	4/22/10 16:	10 JMV	P0D0110
			Surrogate			Recov	ery	Control	Limits
			o-Terphenyl			87	49-124	49-124	
General Chemistry Paramete	rs								
% Solids	82.8	% by Weight	0.100	0.100	1	*SM2540 G	4/16/10 9:0	6 JAB	P0D0033
Volatile Petroleum Hydrocark	oons by GC/FID								
Gasoline Range Organics	BRL	mg/kg dry	6.0	0.79	50	8015C	4/16/10 21:	18 HPE	P0D0048
			Surrogate			Recov	rery	Control	Limits
			a,a,a-Trifluor	rotoluene		122	2 %	55-129	



04/30/2010



URS Corp Morrisville (NCDOT) Attn: Martha Myers-Lee

1600 Perimeter Park Dr. Suite 400

Morrisville, NC 27560

Project: NC DOT: Canton, NC (Parcel

4)

Project No.: WBS #3.3202.1.2

Sample Matrix: Solid

Client Sample ID: P4-4-10 Prism Sample ID: 0040056-04 Prism Work Order: 0040056 Time Collected: 04/13/10 09:45 Time Submitted: 04/14/10 09:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Tim		nalyst	Batch ID
Extractable Petroleum Hydro	ocarbons by GC/FID									
Diesel Range Organics	13	mg/kg dry	9.0	1.5	1	8015C	4/22/10 10	6:46	JMV	P0D0110
			Surrogate			Recov	ery		Control I	_imits
			o-Terphenyl	o-Terphenyl 86		3% 49-12		49-124		
General Chemistry Paramete	ers									
% Solids	77.6	% by Weight	0.100	0.100	1	*SM2540 G	4/16/10 9	:06	JAB	P0D0033
Volatile Petroleum Hydrocar	bons by GC/FID									
Gasoline Range Organics	BRL	mg/kg dry	6.4	0.84	50	8015C	4/16/10 2	1:49	HPE	P0D0048
			Surrogate			Recov	rery		Control I	_imits
			a,a,a-Trifluor	otoluene		139	9 %		55-129	Α







1600 Perimeter Park Dr. Suite 400

Morrisville, NC 27560

Project: NC DOT: Canton, NC (Parcel

4)

Project No.: WBS #3.3202.1.2

Sample Matrix: Solid

Client Sample ID: P4-5-10 Prism Sample ID: 0040056-05 Prism Work Order: 0040056 Time Collected: 04/13/10 10:05 Time Submitted: 04/14/10 09:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydro	carbons by GC/FID								
Diesel Range Organics	BRL	mg/kg dry	9.2	1.5	1	8015C	4/21/10 19:14	JMV	P0D0110
			Surrogate			Recov	ery	Control	Limits
			o-Terphenyl		76 %		49-124		
General Chemistry Paramete	ers								
% Solids	76.1	% by Weight	0.100	0.100	1	*SM2540 G	4/16/10 9:06	JAB	P0D0033
Volatile Petroleum Hydrocar	bons by GC/FID								
Gasoline Range Organics	BRL	mg/kg dry	6.6	0.85	50	8015C	4/16/10 22:21	HPE	P0D0048
			Surrogate			Recov	ery	Control	Limits
			a,a,a-Trifluor	otoluene		112	2 %	55-129	







1600 Perimeter Park Dr. Suite 400

Morrisville, NC 27560

Project: NC DOT: Canton, NC (Parcel

4)

Project No.: WBS #3.3202.1.2

Sample Matrix: Solid

Client Sample ID: P4-6-10 Prism Sample ID: 0040056-06 Prism Work Order: 0040056 Time Collected: 04/13/10 10:30 Time Submitted: 04/14/10 09:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydro	ocarbons by GC/FID								
Diesel Range Organics	4.2 J	mg/kg dry	9.3	1.5	1	8015C	4/21/10 19:	19 JMV	P0D0110
			Surrogate			Recov	rery	Control	Limits
			o-Terphenyl		68 %		49-124		
General Chemistry Paramete	ers								
% Solids	74.7	% by Weight	0.100	0.100	1	*SM2540 G	4/16/10 9:0	6 JAB	P0D0033
Volatile Petroleum Hydrocar	bons by GC/FID								
Gasoline Range Organics	BRL	mg/kg dry	6.7	0.87	50	8015C	4/16/10 22:	52 HPE	P0D0048
			Surrogate			Recov	ery	Control	Limits
			a,a,a-Trifluor	otoluene		91	%	55-129	







1600 Perimeter Park Dr. Suite 400

Morrisville, NC 27560

Project: NC DOT: Canton, NC (Parcel

4)

Project No.: WBS #3.3202.1.2

Sample Matrix: Solid

Client Sample ID: P4-7-10 Prism Sample ID: 0040056-07 Prism Work Order: 0040056 Time Collected: 04/13/10 11:00 Time Submitted: 04/14/10 09:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydro	carbons by GC/FID								
Diesel Range Organics	BRL	mg/kg dry	8.5	1.4	1	8015C	4/21/10 20:25	JMV	P0D0110
			Surrogate			Recov	ery	Control	Limits
			o-Terphenyl		69 %		49-124		
General Chemistry Paramete	rs								
% Solids	81.9	% by Weight	0.100	0.100	1	*SM2540 G	4/16/10 9:06	JAB	P0D0033
Volatile Petroleum Hydrocark	oons by GC/FID								
Gasoline Range Organics	BRL	mg/kg dry	6.1	0.79	50	8015C	4/16/10 23:24	HPE	P0D0048
			Surrogate			Recov	ery	Control	Limits
			a,a,a-Trifluor	otoluene		107	7 %	55-129	







1600 Perimeter Park Dr. Suite 400

Morrisville, NC 27560

Project: NC DOT: Canton, NC (Parcel

4)

Project No.: WBS #3.3202.1.2

Sample Matrix: Solid

Client Sample ID: P4-8-10 Prism Sample ID: 0040056-08 Prism Work Order: 0040056 Time Collected: 04/13/10 11:20 Time Submitted: 04/14/10 09:45

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID	
Extractable Petroleum Hydro	carbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	8.6	1.4	1	8015C	4/22/10 5:5	4 JMV	P0D0110	
			Surrogate			Recov	ery	Control	Limits	
			o-Terphenyl			79 %		49-124	49-124	
General Chemistry Parameter	's									
% Solids	81.7	% by Weight	0.100	0.100	1	*SM2540 G	4/16/10 9:0	6 JAB	P0D0033	
Volatile Petroleum Hydrocarb	ons by GC/FID									
Gasoline Range Organics	BRL	mg/kg dry	6.1	0.80	50	8015C	4/16/10 23:	55 HPE	P0D0048	
			Surrogate			Recov	rery	Control	Limits	
			a,a,a-Trifluor	otoluene		119	9 %	55-129		



1600 Perimeter Park Dr. Suite 400

Morrisville, NC 27560

Project: NC DOT: Canton, NC (Parcel

4)

Project No: WBS #3.3202.1.2

Prism Work Order: 0040056

Time Submitted: 4/14/10 9:45:00AM

Volatile Petroleum Hydrocarbons by GC/FID - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0D0048 - 5035										
Blank (P0D0048-BLK1)				Prepared	& Analyze	ed: 04/16/1	10			
Gasoline Range Organics	BRL	5.0	mg/kg wet							
Surrogate: a,a,a-Trifluorotoluene	0.104		mg/kg	0.100		104	55-129			
LCS (P0D0048-BS1)				Prepared	& Analyze	ed: 04/16/1	10			
Gasoline Range Organics	47.8	5.0	mg/kg wet	50.0		96	67-116			
Surrogate: a,a,a-Trifluorotoluene	0.114		mg/kg	0.100		114	55-129			
Matrix Spike (P0D0048-MS1)	Source	ce: 004005	6-01	Prepared	& Analyze	ed: 04/16/1	10			
Gasoline Range Organics	52.4	6.4	mg/kg dry	64.4	4.70	74	57-113			
Surrogate: a,a,a-Trifluorotoluene	0.129		mg/kg	0.100		129	55-129			
Matrix Spike Dup (P0D0048-MSD1)	Source	ce: 004005	6-01	Prepared	& Analyze	ed: 04/16/1	10			
Gasoline Range Organics	54.7	6.4	mg/kg dry	64.4	4.70	78	57-113	4	23	
Surrogate: a,a,a-Trifluorotoluene	0.133		mg/kg	0.100		133	55-129			A



URS Corp Morrisville (NCDOT) Attn: Martha Myers-Lee 1600 Perimeter Park Dr. Suite 400 Morrisville, NC 27560 Project: NC DOT: Canton, NC (Parcel

4)

Project No: WBS #3.3202.1.2

Prism Work Order: 0040056

Time Submitted: 4/14/10 9:45:00AM

Extractable Petroleum Hydrocarbons by GC/FID - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch P0D0110 - 3545A										
Blank (P0D0110-BLK1)				Prepared	04/20/10	Analyzed	: 04/21/10			
Diesel Range Organics	BRL	7.0	mg/kg wet							
Surrogate: o-Terphenyl	1.39		mg/kg wet	1.60		87	49-124			
LCS (P0D0110-BS1)				Prepared	04/20/10	Analyzed	: 04/21/10			
Diesel Range Organics	51.7	7.0	mg/kg wet	79.8		65	55-109			
Surrogate: o-Terphenyl	1.23		mg/kg wet	1.60		77	49-124			
Matrix Spike (P0D0110-MS1)	Sour	ce: 004005	6-01	Prepared	04/20/10	Analyzed	: 04/21/10			
Diesel Range Organics	73.1	9.0	mg/kg dry	103	BRL	71	50-117			
Surrogate: o-Terphenyl	1.68		mg/kg dry	2.06		82	49-124			
Matrix Spike Dup (P0D0110-MSD1)	Sour	ce: 004005	6-01	Prepared	04/20/10	Analyzed	: 04/21/10			
Diesel Range Organics	70.0	9.0	mg/kg dry	103	BRL	68	50-117	4	24	·
Surrogate: o-Terphenyl	1.50		mg/kg dry	2.06		73	49-124			

Sample Extraction Data

Prep Method: 3545A

Lab Number	Batch	Initial	Final	Date	
0040056-01	P0D0110	25.05 g	1 mL	04/20/10	
0040056-02	P0D0110	25.03 g	1 mL	04/20/10	
0040056-03	P0D0110	25.12 g	1 mL	04/20/10	
0040056-04	P0D0110	24.94 g	1 mL	04/20/10	
0040056-05	P0D0110	24.99 g	1 mL	04/20/10	
0040056-06	P0D0110	25.06 g	1 mL	04/20/10	
0040056-07	P0D0110	25.07 g	1 mL	04/20/10	
0040056-08	P0D0110	25.02 g	1 mL	04/20/10	
NO PREP					
Lab Number	Batch	Initial	Final	Date	
0040056-01	P0D0033	30 g	30 mL	04/15/10	
0040056-02	P0D0033	30 g	30 mL	04/15/10	
0040056-03	P0D0033	30 g	30 mL	04/15/10	
0040056-04	P0D0033	30 g	30 mL	04/15/10	
0040056-05	P0D0033	30 g	30 mL	04/15/10	
0040056-06	P0D0033	30 g	30 mL	04/15/10	
0040056-07	P0D0033	30 g	30 mL	04/15/10	
0040056-08	P0D0033	30 g	30 mL	04/15/10	
Prep Method: 5035					
Lab Number	Batch	Initial	Final	Date	
0040056-01	P0D0048	5 g	5 mL	04/16/10	
0040056-02	P0D0048	5 g	5 mL	04/16/10	
0040056-03	P0D0048	5 g	5 mL	04/16/10	
0040056-04	P0D0048	5 g	5 mL	04/16/10	
0040056-05	P0D0048	5 g	5 mL	04/16/10	
0040056-06	P0D0048	5 g	5 mL	04/16/10	
0040056-07	P0D0048	5 g	5 mL	04/16/10	
0040056-08	P0D0048	5 g	5 mL	04/16/10	



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Full Service 449 Springbrook Road •	onmental Solution	S 20224_0542	Project Name: NC DOT - Canton, NC							eived ON WE	TICE? Temp <u>917</u>				
Phone: 704/529-6364 • I	Fax: 70	14/525-040	9		Short Hold Ar	nalysis:	(Yes) (No) UST P		(Yes) (I	No)		RVATIVES indicated? HOLDING TIMES?		
Client Company Name	S Corporati	ion .		*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements CUSTODY SEALS INTACT?											
Report To/Contact Na Reporting Address: 16	rive Suite 400		Invoice To: NC DENR, State TIP # B-3656, WBS# 3 3202.1.2 VOLATILES rec'd W/QUT HEADSPACE? PROPER CONTAINERS used?												
Morrisville, NC 27560	nvo, cono 400														
Phone: (919) 461-1519	s) (No):														
Email (Y s) (No) Email	a_meyers-lee@ursco	rp.com	Purchase Order No./Billing Reference 31826802 TO BE FILLED IN BY CLIENT/SA Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days Certification: NELACUSAC												
EDD Type: PDF	Other		"Working Days" 6-9 Days ✓ Standard 10 days								SCOTHERN/A				
Site Location Name:	Auto Parts, 101 Park St. C	Samples received after 15:00 will be processed next business day. Turnaround time is based on business days, excluding weekends and holidays. Water							Chlorinated: YES NO NO						
Site Location Physical	Addi	ress:			(SEE REVE	RSE FOR T	ERMS & CON	IDITIONS REGARDING	SERVICE	S			n Collection: YES		
	TIM		TIME	MATRIX	RENDERED BY PRISM LABORATORIES, INC. TO CLIENT) SAMPLE CONTAINER				T	Al OFF		LYSES REQUESTED			
CLIENT SAMPLE DESCRIPTION	1	DATE LECTED	COLLECTED MILITARY HOURS	(SOIL, WATER OR SLUDGE)			T	PRESERVA-	DH OH AND			' / .	REMARKS		PRISM LAB
CAMP LE DECOMM TION					SEE BELOW NO.	SIZE	IIVES	# A S		∕> /s	/ /			ID NO.	
P4-1-10	¥-1	13-10	0830	Soil	VOA Glasg	4	402 40ml	" methoro /-VOA	X	X					01
P4-2-10			0900	Soil		4			X	X					02
P4-3-10			0920	Soil		4			X	×					03
P4-4-10			0945	Soil		4			20	X					04
P4-5-10			1005	Soil		4			X	X					05
P4-6-10			1030	Soil		4			X	χ					06
P4-7-10			1100	Soil		4	V	1/	X	X					07
P4-8-10	4-1	3-10	1120	Soil	VOX Glass	4	402 Zo	nethanol-UOA	X	X					68
				Soil											
		4		Soil									·		
1 1 / / /				Michael Meese					URS Corporation			PRESS DOV	VN FIRMLY	- 3 COPIES	
Campion Colgitation 2	Mu		19W		y (Print Name)				Affilia	ition	· · · · · · · · · · · · · · · · · · ·	UII			
Upon relinquishing, this submitted in writing to	Chair the Pr	n of Custo rism Proje	ody is your auti ect Manager. Th	norization for nere will be c	r Prism to proc harges for any	eed with change:	the analys after anal	ses as requested a lyses have been in	bove. A itialized	iny change: I.	s must be			PRISM	USE ONLY
Relinquished By: (Signature)	1		ceived By: (Signature)					Date	Military/H	ours Add	itional Comments:	Site Arrival T	Time:		
Relinquished By: (Signature)		ceived By: (Signature)					Date				Site Departu				
Relinquished By: (Signature)				Rece	eived For Prism Lab	oratories B				Date / /	0	_		Field Tech F	ee:
l					1	>/<				4/14/1	0 445		·	Mileage:	
Method of Shipment: NOTE: A SAMPLE	LL SAM S ARE I	NOT ACCEP	RS SHOULD BE TA TED AND VERIFIED	PED SHUT WITH AGAINST COC U	UNTIL RECEIVED A	FOR TRAN	SPORTATION ORATORY.	TO THE LABORATORY.	•	Log-In Grou	p No.				
	delivere		m Field Service		al Express Accor	unt # 122	2090027				10096		•		
NPDES: UST:\ _NC _SC \rightarrow NC _S		GROUND _ NC	1	Rinking wa NC <u>-</u> SC		WAST _ SC	1	CERCLA C SC NC		LANDFILL _NC _S				SEE RE TERMS 8	EVERSE FOR CONDITIONS
*CONTAINER TYPE CO	DES:	- — An	nber C = Clear	G = Glass	P = Plastic: TL	. = Teflo	n-Lined Ca	p VOA = Volatile	Organic	s Analysis	(Zero Head	Space)			Page 14 of

CHAIN OF CUSTODY RECORD

PAGE __ OF __ QUOTE # TO ENSURE PROPER BILLING: _

LAB USE ONLY

Samples INTACT upon arrival? 3