P S A R E P O R T

PRELIMINARY SITE ASSESSMENT
PARCEL #8 AND #12
TOWN OF CANTON
89 PARK STREET AND SORRELL STREET
CANTON, HAYWOOD COUNTY, NC 28716
STATE PROJECT B-3656
WBS ELEMENT 33202.1.2

Prepared for

North Carolina Department of Transportation
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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		

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 two sites located on the south east corner of the intersection of Park Street and Sorrell 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 Town of Canton Properties, located at 89 Park Street and at Sorrell Street (the Sites). 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 Sites 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 parcels are bounded by Sorrell Street to the west, Park Street to the north, another Town of Canton property and a commercial property to the east, and a Town of Canton property to the south. The properties are currently two vacant lots. Parcel #8 formerly operated as a Trif-Tee Korner gas station and convenience store. Five (5) USTs were removed in 2005. Soil contamination was encountered during UST removal and 37.31 tons of soil was removed from the site. A Limited Site Assessment (LSA) was performed by Mountain Environmental

Group and was completed on April 24, 2006. The LSA identified 1.3 feet of petroleum floating on top of the groundwater in MW-1. The monitoring well was observed approximately 10 feet east of the edge of pavement of Sorrell Street and 20 feet south of the edge of pavement of Park Street. Ground Water Incident #28364 has been assigned to this facility.

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 concrete or asphalt.

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 #4.

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. No follow-up GPR surveying was conducted at Parcel #4 because the bulk of the survey area was surveyed using a blind search with the GPR. The GPR survey consisted of in-field analysis of real-time data. No post-processing of the data was completed, although a representative GPR profile was 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

Fourteen Geoprobe® direct-push soil borings, P8-1 through P8-13 and P12-1, were installed on April 14, 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 blind search survey with the GEMINI-3 indicated widespread anomalies consistent with the presence of buried remnant building foundations or near-surface metallic clutter. Therefore, USTs could not be readily identified with the GEMINI-3 due to elevated background noise.

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 linear features indicative of underground utilities are identified with black dashed lines. It is important to note that utility center lines are identified in **Figures 1 and 2** only where the EM-61 data or visible site features (e.g. cut in concrete) support this level of interpretation.

The Channel 1 results in **Figure 3A** appear to be consistent with the GEMINI-3 blind search results and indicate the likely presence of widespread near-surface cultural features (e.g. buried concrete slabs, remnant foundations) likely associated with the former gas station. The differential response results in **Figure 3B** appear to have effectively minimized the effect from these near-surface features and have accentuated the anomalies most likely indicative of USTs. Anomalies targeted for follow-up surveying with GPR were identified using the differential response contours presented in **Figure 3B**. However, development of a subsurface investigation plan or excavations should refer to both **Figures 3A** and **3B.**

Follow-up GPR surveying was subsequently conducted across EM-61 anomalies in **Figure 3B** that could not be attributed to surface features and that exhibited both plan-view dimensions and EM response magnitudes consistent with USTs. Cross-sections A-A' through J-J' on **Figures 3A** and **3B** depict the locations of representative profiles collected and stored as part of the follow-up GPR survey.

The results of the follow-up GPR survey are presented as **Figure 3**C. The majority of the cross-sections appear to be consistent with the EM-61 Channel 1 and GEMINI-3 results and further indicate the presence of near-surface features likely associated with the former gas station. For example, the relatively horizontal, high-amplitude GPR reflections in cross-sections C-C' and E-E' on **Figure 3**C (purple and blue colors) are characteristic of buried concrete or asphalt slabs, remnant foundations, or debris. Only cross-section A-A' depicts a potential UST at a depth of around 2 feet at Parcels #8 and #12. Because no visible evidence of USTs was observed on-site, this suspected UST is categorized as a "Possible UST" in accordance with the NCDOT guidelines.

The parabolic shape of the anomaly in cross-section A-A' in **Figure 3**C suggests that the long axis of the possible UST is oriented roughly parallel to Park Street. The brown rectangle shown

in **Figures 3A** and **3B** depicts the extents of the suspected UST based on the GPR survey. Although the remaining cross-sections in **Figure 3**C do not indicate the presence of USTs, it should be noted that deterioration of a UST over time may result in muting of the characteristic GPR reflection patterns typical of USTs. Therefore, intrusive investigations of the additional EM-61 anomalies at Parcels #8 and #12 may be warranted in the future.

3.2 SOIL SAMPLING RESULTS

A total of sixteen 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 were generally at background levels and ranged from 0.0 to 7.8 ppm in most borings. Higher readings were recorded in borings P8-5, P8-10, P8-11, and P8-12 where measurements ranged from 17 - 62 ppm. Elevated measurements were recorded in borings P8-4 and P8-6 and ranged from 860 to 2938 ppm.

TPH (GRO and DRO) were detected above the UST Section Action Level of 10 mg/kg in samples P8-6 and P8-10 and elevated concentrations were detected in P8-4. Boring P8-4 was located near an existing monitoring well that was previously installed by others for monitoring of the former retail gas station in association with the aforementioned NCDENR Groundwater Incident.

In the area of the temporary road/detour between the ROW and easement, a limited amount of impacted soils (three to four truckloads) may be encountered in the vicinity P8-10 and P8-12 depending on the depth of the cut and any temporary drainage features that will be installed. Shallow impacts in this area are likely related to a release(s) from the former dispensers located at the former Trif-Tee Korner gas station. No impacts were identified via soil screening or soil sampling from the anomaly located on the eastern easement of Parcel 8.

In the area of the new alignment for Sorrells Street, petroleum impacts soils are present from just below ground surface in boring P8-4 and beginning at approximately 4 ft bgs in P8-6 and extend to the water table. Based on the information presented in the UST Closure Report for the former Trif-Tee Korner gas station, the excavation basin for the former USTs is directly beneath this new alignment. Only a limited amount of soil was removed during the UST removal process and free product was reported in the monitoring well, leading one to estimate that the amount of subsurface impacts could be extensive.

Depending on the depth of the cut needed to install the road bed for the new alignment of Sorrells Street, the amount of impact soil encountered could vary widely. Additionally, no information is presented relating to the backfill/compaction of this former UST basin, which was approximately 30’ wide (E-W) and 60 ft long (N-S). If this entire area needs to be re-worked to provide the proper structural support for the new roadway, excavation of impacted soil would be much larger than mentioned above. Also, monitoring well(s) will need to be properly abandoned.

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.

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, Town of Canton Property*, January 29, 2010.

North Carolina Department of Transportation, *Notice to Proceed - Preliminary Site Assessment, Town of Canton Property*, March 2, 2010.

Tables

TABLE 1
SUMMARY OF SOIL TPH ANALYTICAL RESULTS
Parcels #8 & #12 Town of Canton
Canton, Haywood County, North Carolina

		LABORATORY ANALYSES TPH RANGE ORGANICS		
LOCATION	DEPTH (ft bgs)	DRO (mg/kg)		GRO (mg/kg)
P8-1	10	ND	1.4	1.4 JB
P8-2	10	ND	1.4	1.5 JB
P8-3	10	ND	1.4	1.3 JB
P8-4	10	**7400**		**2200**
P8-5	10	ND	1.2	2.6 JB
P8-6	10	**27**		**260**
P8-7	10	ND	1.5	1.3 JB
P8-8	10	ND	1.5	1.1 JB
P8-9	10	ND	1.5	1.4 JB
P8-10	4.	**11**		**16**
P8-10	10	ND	1.5	3.0 JB
P8-11	10	ND	1.4	3.6 JB
P8-12	10	ND	1.5	6.5 B
P8-13	10	ND	1.5	1.1 JB
P12-1	10	ND	1.4	1.6 JB
NCDENR UST Section Action Levels:		**10**		**10**
NCDENR Non-UST Petroleum Action Levels:		**10**		**40**

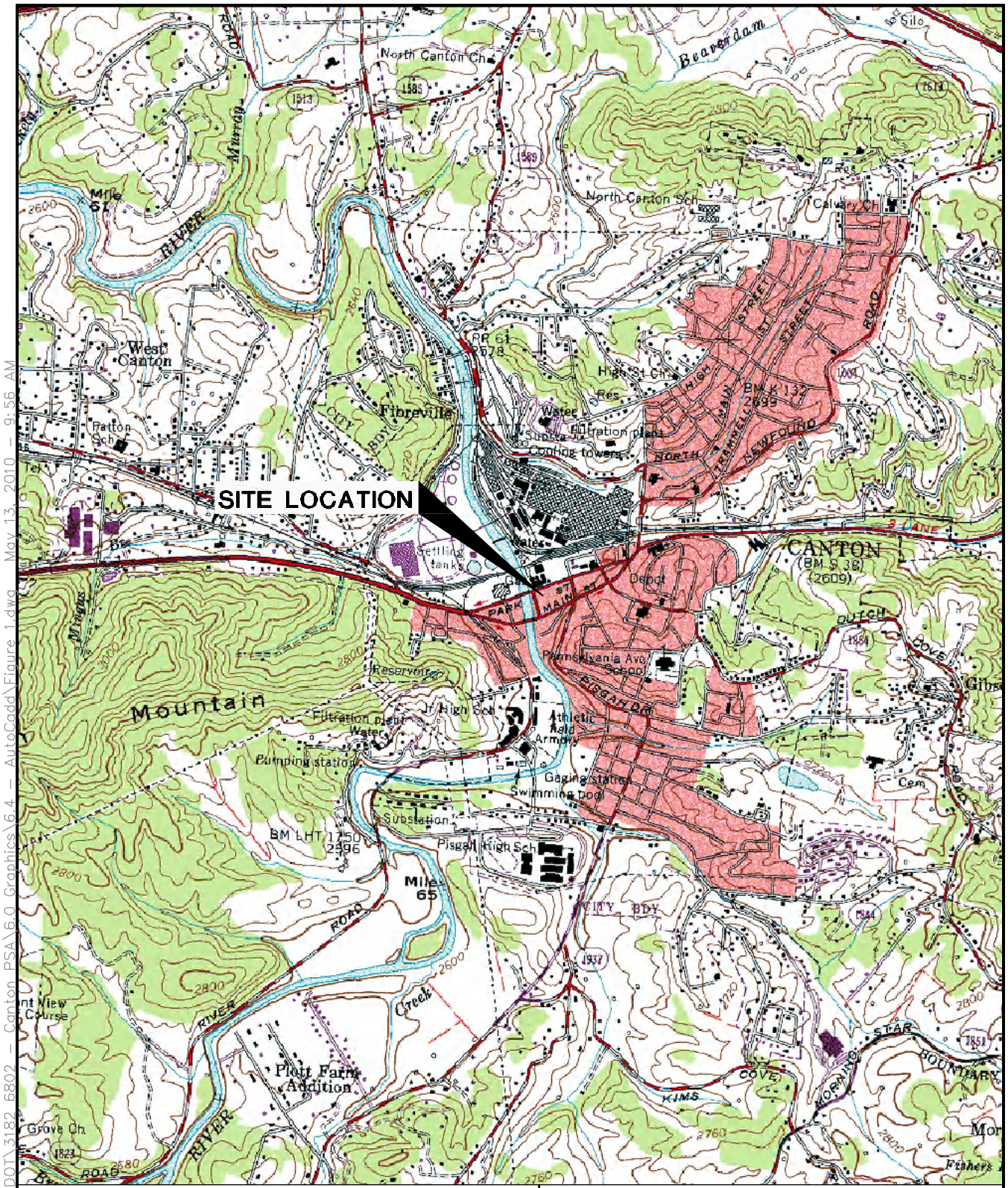
LEGEND:

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 0.79 - Not Detected above the indicated limit
J - Estimated concentration
B- Blank contaminiaton exists

NOTES:

Soil samples were collected by URS on April 14, 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).

Figures



N.C.

QUADRANGLE LOCATION

N

SCALE IN FEET

0 2000

SOURCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE
CANTON, NC

FIGURE 1. LOCATION MAP

PARCELS 8 AND 12
HAYWOOD COUNTY
CANTON, NORTH CAROLINA

Prepared for: NC DOT	URS RDU, NORTH CAROLINA 27560
DRAWN BY: TSH	
DATE: 05/13/10	
PROJECT NO. 31826802	Fig. 1

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PROJECT REFERENCE NO.	SHEET
B-3656	2

GeoEnvironmental

0 120 240
FEET

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Prepared by
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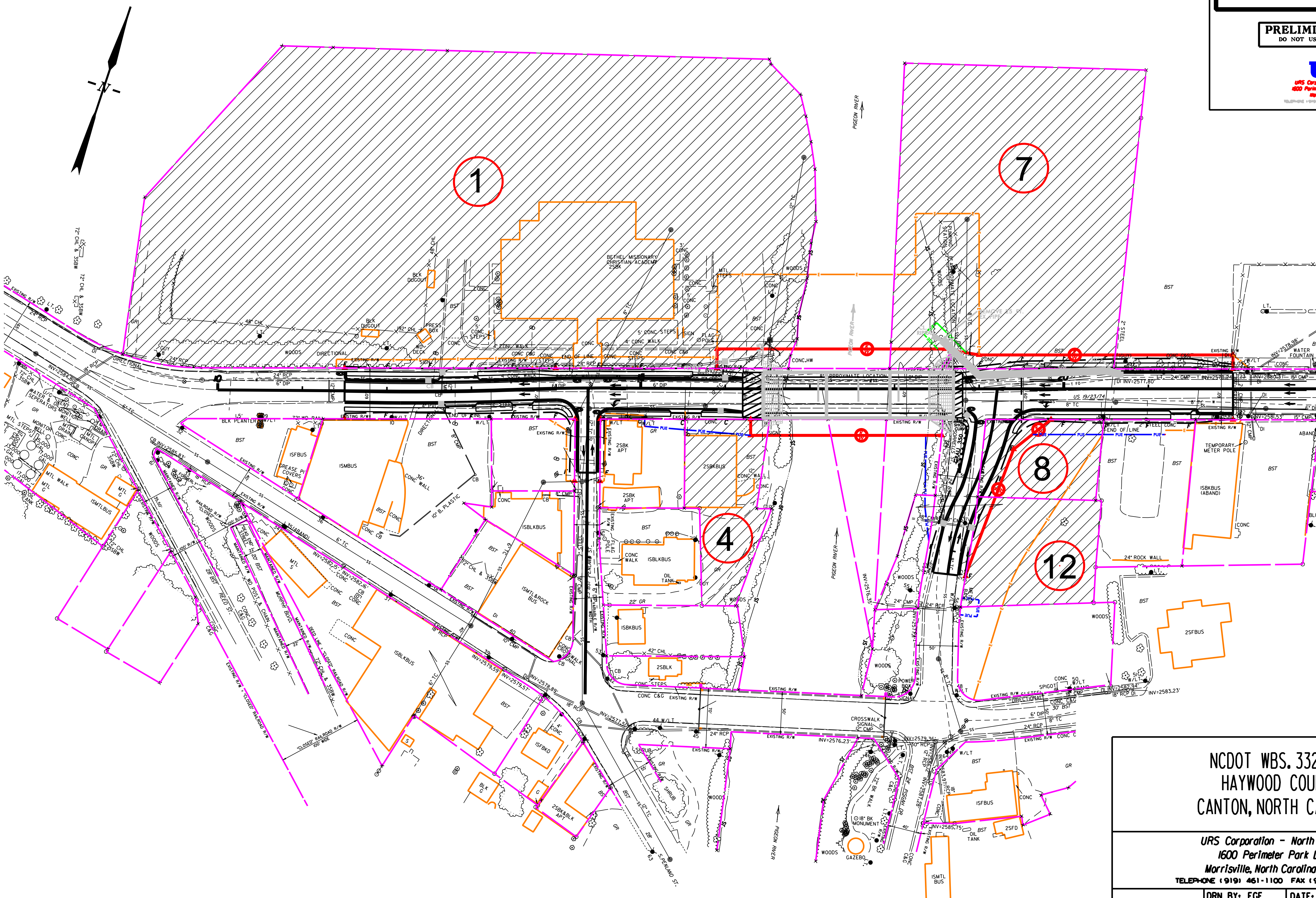

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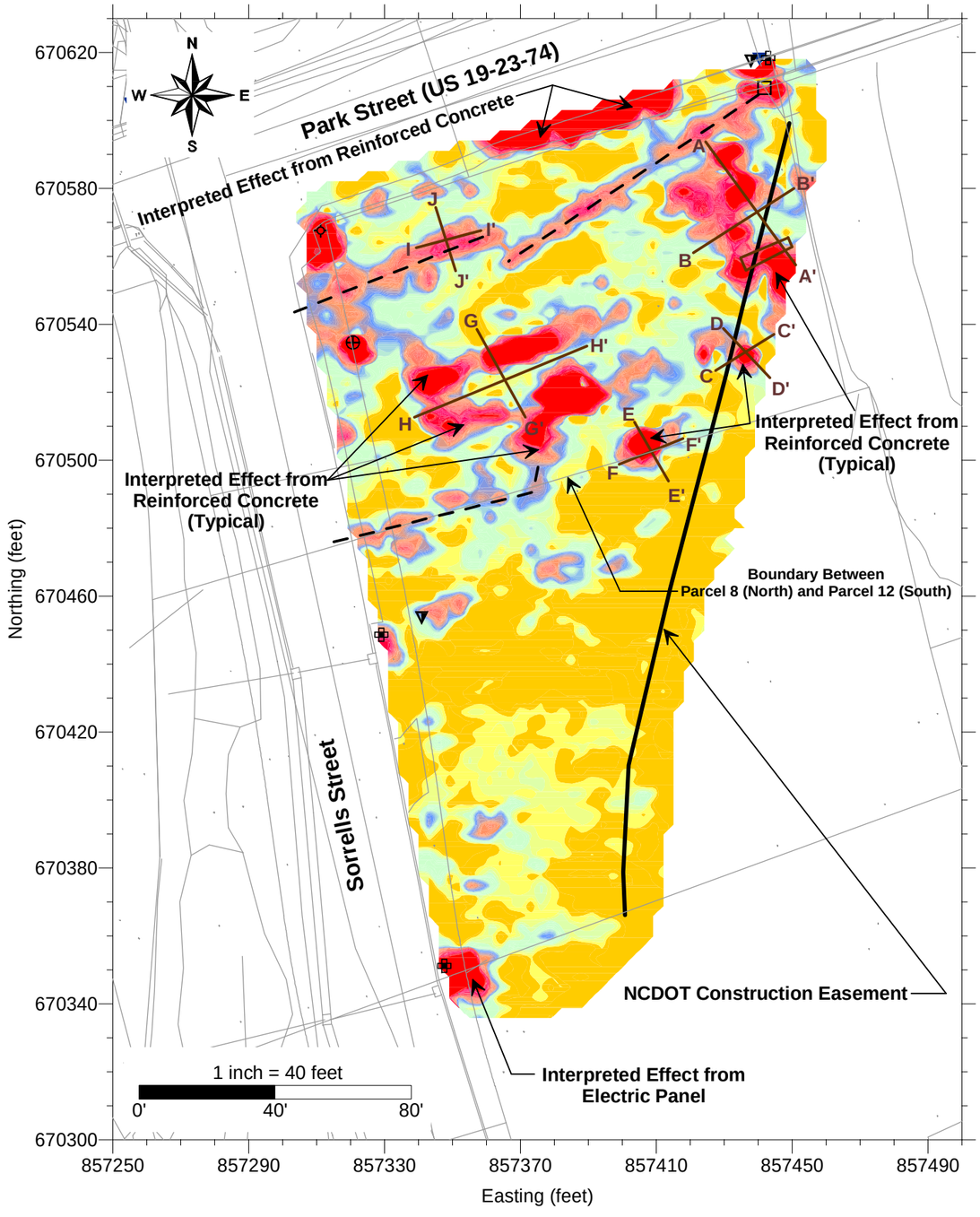
CANTON, NORTH CAROLINA

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

DRN BY: EGE	DATE: 5-5-10	STATE PROJECT:
CHECKED BY: VK	DATE: 5-5-10	B-3656

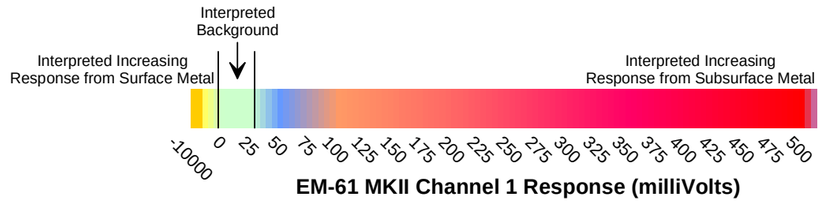
PARCEL LOCATION MAP

FIGURE 2



LEGEND

- A——A' Representative GPR Cross-Section Location
- Possible UST
- Interpreted Unknown Utility Center Line (Termination Points not Mapped)
- Monitoring Well
- Telephone Pole
- Guy Wire
- Remnant Footer Location
- Road or Directional Sign
- Water Meter



Notes:

1. Coordinates in North Carolina State Plane Grid, NAD-83.
2. Contoured data from Geonics, Ltd. EM-61 MKII instrument.
3. Base drawing after file "b3656_ls_brl.dgn" provided by NCDOT.
4. Location control for geophysical survey from DGPS survey conducted by URS.
5. These geophysical survey results do not constitute a formal underground utility avoidance survey.
6. UST designation in accordance with NCDOT guidelines, dated May 19, 2009.

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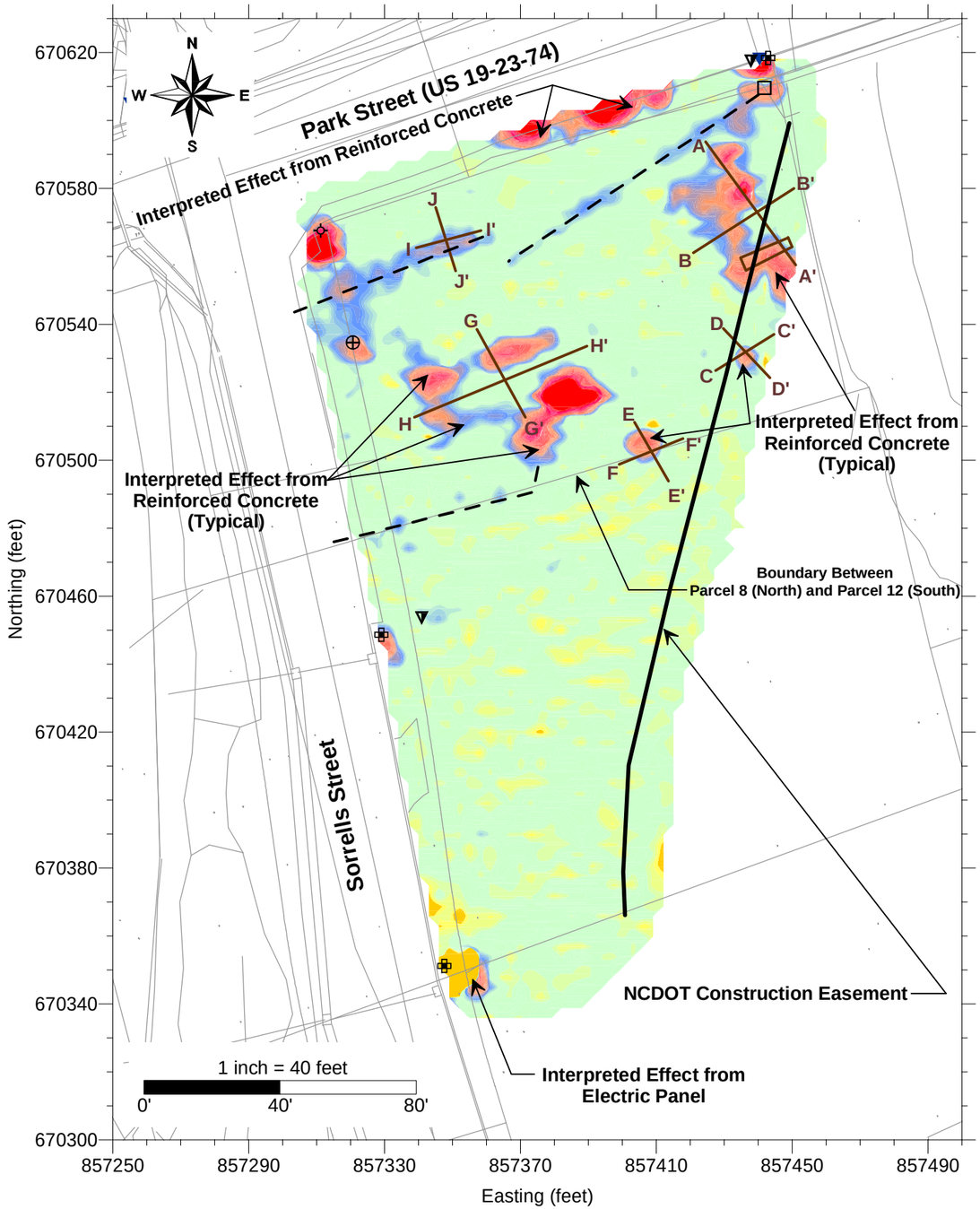
EM-61 MKII Channel 1 Response Contours
Town of Canton Property (Parcels 8 & 12)

NCDOT WBS 33202.1.2, Haywood County

Canton, North Carolina

DESIGNED BY		DRAWN BY		CHECKED BY		JOB NUMBER	Figure
MAB	04/13/10	MAB	04/13/10	JLM	04/13/10	31826802	3A



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- Possible UST
- Interpreted Unknown Utility Center Line (Termination Points not Mapped)
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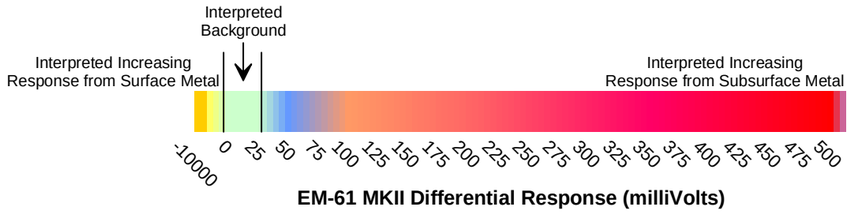

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EM-61 MKII Differential Response Contours
Town of Canton Property (Parcels 8 & 12)

NCDOT WBS 33202.1.2, Haywood County

Canton, North Carolina

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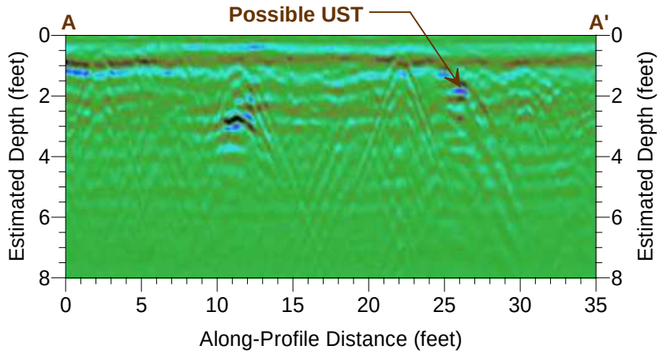
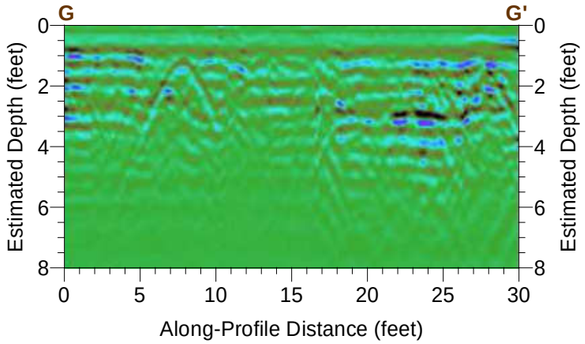


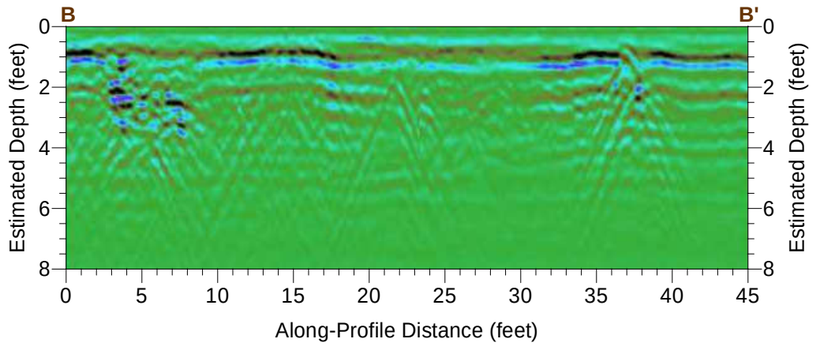


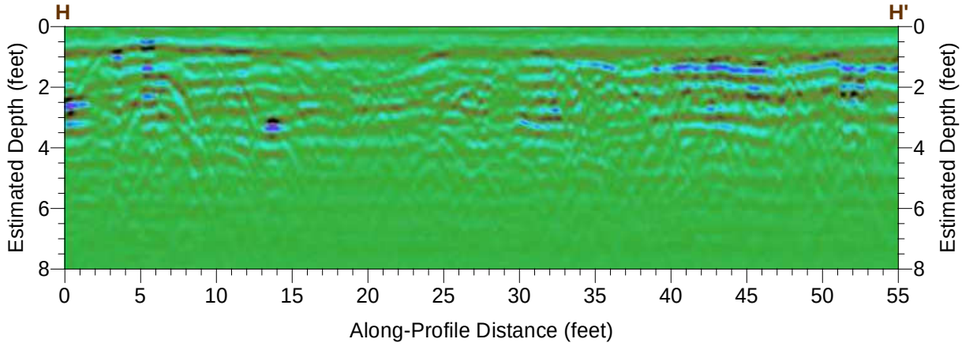
GPR Profile Vertical Scale
1 inch = 5 feet

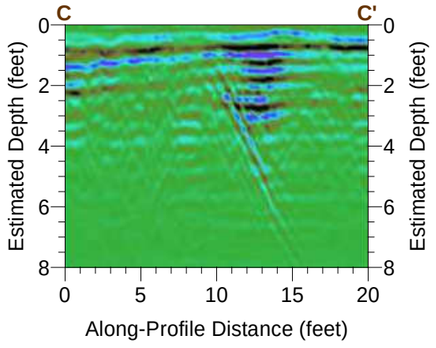
0' 5' 10'

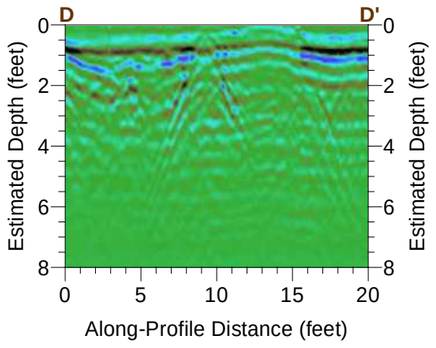
GPR Profile Horizontal Scale
1 inch = 10 feet

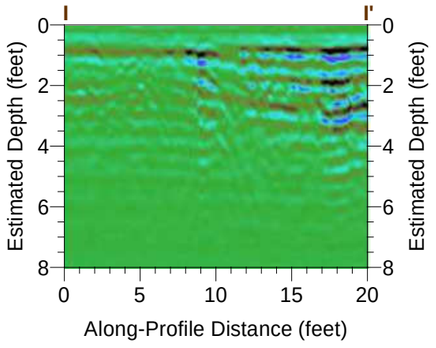
0' 10' 20'

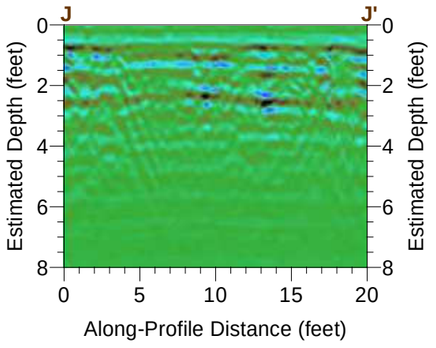


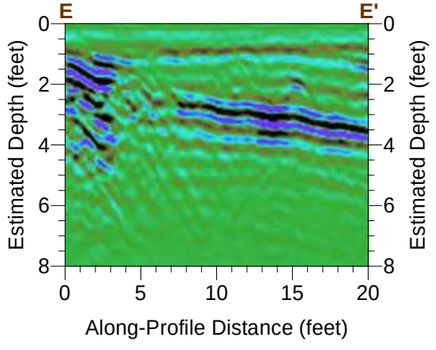


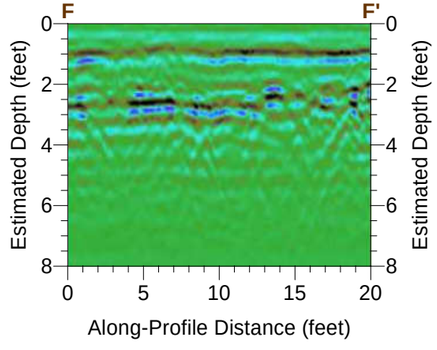












Notes:

1. See Figures 3A & 3B for cross-section locations.
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.

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GPR Cross-Sections A-A' through J-J'
Town of Canton Property (Parcels 8 & 12)

NCDOT WBS 33202.1.2, Haywood County

Canton, North Carolina

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MAB	04/13/10	MAB	04/13/10	JLM	04/13/10	31826802	3C

PROJECT REFERENCE NO.	SHEET
B-3656	

GeoEnvironmental

0 40 80

FEET

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive, Suite 400
Morrisville, NC 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

LEGEND

- P3-1 - SOIL BORING LOCATION
- PROPOSED RIGHT-OF-WAY
- E — PROPOSED EASEMENT
- PROPOSED DRAINAGE STRUCTURE
- APPROXIMATE LOCATION OF EM-61 ANOMALY

PARCEL 8 & 12 - TOWN OF CANTON
NCDOT WBS. 33202.1.2
HAYWOOD COUNTY
CANTON, NORTH CAROLINA

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

DRN BY: EGE	DATE: 5-5-10	STATE PROJECT:
CHECKED BY: VK	DATE: 5-5-10	B-3656

SOIL SAMPLING LOCATIONS

FIGURE 4

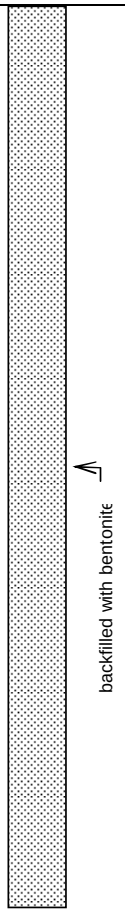
Appendix A
Boring Logs

BORING LOG: P12-1

Permit #		Drill Date	***04/14/10***	Site	***Parcel 12***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***12***	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				2.2 ppm	loose, dry, lt. brown, silty Sand, gravel
2				3.4 ppm	soft, dry, brown, clayey Silt, mica
4				4.0 ppm	
6				4.8 ppm	
8				7.2 ppm	soft, dry, brown, silty Clay, trace mica
10	P12-1-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

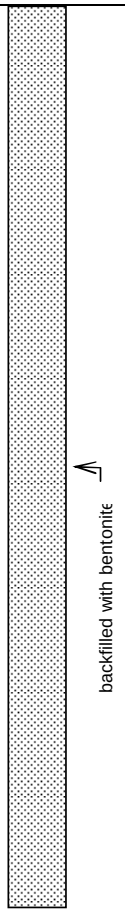
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-1

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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	soft, dry, reddish-brown, clayey Silt, gravel
2				0.0 ppm	
4				0.0 ppm	soft, dry, brown, clayey Silt, mica
6				0.0 ppm	
8				0.0 ppm	soft, dry, brown, silty Clay, trace mica
10	P8-1-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

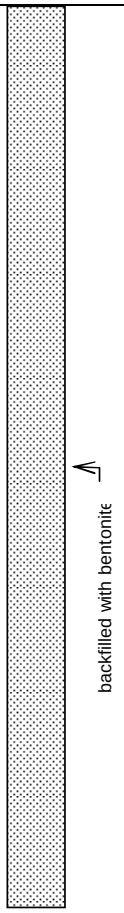
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-2

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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	soft, dry, reddish-brown, clayey Silt, gravel
2				0.0 ppm	
4				0.0 ppm	soft, dry, brown, clayey Silt, mica
6				0.0 ppm	
8				0.0 ppm	soft, dry, brown, silty Clay, trace mica
10	P8-2-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

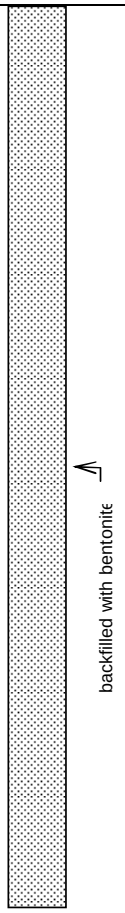
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-3

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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	soft, dry, reddish-brown, clayey Silt, gravel
2				0.0 ppm	
4				0.0 ppm	soft, dry, brown, clayey Silt, mica
6				0.0 ppm	
8				0.0 ppm	soft, dry, brown, silty Clay, trace mica
10	P8-3-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

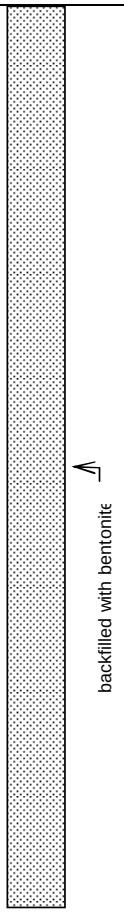
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-4

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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				8.2 ppm	loose, dry, lt. brown, silty Sand, gravel
2				1900 ppm	
4				200 ppm	soft, dry, brown, clayey Silt, mica
6				2000 ppm	
8				2938 ppm	soft, dry, dk.Gray, clayey Silt, mica
10	P8-4-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

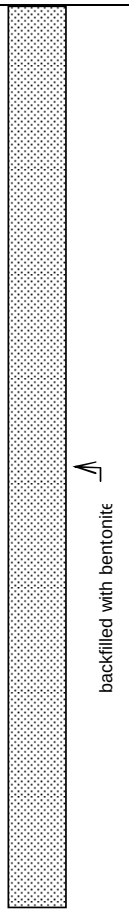
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-5

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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				2.4 ppm	soft, dry, reddish-brown, clayey Silt, gravel
2				2.6 ppm	soft, dry, brown, clayey Silt, mica
4				3.4 ppm	
6				17.1 ppm	soft, dry,dk. Gray, clayey Silt, mica
8				21.8 ppm	
10	P8-5-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

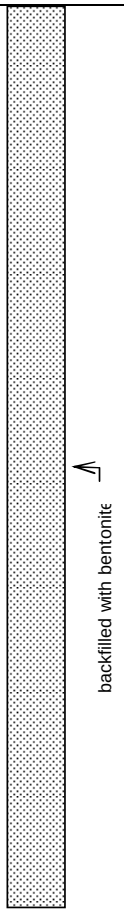
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-6

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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	soft, dry, reddish-brown, clayey Silt, gravel
2				2.4 ppm	
4				860 ppm	soft, dry, brown, clayey Silt, mica
6				1425 ppm	
8				1710 ppm	soft, dry, brown, silty Clay, trace mica
10	P8-6-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

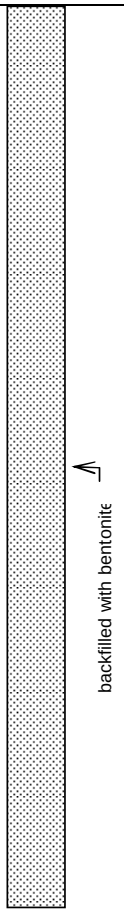
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-7

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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	soft, dry, reddish-brown, clayey Silt, gravel
2				0.0 ppm	
4				0.0 ppm	soft, dry, brown, clayey Silt, mica
6				0.0 ppm	
8				0.0 ppm	soft, dry, brown, silty Clay, trace mica
10	P8-7-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

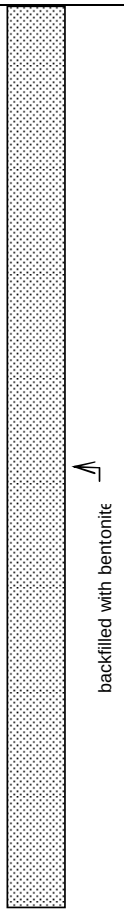
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-8

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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	soft, dry, reddish-brown, clayey Silt, gravel
2				0.0 ppm	
4				0.0 ppm	soft, dry, brown, clayey Silt, mica
6				0.0 ppm	
8				4.0 ppm	soft, dry, lt. brown, silty Clay, trace mica
10	P8-8-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

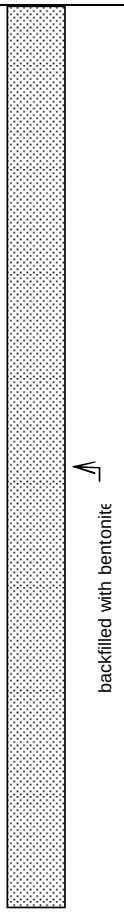
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-9

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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				7.0 ppm	soft, dry, reddish-brown, clayey Silt, gravel
2				7.1 ppm	
4				7.2 ppm	soft, dry, brown, clayey Silt, mica
6				5.1 ppm	
8				7.8 ppm	soft, dry, lt. brown, silty Clay, trace mica
10	P8-9-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

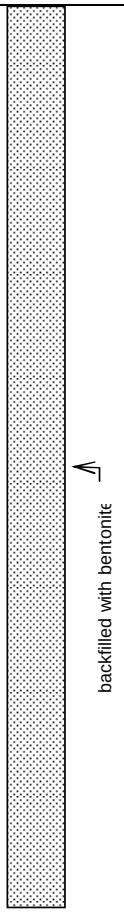
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-10

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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	soft, dry, reddish-brown, clayey Silt, gravel
2				50.1 ppm	
4	P8-10-4	4'		24.3 ppm	soft, dry, brown, clayey Silt, mica
6				19.9 ppm	
8				20.1 ppm	soft, dry, dk. Gray, silty Clay, trace mica
10	P8-10-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

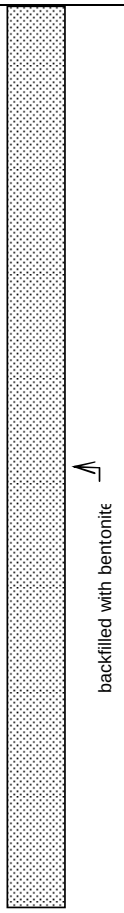
Geologist:	***Michael Meese***	Driller:	***Probe Tech***

BORING LOG: P8-11

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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	soft, dry, reddish-brown, clayey Silt, gravel
2				44.5 ppm	
4				43.5 ppm	soft, dry, brown, clayey Silt, mica
6				76.9 ppm	
8				78.1 ppm	soft, dry, dk.gray, silty Clay, trace mica
10	P8-11-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

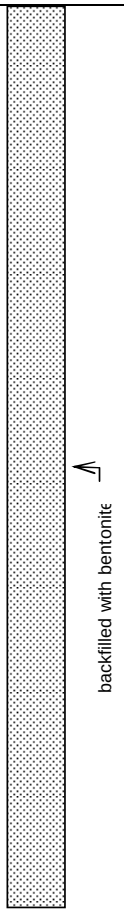
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-12

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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				9.2 ppm	soft, dry, reddish-brown, clayey Silt, gravel
2				40.9 ppm	
4				11.8 ppm	soft, dry, brown, clayey Silt, mica
6				19.1 ppm	
8				62.1 ppm	soft, dry, dk. gray, silty Clay, trace mica
10	P8-12-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

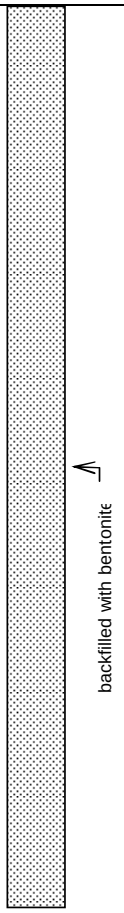
Geologist: ***Michael Meese*** Driller: ***Probe Tech***

BORING LOG: P8-13

Permit #		Drill Date	***04/14/10***	Site	***Parcel 8***
Client	***NCDOT***	Use		URS Corporation	
Address	***Canton, North Carolina***			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	soft, dry, reddish-brown, clayey Silt, gravel
2				0.0 ppm	
4				0.0 ppm	soft, dry, brown, clayey Silt, mica
6				0.0 ppm	
8				0.0 ppm	soft, dry, dk. gray, silty Clay, trace mica
10	P8-13-10	10'			Bottom of boring
12					

Typical Diagram



Not to Scale

Notes:

Geologist: ***Michael Meese*** Driller: ***Probe Tech***

Appendix B
Laboratory Report

PRISM LABORATORIES, INC.
Full-Service Analytical & Environmental Solutions

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: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Lab Submittal Date: 04/15/2010
Prism Work Order: 0040128

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

Data Qualifiers Key Reference:

M	Matrix spike outside of the control limits.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
A	Surrogate is diluted out.
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: 0040128

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received
P8-1-10	0040128-01	Solid	04/14/10	04/15/10
P8-2-10	0040128-02	Solid	04/14/10	04/15/10
P8-3-10	0040128-03	Solid	04/14/10	04/15/10
P8-4-10	0040128-04	Solid	04/14/10	04/15/10
P8-5-10	0040128-05	Solid	04/14/10	04/15/10
P8-6-10	0040128-06	Solid	04/14/10	04/15/10
P8-7-10	0040128-07	Solid	04/14/10	04/15/10
P8-8-10	0040128-08	Solid	04/14/10	04/15/10
P8-9-10	0040128-09	Solid	04/14/10	04/15/10
P8-10-4	0040128-10	Solid	04/14/10	04/15/10
P8-10-10	0040128-11	Solid	04/14/10	04/15/10
P8-11-10	0040128-12	Solid	04/14/10	04/15/10
P8-12-10	0040128-13	Solid	04/14/10	04/15/10
P8-13-10	0040128-14	Solid	04/14/10	04/15/10

Samples received in good condition at 4.7 degrees C unless otherwise noted.

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

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-1-10
Prism Sample ID: 0040128-01
Prism Work Order: 0040128
Time Collected: 04/14/10 08:20
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	8.7	1.4	1	8015C	4/23/10 4:00	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*80 %*		*49-124*	
General Chemistry Parameters									
% Solids	**80.0**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**1.4 J**	**mg/kg dry**	**4.9**	**0.64**	**50**	**8015C**	**4/21/10 19:51**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*115 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-2-10
Prism Sample ID: 0040128-02
Prism Work Order: 0040128
Time Collected: 04/14/10 08:45
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.0	1.4	1	8015C	4/23/10 3:24	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*84 %*		*49-124*	
General Chemistry Parameters									
% Solids	**77.7**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**1.5 J**	**mg/kg dry**	**5.4**	**0.71**	**50**	**8015C**	**4/21/10 20:22**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*127 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-3-10
Prism Sample ID: 0040128-03
Prism Work Order: 0040128
Time Collected: 04/14/10 09:10
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	8.8	1.4	1	8015C	4/23/10 2:49	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*81 %*		*49-124*	
General Chemistry Parameters									
% Solids	**79.4**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**1.3 J**	**mg/kg dry**	**5.2**	**0.67**	**50**	**8015C**	**4/21/10 20:53**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*116 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-4-10
Prism Sample ID: 0040128-04
Prism Work Order: 0040128
Time Collected: 04/14/10 10:10
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	**7400**	**mg/kg dry**	**840**	**140**	**100**	**8015C**	**4/26/10 9:17**	**JMV**	**P0D0156**
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*0 %*		*49-124*	*A*
General Chemistry Parameters									
% Solids	**82.9**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**2200**	**mg/kg dry**	**110**	**15**	**1000**	**8015C**	**4/22/10 11:35**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*10 %*		*55-129*	*A*

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Attn: Martha Myers-Lee
1600 Perimeter Park Dr. Suite 400
Morrisville, NC 27560

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-5-10
Prism Sample ID: 0040128-05
Prism Work Order: 0040128
Time Collected: 04/14/10 10:30
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	7.6	1.2	1	8015C	4/23/10 2:13	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*74 %*		*49-124*	
General Chemistry Parameters									
% Solids	**91.7**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**2.6 J**	**mg/kg dry**	**4.6**	**0.59**	**50**	**8015C**	**4/21/10 21:24**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*111 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-6-10
Prism Sample ID: 0040128-06
Prism Work Order: 0040128
Time Collected: 04/14/10 10:45
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	**27**	**mg/kg dry**	**8.8**	**1.4**	**1**	**8015C**	**4/23/10 1:38**	**JMV**	**P0D0156**
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*71 %*		*49-124*	
General Chemistry Parameters									
% Solids	**79.2**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**260**	**mg/kg dry**	**9.9**	**1.3**	**100**	**8015C**	**4/22/10 10:51**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*52 %*		*55-129*	*A*

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-7-10
Prism Sample ID: 0040128-07
Prism Work Order: 0040128
Time Collected: 04/14/10 11:15
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.1	1.5	1	8015C	4/23/10 1:02	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*78 %*		*49-124*	
General Chemistry Parameters									
% Solids	**77.1**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**1.3 J**	**mg/kg dry**	**5.0**	**0.65**	**50**	**8015C**	**4/21/10 22:27**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*123 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-8-10
Prism Sample ID: 0040128-08
Prism Work Order: 0040128
Time Collected: 04/14/10 11:40
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.1	1.5	1	8015C	4/23/10 14:09	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*69 %*		*49-124*	
General Chemistry Parameters									
% Solids	**77.1**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**1.1 J**	**mg/kg dry**	**4.7**	**0.62**	**50**	**8015C**	**4/21/10 22:58**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*110 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-9-10
Prism Sample ID: 0040128-09
Prism Work Order: 0040128
Time Collected: 04/14/10 12:00
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.2	1.5	1	8015C	4/23/10 11:59	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*68 %*		*49-124*	
General Chemistry Parameters									
% Solids	**76.0**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**1.4 J**	**mg/kg dry**	**5.8**	**0.75**	**50**	**8015C**	**4/22/10 1:04**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*119 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-10-4
Prism Sample ID: 0040128-10
Prism Work Order: 0040128
Time Collected: 04/14/10 13:00
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	**11**	**mg/kg dry**	**8.3**	**1.3**	**1**	**8015C**	**4/23/10 11:24**	**JMV**	**P0D0156**
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*75 %*		*49-124*	
General Chemistry Parameters									
% Solids	**83.9**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**16**	**mg/kg dry**	**5.5**	**0.72**	**50**	**8015C**	**4/22/10 1:35**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*122 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-10-10
Prism Sample ID: 0040128-11
Prism Work Order: 0040128
Time Collected: 04/14/10 13:05
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.1	1.5	1	8015C	4/23/10 10:48	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*66 %*		*49-124*	
General Chemistry Parameters									
% Solids	**76.9**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**3.0 J**	**mg/kg dry**	**5.1**	**0.66**	**50**	**8015C**	**4/22/10 2:07**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*112 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-11-10
Prism Sample ID: 0040128-12
Prism Work Order: 0040128
Time Collected: 04/14/10 13:30
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	8.9	1.4	1	8015C	4/23/10 8:07	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*77 %*		*49-124*	
General Chemistry Parameters									
% Solids	**78.2**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**3.6 J**	**mg/kg dry**	**6.1**	**0.80**	**50**	**8015C**	**4/22/10 2:38**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*104 %*		*55-129*	

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1600 Perimeter Park Dr. Suite 400
Morrisville, NC 27560

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-12-10
Prism Sample ID: 0040128-13
Prism Work Order: 0040128
Time Collected: 04/14/10 13:55
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.0	1.5	1	8015C	4/23/10 7:32	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*71 %*		*49-124*	
General Chemistry Parameters									
% Solids	**77.4**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**6.5**	**mg/kg dry**	**4.9**	**0.64**	**50**	**8015C**	**4/22/10 3:09**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*117 %*		*55-129*	

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1600 Perimeter Park Dr. Suite 400
Morrisville, NC 27560

Project: NCDOT: Canton, NC (Parcel 8)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P8-13-10
Prism Sample ID: 0040128-14
Prism Work Order: 0040128
Time Collected: 04/14/10 14:15
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	9.1	1.5	1	8015C	4/23/10 6:57	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*70 %*		*49-124*	
General Chemistry Parameters									
% Solids	**77.1**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**1.1 J**	**mg/kg dry**	**5.1**	**0.67**	**50**	**8015C**	**4/22/10 3:40**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*92 %*		*55-129*	

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Morrisville, NC 27560

Project: NCDOT: Canton, NC (Parcel 8)

Project No: WBS# 3.3202.1.2

Prism Work Order: 0040128
Time Submitted: 4/15/10 1:00:00PM

Volatile Petroleum Hydrocarbons by GC/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0147 - 5035										
Blank (P0D0147-BLK1)				Prepared & Analyzed: 04/21/10						
Gasoline Range Organics	1.85	5.0	mg/kg wet							J
Surrogate: a,a,a-Trifluorotoluene	*0.103*		*mg/kg*	*0.100*		*103*	*55-129*			
LCS (P0D0147-BS1)				Prepared & Analyzed: 04/21/10						
Gasoline Range Organics	46.8	5.0	mg/kg wet	50.0		94	67-116			
Surrogate: a,a,a-Trifluorotoluene	*0.111*		*mg/kg*	*0.100*		*111*	*55-129*			
Matrix Spike (P0D0147-MS1)		**Source: 0040130-01**		Prepared & Analyzed: 04/21/10						
Gasoline Range Organics	73.4	6.2	mg/kg dry	61.6	1.61	117	57-113			M
Surrogate: a,a,a-Trifluorotoluene	*0.126*		*mg/kg*	*0.100*		*126*	*55-129*			
Matrix Spike Dup (P0D0147-MSD1)		**Source: 0040130-01**		Prepared & Analyzed: 04/21/10						
Gasoline Range Organics	76.0	6.2	mg/kg dry	61.6	1.61	121	57-113	4	23	M
Surrogate: a,a,a-Trifluorotoluene	*0.129*		*mg/kg*	*0.100*		*129*	*55-129*			

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Project: NCDOT: Canton, NC (Parcel 8)

Project No: WBS# 3.3202.1.2

Prism Work Order: 0040128
Time Submitted: 4/15/10 1:00:00PM

Extractable Petroleum Hydrocarbons by GC/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0156 - 3545A										
Blank (P0D0156-BLK1)				Prepared & Analyzed: 04/21/10						
Diesel Range Organics	BRL	7.0	mg/kg wet							
Surrogate: o-Terphenyl	*1.52*		*mg/kg wet*	*1.60*		*95*	*49-124*			
LCS (P0D0156-BS1)				Prepared & Analyzed: 04/21/10						
Diesel Range Organics	71.8	7.0	mg/kg wet	80.0		90	55-109			
Surrogate: o-Terphenyl	*1.74*		*mg/kg wet*	*1.60*		*109*	*49-124*			
Matrix Spike (P0D0156-MS1)		**Source: 0040130-01**		Prepared: 04/21/10 Analyzed: 04/22/10						
Diesel Range Organics	71.5	8.6	mg/kg dry	98.5	BRL	73	50-117			
Surrogate: o-Terphenyl	*1.44*		*mg/kg dry*	*1.97*		*73*	*49-124*			
Matrix Spike Dup (P0D0156-MSD1)		**Source: 0040130-01**		Prepared: 04/21/10 Analyzed: 04/23/10						
Diesel Range Organics	73.3	8.6	mg/kg dry	98.5	BRL	74	50-117	2	24	
Surrogate: o-Terphenyl	*1.56*		*mg/kg dry*	*1.97*		*79*	*49-124*			

Sample Extraction Data

Prep Method: 3545A

Lab Number	Batch	Initial	Final	Date
0040128-01	P0D0156	25.04 g	1 mL	04/21/10
0040128-02	P0D0156	25.12 g	1 mL	04/21/10
0040128-03	P0D0156	25.08 g	1 mL	04/21/10
0040128-04	P0D0156	25.04 g	1 mL	04/21/10
0040128-05	P0D0156	25.04 g	1 mL	04/21/10
0040128-06	P0D0156	25.05 g	1 mL	04/21/10
0040128-07	P0D0156	25 g	1 mL	04/21/10
0040128-08	P0D0156	25.01 g	1 mL	04/21/10
0040128-09	P0D0156	25.02 g	1 mL	04/21/10
0040128-10	P0D0156	25.03 g	1 mL	04/21/10
0040128-11	P0D0156	25.01 g	1 mL	04/21/10
0040128-12	P0D0156	25.07 g	1 mL	04/21/10
0040128-13	P0D0156	25.03 g	1 mL	04/21/10
0040128-14	P0D0156	25.05 g	1 mL	04/21/10

NO PREP

Lab Number	Batch	Initial	Final	Date
0040128-01	P0D0060	30 g	30 mL	04/19/10
0040128-02	P0D0060	30 g	30 mL	04/19/10
0040128-03	P0D0060	30 g	30 mL	04/19/10
0040128-04	P0D0060	30 g	30 mL	04/19/10
0040128-05	P0D0060	30 g	30 mL	04/19/10
0040128-06	P0D0060	30 g	30 mL	04/19/10
0040128-07	P0D0060	30 g	30 mL	04/19/10
0040128-08	P0D0060	30 g	30 mL	04/19/10
0040128-09	P0D0060	30 g	30 mL	04/19/10
0040128-10	P0D0060	30 g	30 mL	04/19/10
0040128-11	P0D0060	30 g	30 mL	04/19/10
0040128-12	P0D0060	30 g	30 mL	04/19/10
0040128-13	P0D0060	30 g	30 mL	04/19/10
0040128-14	P0D0060	30 g	30 mL	04/19/10

Prep Method: 5035

Lab Number	Batch	Initial	Final	Date
0040128-01	P0D0147	6.32 g	5 mL	04/21/10
0040128-02	P0D0147	5.92 g	5 mL	04/21/10
0040128-03	P0D0147	6.08 g	5 mL	04/21/10
0040128-04	P0D0147	5.28 g	5 mL	04/21/10
0040128-05	P0D0147	5.98 g	5 mL	04/21/10
0040128-06	P0D0147	6.4 g	5 mL	04/21/10
0040128-07	P0D0147	6.53 g	5 mL	04/21/10
0040128-08	P0D0147	6.85 g	5 mL	04/21/10
0040128-09	P0D0147	5.71 g	5 mL	04/21/10
0040128-10	P0D0147	5.38 g	5 mL	04/21/10
0040128-11	P0D0147	6.42 g	5 mL	04/21/10
0040128-12	P0D0147	5.2 g	5 mL	04/21/10
0040128-13	P0D0147	6.61 g	5 mL	04/21/10
0040128-14	P0D0147	6.3 g	5 mL	04/21/10

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Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

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

PAGE 1 OF 2 QUOTE # TO ENSURE PROPER BILLING: _____

Client Company Name: URS Corporation
Report To/Contact Name: Martha Meyers-Lee
Reporting Address: 1600 Perimeter Park Drive, Suite 400
Morrisville, NC 27560
Phone: (919) 461-1519 **Fax (Yes) (No):** _____
Email (Y s) (No) Email Address martha_meyers-lee@urscorp.com
EDD Type: ✓ PDF ✓ Excel ___ Other
Site Location Name: NC DOT Canton - Parcel 8
Site Location Physical Address: 89 Park St. Canton, NC 28716

Project Name: NC DOT - Canton, NC
Short Hold Analysis: (Yes) (No) **UST Project:** (Yes) (No)
***Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements**
Invoice To: NC DENR, State TIP # B-3656, WBS# 3 3202.1.2
Address: _____

Purchase Order No./Billing Reference 31826802
Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
"Working Days" 6-9 Days ✓ Standard 10 days
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	✓		
Received ON WET ICE? Temp 4.7	✓		
PROPER PRESERVATIVES indicated?	✓		
Received WITHIN HOLDING TIMES?	✓		
CUSTODY SEALS INTACT?	✓		
VOLATILES rec'd W/OUT HEADSPACE?			✓
PROPER CONTAINERS used?	✓		

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NELAC ___ USACE ___ FL ___ NC ✓
SC ___ OTHER ___ N/A ___
Water Chlorinated: YES ___ NO ___
Sample Iced Upon Collection: YES ✓ NO ___

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 TPH G	TPH D	VOC	SVOC			REMARKS	PRISM LAB ID NO.
P8-1-10	4-14-10	0820	Soil	VOA/G	4	40z, 2oz, 40ml	methanol-VOA	X	X						01
P8-2-10		0845	Soil		4			X	X						02
P8-3-10		0910	Soil		4			X	X						03
P8-4-10		1010	Soil		4			X	X						04
P8-5-10		1030	Soil		4			X	X						05
P8-6-10		1045	Soil		4			X	X						06
P8-7-10		1115	Soil		4			X	X						07
P8-8-10		1140	Soil		4			X	X						08
P8-9-10		1200	Soil		4			X	X						09
P8-10-4	4-14-10	1300	Soil	VOA/G	4	40z, 2oz 40ml	methanol-VOA	X	X						010

Sampler's Signature Michael Meese | Sampled By (Print Name) Michael Meese | Affiliation URS Corporation

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Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

		Date	Military/Hours
Relinquished By: (Signature) Michael Meese	Received By: (Signature)		
Relinquished By: (Signature)	Received By: (Signature)	Date	
Relinquished By: (Signature)	Received For Prism Laboratories By:	Date 4/15/10	1300

Method of Shipment: **NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.**
✓ Fed Ex UPS Hand-delivered Prism Field Service Other Federal Express Account # 122090027

Log-In Group No. 0040128

Additional Comments: 4.7°C

PRISM USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	CERCLA	LANDFILL	OTHER:
_ NC _ SC	✓ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC

SEE REVERSE FOR TERMS & CONDITIONS

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

ORIGINAL

CHAIN OF CUSTODY RECORD

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

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Phone: 704/529-6364 • Fax: 704/525-0409

PAGE 2 OF 2 QUOTE # TO ENSURE PROPER BILLING: _____

LAB USE ONLY

Client Company Name: URS Corporation
Report To/Contact Name: Martha Meyers-Lee
Reporting Address: 1600 Perimeter Park Drive, Suite 400
Morrisville, NC 27560
Phone: (919) 461-1519 **Fax (Yes) (No):** _____
Email (Y s) (No) Email Address martha_meyers-lee@urscorp.com
EDD Type: ✓ PDF ✓ Excel ___ Other
Site Location Name: NC DOT Canton - Parcel 8
Site Location Physical Address: 89 Park St. Canton, NC 28716

Project Name: NC DOT - Canton, NC
Short Hold Analysis: (Yes) (No) **UST Project:** (Yes) (No)
***Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements**
Invoice To: NC DENR, State TIP # B-3656, WBS# 3 3202.1.2
Address: _____

Purchase Order No./Billing Reference 31826802
Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
"Working Days" 6-9 Days ✓ Standard 10 days
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NELAC ___ USACE ___ FL ___ NC ✓
SC ___ OTHER ___ N/A ___
Water Chlorinated: YES ___ NO ___
Sample Iced Upon Collection: YES ✓ NO ___

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 TPH GRO	TPH DRO	VOC	SVOC			REMARKS	PRISM LAB ID NO.
P8-10-10	4-14-10	1305	Soil	VOA/G	4	40z, 202 40ml	methanol-VOA	X	X						11
P8-11-10		1330	Soil		4			X	X						12
P8-12-10		1355	Soil		4			X	X						13
P8-13-10	4-14-10	1415	Soil	VOA/G	4	40z, 202 40ml	methanol-VOA	X	X						14
			Soil												~~15~~
			Soil												~~16~~
			Soil												~~17~~
			Soil												1
			Soil												
			Soil												

Sampler's Signature Michael Meese Sampled By (Print Name) Michael Meese Affiliation URS Corporation

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Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.

		Date	Military/Hours
Relinquished By: (Signature) Michael Meese	Received By: (Signature)		
Relinquished By: (Signature)	Received By: (Signature)	Date	
Relinquished By: (Signature)	Received For Prism Laboratories By:	Date 4/15/10	1300

Method of Shipment: **NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.**
Log-In Group No. 0040128
✓ Fed Ex UPS Hand-delivered Prism Field Service Other Federal Express Account # 122090027

Additional Comments:

PRISM USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	CERCLA	LANDFILL	OTHER:
_ NC _ SC	✓ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

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

PRISM LABORATORIES, INC.
Full-Service Analytical & Environmental Solutions

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: NCDOT: Canton, NC (Parcel 12)
Project No.: WBS# 3.3202.1.2
Lab Submittal Date: 04/15/2010
Prism Work Order: 0040130

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

Data Qualifiers Key Reference:

M	Matrix spike outside of the control limits.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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: 0040130

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received
P12-1-10	0040130-01	Solid	04/14/10	04/15/10

Samples received in good condition at 4.5 degrees C unless otherwise noted.

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

Project: NCDOT: Canton, NC (Parcel 12)
Project No.: WBS# 3.3202.1.2
Sample Matrix: Solid

Client Sample ID: P12-1-10
Prism Sample ID: 0040130-01
Prism Work Order: 0040130
Time Collected: 04/14/10 09:40
Time Submitted: 04/15/10 13:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Extractable Petroleum Hydrocarbons by GC/FID									
Diesel Range Organics	BRL	mg/kg dry	8.6	1.4	1	8015C	4/23/10 6:22	JMV	P0D0156
			Surrogate			Recovery		Control Limits	
			o-Terphenyl			*74 %*		*49-124*	
General Chemistry Parameters									
% Solids	**81.2**	**% by Weight**	**0.100**	**0.100**	**1**	***SM2540 G**	**4/19/10 12:50**	**JAB**	**P0D0060**
Volatile Petroleum Hydrocarbons by GC/FID									
Gasoline Range Organics	**1.6 J**	**mg/kg dry**	**5.0**	**0.65**	**50**	**8015C**	**4/21/10 19:20**	**HPE**	**P0D0147**
			Surrogate			Recovery		Control Limits	
			a,a,a-Trifluorotoluene			*125 %*		*55-129*	

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

Project: NCDOT: Canton, NC (Parcel 12)

Project No: WBS# 3.3202.1.2

Prism Work Order: 0040130
Time Submitted: 4/15/10 1:00:00PM

Volatile Petroleum Hydrocarbons by GC/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0147 - 5035										
Blank (P0D0147-BLK1)				Prepared & Analyzed: 04/21/10						
Gasoline Range Organics	1.85	5.0	mg/kg wet							J
Surrogate: a,a,a-Trifluorotoluene	*0.103*		*mg/kg*	*0.100*		*103*	*55-129*			
LCS (P0D0147-BS1)				Prepared & Analyzed: 04/21/10						
Gasoline Range Organics	46.8	5.0	mg/kg wet	50.0		94	67-116			
Surrogate: a,a,a-Trifluorotoluene	*0.111*		*mg/kg*	*0.100*		*111*	*55-129*			
Matrix Spike (P0D0147-MS1)		**Source: 0040130-01**		Prepared & Analyzed: 04/21/10						
Gasoline Range Organics	73.4	6.2	mg/kg dry	61.6	1.61	117	57-113			M
Surrogate: a,a,a-Trifluorotoluene	*0.126*		*mg/kg*	*0.100*		*126*	*55-129*			
Matrix Spike Dup (P0D0147-MSD1)		**Source: 0040130-01**		Prepared & Analyzed: 04/21/10						
Gasoline Range Organics	76.0	6.2	mg/kg dry	61.6	1.61	121	57-113	4	23	M
Surrogate: a,a,a-Trifluorotoluene	*0.129*		*mg/kg*	*0.100*		*129*	*55-129*			

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

Project: NCDOT: Canton, NC (Parcel 12)

Project No: WBS# 3.3202.1.2

Prism Work Order: 0040130
Time Submitted: 4/15/10 1:00:00PM

Extractable Petroleum Hydrocarbons by GC/FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0156 - 3545A										
Blank (P0D0156-BLK1)				Prepared & Analyzed: 04/21/10						
Diesel Range Organics	BRL	7.0	mg/kg wet							
Surrogate: o-Terphenyl	*1.52*		*mg/kg wet*	*1.60*		*95*	*49-124*			
LCS (P0D0156-BS1)				Prepared & Analyzed: 04/21/10						
Diesel Range Organics	71.8	7.0	mg/kg wet	80.0		90	55-109			
Surrogate: o-Terphenyl	*1.74*		*mg/kg wet*	*1.60*		*109*	*49-124*			
Matrix Spike (P0D0156-MS1)		**Source: 0040130-01**		Prepared: 04/21/10		Analyzed: 04/22/10				
Diesel Range Organics	71.5	8.6	mg/kg dry	98.5	BRL	73	50-117			
Surrogate: o-Terphenyl	*1.44*		*mg/kg dry*	*1.97*		*73*	*49-124*			
Matrix Spike Dup (P0D0156-MSD1)		**Source: 0040130-01**		Prepared: 04/21/10		Analyzed: 04/23/10				
Diesel Range Organics	73.3	8.6	mg/kg dry	98.5	BRL	74	50-117	2	24	
Surrogate: o-Terphenyl	*1.56*		*mg/kg dry*	*1.97*		*79*	*49-124*			

Sample Extraction Data

Prep Method: 3545A

Lab Number	Batch	Initial	Final	Date
0040130-01	P0D0156	25.08 g	1 mL	04/21/10

NO PREP

Lab Number	Batch	Initial	Final	Date
0040130-01	P0D0060	30 g	30 mL	04/19/10

Prep Method: 5035

Lab Number	Batch	Initial	Final	Date
0040130-01	P0D0147	6.12 g	5 mL	04/21/10

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Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PRISM LABORATORIES, INC.

Full Service Analytical & Environmental Solutions

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Phone: 704/529-6364 • Fax: 704/525-0409

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING:

Project Name: NC DOT - Canton, NC

Short Hold Analysis: (Yes) (No) **UST Project:** (Yes) (No)

*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements

Invoice To: NC DENR, State TIP # B-3656, WBS# 3 3202.1.2

Address:

LAB USE ONLY

Client Company Name: URS Corporation

Report To/Contact Name: Martha Meyers-Lee

Reporting Address: 1600 Perimeter Park Drive, Suite 400
Morrisville, NC 27560

Phone: (919) 461-1519 **Fax (Yes) (No):**

Email (Y s) (No) Email Address martha_meyers-lee@urscorp.com

EDD Type: ✓ PDF ✓ Excel ___ Other

Site Location Name: NC DOT Canton - Parcel 12

Site Location Physical Address: Sorrell St. Canton, NC 28716

Purchase Order No./Billing Reference 31826802

Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days

"Working Days" 6-9 Days ✓ Standard 10 days

Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC ___ USACE ___ FL ___ NC ✓
SC ___ OTHER ___ N/A ___

Water Chlorinated: YES ___ NO ___

Sample Iced Upon Collection: YES ✓ NO ___

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 TPH G	TPH D	VOC (8260)	SVOC (8270)			REMARKS	PRISM LAB ID NO.
P12-1-10	4-14-10	0940	Soil	VOA/G	4	40z, 20z 40ml	methanol-VOA	X	X					A- 40z	01
			Soil											B- 20z	
			Soil											C- Voal Meth	
			Soil											D- Voal Meth	
			Soil												
			Soil												
			Soil												
			Soil												
			Soil												
			Soil												

Sampler's Signature _____ Sampled By (Print Name) Michael Meese Affiliation URS Corporation

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		Date	Military/Hours
Relinquished By: (Signature)	Received By: (Signature)		
Relinquished By: (Signature)	Received By: (Signature)	Date	
Relinquished By: (Signature)	Received For Prism Laboratories By:	Date 4/15/10	1300

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

✓ Fed Ex UPS X Hand-delivered Prism Field Service Other Federal Express Account # 122090027

Log-In Group No. 0040130

Additional Comments: 4.5°C

PRISM USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	CERCLA	LANDFILL	OTHER:
_ NC _ SC	✓ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC	_ NC _ SC

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

SEE REVERSE FOR TERMS & CONDITIONS