

January 19, 2005

Mr. Greg Smith
North Carolina Department of Transportation
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Reference: Preliminary Site Assessment
Williamson Property (Parcel #15)
695 Brevard Road
Asheville, Buncombe County, North Carolina
NCDOT Project U-3601
WBS Element 34958.1.1
Earth Tech Project No. 81930

Dear Mr. Smith:

Telephone

Earth Tech of North Carolina, Inc., (Earth Tech) has completed the Preliminary Site Assessment conducted at the above-referenced property. The work was performed in accordance with the Technical and Cost proposal dated November 22, 2004, and the North Carolina Department of Transportation's (NCDOT's) Notice to Proceed dated November 24, 2004. Activities associated with the assessment consisted of reviewing geophysical data, collecting soil samples for laboratory analysis and reviewing applicable North Carolina Department of Environment and Natural Resources (NCDENR) records. The purpose of this report is to document the field activities, present the laboratory analyses, and provide recommendations regarding the property.

919.854.6200

Facsimile

919.854.6259

Location and Description

The Deborah Williamson Property (Parcel #15) is located at 695 Brevard Road (NC 191) in Asheville, North Carolina. The property is situated on the west side of Brevard Road approximately 0.1 miles north of the intersection of Brevard Road and Dogwood Road (SR 1160) (Figure 1). Based on information supplied by the NCDOT and the site visit, Earth Tech understands that the site is a former gas station/convenience store at least 20 years prior to the date of this report. The site is currently occupied by Bent Creek Tire, an automotive tire shop. Two underground storage tanks (USTs) are reportedly present at the property, but will not be affected by the right-of-way acquisition. However, the former pump island will likely be within the proposed right-of-way. The property consists of a wood-frame building with a pump island on the north side of the building (Figure 2). The proposed right-of-way appears to affect the east side of the pump islands. Because of the presence of potential contamination around the pump islands, a Preliminary Site Assessment was requested to evaluate the soils within the proposed right-of-way.

Earth Tech reviewed the North Carolina Department of Environment and Natural Resources (NCDENR) Incident Management database and no Incident Number was found for this



location. Earth Tech also reviewed the UST registration database to obtain UST ownership information. According to the database, the USTs on the property were operated under Facility Number 0-007654. The information indicates that the USTs have not been permanently closed. The operator and owner of the tanks are listed as follows:

<u>Owner</u>	<u>Operator</u>
Carl Williamson 695 Brevard Road Asheville, North Carolina 28806	Star Grocery 695 Brevard Road Asheville, North Carolina 28806

Geophysical Survey

Prior to Earth Tech's mobilization to the site, Pyramid Environmental conducted a geophysical survey to evaluate if USTs were present in the proposed right-of-way. The geophysical survey consisted of an electromagnetic survey using a Geonics EM61 time-domain electromagnetic induction meter to locate buried metallic objects, specifically USTs. A survey grid was laid out at the property with the X-axis oriented approximately parallel to Brevard Road and the Y-axis oriented approximately perpendicular to Brevard Road. The grid was located to cover all accessible portions of the property. The survey lines were spaced 5 feet apart. Magnetic data was collected continuously along each survey line with a data logger. After collection, the data was reviewed in the field with graphical computer software. Following the electromagnetic survey, a ground penetrating radar (GPR) survey was conducted to further evaluate any anomalies.

Two anomalies were observed at the Williamson Property. One anomaly (Anomaly A) was located near the southeast corner of the building and was interpreted to represent a utility junction box. Anomaly B was located within the concrete slab at the dispensers. The electromagnetic and GPR signatures of this anomaly suggest the presence of steel reinforced concrete. Based on the data, no USTs are present within the proposed right-of-way at the site. A detailed report of findings and interpretations is presented in Attachment A.

Site Assessment Activities

On December 16, 2004, Earth Tech mobilized to the site to conduct a Geoprobe[®] direct push investigation to evaluate soil conditions within the proposed right-of-way and easements. Continuous sampling using direct push technology (Probe Technology of Concord, North Carolina) resulted in generally good recovery of soil samples from the direct-push holes. Soil samples were collected and contained in 4-foot long acetate sleeves inside the direct push sampler. Each of these sleeves was divided in half for soil sample screening. Each 2-foot interval was placed in a resealable plastic bag and the bag was set aside for a sufficient amount of time to allow volatilization of organic compounds from the soil to the bag headspace. The probe of a flame ionization detector/photo ionization detector (FID/PID) was inserted into the bag and the reading was recorded. After terminating the sample hole, the

soil sample from the depth interval with the highest FID/PID reading was submitted to Prism Laboratories, Inc., in Charlotte, North Carolina, using standard chain-of-custody procedures. The laboratory analyzed the soil samples for total petroleum hydrocarbons (TPH) using extraction methods 3550 (diesel fuel/fuel oil) and 5030 (gasoline).

Five direct-push holes (BT-1 through BT-5) were advanced within the proposed right-of-way at the site to depths ranging from 2 to 8 feet (Figure 2 and Attachment B). Borings BT-1 and BT-2 were located to evaluate the dispenser island area; borings BT-3 through BT-5 were located to evaluate the remaining proposed right-of-way (Attachment C). The lithology encountered by the direct-push samples generally was consistent throughout the site. The ground surface was covered with about 4 inches of asphalt and gravel. Below the surface treatment was a medium brown silt/sand saprolite. All the borings were terminated at refusal, which ranged from 2 feet below ground surface in boring BT-1 to 8 feet below ground surface in boring BT-3. Based on field screening, soil samples were submitted for laboratory analysis, which are summarized in Table 1. No groundwater was encountered in any of the borings at the site.

Analytical Results

Based on the laboratory reports, summarized in Table 1 and presented in Attachment D, petroleum hydrocarbon compounds were detected in two of the five soil samples collected from the site (Figure 3). Total petroleum hydrocarbons (TPH) identified as diesel fuel (DRO) were detected in the sample from boring BT-1 at a concentration of 19 mg/kg, and in the sample from boring BT-5 at a concentration of 8.1 mg/kg. No TPH compounds identified as gasoline (GRO) were detected in any of the soil samples. According to the North Carolina Underground Storage Tank Section's Underground Storage Tank Closure Policy dated August 24, 1998, the action level for TPH analyses is 10 mg/kg for both gasoline and diesel fuel. However, that agency's "Guidelines for Assessment and Corrective Action," dated April 2001, does not allow for use of TPH analyses for confirmation of the extent of petroleum contamination or its cleanup. As a result, while TPH concentrations are no longer applicable in determining if soil contamination is present, this analysis is a legitimate screening tool. Based on the TPH action level for UST closures, the assumed action level for this report is 10 mg/kg. The soil sample from boring BT-1 contained a TPH DRO concentration above the 10 mg/kg assumed action level.

Conclusions and Recommendations

A Preliminary Site Assessment was conducted to evaluate the proposed right-of-way at the Deborah Williamson Property (Parcel #15) located at 695 Brevard Road in Asheville, Buncombe County, North Carolina. A geophysical survey suggested that no USTs are present within the proposed right-of-way at the site. A total of five soil borings were advanced to evaluate the subsurface conditions on the proposed right-of-way. The laboratory reports of two of the five soil samples from these borings suggest that TPH DRO and GRO

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are present, but only one soil sample contained a DRO concentration above the 10 mg/kg action level. The borings that contained soil samples with TPH concentrations were located at or near the concrete dispenser pad. This location suggests that the contamination may be from a UST or product line release.

To evaluate the volume of soil requiring possible remediation, the soil samples with TPH concentrations above 10 mg/kg were considered. The analytical results of the soil samples suggest that the soil from boring BT-1 contained TPH concentrations above the assumed action level. A review of the field screening readings (Table 1) suggests that a maximum contaminated soil thickness of 2 feet (from ground surface to a depth of 2 feet) is likely. The volume of potentially affected soil was estimated based on a thickness of 2 feet, an average width of 10 feet, and an average length of 30 feet. These dimensions result in a volume of about 22 cubic yards of contaminated soil. This volume is estimated from TPH analytical data, which are no longer valid for remediation of sites reported after January 2, 1998. After this date, MADEP EPH/VPH and EPA Method 8260/8270 analyses will likely be required to confirm cleanup. However, these analyses do not correlate exactly with TPH data and, as a result, the actual volume of contaminated soil may be higher or lower.

Earth Tech appreciates the opportunity to work with the NCDOT on this project. Because hydrocarbon concentrations were detected in the soil, Earth Tech recommends that a copy of this report be submitted to the Division of Waste Management, UST Section, in the Asheville Regional Office. If you have any questions, please contact me at (919)854-6238.

Sincerely,



Michael W. Branson, P.G.
Project Manager

Attachments

c: Project File



TABLE 1

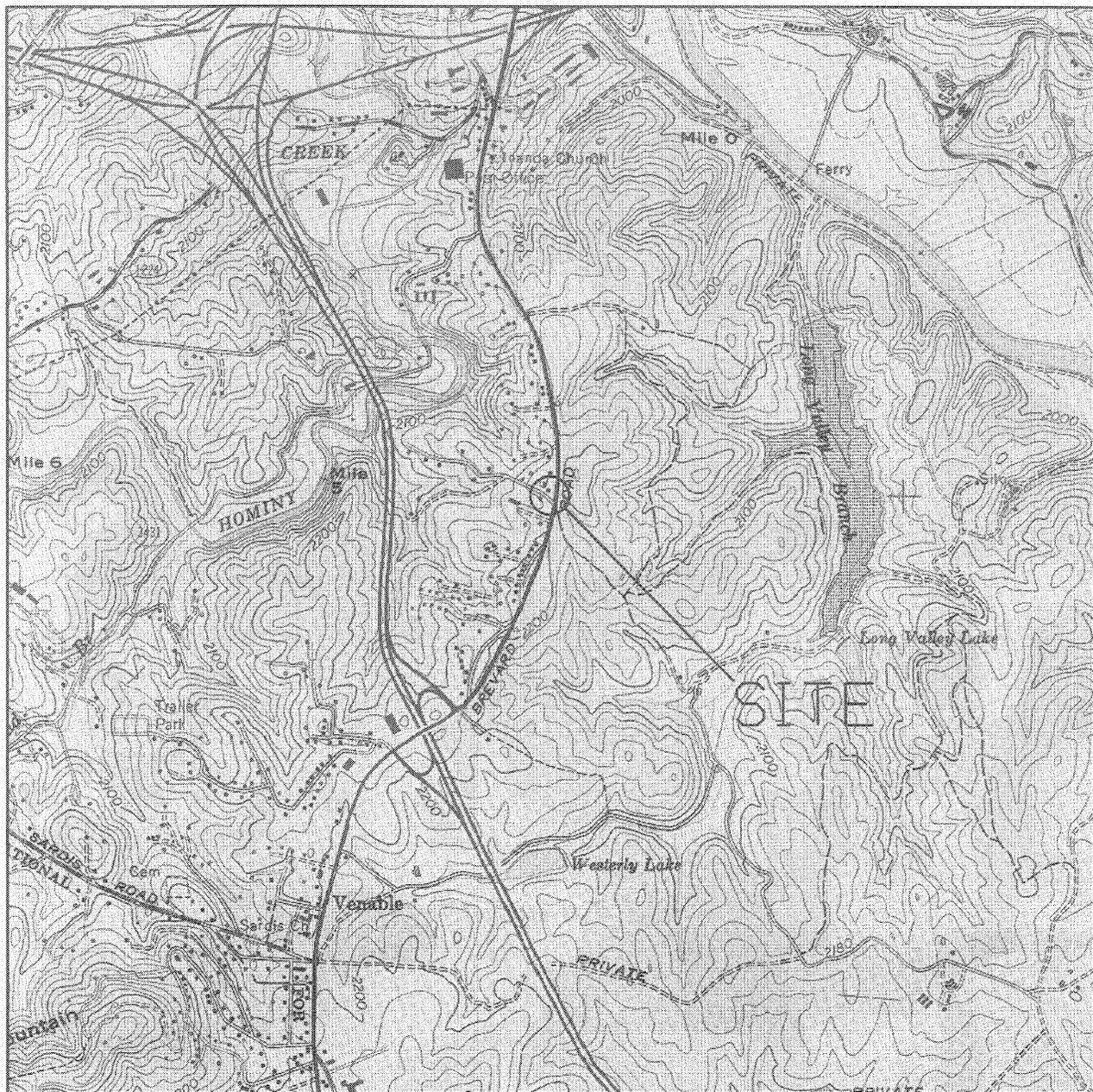
**FIELD SCREENING AND ANALYTICAL RESULTS
 DEBORAH WILIAMSON PROPERTY (PARCEL #15)
 ASHEVILLE, BUNCOMBE COUNTY, NORTH CAROLINA
 NCDOT PROJECT NO. U-3601
 WBS ELEMENT 34958.1.1
 EARTH TECH PROJECT NO. 81004**

LOCATION	DEPTH (ft)	FID READING (ppm)	SAMPLE ID	ANALYTICAL RESULTS (mg/kg)	ASSUMED ACTION LEVEL (mg/kg)
BT-1	0 - 2	0.85	BT-1	DRO (19) GRO (<1.1)	10 10
BT-2	0 - 2	1.77			
	2 - 4	1.87	BT-2	DRO (>7.4) GRO (>1.1)	10 10
BT-3	0 - 2	1.83			
	2 - 4	2.01			
	4 - 6	2.12			
	6 - 8	2.42	BT-3	DRO(>7.8) GRO (>1.1)	10 10
BT-4	0 - 2	2.15			
	2 - 4	2.32			
	4 - 6	2.4	BT-4	DRO (>7.4) GRO (<1.1)	10 10
BT-5	0 - 2	14.3			
	2 - 4	18.2	BT-5	DRO (8.1) GRO (<1.1)	10 10

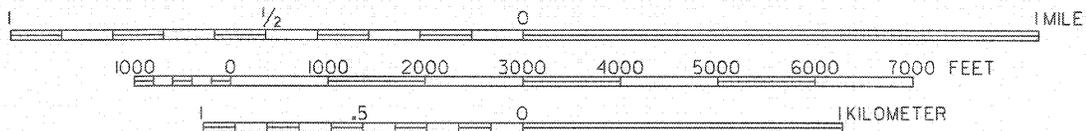
DRO - Diesel range organics.
 GRO - Gasoline range organics.

ppm - parts per million.
 mg/kg - milligrams per kilogram.

FIGURES



SCALE 1:24,000



SOURCE: U.S. GEOLOGICAL SURVEY 7.5 MIN QUADRANGLE: ASHEVILLE, NC (REV 1991)

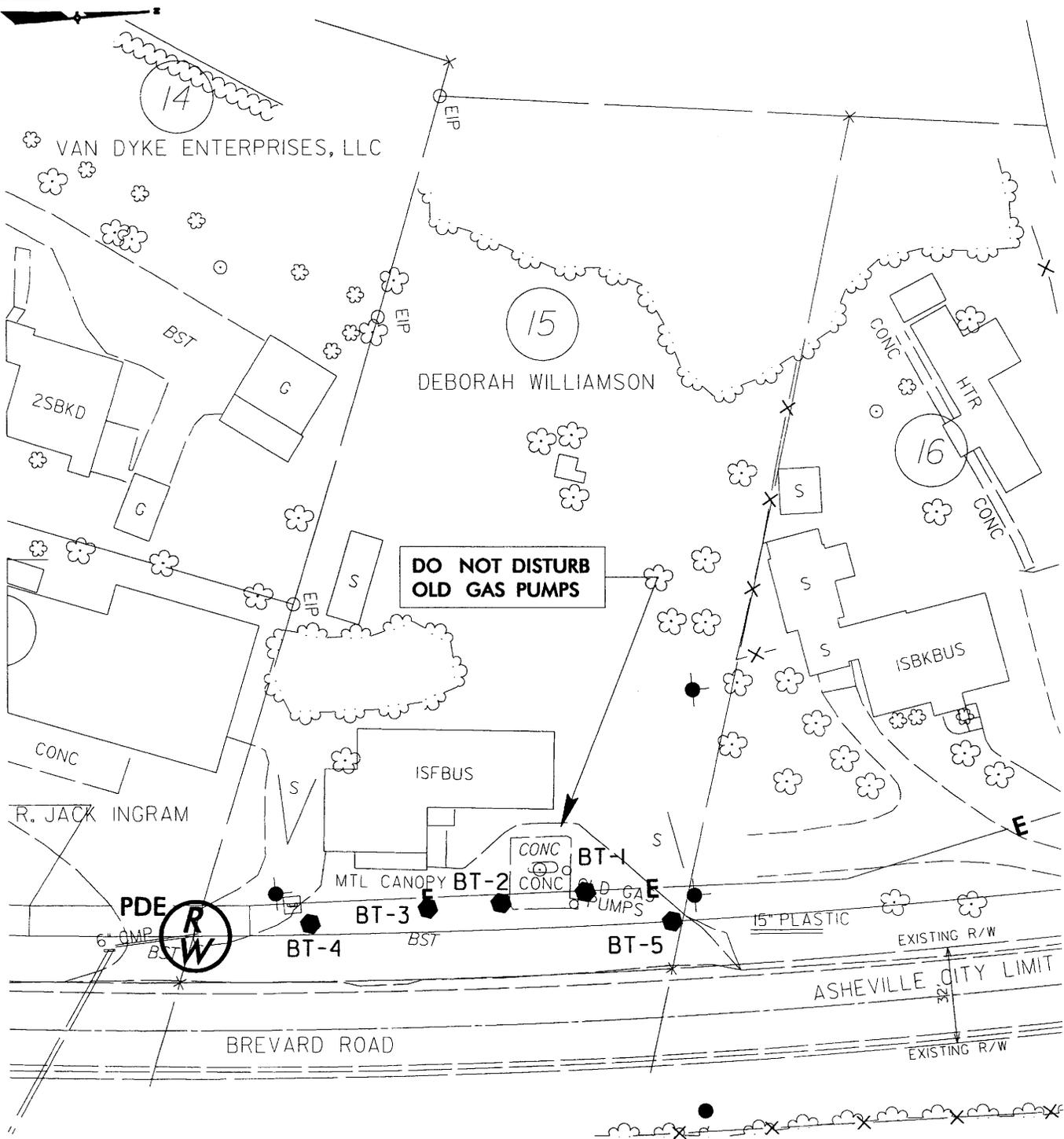


FIGURE I VICINITY MAP

WILLIAMSON PROPERTY (PARCEL #15)
ASHEVILLE, BUNCOMBE COUNTY, NORTH CAROLINA

DECEMBER 2004

81930



LEGEND

HT-1

● SOIL SAMPLE LOCATION AND IDENTIFICATION

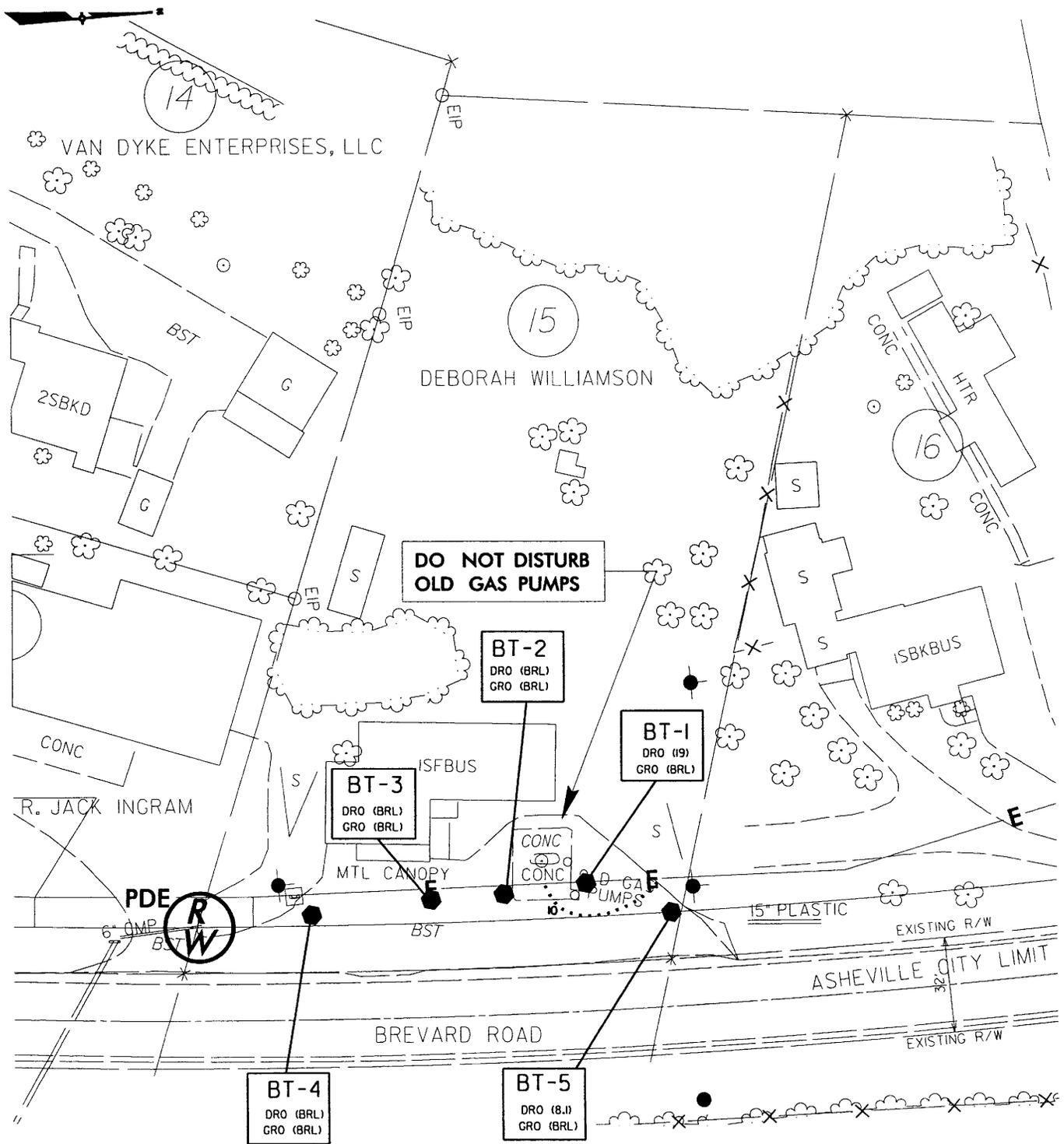


**FIGURE 2
SITE MAP**

WILLIAMSON PROPERTY (PARCEL #15)
ASHEVILLE, BUNCOMBE COUNTY, NORTH CAROLINA

DECEMBER 2004

81930



LEGEND

- SOIL SAMPLE LOCATION
- DRO (123) TPH AS DIESEL FUEL IN MG/KG
- GRO (123) TPH AS GASOLINE IN MG/KG
- BRL BELOW REPORTING LIMIT
- 10 TPH ISOCONCENTRATION CONTOUR IN MG/KG

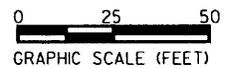


FIGURE 3
SOIL ANALYTICAL RESULTS MAP
 WILLIAMSON PROPERTY (PARCEL #15)
 ASHEVILLE, BUNCOMBE COUNTY, NORTH CAROLINA

DECEMBER 2004

81930

ATTACHMENT A

GEOPHYSICAL INVESTIGATION REPORT

EM-61 & GPR SURVEY

Parcel 15
695 Brevard Rd., Asheville, NC

January 12, 2005

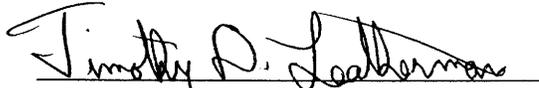
Report prepared for: **Mike Branson**
EarthTech, Inc.
701 Corporate Center Drive, Suite 475
Raleigh, North Carolina 27607

Prepared by:



G. Van Ness Burbach, PhD, PG

Reviewed by:



Timothy D. Leatherman, PG

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
700 NORTH EUGENE ST.
GREENSBORO, NC 27401
(336) 335-3489

GEOPHYSICAL INVESTIGATION REPORT
EM-61 & GPR SURVEY
Parcel 15 - 695 Brevard Rd., Asheville, NC

1.0 INTRODUCTION

On December 1-2, 2004, Pyramid Environmental & Engineering, P.C. (Pyramid) performed a geophysical survey on a portion of the property identified as Parcel 15, located at 695 Brevard Rd. in Asheville, North Carolina. The primary instruments used for the survey were a Geonics EM-61 time-domain electromagnetic induction metal detector and a GSSI SIR-2000 ground-penetrating radar (GPR) system with a 400 MHz antenna. The purpose of this investigation was to locate possible underground storage tanks on the site.

The survey area was approximately 175 feet long and 35 feet wide and included the area within the expanded DOT construction easement. The property contains one building, which is a former service station which now houses Bent Creek Tire, a retail automotive tire business. An old pump island in front of the store is located near the survey area. The ground surface on the site is mostly old asphalt paving with a small area of concrete around the old pump island. There is also a small grassy area on the southern end of the site which extends into the survey area. The important physical features of this site that may have affected the acquisition of data are shown in **Figure 1**.

2.0 GEOPHYSICAL METHODS

2.1 EM-61

The first geophysical method chosen for this survey was time-domain electromagnetic induction (EM) using a Geonics EM-61 high sensitivity, high resolution EM metal detector. The EM-61 generates a powerful primary electromagnetic field pulse that is repeated 150 times per second. The EM pulse generates secondary electromagnetic eddy currents in nearby conductive objects (e.g.- metal). The eddy currents decay with time after the primary pulse is over, and can be detected by the EM-61's antennae. The EM-61 has two one-meter square coil antennae, one mounted above the other.

The EM-61 can detect a metal object the size of a 55-gallon drum buried at depths up to 3 meters under typical site conditions. It can detect either ferrous or non-ferrous metal objects, and the response is practically independent of the electrical conductivity of the ground. The two antennae allow the EM-61 to discriminate against objects that are not directly below the antennae, allowing accurate metal detection in the subsurface within less than two meters of cars, fences, or other above ground metal objects. The differential between the two antennae's responses can be used to estimate the depth of a metal object.

For this survey, the EM-61 was operated in the "Wheel Mode". In this mode, the EM-61 antennae are mounted on wheels for easy and regular movement along a line. Measurements are triggered by a relay on the wheel so the data can be recorded at regular intervals and recorded with the measured distance along the line. The data and line parameters (such as line number, direction, and increment) are recorded in the EM-61's datalogger, and can be downloaded to a personal computer for review, printout and analysis.

2.2 GPR

Ground penetrating radar (GPR) uses high-frequency radio waves radiated downward into the ground by a transmitting antenna. As the radiated energy is reflected back by objects or interfaces in the subsurface, the receiving antenna detects it. As the antennae are moved across the ground surface, the instrument records a continuous profile of the subsurface. The depth of penetration is highly site-specific, being dependent upon the properties of the site's soil and/or rock materials and the frequency of the antenna, and can range from 1 to 9 meters (3-30 feet). A radar profile will show interfaces between soil and/or rock layers having sufficiently different electrical properties, as well as objects such as buried drums, pipelines, or tanks.

The instrument used in this survey was a GSSI SIR-2000 ground-penetrating radar recording system with a 400 MHz antenna. The transmitting and receiving antennae are located together in a single unit for smooth movement over the ground. The data was recorded with high-pass and low-pass filters set at 35 MHz and 565 MHz, respectively. The data were recorded with positive polarity at 512 samples per scan and 8 bits resolution. The full-scale range was set at 100 ns (nanoseconds). The data was collected in continuous mode with a maximum scan rate of 64 scans per second using fiducial markers to accurately locate the data along each line.

3.0 SURVEY LAYOUT AND DATA ACQUISITION

3.1 EM-61

Pyramid laid out a survey grid on the subject site for the collection of the geophysical data. The grid was laid out with the X-axis parallel to Brevard Road, starting at the south end of the property and increasing toward the north. The X-axis was not perfectly linear, rather it followed the curvature of the road. The Y-axis was perpendicular to Brevard Road with zero at the white line on the road and increasing toward the west. The grid is shown on the site base map in **Figure 1**.

The main survey lines for the EM-61 were oriented parallel to the X-axis (approximately north-south) with a spacing of 1 meter between lines. A cross line running parallel to the Y-axis was collected over an observed anomaly (A) (Line X-17). The survey data, including the response from both the top and bottom antennae on the EM-61, and the differential between the two antennae, were recorded in the EM-61's portable data-logger and later downloaded onto a computer. The data were adjusted to accommodate problems in the field (such as starting and stopping to go around obstructions), and then

printed out. Printouts of all the EM-61 lines, including the lines over Anomaly "A", are presented in **Appendix A**.

3.2 GPR

The area around the old pump island is paved with apparently steel-reinforced concrete. Because of the steel reinforcement, the EM-61 was incapable of detecting any UST's that might lie under the concrete slab. In order to look for possible UST's under the slab, Pyramid collected a few lines of GPR data across this area. Also, a two GPR lines were collected over an EM Anomaly "A", located just southeast of the site building. The locations of the GPR data lines are shown in **Figure 1**. Printouts of the GPR data are presented in **Appendix B**.

4.0 RESULTS AND CONCLUSIONS

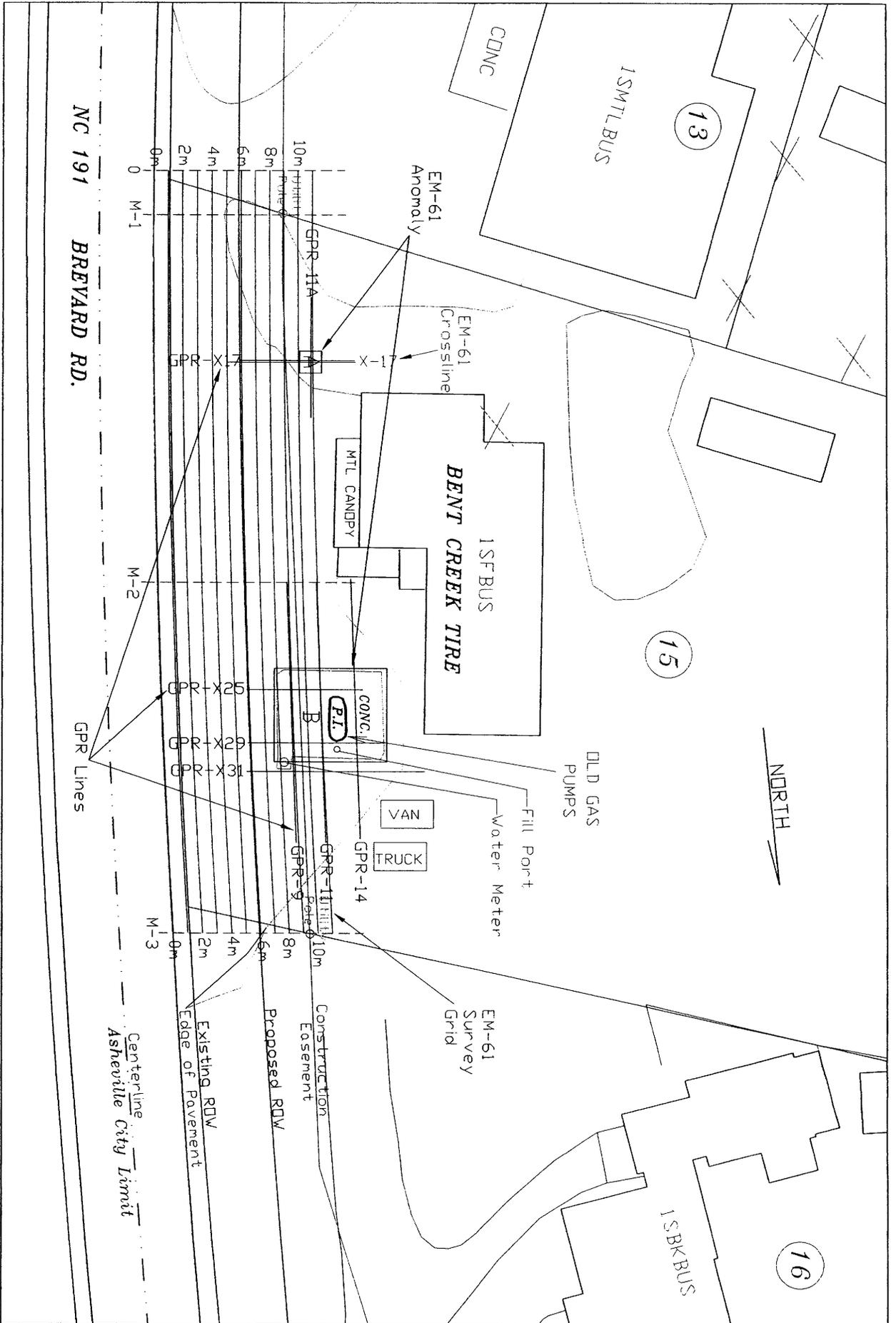
The significant EM anomalies identified in this survey are shown on **Figure 1**. Only two EM anomalies were observed that were not obviously related to observable site features such as vehicles, manholes, etc.. Anomaly "A", located in the grassy area just southeast of the site building, had a maximum amplitude of about 2500 mV and was about 5 feet wide and 5 feet long. While it is possible this anomaly could represent a very small UST, it is most likely some sort of utility line or junction or it could be buried metal debris. GPR lines across this anomaly showed some strong, chaotic reflectors in this area, but no clear UST.

Anomaly "B" corresponds to the concrete slab around the old pump island and appears to be a response to rebar in the concrete rather than a UST under the slab; however, based only on the EM-61 data we could not be certain there was no UST under the slab. We collected GPR data over this area. The GPR data showed no clear sign of any UST's, but there were some strong, chaotic reflectors at about 20-40 nsec which may indicate the base of fill material. There is an apparent fill port next to the pump island, but where this fill port goes could not be determined. This is a very old, small pump island and it is possible the UST was very small. A small (~500-gallon) UST could conceivably be located directly beneath the pump island itself where neither the EM-61 nor GPR data could see it.

5.0 CLOSURE

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

FIGURE



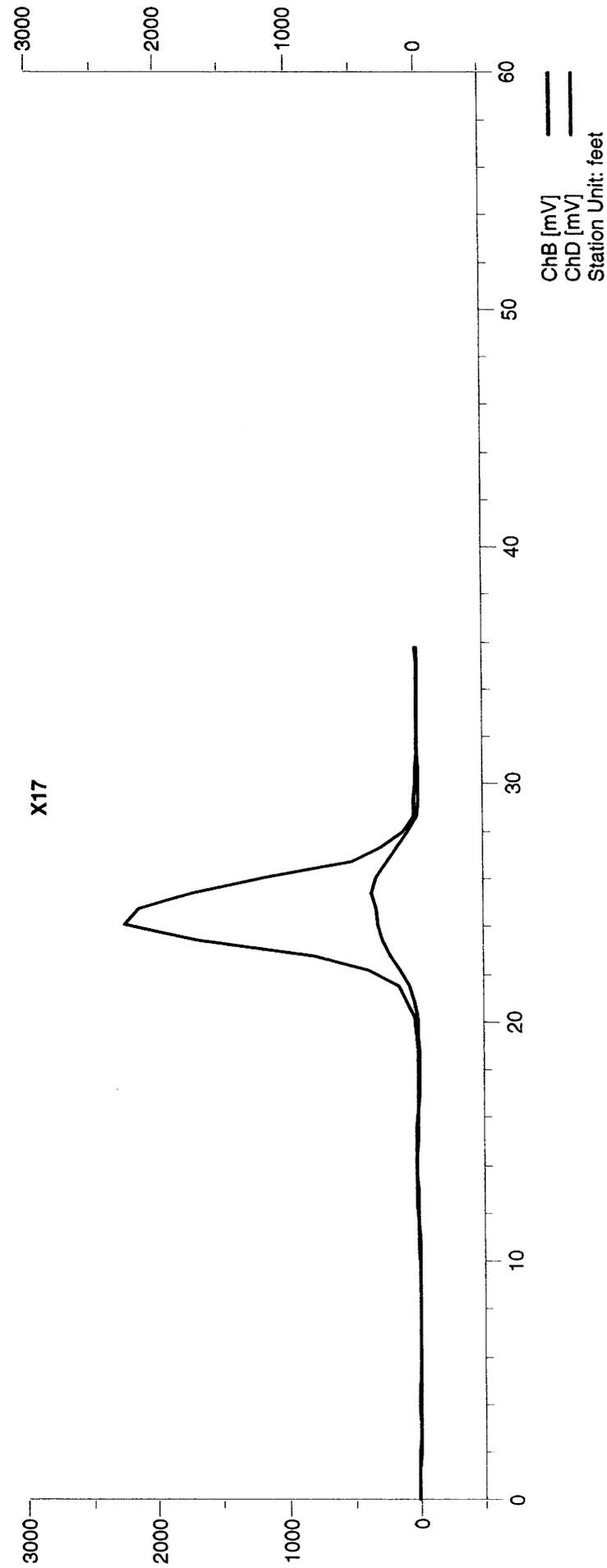
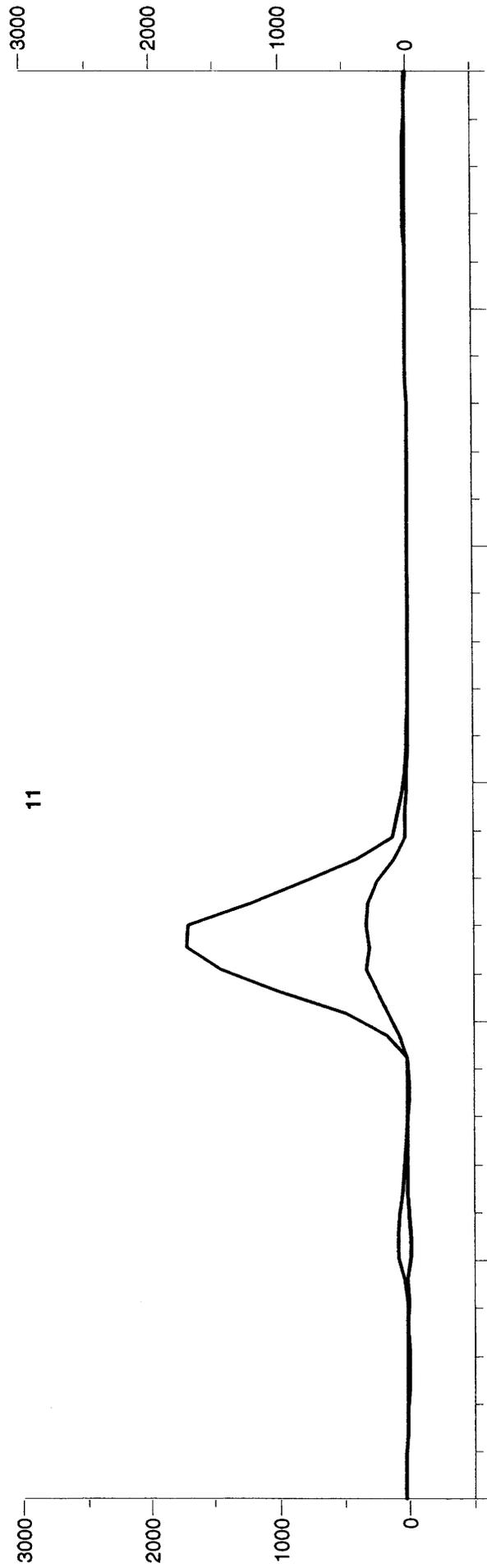
	EarthTech	1/11/05	GB
	Parcel 15 - 695 Brevard Rd.		
	Asheville	North Carolina	
	Geophysical Survey Map	2004294	1

SCALE: 1 in = 20 ft

APPENDIX A

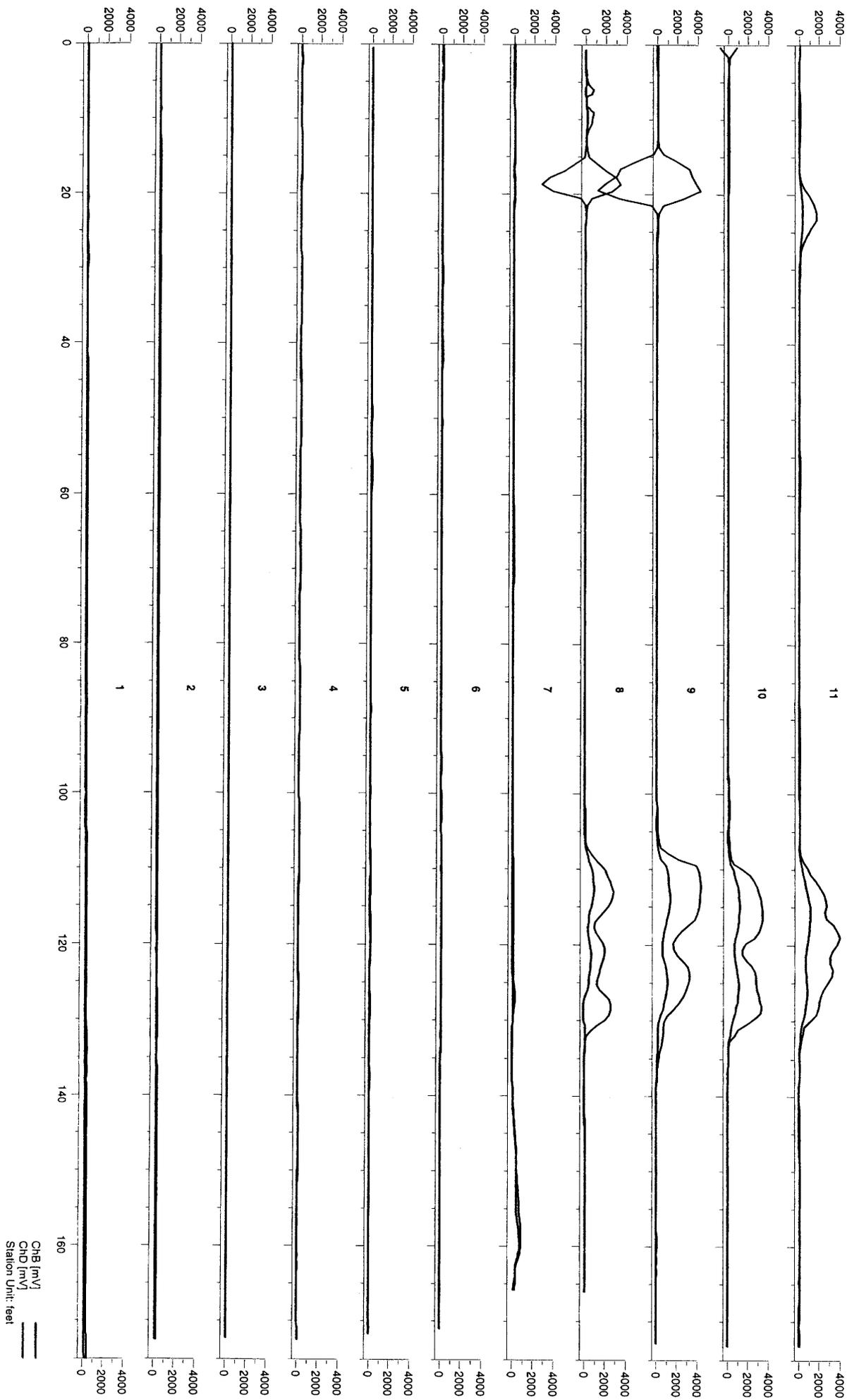
Printouts of EM-61 Data

Parcel 15 - 695 Brevard Rd., Asheville, NC



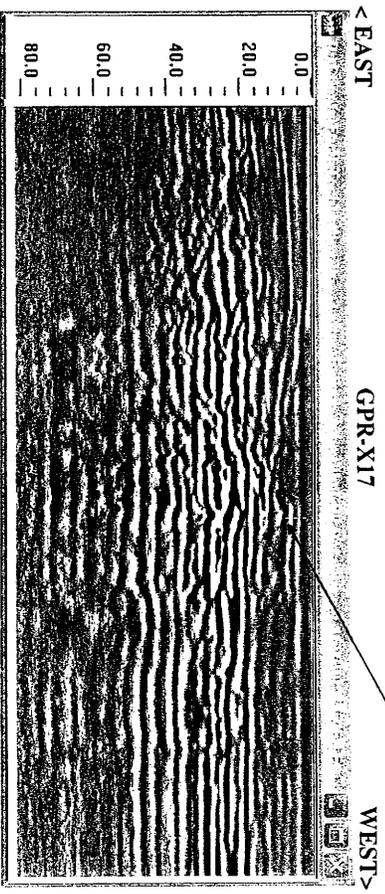
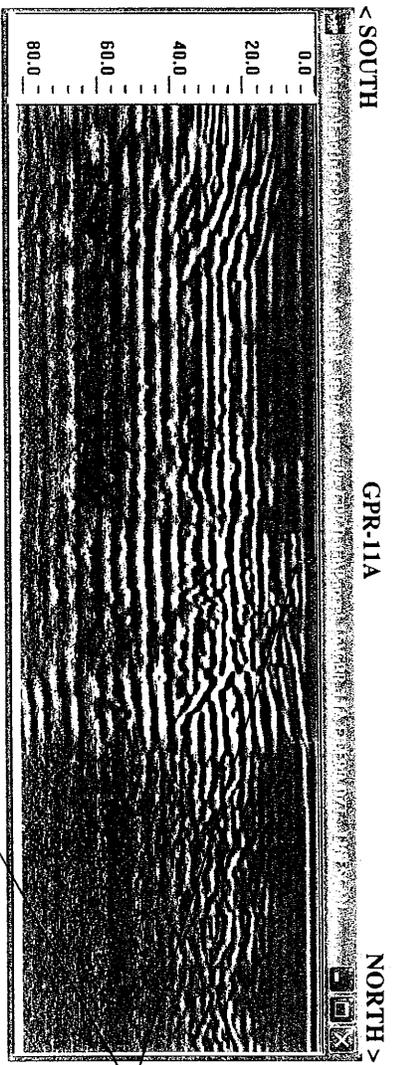
ChB [mV]
ChD [mV]
Station Unit: feet

Parcel 15 - 695 Brevard Rd., Asheville, NC

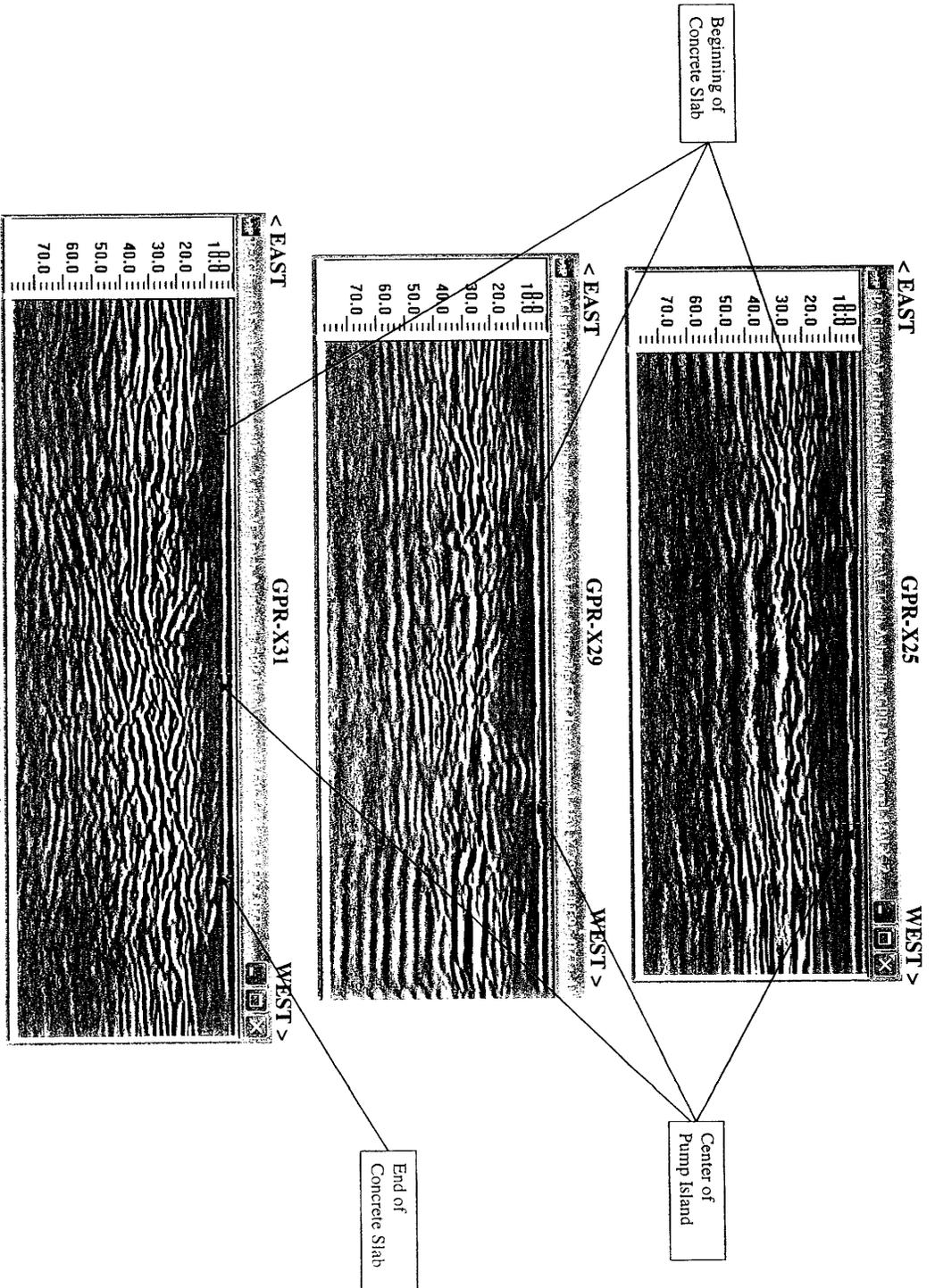


APPENDIX B

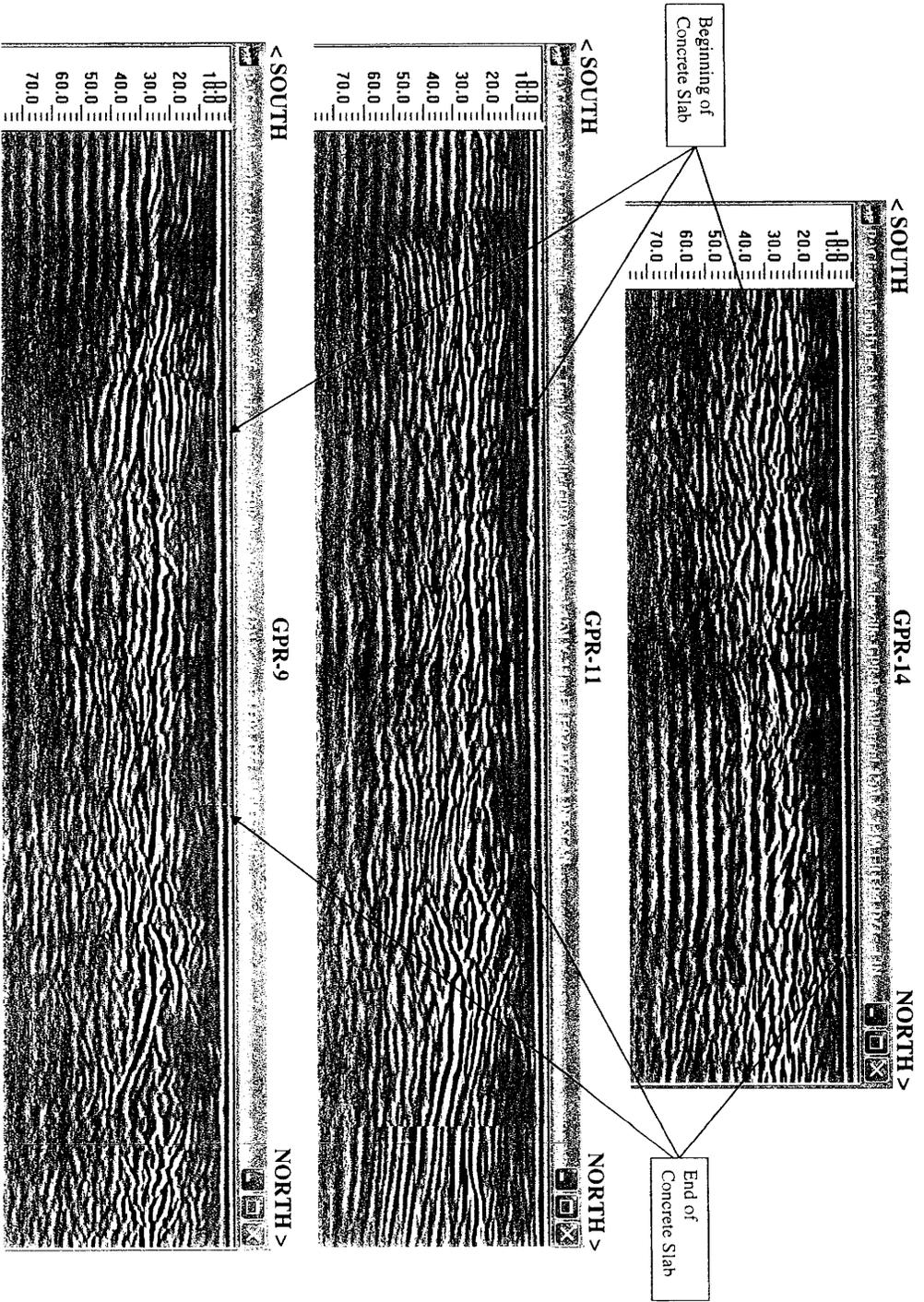
Printouts of GPR Data



Parcel 15 - 695 Brevard Rd., Asheville, NC
 GPR Lines 11A & X17 over Anomaly "A"



Parcel 15 - 695 Brevard Rd., Asheville, NC
 GPR Lines X25, X29, & X31 over slab around Pump Island



Parcel 15 - 695 Brevard Rd., Asheville, NC
 GPR Lines 9, 11, & 14 over slab around Pump Island

ATTACHMENT B

TEST BORING REPORT

PROJECT <u>WILLIAMSON PROPERTY (PARCEL #15)</u>	BORING NUMBER <u>BT-2</u>
CLIENT <u>NCDOT (U-3601)</u>	PAGE <u>1</u>
PROJECT NUMBER <u>81930</u>	ELEVATION _____
CONTRACTOR <u>PROBE TECHNOLOGY</u>	DATE <u>12/16/04</u>
EQUIPMENT <u>GEOPROBE</u>	DRILLER <u>PROBE TECHNOLOGY</u>
	PREPARED BY <u>BRANSON</u>

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			1.77		4" ASPHALT/GRAVEL, MEDIUM BROWN SILT/SAND SAPROLITE, HARD, DRY, NO ODOR.
			1.87		
5.0					AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
					REFUSAL AT 3 FEET. NO GROUNDWATER ENCOUNTERED.
10.0					
15.0					
20.0					

TEST BORING REPORT

PROJECT WILLIAMSON PROPERTY (PARCEL #15)

CLIENT NCDOT (U-3601)

PROJECT NUMBER 81930

CONTRACTOR PROBE TECHNOLOGY

EQUIPMENT GEOPROBE

BORING NUMBER BT-3

PAGE 1

ELEVATION _____

DATE 12/16/04

DRILLER PROBE TECHNOLOGY

PREPARED BY BRANSON

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
5.0			1.83		4" ASPHALT/GRAVEL, MEDIUM BROWN SILT/SAND SAPROLITE, HARD, DRY, NO ODOR.
			2.01		AS ABOVE, DRY, NO ODOR.
			2.12		AS ABOVE, DRY, NO ODOR.
			2.42		AS ABOVE, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
10.0					REFUSAL AT 8 FEET. NO GROUNDWATER ENCOUNTERED.
15.0					
20.0					

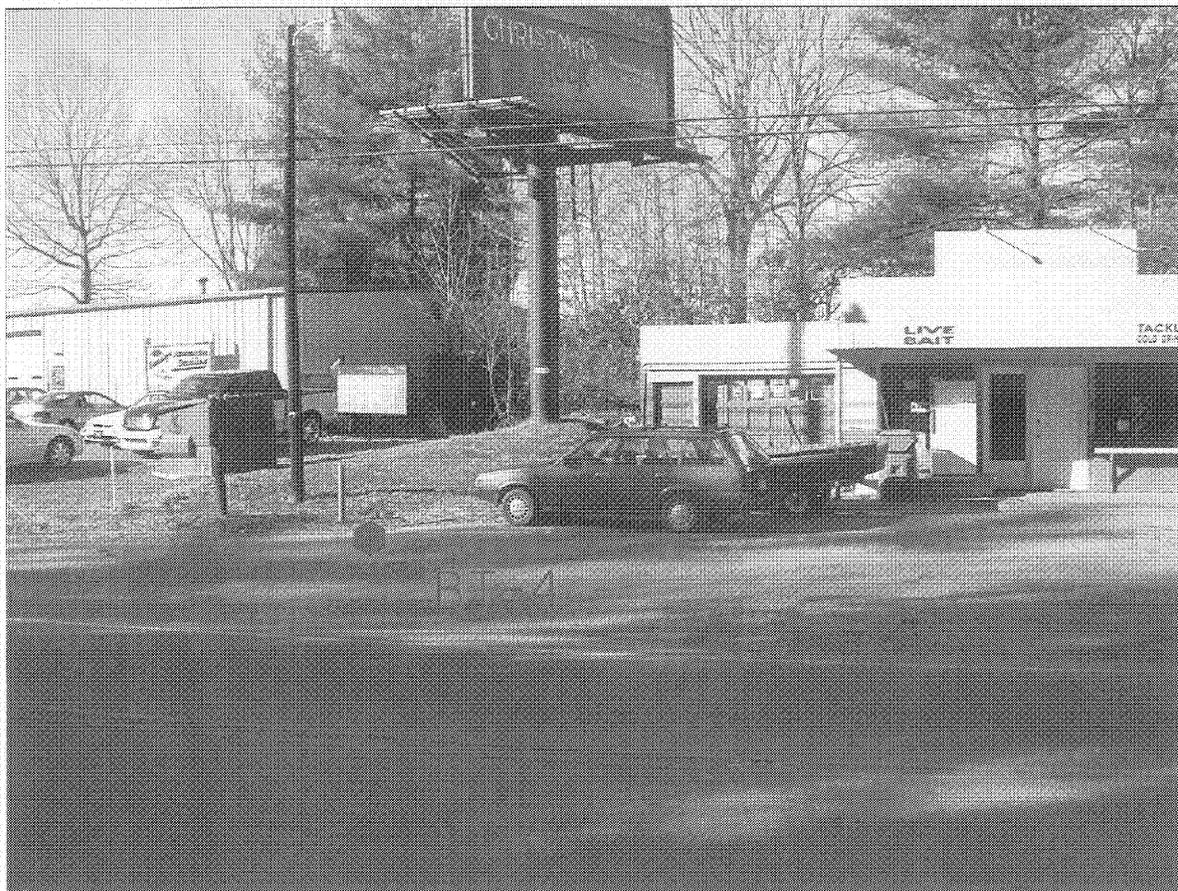
TEST BORING REPORT

PROJECT <u>WILLIAMSON PROPERTY (PARCEL #15)</u>	BORING NUMBER <u>BT-4</u>
CLIENT <u>NCDOT (U-3601)</u>	PAGE <u>1</u>
PROJECT NUMBER <u>81930</u>	ELEVATION _____
CONTRACTOR <u>PROBE TECHNOLOGY</u>	DATE <u>12/16/04</u>
EQUIPMENT <u>GEOPROBE</u>	DRILLER <u>PROBE TECHNOLOGY</u>
	PREPARED BY <u>BRANSON</u>

DEPTH IN FEET	CASING BLOWS FOOT	BLOWS PER 6 INCHES	OVA (ppm)	SAMPLE DEPTH RANGE	FIELD CLASSIFICATION AND REMARKS
			2.15		4" ASPHALT/GRAVEL, MEDIUM BROWN SILT/SAND SAPROLITE, HARD, DRY, NO ODOR.
			2.32		AS ABOVE, DRY, NO ODOR.
5.0			2.4		MEDIUM TO LIGHT BROWN SAND SAPROLITE, HARD, DRY, NO ODOR. SUBMIT TO LABORATORY FOR ANALYSIS.
					REFUSAL AT 6 FEET. NO GROUNDWATER ENCOUNTERED.
10.0					
15.0					
20.0					

ATTACHMENT C





ATTACHMENT D

Case Narrative



Date: 12/31/04

Company: N. C. Department of Transportation
c/o: Earth Tech / Mike Branson
Address: 701 Corporate Ct. Dr. Ste. 475
Raleigh, NC 27607

Client Project ID: NCDOT-Asheville WBS# 34958.1.1
Prism Log-In Group No: G1204519

The attached Laboratory Report contains the analytical results for the project identified above and includes Quality Control Data and a Chain-of-Custody copy.

Data qualifiers are flagged individually on each sample. A Key Reference for the data qualifiers appears at the bottom of this page. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

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

Data Reviewed by: Robbi A. Jones
Signature: *Robbi A. Jones*
Review Date: 12/31/04

Project Manager: Angela D. Overcash
Signature: *Angela D. Overcash*
Approval Date: 12/31/04

Data Qualifier Key Reference:

- #: Result outside of QC Limits
- B: Compound also detected in the method blank
- DO: Compound diluted out.
- E: Estimated concentration, calibration range exceeded
- J: The analyte was positively identified but the value is estimated below the reporting limit
- JH: Estimated concentration with a high bias
- JL: Estimated concentration with a low bias
- M: A matrix effect is present
- T: Tentatively identified compound. The concentration is estimated.

Note: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

449 Springbrook Road, P. O. Box 240543, Charlotte, NC 28224-0403
Phone: 704/529-6364 Toll Free: 800/529-6364 Fax: 704/525-0409



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735
 FL Certification No. E87519

Laboratory Report

12/31/04

... C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Asheville
 Project No.: WBS# 34958.1.1
 Sample Matrix: Soil

Client Sample ID: BT-1
 Prism Sample ID: 106741
 COC Group: G1204519
 Time Collected: 12/16/04 9:30
 Time Submitted: 12/16/04 16:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	90.3	%			1	SM2540 G	12/22/04 8:30	wconder	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	19	mg/kg	7.8	2.2	1	8015B	12/23/04 5:47	jvogel	Q01956
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Sample Preparation: 25.25 g / 1 mL 3545 12/21/04 14:30 wconder P11462

Surrogate	% Recovery	Control Limits
o-Terphenyl	99	49 - 124

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	1.1	0.13	1	8015B	12/17/04 21:13	awheeler	Q01783
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Surrogate	% Recovery	Control Limits
aaa-TFT	71	55 - 129

Sample Comment(s):

All results are reported on a dry-weight basis

BRL = Below Reporting Limit

J = Estimated value between the Reporting Limit and the MDL

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735
 FL Certification No. E87519

Laboratory Report

12/31/04

.. C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Asheville
 Project No.: WBS# 34958.1.1
 Sample Matrix: Soil

Client Sample ID: BT-2
 Prism Sample ID: 106742
 COC Group: G1204519
 Time Collected: 12/16/04 9:45
 Time Submitted: 12/16/04 16:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	95.0	%			1	SM2540 G	12/22/04 8:30	wconder	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	7.4	2.1	1	8015B	12/23/04 6:29	jvogel	Q01956
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Sample Preparation:			25.04 g	/	1 mL	3545	12/21/04 14:30	wconder	P11462
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Surrogate	% Recovery	Control Limits
o-Terphenyl	72	49 - 124

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	1.1	0.13	1	8015B	12/17/04 21:49	awheeler	Q01783
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Surrogate	% Recovery	Control Limits
aaa-TFT	84	55 - 129

Sample Comment(s):

All results are reported on a dry-weight basis

BRL = Below Reporting Limit

J = Estimated value between the Reporting Limit and the MDL

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735
 FL Certification No. E87519

Laboratory Report

12/31/04

N. C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Asheville
 Project No.: WBS# 34958.1.1
 Sample Matrix: Soil

Client Sample ID: BT-3
 Prism Sample ID: 106743
 COC Group: G1204519
 Time Collected: 12/16/04 10:00
 Time Submitted: 12/16/04 16:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	90.2	%			1	SM2540 G	12/22/04 8:30	wconder	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	7.8	2.3	1	8015B	12/23/04 7:11	jvogel	Q01956
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Sample Preparation:			25.27	g /	1	mL	3545	12/21/04 14:30	wconder	P11462
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Surrogate	% Recovery	Control Limits
o-Terphenyl	79	49 - 124

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	1.1	0.13	1	8015B	12/18/04 0:51	awheeler	Q01783
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Surrogate	% Recovery	Control Limits
aaa-TFT	62	55 - 129

Sample Comment(s):

All results are reported on a dry-weight basis

BRL = Below Reporting Limit

J = Estimated value between the Reporting Limit and the MDL

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735
 FL Certification No. E87519

Laboratory Report

12/31/04

.. C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Asheville
 Project No.: WBS# 34958.1.1
 Sample Matrix: Soil

Client Sample ID: BT-4
 Prism Sample ID: 106744
 COC Group: G1204519
 Time Collected: 12/16/04 10:15
 Time Submitted: 12/16/04 16:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	94.7	%			1	SM2540 G	12/22/04 8:30	wconder	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	BRL	mg/kg	7.4	2.1	1	8015B	12/23/04 8:35	jvogel	Q01956
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Sample Preparation:			25 g	/	1 mL	3545	12/21/04 14:30	wconder	P11462
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Surrogate	% Recovery	Control Limits
o-Terphenyl	65	49 - 124

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	1.1	0.13	1	8015B	12/18/04 1:28	awheeler	Q01783
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Surrogate	% Recovery	Control Limits
aaa-TFT	73	55 - 129

Sample Comment(s):

All results are reported on a dry-weight basis

BRL = Below Reporting Limit

J = Estimated value between the Reporting Limit and the MDL

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402
 SC Certification No. 99012
 NC Drinking Water Cert. No. 37735
 FL Certification No. E87519

Laboratory Report

12/31/04

.. C. Department of Transportation
 Attn: Mike Branson
 c/o Earth Tech Remediation
 701 Corporate Center Dr. Ste 475
 Raleigh, NC 27607

Project ID: NCDOT - Asheville
 Project No.: WBS# 34958.1.1
 Sample Matrix: Soil

Client Sample ID: BT-5
 Prism Sample ID: 106745
 COC Group: G1204519
 Time Collected: 12/16/04 10:30
 Time Submitted: 12/16/04 16:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
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Percent Solids Determination

Percent Solids	92.7	%			1	SM2540 G	12/27/04 8:55	cnguyen	
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Diesel Range Organics (DRO) by GC-FID

Diesel Range Organics (DRO)	8.1	mg/kg	7.6	2.2	1	8015B	12/23/04 9:17	jvogel	Q01956
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Sample Preparation:			25.1	g /	1	mL	3545	12/21/04 14:30	wconder	P11462
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Surrogate	% Recovery	Control Limits
o-Terphenyl	99	49 - 124

Gasoline Range Organics (GRO) by GC-FID

Gasoline Range Organics (GRO)	BRL	mg/kg	1.1	0.13	1	8015B	12/18/04 2:04	awheeler	Q01783
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Surrogate	% Recovery	Control Limits
aaa-TFT	68	55 - 129

Sample Comment(s):

All results are reported on a dry-weight basis

BRL = Below Reporting Limit

J = Estimated value between the Reporting Limit and the MDL

Angela D. Overcash, V.P. Laboratory Services

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

Client Company Name: EMETA TECH
Report To/Contact Name: Mike Branston
Reporting Address: 701 Corporate Center Dr
Suite 475 Raleigh, NC 27607

Phone: 919 516 230 Fax: 919 516 239
Email: (No) Email Address Mike Branston

EDD Type: PDF Excel Other
Site Location Name: Bent Creek Tire
Site Location Physical Address: Bent Creek Rd

CHAIN OF CUSTODY

PAGE 1 OF 1 QUOTE # TO E/ PROPER BILLING:
Project Name: NC DOT - Asheville
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 DOT
Address:

Purchase Order No./Billing Reference 34958-1-1
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)

Samples INTACT upon arrival? YES NO N/A
Received ON WET ICE? Temp 2.1.3
PROPER PRESERVATIVES indicated?
Received WITHIN HOLDING TIMES?
CUSTODY SEALS INTACT?
VOLATILES rec'd W/O 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 DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPLE CONTAINER		PRESERVATIVES	ANALYSES REQUESTED	REMARKS	PRISM LAB ID NO.
				*TYPE SEE BELOW	NO. SIZE				
BT-1	12/16/04	0930	soil	CS	2 4/8" =	---	NA 204519		106741
BT-2		0945			2	---			106742
BT-3		1000			2	---			106743
BT-4		1015			2	---			106744
BT-5		1030			2	---			106745

EMETA TECH

M Branston

Sampled By (Print Name) M Branston Affiliation EMETA TECH

Sampler's Signature M Branston

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.

Relinquished By (Signature) [Signature] Date 12/16/04 Military/Hours
Relinquished By (Signature) [Signature] Date 12/16/04 Military/Hours
Relinquished By (Signature) [Signature] Date 12/16/04 Military/Hours

Additional Comments: INVOICE NOT UNDER Blanket PO

Method of Shipment: Fed Ex UPS Hand-delivered Prism Field Service Other

NPDES: NC SC NC SC NC SC NC SC NC SC NC SC

DRINKING WATER: NC SC NC SC NC SC

SOLID WASTE: NC SC NC SC NC SC

RCRA: NC SC NC SC NC SC

CERCLA: NC SC NC SC NC SC

LANDFILL: NC SC NC SC NC SC

OTHER: 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)

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

PRESS DOWN FIRMLY - 3 COPIES

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL