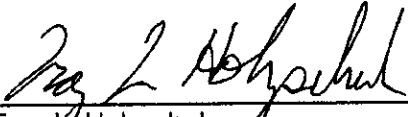




**NC Department of Transportation
Preliminary Site Assessment
State Project: U-3812
WBS Element: 34977.1.1**

**Poe/Hamby Property
Parcel #99
May 18, 2010**

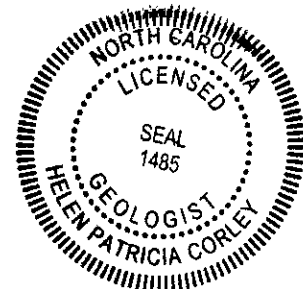
**AMEC Earth and Environmental, Inc. of North Carolina
AMEC Project: 562113812**



Troy L. Holzschuh
Engineering Technician



Helen P. Corley, L.G.
Senior Project Manager





**NC Department of Transportation
Preliminary Site Assessment
State Project: U-3812
WBS Element: 34977.1.1**

**Poe/Hamby Property
Parcel #99
May 18, 2010**

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AMEC Project: 562113812**



Troy L. Holzschuh
Engineering Technician



Helen P. Corley, L.G.
Senior Project Manager



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1.0 INTRODUCTION

In accordance with the North Carolina Department of Transportation (NCDOT) Request for Proposal, dated February 19, 2010, AMEC Earth and Environmental, Inc. of North Carolina (AMEC) has performed a Preliminary Site Assessment (PSA) for the Poe / Hamby Property (the Site) to be affected by a road improvement project along NC Highway (Hwy) 88 and NC Hwy 194. The property is located at 101 North Main Street in Jefferson, Ashe County, North Carolina. The property is identified as Parcel #99 within the NCDOT U-3812 design project. The investigation was conducted in accordance with AMEC's Technical and Cost proposal dated March 5, 2010.

NCDOT contracted AMEC to perform a PSA on the Poe / Hamby Property due to the observation of an underground storage tank (UST) on the property. The PSA was performed to determine if soils have been impacted by petroleum compounds as a result of past or present uses of the property within the proposed expanded right-of-way (ROW).

The following report describes our field investigations and results of chemical analyses. It includes the evaluation of the analytical data with regards to the presence or absence of soil contamination within the proposed right-of-way and estimates the extent of soil contamination.

1.1 Site Location and History

The Poe / Hamby Property is located on the northeastern quadrant of the intersection of NC Hwy 88 and Main Street in Jefferson, Ashe County, North Carolina. It is located within the Sedimentary and Metamorphic sediments of the Blue Ridge Belt Physiographic Province of western North Carolina. Figure 1 shows the site location and vicinity.

AMEC studied the NCDENR UST Database for Incident Management and Registered Facilities and did not find any incidents reported for this site.

1.2 Site Description

One two-story stone and masonite building with an attached cinder block garage and a one-story brick building with an attached four-bay carwash occupies the Site. The buildings on the parcel operate as a hair salon, apartments, Jefferson Carwash and detail shop. The proposed road widening will traverse the entire Southern road frontage of Parcel #99. Two UST(s) exist, on the southeast corner of the parcel, under the building canopy. No monitoring wells are located at this facility. Appendix A includes a photo log for Site 1.

The property North of the Site is a commercial building. Across Main Street, to the east, is a commercial building that contains the Ashe County Free Medical Clinic. To the South of the Site is a motorcycle retail store and repair shop, also identified as Parcel #93 within the NCDOT U-3812 design project. To the West of the Site is a rural residential area.

2.0 GEOLOGY

2.1 Regional Geology

The Poe / Hamby Property is located within the Ashe Metamorphic Suite and Tallulah Falls Formation group of the Blue Ridge Belt Physiographic Province of western North Carolina. The Ashe Metamorphic Suite and Tallulah Falls Formation group is amphibolite with intrusive pegmatites.

2.2 Site Geology

Site geology was observed through the sampling of 16 shallow direct push probe soil borings (SB) onsite. Borings generally extended until groundwater was intercepted at depths ranging from 3.5 to 8 feet below ground surface (bgs) with depth increasing to the north. Soils generally consisted of brown well sorted clayey silt. Some borings closest to the overhang intercepted medium-grained sand that may be associated with the UST bed. Boring logs are presented in Appendix B.

Saturated conditions (ground water) were typically encountered between 3.5 and 8 feet below ground surface.

3.0 FIELD ACTIVITIES

3.1 Preliminary Activities

Prior to commencing field sampling activities at the site, several tasks were accomplished in preparation for the subsurface investigation. The Health and Safety Plan (HSP) was modified to include the site-specific health and safety information necessary for the field activities. North Carolina-1-Call was contacted to facilitate the location of underground utilities in the vicinity of selected boring locations. SAEDACCO (South Atlantic Environmental Drilling and Construction Co.) of Fort Mill, South Carolina was retained by AMEC to perform the direct push sampling for soil borings. AMEC coordinated with Schnabel Engineering South (Schnabel) who performed two geophysical surveys (electromagnetic and ground penetrating radar) onsite during March. The geophysical results were reviewed and discussed at the completion of each survey. Prism Laboratories, Inc. was contacted for acquisition of sample bottles.

3.2 Site Reconnaissance

AMEC personnel completed site reconnaissance on February 26, 2010. The area was visually examined for the presence of any UST or areas/obstructions that could potentially affect the subsurface investigation. Boring locations were marked on March 31, 2010.

3.3 Geophysical Survey

Schnabel performed the geophysical surveys on March 16 and 24, 2010. Schnabel utilized a Geonics EM61-MK2 to perform the electromagnetic induction surveys and a Geophysical Survey Systems SIR-3000 to conduct the ground-penetrating radar (GPR) investigations. These instruments are specifically calibrated to detect metal anomalies that are buried deeply and are characteristically large. GPR focused in the area under canopy with two apparent UST lids. Obstacles in the field, such as canopy support poles, raised concrete islands, and concrete planters interfered with the outcome of the survey. Therefore, the data collected by Schnabel is inconclusive regarding the presence of the tank(s) under the canopy. The report prepared by Schnabel recommends that the area should be considered as containing probable UST(s). The complete report can be found in Appendix C.

3.4 UST Field Inspection

Since the geophysical survey was inconclusive, AMEC personnel conducted an inspection of the area under and near the building/canopy that resembles an historic service station. Under the front of the canopy between the support poles, lies a short concrete island resembling a former dispenser island. Piping is in fact still visible in two locations where dispensers were likely removed (see photos 3 and 4 of Appendix A). Under the canopy and directly adjacent to the island, two lids are situated in the ground. They appear as access ports to UST(s). It was possible to open one of the lids and the existence of tank piping and UST was confirmed through it. The depth to the tank floor was measured to be 5 feet bgs and product was observed in the bottom 2 feet of the tank. An approximate tank diameter of around 4-ft was assumed. The second lid that could not be opened is expected to overlay a second similarly sized UST based on the presence of the second former dispenser location with piping. AMEC personnel also identified an abandoned hydraulic lift situated southwest of the canopy and just outside of the ROW. These features are identified in Figure 2, the Site map.

3.5 Well Survey

No well survey was performed as part of this PSA but one water supply well, with water meter, was observed by AMEC on the site located on the northeast corner of the carwash.

3.6 Soil Sampling

Soil boring occurred on April 1, 2010 at Parcel # 99. Sixteen direct push soil borings were conducted within the proposed expanded ROW on Parcel # 99. Figure 2 presents the Site Map with sample locations and identifications. The first boring (SB-1) was placed on the western portion of the southern proposed expanded ROW. Soil borings SB-2 through SB-6 were placed east of SB-1. Soil boring locations were focused within the proposed expanded ROW, using a staggered soil boring placement pattern to optimize the likelihood of intercepting any potential soil contamination. At SB-3, a noticeable odor was detected, despite low PID readings. Soil borings SB-7 through SB-13 concentrated around the area suspected of containing USTs. Soil borings SB-14 through SB-16 progressed north within the eastern proposed expanded ROW.

Elevated Photo Ionization Detector (PID) readings were detected in the soil borings SB-7 through SB-11 located closest to the USTs. Soil samples were collected in accordance with EPA protocols in laboratory-supplied containers. The soil samples for Total Petroleum Hydrocarbons (TPH) –Gasoline Range Organics (GRO) analysis were collected using the 5030 prep method with methanol preservation. Samples for TPH-Diesel Range Organics (DRO) analysis were collected in 4oz. glass containers. Once placed in the containers, the samples were labeled with the sample number, time of collection, date of collection, name of the collector, and the requested analysis. The samples were packed on ice, and then hand delivered to Prism Laboratories, a North Carolina Certified Laboratory following proper chain-of-custody procedures.

4.0 SOIL SAMPLING RESULTS

AMEC conducted soil sampling at the Site on April 1, 2010. The purpose of the sampling was to determine if releases of petroleum hydrocarbons had occurred, and if so, to estimate the volume of soil that might require special handling during construction activities. The sampling was accomplished using direct push methods accompanied by field screening for organic vapors with a PID. The laboratory results with PID readings are tabulated in Table 1 and shown on Figure 3.

A minimum of one soil sample was collected from each of the 16 completed soil borings from Parcel 99. Elevated PID readings were measured in samples collected from borings SB-7 through SB-12, where the PID values ranged from 62.2 to 215 parts per million (ppm). Typically, when impacted soil is identified, additional soil samples are obtained at greater depth; however, this didn't occur at this parcel due to the shallow groundwater intercepted in these borings.

Laboratory analyses of soil samples for DRO indicated seven boring locations (SB-2, SB-3, SB-5, SB-7, SB-9, SB-10 and SB-11) had samples with DRO concentrations above the 10 mg/kg NCDENR Initial Action Level for TPH in soil. These samples' DRO values ranged from 57 to 660 mg/kg, with the highest concentration near the UST. Laboratory analyses of soil samples for GRO indicated seven boring locations (SB-3, SB-6, SB-7, SB-8, SB-9, SB-10 and SB-11) had samples with GRO concentrations slightly above the 10 mg/kg NCDENR Initial Action Level for TPH in soil. The GRO concentrations were greater in magnitude than the DRO concentrations with GRO values ranging from 17 to 10,000

mg/kg. The samples obtained from the 7-8 foot interval (SB-9, SB-10, and SB-11) around the UST bed consistently yielded elevated levels of both GRO and DRO.

Estimated areas of petroleum impacted soil situated within the ROW have been drawn and shaded in Figure 4. The square footage of the area is 1446 ft². Assuming a 7-ft thickness of impacted soil, which correlates with the average unsaturated soil column thickness, then 10,105 ft³ (i.e. 374 cubic yards) of impacted soil may be intercepted within the ROW in this area during road construction activities.

Copies of the original laboratory report and chain-of-custody documentation are included as Appendix D.

5.0 CONCLUSIONS

The following conclusions are based upon AMEC's evaluation of field observations and laboratory analyses of samples collected from the Site on April 1, 2010.

- The parcel currently operates as a hair salon, apartments, Jefferson car wash and car detail.
- One UST with piping is located on the southeastern portion of the parcel, under the building canopy. Product remains in this confirmed UST. A second UST is expected to be in place next to the first.
- Laboratory analyses of soil samples confirmed DRO detection of >10 mg/kg NC Action Level in soil borings SB-2, SB-3, SB-5, SB-7, SB-9, SB-10 and SB-11.
- Laboratory analyses of soil samples confirmed GRO detection of >10 mg/kg NC Action Level in soil boring SB-3, SB-6, SB-7, SB-8, SB-9, SB-10 and SB-11.
- Two separate areas of potentially impacted soil exist on the site; near the UST bed and in front of the carwash around the vacuum island. The highest concentrations of GRO/DRO occur at SB-10 near the UST(s). The total potentially impacted soil volume in the two areas is estimated as 374 cubic yards. These areas are within the proposed expanded ROW.

6.0 RECOMMENDATIONS

The two USTs should be closed by removal per the NCDENR UST guidelines, which require additional sampling and likely over excavation based on the soil sampling results from nearby borings. This action would be necessary whether the NCDOT acquires the entire parcel or just the expanded ROW.

If NCDOT intercepts soil in the contaminated area along the southern parcel boundary in front of the carwash, AMEC recommends the following action:

- Segregation during soil excavation with proper disposal of potentially petroleum-impacted soil during roadway improvement construction operations.

TABLES

Table 1
Soil Sampling Analytical Results, DRO-GRO
Parcel 99
Ashe County PSA
Jefferson, North Carolina

| SAMPLE ID | SAMPLE DATE | SAMPLE DEPTH (ft bgs) | PID READINGS (ppm) | EPA Method 8015B | |
|-------------------------|-------------|--------------------------|-----------------------|------------------|---------------|
| | | | | DRO (mg/kg) | GRO (mg/kg) |
| NC Action Levels | | | | 10 | 10 |
| P99-SB-1 | 4/1/2010 | 5 - 6 | 6.8 | <10 | <7.4 |
| P99-SB-2 | 4/1/2010 | 2 - 3 | 0.6 | 91 | <6.6 |
| P99-SB-3 | 4/1/2010 | 2 - 3 | 5.5 | 650 | 40 |
| P99-SB-4 | 4/1/2010 | 3 - 4 | 1.4 | <8.8 | <6.3 |
| P99-SB-5 | 4/1/2010 | 1 - 2 | 0.2 | 190 | <6.3 |
| P99-SB-6 | 4/1/2010 | 4.5 - 5.5 | 10.6 | 8.3 J | 17 |
| P99-SB-7 | 4/1/2010 | 5 - 6 | 122 | 57 | 170 |
| P99-SB-8 | 4/1/2010 | 5 - 6 | 215 | 8.0 J | 1,900 |
| P99-SB-9 | 4/1/2010 | 7 - 8 | 153 | 220 | 3,000 |
| P99-SB-10 | 4/1/2010 | 7 - 8 | 146 | 660 | 10,000 |
| P99-SB-11 | 4/1/2010 | 7 - 8 | 62.2 | 470 | 5,000 |
| P99-SB-12 | 4/1/210 | 5 - 6 | 1.1 | <8.0 | <8.0 |
| P99-SB-13 | 4/1/210 | 6 - 7 | 1.8 | <7.6 | <7.6 |
| P99-SB-14 | 4/1/210 | 3 - 4 | 1.0 | <8.6 | <6.1 |
| P99-SB-15 | 4/1/210 | 5 - 6 | 0.6 | <9.1 | <6.5 |
| P99-SB-16 | 4/1/210 | 5 - 6 | 0.8 | <8.2 | <8.2 |

NOTES:

ft bgs = feet below ground surface; ppm = part per million

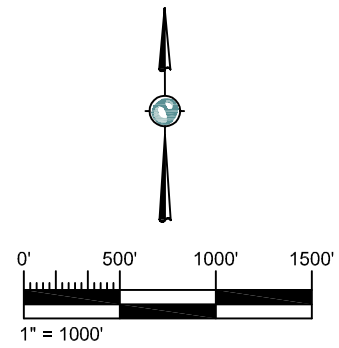
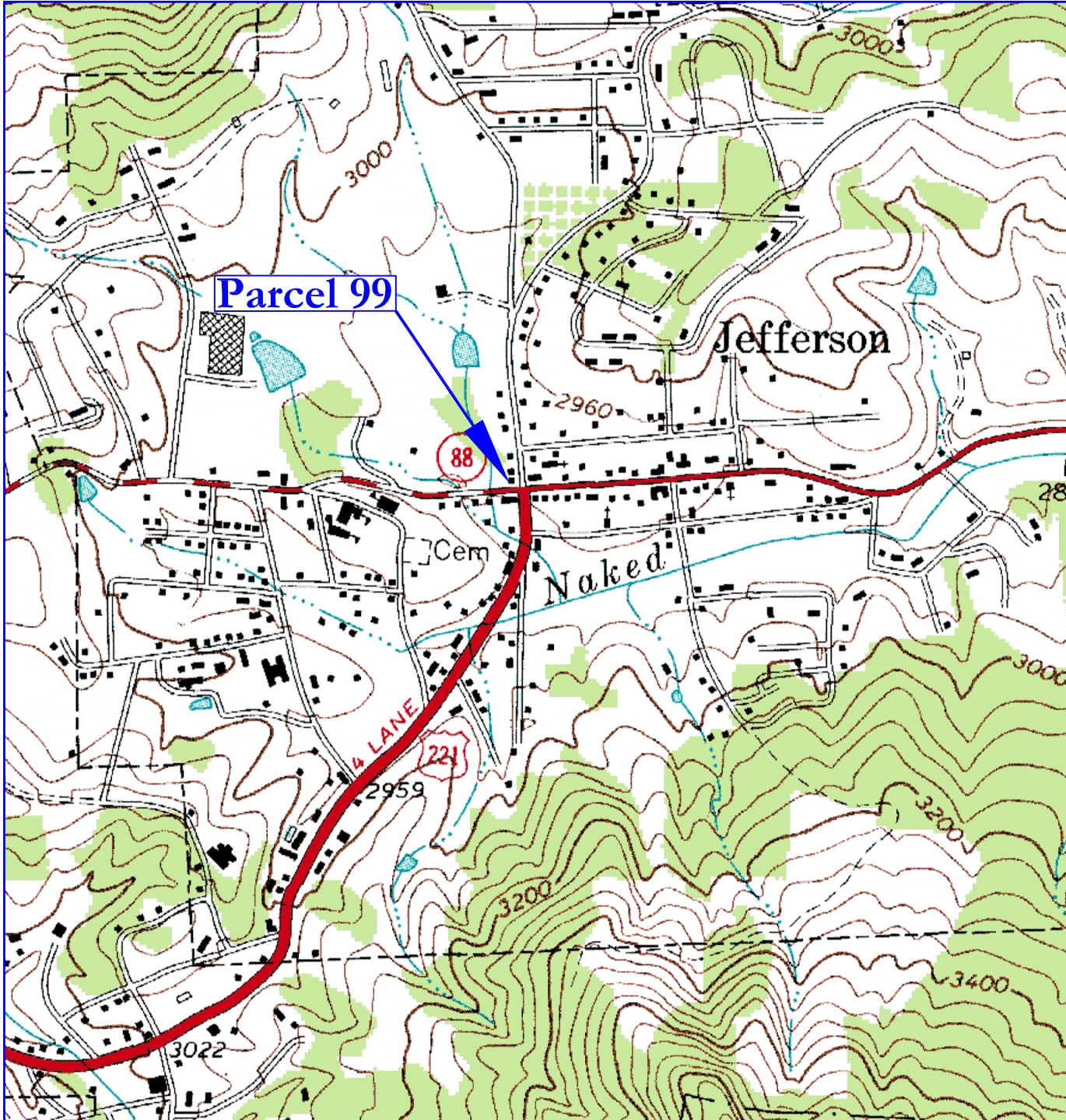
mg/kg = milligrams per kilograms **Bold** Concentrations Exceed Action Levels

DRO = Diesel Range Organics

GRO = Gasoline Range Organics


Standards derived from the North Carolina UST Section Guidelines for Assessment and Corrective Action

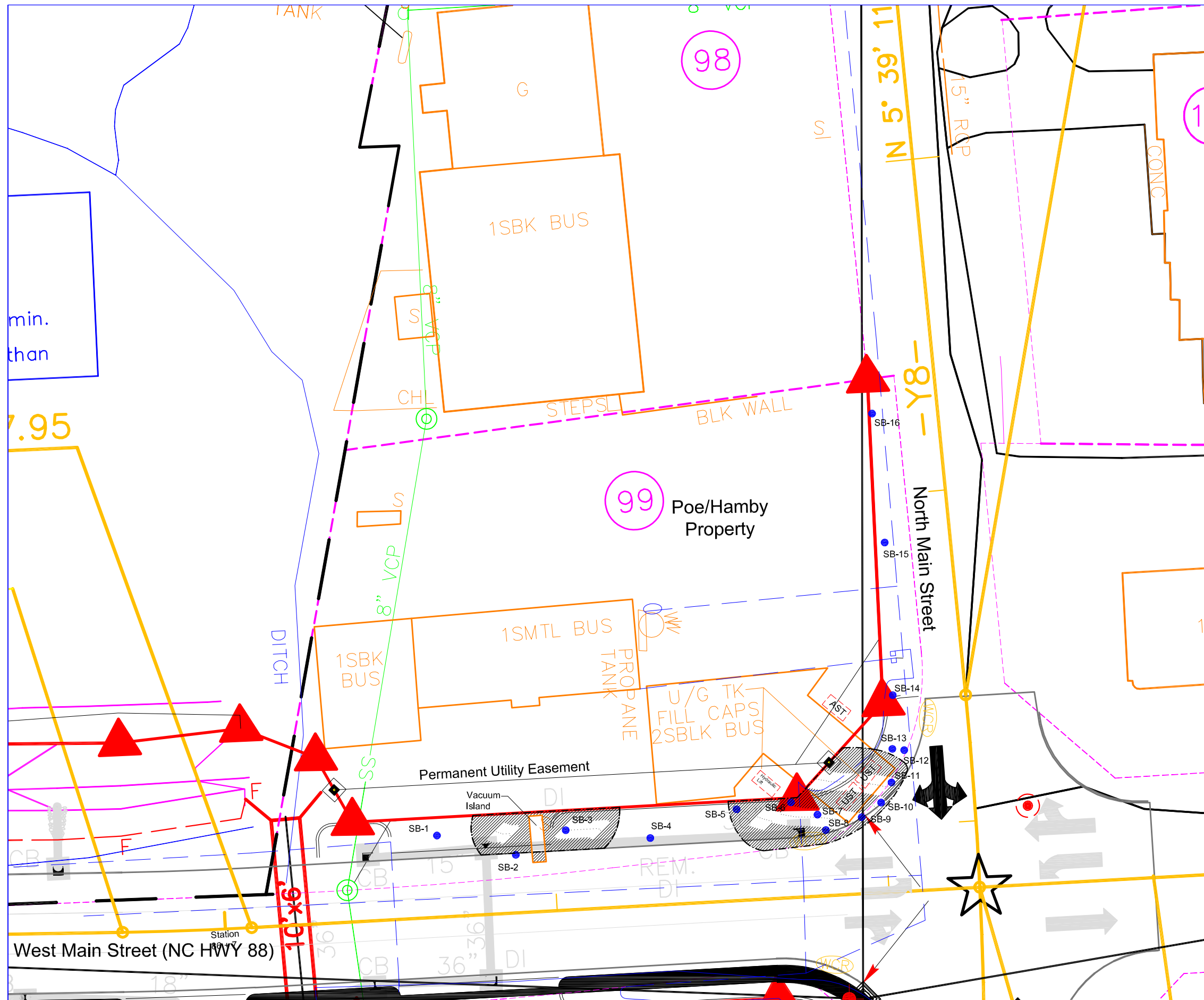
FIGURES












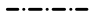
7.5 Minute Quadrangle
 North Carolina, 1983
 Photorevised 1993

Figure 1
Site Vicinity Map
Parcel 99

| | | | |
|---|---------------------|---------------|------|
| DRAWING NAME: J:\NCDOT\ASHE\FIG1 | | DATE: 5/12/10 | |
| SCALE: 1 INCH = 1,000 FEET | DR: TLH | CHK: HPC | REV: |
| PREPARED FOR: NC Department of Transportation Geotechnical Unit WBS Element: 34977.1.1 TIP# U-3812 | | | |
| Prepared By:  amec 338 North Elm Street Suite 112 Greensboro, NC 27401 (336) 691-5398 | Figure: Figure 1 | | |



LEGEND

-  Proposed Right of Way
-  Existing Right of Way
-  Property Boundaries
-  Cut/Fill Line
-  Cut/Fill Line
-  Boring Locations
-  Underground Water Lines
-  Under Ground Sewer
-  Under Ground Storm Sewer
-  Area of Contamination

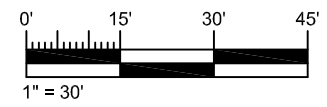


Figure 4
 Site Map With Potential Area of
 Soil Contamination
 Parcel 99 Poe/Hamby Property

NC Department of Transportation
 Geotechnical Unit
 WBS Element: 34977.1.1
 TIP# U-3812

APPENDIX A

PHOTO LOG

Photo Log

PAGE 1 of 2



| | | |
|---|--------------------------|--|
| Photo No. 1 | Date: 02/26/10 |  |
| Direction Photo Taken: East | | |
| Description: View of Parcel 99 and Proposed ROW | | |



| | | |
|---|--------------------------|--|
| Photo No. 2 | Date: 02/26/10 |  |
| Direction Photo Taken: South | | |
| Description: View of Parcel 99 and proposed ROW | | |

Photo Log

PAGE 2 of 2



| | | |
|---|--------------------------|---|
| Photo No. 3 | Date: 04/01/10 |  |
| Direction Photo Taken: Northeast | | |
| Description: View of rod being placed in UST to determine size and amount of product. | | |

| | | |
|---|--------------------------|--|
| Photo No. 4 | Date: 02/26/10 |  |
| Direction Photo Taken: East | | |
| Description: View of dispenser island and piping. | | |

APPENDIX B
BORING LOGS

APPENDIX C

Geophysical Report



April 26, 2010

Ms. Helen Corley, LG, Project Manager
AMEC Earth and Environmental of North Carolina, Inc.
101 W. Friendly Avenue, Suite 603
Greensboro, NC 27401

RE: State Project: U-3812
 WBS Element: 34977.1.1
 County: Ashe
 Description: Jefferson – NC 88 from NC 194 to US 221 Bus

**Subject: Report on Geophysical Surveys for Parcel 99, Jefferson, NC
 Schnabel Engineering Project 09210013.17**

Dear Ms. Corley:

Schnabel Engineering South, P.C. (Schnabel) is pleased to present this report on the geophysical surveys we conducted on the subject property. We understand this letter report will be included as an appendix in your report to the NCDOT. The report includes two 11x17 color figures and two 8.5x11 color figures.

1.0 INTRODUCTION

The work described in this report was conducted on March 16, 23, and 24, 2010, by Schnabel under our 2009 contract with the NCDOT. The work was conducted within the accessible areas of the proposed right-of-way and/or easement indicated by the NCDOT to support their environmental assessment of Parcel 99 (Poe/Hamby Property). Photographs of the parcel are included on Figure 1. The purpose of the geophysical surveys was to locate possible metal underground storage tanks (UST's) and associated metal product lines in the accessible areas of the right-of-way and/or easement.

The geophysical investigation consisted of electromagnetic (EM) induction surveys using a Geonics EM61-MK2 instrument. The EM61 metal detector is used to locate metal objects buried up to about eight feet below ground surface. Ground-penetrating radar (GPR) investigations of selected EM61 anomalies were conducted using a Geophysical Survey Systems SIR-3000 system equipped with a 400 MHz antenna. Photographs of the equipment used are shown on Figure 2.

2.0 FIELD METHODOLOGY

Locations of geophysical data points were obtained using a sub-meter Trimble Pro-XRS DGPS system. References to direction and location in this report are based on the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 83 datum, with units in US survey feet. The locations of existing site features (building, curbs, signs, etc.) were recorded for later correlation with the geophysical data and for location references to the NCDOT drawings.

The EM61 data were collected along parallel survey lines spaced approximately 2.5 feet apart. The EM61 and DGPS data were recorded digitally using a field computer and later transferred to a desktop computer for data processing. The GPR data were collected along survey lines spaced one to two feet apart in two orthogonal directions over anomalous EM readings not attributed to cultural features. The GPR data were reviewed in the field to evaluate the possible presence of UST's. The GPR data also were recorded digitally and later transferred to a desktop computer for further review.

Preliminary results for Parcel 99 were sent to Helen Corley and Troy Holzschuh of AMEC and Ethan Caldwell of the NCDOT on March 30, 2010.

3.0 DISCUSSION OF RESULTS

The contoured EM61 data for Parcel 99 are shown on Figures 3 and 4. The EM61 early time gate results are plotted on Figure 3. The early time gate data provide the more sensitive detection of metal objects,. Figure 4 shows the difference between the response of the top and bottom coils of the EM61 instrument (differential response). The difference is taken to remove the effect of surface and very shallowly buried metallic objects. Typically, the differential response emphasizes anomalies from deeper and larger objects such as UST's.

The early time gate and differential results show anomalies apparently caused by buried utilities and known site features (Figures 3 and 4). GPR data collected over differential EM61 anomalies does not indicate the presence of metallic UST's within the right-of-way and/or easement (Figures 3 and 4). We collected GPR data over the area beneath the canopy that contains two apparent UST lids. The GPR survey was affected by the canopy support poles, raised concrete of the possible pump island, and two planters on the possible pump island. Our level of confidence in the GPR data in this area, with regards to suspect UST's, is low as a result of those obstacles.

4.0 CONCLUSIONS

Our evaluation of the geophysical data collected on Parcel 99 on Project U-3812 in Jefferson, NC indicates the following:

A relatively high EM61 response was recorded in the vicinity of the two apparent UST lids located beneath the canopy. The GPR data did not show a response indicative of a UST, but our confidence in the GPR data is low due to the presence of obstacles that prevented continuous data collection. Therefore, we recommend that this area be considered as containing a possible UST(s) for the purpose of the Preliminary Site Assessment.

5.0 LIMITATIONS

These services have been performed and this report prepared for the North Carolina Department of Transportation in accordance with generally accepted guidelines for conducting geophysical surveys. It is generally recognized that the results of geophysical surveys are non-unique and may not represent actual subsurface conditions.

Thank you for the opportunity to serve you on this project. Please call if you need additional information or have any questions.

Sincerely,

SCHNABEL ENGINEERING SOUTH, PC



James W. Whitt
Staff Geophysicist



Edward D. Billington, LG
Senior Vice President

JW:NB

Attachment: Figures (4)

FILE: G:\2009 PROJECTS\09210013 (NCDOT 2009 GEOTECH UNIT SERVICES)\09210013.17 (U-3812, ASHE COUNTY)\REPORT\PARCEL 99\PARCEL 99 (U-3812).DOC



Parcel 99 – Poe/Hamby Property, looking northeast



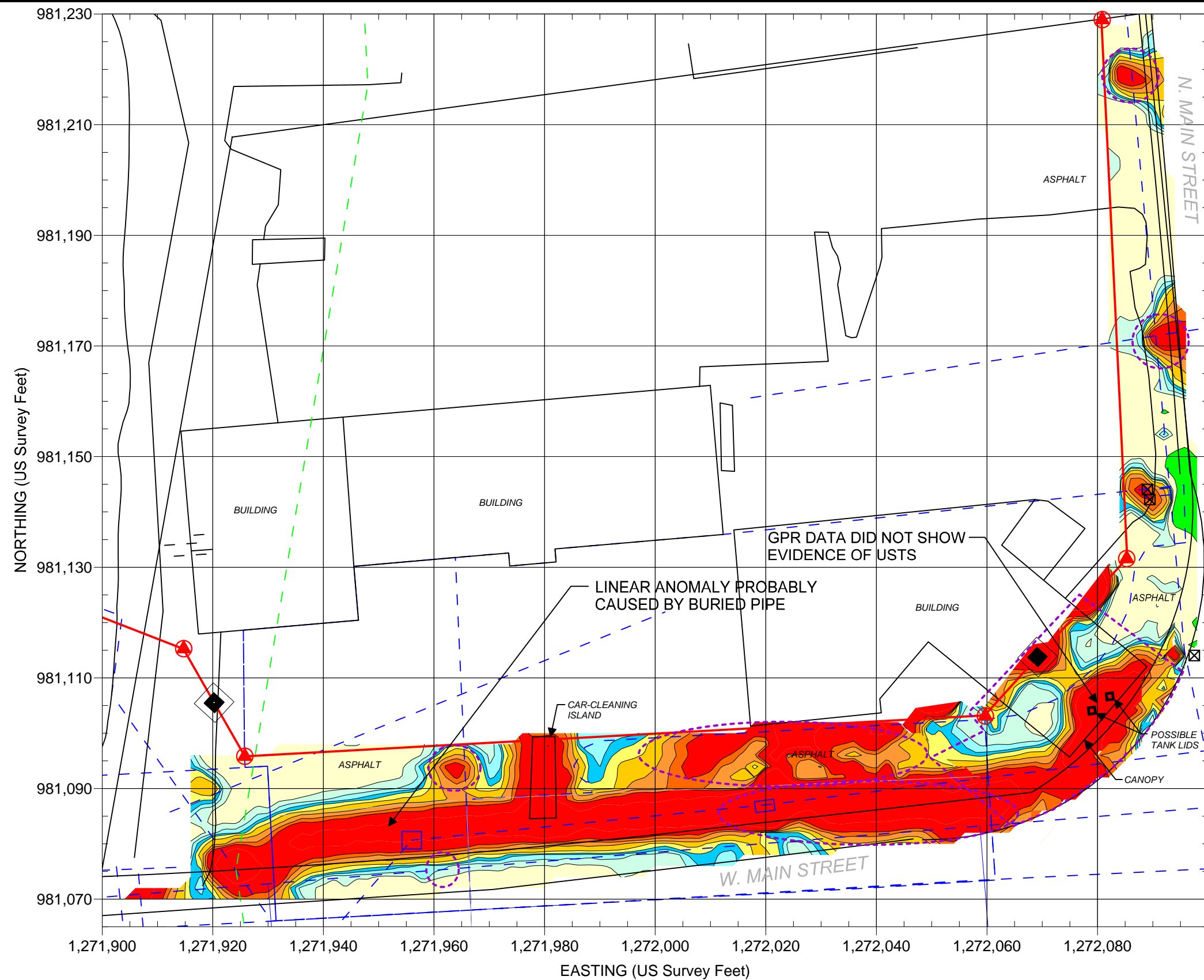
Parcel 99 – Poe/Hamby Property, looking northwest



Geonics EM61-MK2



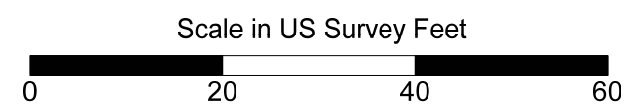
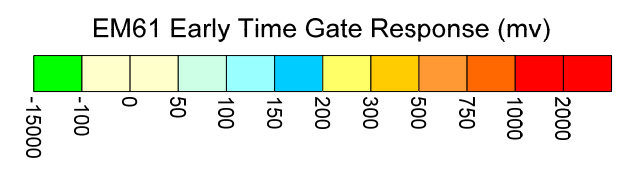
GSSI SIR-3000



EXPLANATION

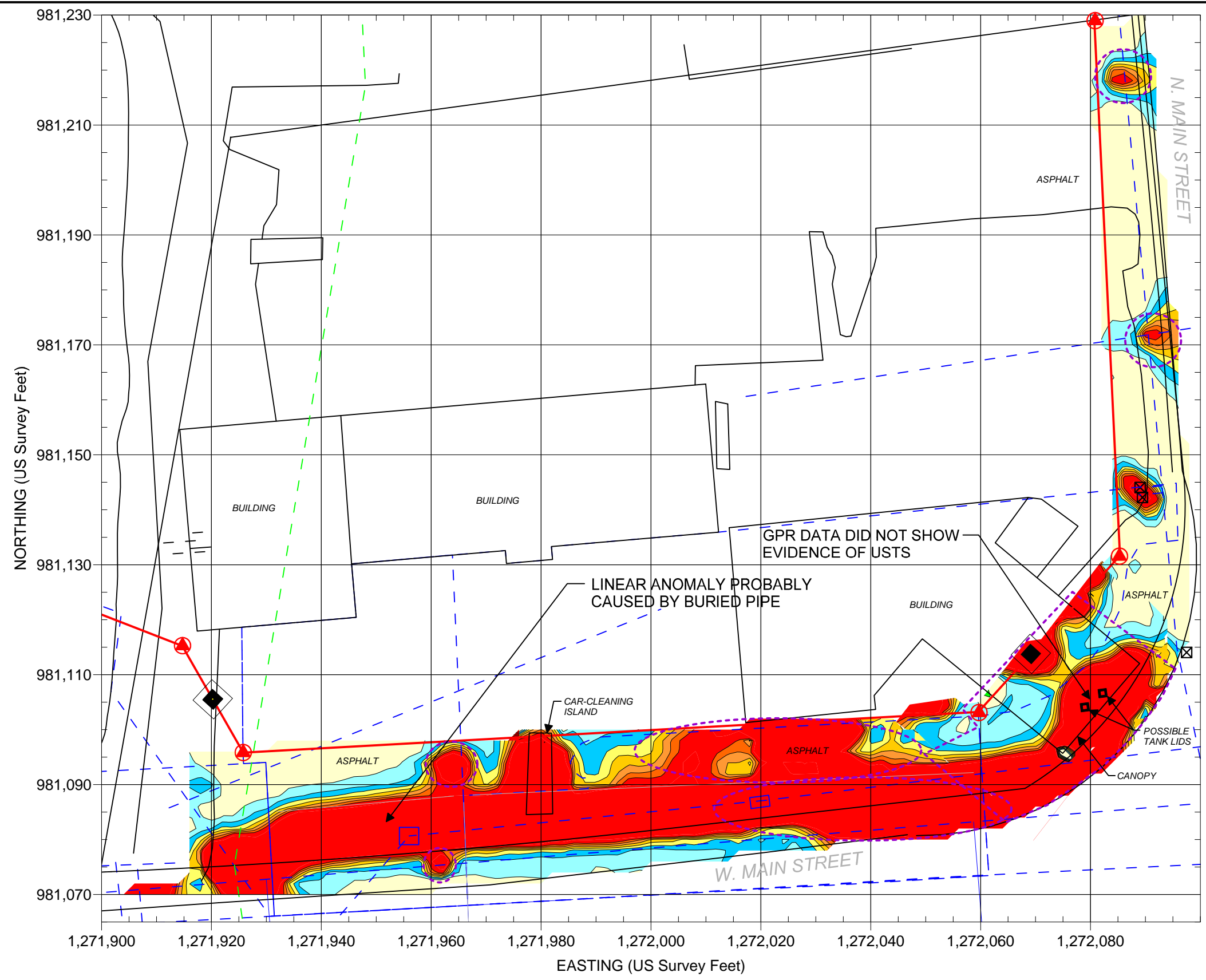
- SIGN
- UTILITY POLE
- GUY WIRE
- MISCELLANEOUS METALLIC OBJECT
- UTILITY LID
- LIGHT POLE
- STORM SEWER INLET
- UST LID
- DOT PROPOSED R/W
- DOT PROPOSED UTILITY EASEMENT
- PROPERTY LINE
- UTILITY (AS MARKED BY OTHERS OR AS PROVIDED BY NCDOT [VARIOUS COLORS])
- GPR SURVEY AREA

REF.: NCDOT FILE: u3812_rdy_psh09.dgn
(FOR SOME SITE FEATURES)



Note: The contour plot shows the earliest and most sensitive time gate of the EM61 bottom coil/channel in millivolts (mV). The EM data were collected on March 16, 2010, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina Zone 3200, using the NAD 1983 datum. GPR data were acquired on March 23 and 24, 2010, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.

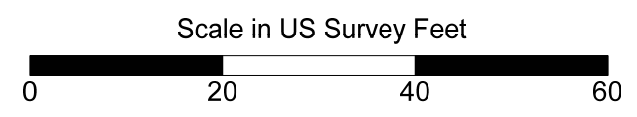
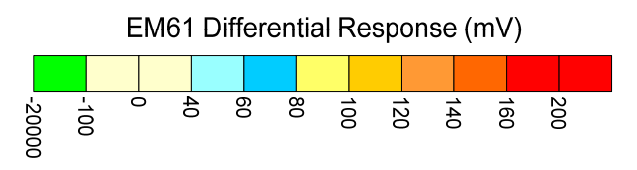
| | | |
|--|---|---|
| | STATE PROJECT U-3812 ASHE COUNTY, NORTH CAROLINA NC DEPARTMENT OF TRANSPORTATION PROJECT NO. 09210013.17 | PARCEL 99 EM61 EARLY TIME GATE RESPONSE FIGURE 3 |
|--|---|---|



EXPLANATION

| | |
|--|--|
| | SIGN |
| | UTILITY POLE |
| | GUY WIRE |
| | MISCELLANEOUS METALLIC OBJECT |
| | UTILITY LID |
| | LIGHT POLE |
| | STORM SEWER INLET |
| | UST LID |
| | DOT PROPOSED R/W |
| | DOT PROPOSED UTILITY EASEMENT |
| | PROPERTY LINE |
| | UTILITY (AS MARKED BY OTHERS OR AS PROVIDED BY NCDOT [VARIOUS COLORS]) |
| | GPR SURVEY AREA |

REF.: NCDOT FILE: u3812_rdy_psh09.dgn
(FOR SOME SITE FEATURES)



Note: The contour plot shows the difference, in millivolts (mV), between the readings from the top and bottom coils of the EM61. The difference is taken to reduce the effect of shallow metal objects and emphasize anomalies caused by deeper metallic objects, such as drums and tanks. The EM data were collected on March 16, 2010, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 1983 datum. GPR data were acquired on March 23 and 24, 2010, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.

| | | |
|--|---|--|
| | <p>STATE PROJECT U-3812 ASHE COUNTY, NORTH CAROLINA NC DEPARTMENT OF TRANSPORTATION PROJECT NO. 09210013.17</p> | <p>PARCEL 99 EM61 DIFFERENTIAL RESPONSE FIGURE 4</p> |
|--|---|--|

APPENDIX D
LABORATORY ANALYTICAL RESULTS



Case Narrative

Date: 04/19/10
Company: N. C. Department of Transportation
Contact: Helen Corley
Address: c/o AMEC Earth & Environmental, Inc.
101 W. Friendly Ave. Suite 603
Greensboro, NC 27401

Client Project ID: NCDOT: Ashe Co. PSA (Parcel 99)
Prism COC Group No: G0410064
Collection Date(s): 04/01/10
Lab Submittal Date(s): 04/05/10

Client Project Name Or No: WBS #34977.1.1

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 19 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

Analysis Note for Q49432 MS Diesel Range Organics (DRO): Sample concentration too high for recovery evaluation.

Analysis Note for Q49432 MSD Diesel Range Organics (DRO): Sample concentration too high for recovery evaluation.

Volatile Analysis

Analysis Note for Q49302 MS Gasoline Range Organics (GRO): MS and MSD recoveries outside of the control limits.

Metals Analysis

N/A

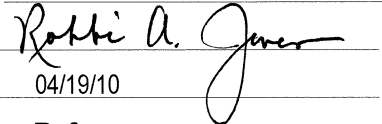
Wet Lab and Micro Analysis

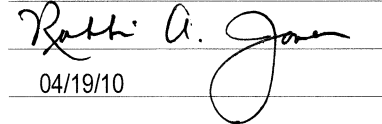
N/A

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

Data Reviewed by: Robbi A. Jones

Project Manager: Robbi A. Jones

Signature: 

Signature: 

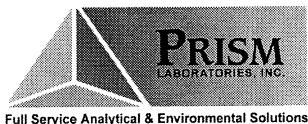
Review Date: 04/19/10

Approval Date: 04/19/10

Data Qualifiers Key Reference:

- B: Compound also detected in the method blank.
- #: Result outside of the QC limits.
- 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.
- H: Estimated concentration with a high bias.
- L: Estimated concentration with a low bias.
- M: A matrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-1 (5-6)
 Prism Sample ID: 275669
 COC Group: G0410064
 Time Collected: 04/01/10 10:10
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|--|--------|-------|--------------|--------|-----------------|------------------|--------------------|-----------------------|----------|
| Percent Solids Determination | | | | | | | | | |
| Percent Solids | 68.0 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| Diesel Range Organics (DRO) by GC-FID | | | | | | | | | |
| Diesel Range Organics (DRO) | BRL | mg/kg | 10 | 1.7 | 1 | 8015B | 04/13/10 6:25 | jvogel | Q49319 |
| Sample Preparation: | | | | 25 g / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 61 | 49 - 124 | |
| Sample Weight Determination | | | | | | | | | |
| Weight 1 | 6.35 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.56 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Gasoline Range Organics (GRO) by GC-FID | | | | | | | | | |
| Gasoline Range Organics (GRO) | BRL | mg/kg | 7.4 | 4.6 | 50 | 8015B | 04/10/10 0:15 | heasler | Q49302 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | 107 | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-2 (2-3)
 Prism Sample ID: 275670
 COC Group: G0410064
 Time Collected: 04/01/10 10:30
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|--|--------|-------|--------------|-----|-----------------|------------------|--------------------|-----------------------|----------|
| Percent Solids Determination | | | | | | | | | |
| Percent Solids | 75.2 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| Diesel Range Organics (DRO) by GC-FID | | | | | | | | | |
| Diesel Range Organics (DRO) | 91 | mg/kg | 9.3 | 1.5 | 1 | 8015B | 04/13/10 13:04 | jvogel | Q49319 |
| Sample Preparation: | | | 24.93 g | / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 76 | 49 - 124 | |
| Sample Weight Determination | | | | | | | | | |
| Weight 1 | 6.80 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.50 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Gasoline Range Organics (GRO) by GC-FID | | | | | | | | | |
| Gasoline Range Organics (GRO) | BRL | mg/kg | 6.6 | 4.2 | 50 | 8015B | 04/10/10 0:46 | heasler | Q49302 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | 98 | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

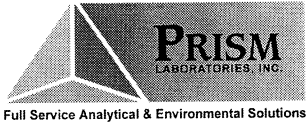
All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-3 (2-3)
 Prism Sample ID: 275671
 COC Group: G0410064
 Time Collected: 04/01/10 10:45
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|--|--------|-------|--------------|--------|-----------------|------------------|--------------------|-----------------------|----------|
| Percent Solids Determination | | | | | | | | | |
| Percent Solids | 79.6 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| Diesel Range Organics (DRO) by GC-FID | | | | | | | | | |
| Diesel Range Organics (DRO) | 650 | mg/kg | 180 | 28 | 20 | 8015B | 04/13/10 7:00 | jvogel | Q49319 |
| Sample Preparation: | | | | 25 g / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | DO # | 49 - 124 | |
| Sample Weight Determination | | | | | | | | | |
| Weight 1 | 7.30 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.53 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Gasoline Range Organics (GRO) by GC-FID | | | | | | | | | |
| Gasoline Range Organics (GRO) | 40 | mg/kg | 6.3 | 3.9 | 50 | 8015B | 04/10/10 2:20 | heasler | Q49302 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | 102 | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-4 (3-4)
 Prism Sample ID: 275672
 COC Group: G0410064
 Time Collected: 04/01/10 11:00
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|--|--------|-------|--------------|-----|------------------|----------|--------------------|-----------------------|----------|
| Percent Solids Determination | | | | | | | | | |
| Percent Solids | 79.6 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| Diesel Range Organics (DRO) by GC-FID | | | | | | | | | |
| Diesel Range Organics (DRO) | BRL | mg/kg | 8.8 | 1.4 | 1 | 8015B | 04/13/10 5:50 | jbogel | Q49319 |
| Sample Preparation: | | | 25.08 g | / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | Surrogate | | % Recovery | Control Limits | |
| | | | | | o-Terphenyl | | 66 | 49 - 124 | |
| Sample Weight Determination | | | | | | | | | |
| Weight 1 | 7.14 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.64 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Gasoline Range Organics (GRO) by GC-FID | | | | | | | | | |
| Gasoline Range Organics (GRO) | BRL | mg/kg | 6.3 | 3.9 | 50 | 8015B | 04/10/10 1:17 | heasler | Q49302 |
| | | | | | Surrogate | | % Recovery | Control Limits | |
| | | | | | aaa-TFT | | 86 | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-5 (1-2)
 Prism Sample ID: 275673
 COC Group: G0410064
 Time Collected: 04/01/10 12:00
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|-----------|--------|-------|--------------|-----|-----------------|--------|--------------------|---------|----------|
|-----------|--------|-------|--------------|-----|-----------------|--------|--------------------|---------|----------|

Percent Solids Determination

| | | | | | | | | | |
|----------------|------|---|--|--|---|----------|----------------|----------|--|
| Percent Solids | 79.4 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
|----------------|------|---|--|--|---|----------|----------------|----------|--|

Diesel Range Organics (DRO) by GC-FID

| | | | | | | | | | |
|-----------------------------|-----|-------|-----|-----|---|-------|----------------|--------|--------|
| Diesel Range Organics (DRO) | 190 | mg/kg | 8.8 | 1.4 | 1 | 8015B | 04/13/10 12:32 | jvogel | Q49319 |
|-----------------------------|-----|-------|-----|-----|---|-------|----------------|--------|--------|

Sample Preparation: 25.06 g / 1 mL 3545 04/09/10 16:30 athao P27233

| Surrogate | % Recovery | Control Limits |
|-------------|------------|----------------|
| o-Terphenyl | 59 | 49 - 124 |

Sample Weight Determination

| | | | | | | | | | |
|----------|------|---|--|--|---|-----|---------------|--------|--|
| Weight 1 | 5.48 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.52 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |

Gasoline Range Organics (GRO) by GC-FID

| | | | | | | | | | |
|-------------------------------|-----|-------|-----|-----|----|-------|---------------|---------|--------|
| Gasoline Range Organics (GRO) | BRL | mg/kg | 6.3 | 3.9 | 50 | 8015B | 04/10/10 1:48 | heasler | Q49302 |
|-------------------------------|-----|-------|-----|-----|----|-------|---------------|---------|--------|

| Surrogate | % Recovery | Control Limits |
|-----------|------------|----------------|
| aaa-TFT | 108 | 55 - 129 |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-6 (4.5-5.5)
 Prism Sample ID: 275674
 COC Group: G0410064
 Time Collected: 04/01/10 12:10
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|--|--------|-------|--------------|-----|-----------------|------------------|--------------------|-----------------------|----------|
| Percent Solids Determination | | | | | | | | | |
| Percent Solids | 77.7 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| Diesel Range Organics (DRO) by GC-FID | | | | | | | | | |
| Diesel Range Organics (DRO) | 8.3 J | mg/kg | 9.0 | 1.5 | 1 | 8015B | 04/12/10 23:22 | jvogel | Q49319 |
| Sample Preparation: | | | 24.99 g | / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 65 | 49 - 124 | |
| Sample Weight Determination | | | | | | | | | |
| Weight 1 | 6.01 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 7.48 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Gasoline Range Organics (GRO) by GC-FID | | | | | | | | | |
| Gasoline Range Organics (GRO) | 17 | mg/kg | 13 | 8.1 | 100 | 8015B | 04/10/10 2:51 | heasler | Q49302 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | 49 # | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-7 (5-6)
 Prism Sample ID: 275675
 COC Group: G0410064
 Time Collected: 04/01/10 14:05
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|--|--------|-------|--------------|-----|-----------------|------------------|--------------------|-----------------------|----------|
| Percent Solids Determination | | | | | | | | | |
| Percent Solids | 73.2 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| Diesel Range Organics (DRO) by GC-FID | | | | | | | | | |
| Diesel Range Organics (DRO) | 57 | mg/kg | 9.6 | 1.5 | 1 | 8015B | 04/12/10 23:57 | jvogel | Q49319 |
| Sample Preparation: | | | 25.02 g | / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 62 | 49 - 124 | |
| Sample Weight Determination | | | | | | | | | |
| Weight 1 | 11.57 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 13.39 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Gasoline Range Organics (GRO) by GC-FID | | | | | | | | | |
| Gasoline Range Organics (GRO) | 170 | mg/kg | 140 | 86 | 1000 | 8015B | 04/10/10 3:22 | heasler | Q49302 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | DO # | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-8 (5-6)
 Prism Sample ID: 275676
 COC Group: G0410064
 Time Collected: 04/01/10 14:15
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|---|--------|-------|--------------|-----|-----------------|------------------|--------------------|-----------------------|----------|
| <u>Percent Solids Determination</u> | | | | | | | | | |
| Percent Solids | 65.0 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| <u>Diesel Range Organics (DRO) by GC-FID</u> | | | | | | | | | |
| Diesel Range Organics (DRO) | 8.0 J | mg/kg | 11 | 1.7 | 1 | 8015B | 04/13/10 0:32 | jvogel | Q49319 |
| Sample Preparation: | | | 25.1 g | / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 50 | 49 - 124 | |
| <u>Sample Weight Determination</u> | | | | | | | | | |
| Weight 1 | 5.91 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 5.95 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| <u>Gasoline Range Organics (GRO) by GC-FID</u> | | | | | | | | | |
| Gasoline Range Organics (GRO) | 1900 | mg/kg | 150 | 96 | 1000 | 8015B | 04/10/10 3:54 | heasler | Q49302 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | DO # | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

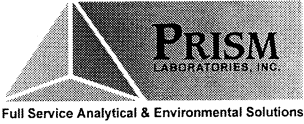
Client Sample ID: P99-SB-9 (7-8)
 Prism Sample ID: 275677
 COC Group: G0410064
 Time Collected: 04/01/10 14:30
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|---|--------|-------|--------------|-----|-----------------|------------------|--------------------|-----------------------|----------|
| <u>Percent Solids Determination</u> | | | | | | | | | |
| Percent Solids | 56.5 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| <u>Diesel Range Organics (DRO) by GC-FID</u> | | | | | | | | | |
| Diesel Range Organics (DRO) | 220 | mg/kg | 12 | 2.0 | 1 | 8015B | 04/13/10 1:08 | jvogel | Q49319 |
| Sample Preparation: | | | 25.03 g | / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 54 | 49 - 124 | |
| <u>Sample Weight Determination</u> | | | | | | | | | |
| Weight 1 | 5.48 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.06 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| <u>Gasoline Range Organics (GRO) by GC-FID</u> | | | | | | | | | |
| Gasoline Range Organics (GRO) | 3000 | mg/kg | 180 | 110 | 1000 | 8015B | 04/10/10 4:25 | heasler | Q49302 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | DO # | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit
 J- Estimated value between the Reporting Limit and the MDL
 The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.
 All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-10 (7-8)
 Prism Sample ID: 275678
 COC Group: G0410064
 Time Collected: 04/01/10 14:45
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|---|--------|-------|--------------|-----|------------------|----------|--------------------|-----------------------|----------|
| <u>Percent Solids Determination</u> | | | | | | | | | |
| Percent Solids | 59.0 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| <u>Diesel Range Organics (DRO) by GC-FID</u> | | | | | | | | | |
| Diesel Range Organics (DRO) | 660 | mg/kg | 59 | 9.5 | 5 | 8015B | 04/13/10 14:05 | jvogel | Q49319 |
| Sample Preparation: | | | 25.13 g | / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | Surrogate | | % Recovery | Control Limits | |
| | | | | | o-Terphenyl | | 60 | 49 - 124 | |
| <u>Sample Weight Determination</u> | | | | | | | | | |
| Weight 1 | 6.28 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.11 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| <u>Gasoline Range Organics (GRO) by GC-FID</u> | | | | | | | | | |
| Gasoline Range Organics (GRO) | 10000 | mg/kg | 340 | 210 | 2000 | 8015B | 04/10/10 22:57 | heasler | Q49314 |
| | | | | | Surrogate | | % Recovery | Control Limits | |
| | | | | | aaa-TFT | | DO # | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

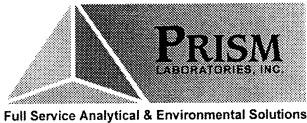
All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-11 (7-8)
 Prism Sample ID: 275679
 COC Group: G0410064
 Time Collected: 04/01/10 15:10
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|-----------|--------|-------|--------------|-----|-----------------|--------|--------------------|---------|----------|
|-----------|--------|-------|--------------|-----|-----------------|--------|--------------------|---------|----------|

Percent Solids Determination

| | | | | | | | | | |
|----------------|------|---|--|--|---|----------|----------------|----------|--|
| Percent Solids | 58.2 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
|----------------|------|---|--|--|---|----------|----------------|----------|--|

Diesel Range Organics (DRO) by GC-FID

| | | | | | | | | | |
|-----------------------------|-----|-------|----|-----|---|-------|----------------|--------|--------|
| Diesel Range Organics (DRO) | 470 | mg/kg | 60 | 9.7 | 5 | 8015B | 04/13/10 14:37 | jvogel | Q49319 |
|-----------------------------|-----|-------|----|-----|---|-------|----------------|--------|--------|

Sample Preparation: 24.98 g / 1 mL 3545 04/09/10 16:30 athao P27233

| Surrogate | % Recovery | Control Limits |
|-------------|------------|----------------|
| o-Terphenyl | 59 | 49 - 124 |

Sample Weight Determination

| | | | | | | | | | |
|----------|------|---|--|--|---|-----|---------------|--------|--|
| Weight 1 | 6.14 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.35 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |

Gasoline Range Organics (GRO) by GC-FID

| | | | | | | | | | |
|-------------------------------|------|-------|-----|-----|------|-------|----------------|---------|--------|
| Gasoline Range Organics (GRO) | 5000 | mg/kg | 340 | 210 | 2000 | 8015B | 04/10/10 23:28 | heasler | Q49314 |
|-------------------------------|------|-------|-----|-----|------|-------|----------------|---------|--------|

| Surrogate | % Recovery | Control Limits |
|-----------|------------|----------------|
| aaa-TFT | DO # | 55 - 129 |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-12 (5-6)
 Prism Sample ID: 275680
 COC Group: G0410064
 Time Collected: 04/01/10 15:30
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|---|--------|-------|--------------|-----|-----------------|------------------|--------------------|-----------------------|----------|
| <u>Percent Solids Determination</u> | | | | | | | | | |
| Percent Solids | 62.8 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| <u>Diesel Range Organics (DRO) by GC-FID</u> | | | | | | | | | |
| Diesel Range Organics (DRO) | BRL | mg/kg | 8.0 | 1.8 | 1 | 8015B | 04/13/10 2:53 | jvogel | Q49319 |
| Sample Preparation: | | | 25.09 g | / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 49 | 49 - 124 | |
| <u>Sample Weight Determination</u> | | | | | | | | | |
| Weight 1 | 6.62 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.72 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| <u>Gasoline Range Organics (GRO) by GC-FID</u> | | | | | | | | | |
| Gasoline Range Organics (GRO) | BRL | mg/kg | 8.0 | 5.0 | 50 | 8015B | 04/10/10 18:14 | heasler | Q49314 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | 97 | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Angela D. Overcash, V.P. Laboratory Services



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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-13 (6-7)
 Prism Sample ID: 275681
 COC Group: G0410064
 Time Collected: 04/01/10 16:05
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|-----------|--------|-------|--------------|-----|-----------------|--------|--------------------|---------|----------|
|-----------|--------|-------|--------------|-----|-----------------|--------|--------------------|---------|----------|

Percent Solids Determination

| | | | | | | | | | |
|----------------|------|---|--|--|---|----------|----------------|----------|--|
| Percent Solids | 66.2 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
|----------------|------|---|--|--|---|----------|----------------|----------|--|

Diesel Range Organics (DRO) by GC-FID

| | | | | | | | | | |
|-----------------------------|-----|-------|-----|-----|---|-------|---------------|--------|--------|
| Diesel Range Organics (DRO) | BRL | mg/kg | 7.6 | 1.7 | 1 | 8015B | 04/13/10 3:29 | jvogel | Q49319 |
|-----------------------------|-----|-------|-----|-----|---|-------|---------------|--------|--------|

Sample Preparation: 25.01 g / 1 mL 3545 04/09/10 16:30 athao P27233

| Surrogate | % Recovery | Control Limits |
|-------------|------------|----------------|
| o-Terphenyl | 52 | 49 - 124 |

Sample Weight Determination

| | | | | | | | | | |
|----------|------|---|--|--|---|-----|---------------|--------|--|
| Weight 1 | 5.87 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 5.68 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |

Gasoline Range Organics (GRO) by GC-FID

| | | | | | | | | | |
|-------------------------------|-----|-------|-----|-----|----|-------|----------------|---------|--------|
| Gasoline Range Organics (GRO) | BRL | mg/kg | 7.6 | 4.7 | 50 | 8015B | 04/10/10 18:46 | heasler | Q49314 |
|-------------------------------|-----|-------|-----|-----|----|-------|----------------|---------|--------|

| Surrogate | % Recovery | Control Limits |
|-----------|------------|----------------|
| aaa-TFT | 97 | 55 - 129 |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-14 (3-4)
 Prism Sample ID: 275682
 COC Group: G0410064
 Time Collected: 04/01/10 16:20
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|---|--------|-------|--------------|-----|-----------------|------------------|--------------------|-----------------------|----------|
| <u>Percent Solids Determination</u> | | | | | | | | | |
| Percent Solids | 81.6 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| <u>Diesel Range Organics (DRO) by GC-FID</u> | | | | | | | | | |
| Diesel Range Organics (DRO) | BRL | mg/kg | 8.6 | 1.4 | 1 | 8015B | 04/13/10 4:04 | jvogel | Q49319 |
| Sample Preparation: | | | 25.05 g | / | 1 mL | 3545 | 04/09/10 16:30 | athao | P27233 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 54 | 49 - 124 | |
| <u>Sample Weight Determination</u> | | | | | | | | | |
| Weight 1 | 7.58 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.82 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| <u>Gasoline Range Organics (GRO) by GC-FID</u> | | | | | | | | | |
| Gasoline Range Organics (GRO) | BRL | mg/kg | 6.1 | 3.8 | 50 | 8015B | 04/10/10 19:17 | heasler | Q49314 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | 105 | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



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

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-15 (5-6)
 Prism Sample ID: 275683
 COC Group: G0410064
 Time Collected: 04/01/10 16:45
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|---|--------|-------|--------------|-----|-----------------|------------------|--------------------|-----------------------|----------|
| <u>Percent Solids Determination</u> | | | | | | | | | |
| Percent Solids | 77.0 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| <u>Diesel Range Organics (DRO) by GC-FID</u> | | | | | | | | | |
| Diesel Range Organics (DRO) | BRL | mg/kg | 9.1 | 1.5 | 1 | 8015B | 04/14/10 22:56 | jvogel | Q49432 |
| Sample Preparation: | | | 25.02 g | / | 1 mL | 3545 | 04/13/10 13:25 | athao | P27252 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 79 | 49 - 124 | |
| <u>Sample Weight Determination</u> | | | | | | | | | |
| Weight 1 | 6.59 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 6.60 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| <u>Gasoline Range Organics (GRO) by GC-FID</u> | | | | | | | | | |
| Gasoline Range Organics (GRO) | BRL | mg/kg | 6.5 | 4.1 | 50 | 8015B | 04/10/10 19:48 | heasler | Q49314 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | 99 | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

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Angela D. Overcash, V.P. Laboratory Services

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 NC Drinking Water Cert. No. 37735

Laboratory Report

04/19/10

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 (Parcel 99)
 Project No.: WBS #34977.1.1
 Sample Matrix: Soil

Client Sample ID: P99-SB-16 (5-6)
 Prism Sample ID: 275684
 COC Group: G0410064
 Time Collected: 04/01/10 17:05
 Time Submitted: 04/05/10 11:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|---|--------|-------|--------------|-----|-----------------|------------------|--------------------|-----------------------|----------|
| <u>Percent Solids Determination</u> | | | | | | | | | |
| Percent Solids | 60.9 | % | | | 1 | SM2540 G | 04/06/10 14:35 | jbrayton | |
| <u>Diesel Range Organics (DRO) by GC-FID</u> | | | | | | | | | |
| Diesel Range Organics (DRO) | BRL | mg/kg | 8.2 | 1.9 | 1 | 8015B | 04/14/10 20:00 | jvogel | Q49432 |
| Sample Preparation: | | | 25.01 g | / | 1 mL | 3545 | 04/13/10 13:25 | athao | P27252 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | o-Terphenyl | 76 | 49 - 124 | |
| <u>Sample Weight Determination</u> | | | | | | | | | |
| Weight 1 | 5.25 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| Weight 2 | 5.08 | g | | | 1 | GRO | 04/08/10 0:00 | lbrown | |
| <u>Gasoline Range Organics (GRO) by GC-FID</u> | | | | | | | | | |
| Gasoline Range Organics (GRO) | BRL | mg/kg | 8.2 | 5.1 | 50 | 8015B | 04/10/10 20:20 | heasler | Q49314 |
| | | | | | | Surrogate | % Recovery | Control Limits | |
| | | | | | | aaa-TFT | 100 | 55 - 129 | |

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

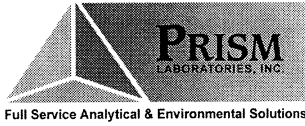
All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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

Level II QC Report

4/19/2010

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 Project No.: (Parcel 99)
 WBS #34977.1.1

COC Group Number: G0410064
 Date/Time Submitted: 4/5/2010 11:00

Gasoline Range Organics (GRO) by GC-FID, method 8015B

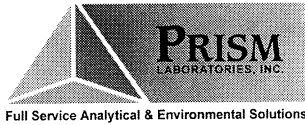
| Method Blank | | | | | | | QC Batch ID | | |
|--------------------------------------|--------|--------------|---------------|-------|------------|-------------------|-------------|-------------|--------|
| | Result | RL | Control Limit | Units | | | | | |
| Gasoline Range Organics (GRO) | ND | 5 | <2.5 | mg/kg | | | Q49302 | | |
| Laboratory Control Sample | | | | | | | QC Batch ID | | |
| | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | | | |
| Gasoline Range Organics (GRO) | 48.70 | 50 | | mg/kg | 97 | 67-116 | Q49302 | | |
| Matrix Spike | | | | | | | QC Batch ID | | |
| Sample ID: | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | | | |
| 275653 Gasoline Range Organics (GRO) | 56.85 | 50 | | mg/kg | 114 # | 57-113 | Q49302 | | |
| Matrix Spike Duplicate | | | | | | | QC Batch ID | | |
| Sample ID: | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | RPD % | RPD Range % | |
| 275653 Gasoline Range Organics (GRO) | 60.40 | 50 | | mg/kg | 121 # | 57-113 | 6 | 0 - 23 | Q49302 |

Gasoline Range Organics (GRO) by GC-FID, method 8015B

| Method Blank | | | | | | | QC Batch ID | | |
|--------------------------------------|--------|--------------|---------------|-------|------------|-------------------|-------------|-------------|--------|
| | Result | RL | Control Limit | Units | | | | | |
| Gasoline Range Organics (GRO) | ND | 5 | <2.5 | mg/kg | | | Q49314 | | |
| Laboratory Control Sample | | | | | | | QC Batch ID | | |
| | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | | | |
| Gasoline Range Organics (GRO) | 49.60 | 50 | | mg/kg | 99 | 67-116 | Q49314 | | |
| Matrix Spike | | | | | | | QC Batch ID | | |
| Sample ID: | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | | | |
| 275755 Gasoline Range Organics (GRO) | 37.45 | 50 | | mg/kg | 75 | 57-113 | Q49314 | | |
| Matrix Spike Duplicate | | | | | | | QC Batch ID | | |
| Sample ID: | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | RPD % | RPD Range % | |
| 275755 Gasoline Range Organics (GRO) | 37.25 | 50 | | mg/kg | 75 | 57-113 | 1 | 0 - 23 | Q49314 |

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

Level II QC Report

4/19/2010

N. C. Department of Transportation
 Attn: Helen Corley
 c/o AMEC Earth & Environmental, Inc.
 101 W. Friendly Ave. Suite 603
 Greensboro, NC 27401

Project ID: NCDOT: Ashe Co. PSA
 Project No.: (Parcel 99)
 WBS #34977.1.1

COC Group Number: G0410064
 Date/Time Submitted: 4/5/2010 11:00

Diesel Range Organics (DRO) by GC-FID, method 8015B

| Method Blank | | | | | | | QC Batch ID | | |
|------------------------------------|--------|--------------|---------------|-------|------------|-------------------|-------------|-------------|-------------|
| | Result | RL | Control Limit | Units | | | | | |
| Diesel Range Organics (DRO) | ND | 7 | <3.5 | mg/kg | | | Q49319 | | |
| Laboratory Control Sample | | | | | | | QC Batch ID | | |
| | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | | | |
| Diesel Range Organics (DRO) | 51.0 | 80 | | mg/kg | 64 | 55-109 | Q49319 | | |
| Matrix Spike | | | | | | | QC Batch ID | | |
| Sample ID: | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | | | |
| 275749 Diesel Range Organics (DRO) | 54.8 | 80 | | mg/kg | 69 | 50-117 | Q49319 | | |
| Matrix Spike Duplicate | | | | | | | QC Batch ID | | |
| Sample ID: | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | RPD % | RPD Range % | QC Batch ID |
| 275749 Diesel Range Organics (DRO) | 55.7 | 80 | | mg/kg | 70 | 50-117 | 2 | 0 - 24 | Q49319 |

Diesel Range Organics (DRO) by GC-FID, method 8015B

| Method Blank | | | | | | | QC Batch ID | | |
|------------------------------------|--------|--------------|---------------|-------|------------|-------------------|-------------|-------------|-------------|
| | Result | RL | Control Limit | Units | | | | | |
| Diesel Range Organics (DRO) | ND | 7 | <3.5 | mg/kg | | | Q49432 | | |
| Laboratory Control Sample | | | | | | | QC Batch ID | | |
| | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | | | |
| Diesel Range Organics (DRO) | 54.8 | 80 | | mg/kg | 69 | 55-109 | Q49432 | | |
| Matrix Spike | | | | | | | QC Batch ID | | |
| Sample ID: | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | | | |
| 276286 Diesel Range Organics (DRO) | 391 | 80 | | mg/kg | -8 # | 50-117 | Q49432 | | |
| Matrix Spike Duplicate | | | | | | | QC Batch ID | | |
| Sample ID: | Result | Spike Amount | | Units | Recovery % | Recovery Ranges % | RPD % | RPD Range % | QC Batch ID |
| 276286 Diesel Range Organics (DRO) | 302 | 80 | | mg/kg | -119 # | 50-117 | 26 # | 0 - 24 | Q49432 |

#-See Case Narrative



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

Client Company Name: AMEC
 Report To/Contact Name: Helen Corley
 Reporting Address: 101 W Friendly Ste 603 Greensboro, NC 27401
 Phone: 336-641-5398 Fax (Yes) (No):
 Email (Yes) (No) Email Address: helen.corley@amec.com
 EDD Type: PDF Excel Other
 Site Location Name: Parcel 199
 Site Location Physical Address:

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2 QUOTE # TO ENSURE PROPER BILLING: 34927.1.1
 Project Name: Ashe Co PSA UST Project: (Yes) (No)
 Short Hold Analysis: (Yes) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I III IV) provisions and/or QC Requirements
 Invoice To: Helen Corley
 Address: Same

Purchase Order No./Billing Reference
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 "Working Days" 6-9 Days Standard 10 days Pre-Approved
 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
 Samples INTACT upon arrival? YES NO N/A
 Received ON WET ICE? Temp 3.8
 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 | | | PRESERVATIVES | ANALYSES REQUESTED | REMARKS | PRISM LAB ID NO. |
|---------------------------|----------------|-------------------------------|--------------------------------|------------------|-----|-------|---------------|--------------------|---------|------------------|
| | | | | *TYPE SEE BELOW | NO. | SIZE | | | | |
| P99-SB-1(56) | 4-1-10 | 1010 | soil | vars | 4 | var g | | | | 275669 |
| P99-SB-2(2-3) | | 1030 | | | | | | | | 275670 |
| P99-SB-3(2-3) | | 1045 | | | | | | | | 275671 |
| P99-SB-4(3-4) | | 1100 | | | | | | | | 275672 |
| P99-SB-5(1-2) | | 1200 | | | | | | | | 275673 |
| P99-SB-6(4.5-5.5) | | 1210 | | | | | | | | 275674 |
| P99-SB-7(5-6) | | 1405 | | | | | | | | 275675 |
| P99-SB-8(5-6) | | 1415 | | | | | | | | 275676 |
| P99-SB-9(7-8) | | 1430 | | | | | | | | 275677 |
| P99-SB-10(7-8) | | 1445 | | | | | | | | 275678 |

PRESS DOWN FIRMLY - 3 COPIES

Sampler's Signature: Troy L Holzschuh Sampled By (Print Name): Troy L Holzschuh Affiliation: AMEC
 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) Troy L Holzschuh Received By: (Signature) _____
 Relinquished By: (Signature) _____ Received By: (Signature) _____
 Relinquished By: (Signature) _____ Received By: (Signature) _____
 Method of Shipment: Fed Ex UPS Hand-delivered Prism Field Service Other
 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.
 Additional Comments: 40
 Date: 4/5/10 Military/Hours: 1100
 Date: 4/5/10 Military/Hours: 1100
 COC Group No.: G 0110064
 NPDES: NC SC NC SC NC SC NC SC
 USF: NC SC NC SC NC SC NC SC
 DRINKING WATER: NC SC NC SC NC SC
 GROUNDWATER: NC SC NC SC NC SC
 SOLID WASTE: NC SC NC SC
 RCRA: NC SC NC SC
 CERCLA: NC SC NC SC
 LANDFILL: 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:

SEE REVERSE FOR TERMS & CONDITIONS
 ORIGINAL



Full-Service Analytical & Environmental Solutions
 449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543
 Phone: 704/525-6364 • Fax: 704/525-0409

Client Company Name: AMEC E&E
 Report To/Contact Name: Helen Corley
 Reporting Address: 101 W. Friendly Ave Ste 603
Greensboro, NC 27401
 Phone: 336-641-5348 Fax (Yes) (No):
 Email (Yes) (No) Email Address: helen.corley@amec.com
 EDD Type: PDF Excel Other
 Site Location Name: Parcel 99
 Site Location Physical Address: Hwy 88 & Main St

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2 QUOTE # TO ENSURE PROPER BILLING: 34977.1.1
 Project Name: Ashe Co. PSA's UST Project: (Yes) (No)
 Short Hold Analysis: (Yes) (No)
 *Please ATTACH any project specific reporting (QC LEVEL I III IV) provisions and/or QC Requirements
 Invoice To: Helen Corley
 Address: Same

Purchase Order No./Billing Reference 34977.1.1
 Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days
 "Working Days" 6-9 Days Standard 10 days Rush Work Must Be Pre-Approved
 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
 Samples INTACT upon arrival? YES NO N/A
 Received ON WET ICE? Temp 4.8
 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 | | PRESERVATIVES | ANALYSES REQUESTED | REMARKS | PRISM LAB ID NO. |
|---------------------------|----------------|-------------------------------|--------------------------------|------------------|----------|---------------|--------------------|---------|------------------|
| | | | | *TYPE SEE BELOW | NO. SIZE | | | | |
| P99-SB-11(7-8) | 4-1-10 | 1510 | Soil | G Von | 4 6.0ea | | DRG 0809 | | 275679 |
| P99-SB-12(5-6) | | 1530 | | | | | | | 275680 |
| P99-SB-13(6-7) | | 1605 | | | | | | | 275681 |
| P99-SB-14(3-4) | | 1620 | | | | | | | 275682 |
| P99-SB-15(5-6) | | 1645 | | | | | | | 275683 |
| P99-SB-16(5-6) | | 1705 | | | | | | | 275684 |

PRESS DOWN FIRMLY - 3 COPIES

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

Additional Comments: 24

Sampler's Signature: Troy L Holzschuh Sampled By (Print Name): Troy L Holzschuh Affiliation: AMEC
 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) Troy L Holzschuh Received By: (Signature)
 Relinquished By: (Signature) Troy L Holzschuh Received By: (Signature)
 Relinquished By: (Signature) Troy L Holzschuh Received By: (Signature)
 Date: 4/5/10 Military/Hours: 1100
 Date: 4/5/10 Military/Hours: 1100
 COO Group No. 6041024

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
 NPDES: NC SC NC SC NC SC NC SC NC SC NC SC NC SC
 DRINKING WATER: NC SC NC SC NC SC NC SC
 SOLID WASTE: NC SC NC SC NC SC
 RCRA: NC SC NC SC
 CERCLA: NC SC NC SC
 LANDFILL: 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)

SEE REVERSE FOR TERMS & CONDITIONS
 ORIGINAL