

**REPORT OF PRELIMINARY  
ENVIRONMENTAL SITE ASSESSMENT**

**RONNIE HENDERSON PROPERTY, PARCEL # 906  
STATE PROJECT U-5132, TIP NO. 45155.1.1  
1549 LEJEUNE BOULEVARD  
JACKSONVILLE, NORTH CAROLINA**

Prepared for:

**North Carolina Department of Transportation  
Professional Services Management Unit  
1592 Mail Service Center  
Raleigh, North Carolina 27699**

Prepared by:

**MACTEC Engineering and Consulting, Inc.  
3301 Atlantic Avenue  
Raleigh, North Carolina 27604**

**MACTEC Project No. 6470-10-0207**

**October 29, 2010**





engineering and constructing a better tomorrow

October 29, 2010

Mr. Cathy Houser, P.E.  
NCDOT Professional Services Management Unit  
1592 Mail Service Center  
Raleigh, North Carolina 27699

Subject: **Report of Preliminary Environmental Site Assessment  
Ronnie Henderson Property, Parcel #906  
State Project U-5132, Tip No. 45155.1.1  
1549 Lejeune Boulevard  
Jacksonville, North Carolina  
MACTEC Project No. 6470-10-0207**

Dear Ms. Houser:

As authorized by your acceptance of MACTEC Proposal No. PROP 10-RAL-385 dated September 10, 2010, MACTEC Engineering and Consulting, Inc. (MACTEC) is pleased to submit the attached Report of Preliminary Environmental Site Assessment for the above-referenced site.

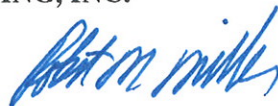
This report is intended for the use of NCDOT subject to contractual terms between NCDOT and MACTEC. Reliance on this document by any other party is not allowed without the expressed, written consent of MACTEC. Use of this report for purposes beyond those reasonably intended by NCDOT and MACTEC will be at the sole risk of the user.

This report presents project information and assessment activities conducted, along with our findings, conclusions and recommendations. We appreciate your selection of MACTEC for this project and look forward to assisting you further on this and other projects. If you have any questions, please do not hesitate to contact us.

Sincerely,

**MACTEC ENGINEERING AND CONSULTING, INC.**

  
Matthew J. Gillis  
Staff Scientist

  
Robert M. Miller, P.E.  
Senior Project Manager/Principal Engineer



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## **1.0 INTRODUCTION**

MACTEC Engineering and Consulting, Inc. (MACTEC) was contracted by North Carolina Department of Transportation (NCDOT) to perform a Preliminary Environmental Site Assessment of the property owned by Ronnie Henderson located at 1549 Lejeune Boulevard in Jacksonville, Onslow County, North Carolina (Figure 1). This property was one of two sites that were investigated by MACTEC in conjunction with State Project U-5132. MACTEC understands that NCDOT is planning road improvements to the area. The entire property is being acquired by NCDOT for this project. NCDOT requested that MACTEC assess the subject site to evaluate the extent (if any) of soil contamination related to activity (past or present) at this location and the impact (if any) on the proposed road improvements. This report presents MACTEC's assessment activities, findings, conclusions and recommendations.

### **1.1 Site Location**

The Ronnie Henderson (Henderson) property is located at 1549 Lejeune Boulevard in Jacksonville, Onslow County, North Carolina. The site consists of approximately 0.22 acres of land and is developed with single-family residence converted into a barber shop. The Onslow County Geographic Information Services (GIS) identifies the site as parcel identification number (PIN) 438610363039. The site is bound to the north and east by the Louise Crumbley property Parcel #905; to the south by Lejeune Boulevard, across which is wooded, undeveloped land; and to the west by West 24 Service Road (Figure 2).

### **1.2 Background Information**

The Henderson property includes a building that is 526 square feet in area and is constructed with a concrete slab foundation and plywood exterior. MACTEC observed a cinderblock foundation along the northern boundary of the property. The asphalt driveway provides access to Lejeune Boulevard.

## **2.0 ASSESSMENT ACTIVITIES**

Prior to field activities, MACTEC prepared a site health and safety plan in accordance with OSHA 1910.120 requirements. MACTEC contacted ULOCO and contracted Priority Underground Locating to mark the locations of underground utilities at the site. NCDOT contracted with Schnabel Engineering (Schnabel) to perform a geophysical survey to identify suspected USTs on the property and to identify buried utilities at the site. Schnabel provided paint mark outs of buried utilities and suspected UST locations to MACTEC prior to our assessment activities. Schnabel did not identify anomalies that may be USTs. Schnabel's Geophysics Report is included in Appendix A.

### **2.1 Soil Assessment**

On September 20, 2010, Troxler Geologic Services, Inc. (Troxler), under contract to MACTEC, advanced six soil borings (Nos. SB-15 through SB-20) at the subject site using a Geoprobe™ direct-push technology. Soil boring locations were selected based on the results of the geophysical

investigation and field observations. Figure 2 shows a site layout and the locations of the soil borings. Coordinates of the soil boring locations were recorded using a hand-held GPS.

MACTEC collected soil samples from each boring using the procedures outlined in Appendix B. Copies of soil boring records are included in Appendix C.

MACTEC instructed Troxler to advance each soil boring to approximately eight feet below ground surface (bgs), due to the shallow groundwater table. MACTEC screened soil samples from each boring at one-foot intervals for volatile organic vapors using a photoionization detector (PID) and selected one soil sample from each boring for laboratory testing. MACTEC selected the soil sample that exhibited the highest PID measurement or the deepest, unsaturated soil sample if the PID did not detect organic vapors. Soil borings SB-15 through SB-20 were backfilled with the excess soil cuttings and bentonite chips.

## **2.2 Soil Analysis**

MACTEC submitted the soil samples to SGS North America, Inc. (SGS) of Wilmington, North Carolina for analysis for total petroleum hydrocarbons (TPH) diesel range organics (DRO) according to EPA Preparation/Test Methods 3550/8015, and TPH gasoline range organics (GRO) according to EPA Preparation/Testing Methods 5035/8015.

## **3.0 LABORATORY RESULTS**

The laboratory test results are summarized on Table 1. The laboratory test reports and chain-of-custody records are included in Appendix D.

### **3.1 Soil Sample Analytical Results**

The laboratory detected TPH DRO in the soil samples collected from soil borings SB-15 and SB-17 at concentrations that exceed the North Carolina Department of Environment and Natural Resources (NCDENR) Action Level of 10 mg/Kg.

## **4.0 CONCLUSIONS AND RECOMMENDATIONS**

Based on the Preliminary Environmental Site Assessment, MACTEC offers the following conclusions and recommendations:

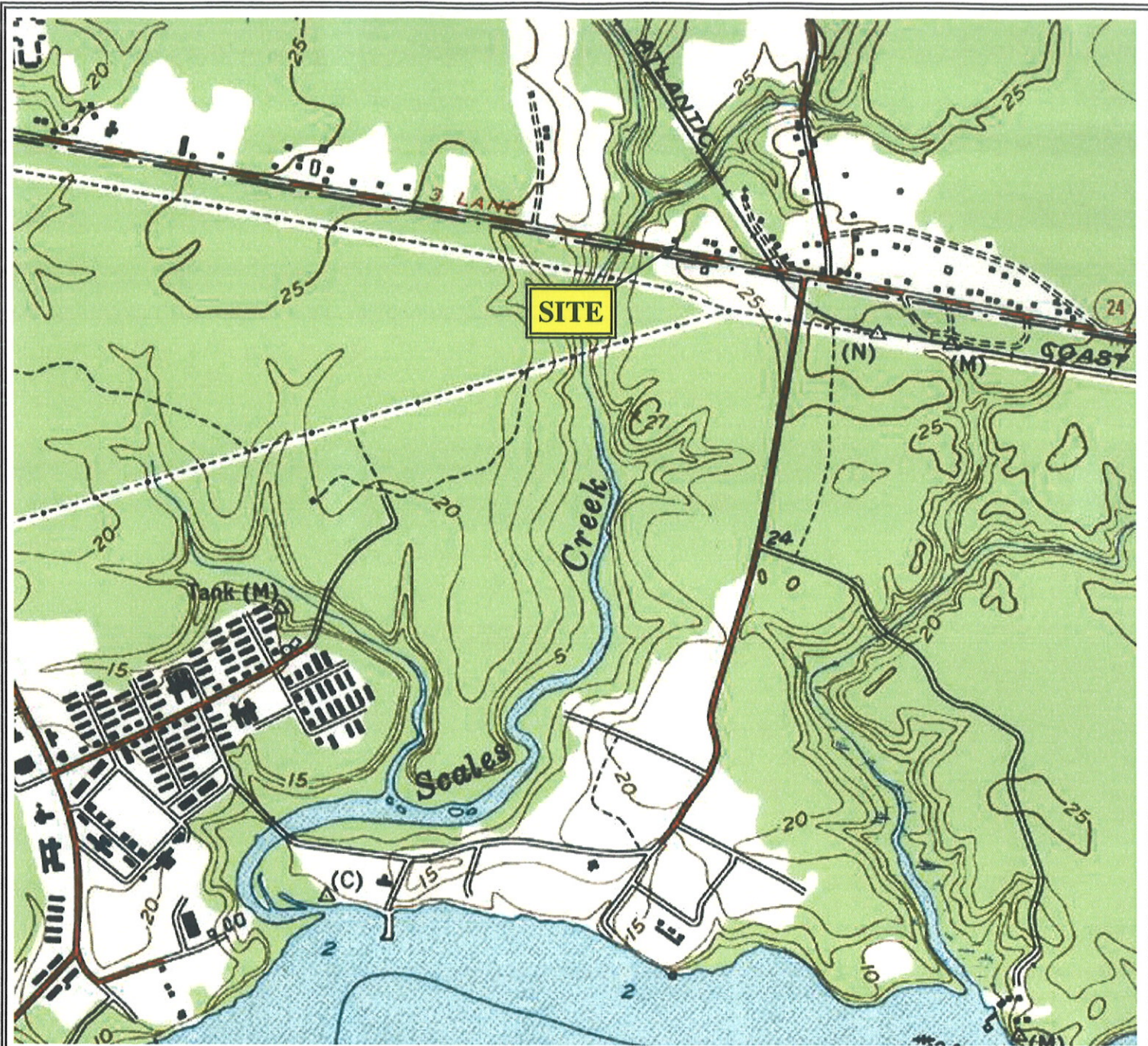
- The laboratory detected TPH DRO in two soil samples (SB-15 and SB-17) at concentrations which exceed NCDENR's Action Level of 10 mg/Kg. Figure 2 shows the estimated extent of contamination at these locations.
- If the impacted soil at the locations of SB-15 and SB-17 extends up to five feet horizontally in all directions and five feet vertically from the boring location, an estimated total of 15 cubic yards of impacted soil is present at each soil boring location.

- The presence of TPH is evidence of a release of petroleum. MACTEC recommends notifying the property owner of this finding, who should then report this evidence to the Wilmington Regional Office of NCDENR.

## **5.0 QUALIFICATIONS**

This assessment was performed under a limited scope for those purposes described above. The conclusions and recommendations presented in this report are based upon the data that were reviewed and documented in this report along with our experience on similar projects. The discovery of any additional information concerning environmental conditions at the site should be reported to MACTEC for additional review so that potential environmental impacts can be reassessed and the conclusions and recommendations modified, if appropriate.

## **FIGURES**



**JACKSONVILLE SOUTH, NC**

1997

NIMA 5553 III NW-Series V 842

CONTOUR INTERVAL 10 FEET  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929  
 1000 0 1000 2000



QUADRANGLE LOCATION

NOTE: SITE LOCATION IS APPROXIMATE

**MACTEC**

MACTEC ENGINEERING AND CONSULTING, INC.  
 3301 ATLANTIC AVENUE  
 RALEIGH, NORTH CAROLINA

**TOPOGRAPHIC SITE MAP  
 RONNIE HENDERSON PROPERTY  
 PARCEL #906  
 JACKSONVILLE, NORTH CAROLINA**

DRAWN: MJG

DATE: OCTOBER 2010

FIGURE

ENG CHECK: CBS

SCALE: 1 : 12000

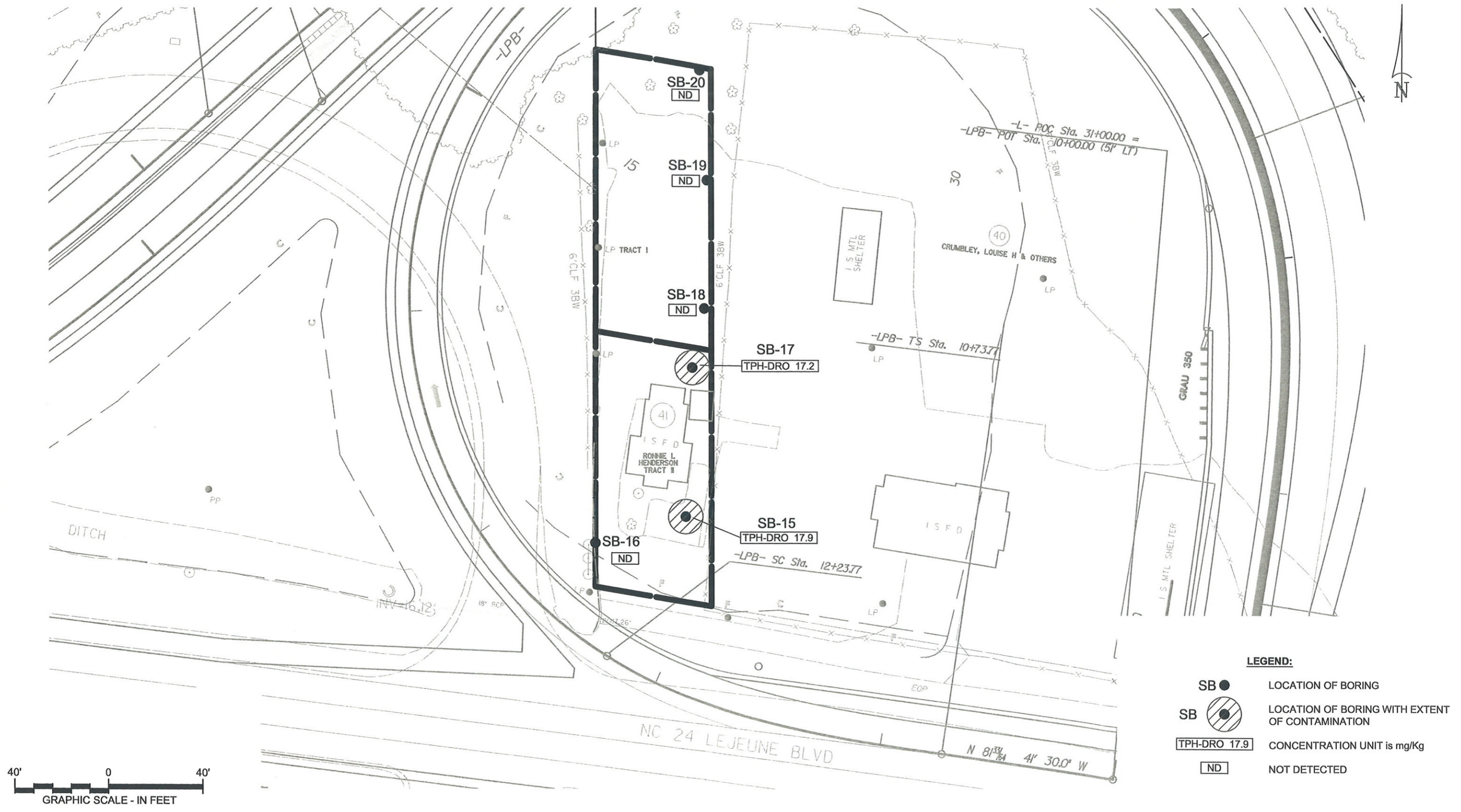
APPROVAL: [Signature]

JOB: 6470-10-0207

**1**



P:\6470\10\0207 U-5132 PSs in Onslow County Drawings\Site Location Map- Parcel 906.dwg Thu, 28 Oct 2010 - 9:41am rrrhh



**LEGEND:**

- SB ● LOCATION OF BORING
- SB ●/● LOCATION OF BORING WITH EXTENT OF CONTAMINATION
- TPH-DRO 17.9 CONCENTRATION UNIT is mg/Kg
- ND NOT DETECTED



**SITE LOCATION MAP**  
**RONNIE HENDERSON PROPERTY, PARCEL #906**  
**PROJECT No. U-5132 TIP No. 45155.1.1**  
**JACKSONVILLE, NORTH CAROLINA**

|                              |                       |
|------------------------------|-----------------------|
| DRAWN: R.R.                  | DATE: OCTOBER 2010    |
| ENG CHECK: <i>MJB</i>        | SCALE: AS SHOWN       |
| APPROVAL: <i>[Signature]</i> | JOB No.: 6470-10-0207 |

FIGURE  
**2**

REFERENCE: MACTEC FIELD NOTES; LABORATORY TEST RESULTS.

## **TABLE**

**Table 1**  
**Summary of Laboratory Test Results**  
**State Project U-5132, TIP No. 45155.1.1**  
**Ronnie Henderson Property, Parcel #906**  
**Jacksonville, North Carolina**  
**MACTEC Job No. 6470-10-0207**

| Analytical Method →        |                |              | EPA 8015    | EPA 8015  |
|----------------------------|----------------|--------------|-------------|-----------|
| Contaminant of Concern →   |                |              | TPH-DRO     | TPH-GRO   |
| Sample ID                  | Date Collected | Sample Depth |             |           |
|                            |                |              | mg/Kg       |           |
| SB-15                      | 9/20/2010      | 7'-8'        | <b>17.9</b> | <5.06     |
| SB-16                      | 9/20/2010      | 6'-7'        | <7.78       | <5.51     |
| SB-17                      | 9/20/2010      | 7'-8'        | <b>17.2</b> | <5.28     |
| SB-18                      | 9/20/2010      | 7'-8'        | <7.37       | <4.58     |
| SB-19                      | 9/20/2010      | 4'-5'        | <6.96       | <4.72     |
| SB-20                      | 9/20/2010      | 7'-8'        | <7.34       | <5.01     |
| <i>NCDENR Action Level</i> |                |              | <i>10</i>   | <i>10</i> |

Notes:

NCDENR North Carolina Department of Environment and Natural Resources

**Bold** Concentration exceeds Reporting Limit (RL)

**Bold** Concentration exceeds the NCDENR Action Level

<# Analyte not detected above the RL

Prepared by: MJB Date: 10-1-10

Checked by: CBS Date: 10/28/10

**APPENDIX A**

**SCHNABEL GEOPHYSICS REPORT**



October 14, 2010

Terry W. Fox, LG  
NCDOT, Geotechnical Engineering Unit  
1020 Birch Ridge Drive  
Raleigh, NC 27610

RE:           State Project:   U-5132  
              WBS Element:  45155.1.1  
              County:       Onslow  
              Description:  Jacksonville – NC 24 (Lejeune Blvd) Trumpet Interchange between SR  
                                  1308 (Bell Fork Road) and the US 17 Bypass

**Subject:       Project 09210013.28 Report on Geophysical Surveys  
                  Parcels 905 and 906, Onslow County, North Carolina**

Dear Mr. Fox:

**SCHNABEL ENGINEERING SOUTH, PC** (Schnabel) is pleased to present this report on the geophysical surveys we conducted on the subject site. The report includes two 8.5x11 and two 11x17 color figures.

## **INTRODUCTION**

The work described in this report was conducted on September 13, 14, and 15, 2010, by Schnabel under our 2009 contract with the NCDOT. The work was conducted over the accessible areas of the parcels as indicated by the NCDOT to support their environmental assessment of the subject properties (Louise Crumbley Property and Ronnie Henderson Property). Photographs of the parcels are included on Figure 1. The properties are located on the north side of NC 24 between SR 1308 (Bell Fork Road) and the US 17 Bypass in Jacksonville, NC. 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, including areas of reinforced concrete, 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.

## **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 (monitoring wells, 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 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.

## **DISCUSSION OF RESULTS**

The contoured EM61 data collected over Parcels 905 and 906 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). The GPR data collected at the site do not indicate the presence of metallic UST's within the areas surveyed.

## **CONCLUSIONS**

Our evaluation of the geophysical data collected on the subject properties on Project U-5132 in Jacksonville, NC indicates the following:

The geophysical data do not indicate the presence of metallic UST's in the areas surveyed on the subject properties.

**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.

We appreciate the opportunity to have provided these services. Please call if you need additional information or have any questions.

Sincerely,

**SCHNABEL ENGINEERING SOUTH, PC**



Jeremy S Strohmeyer, LG  
Project Manager



Edward D Billington, LG  
Senior Vice President

JW:JS:NB

Attachments: Figures (4)

FILE: G:\2009 PROJECTS\09210013 (NCDOT 2009 GEOTECH UNIT SERVICES)\09210013.28 (U-5132, ONSLOW COUNTY)\REPORT\SCHNABEL GEOPHYSICAL REPORT ON U-5132.DOCX



Parcel 905 – Louise Crumbley Property, looking east



Parcel 906 – Ronnie Henderson Property, looking north



STATE PROJECT U-5132  
NC DEPT. OF TRANSPORTATION  
ONSLOW COUNTY, NORTH CAROLINA  
PROJECT NO. 09210013.28

PARCELS 905 AND  
906 SITE PHOTOS

FIGURE 1

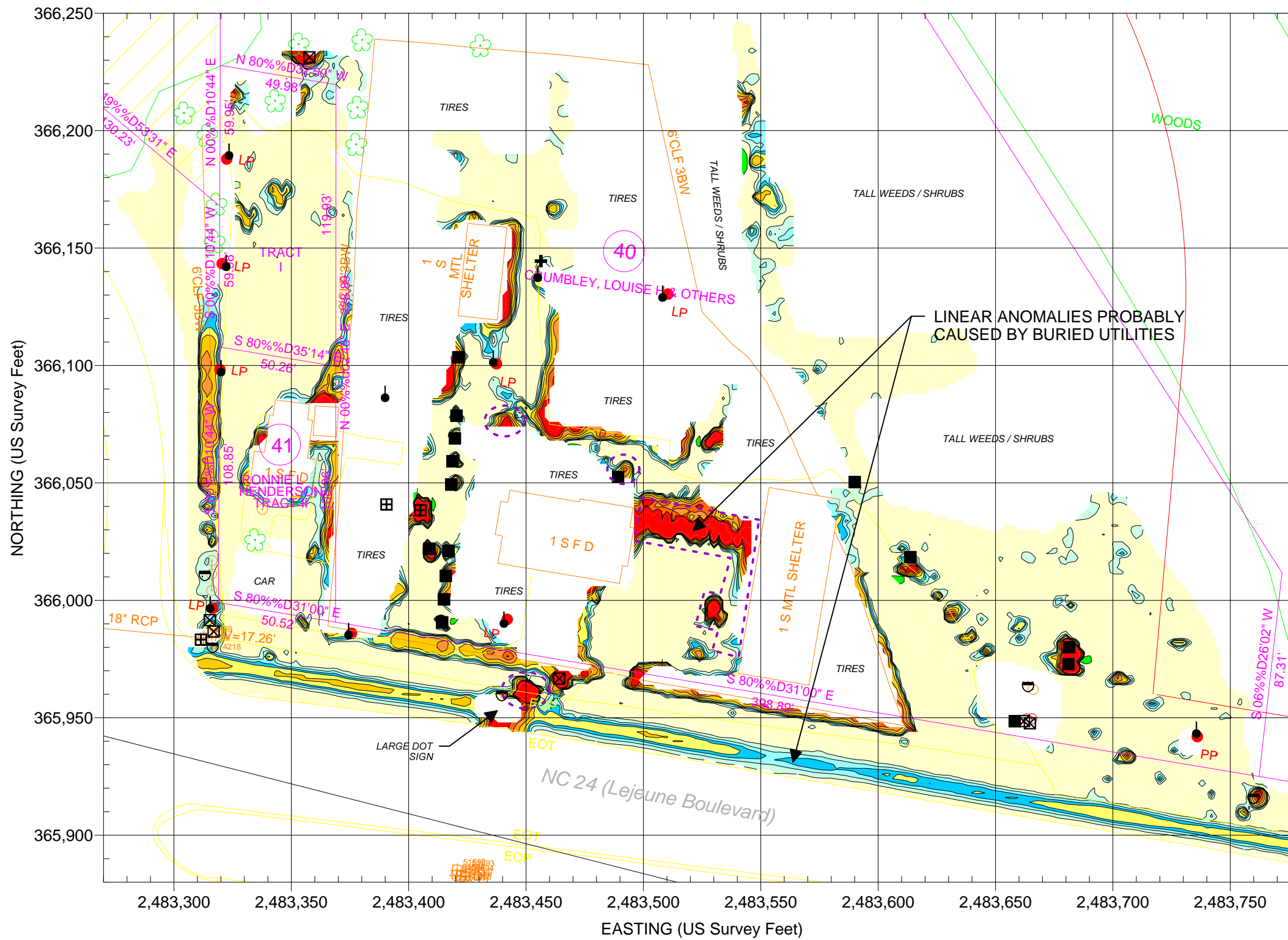




Geonics EM61-MK2

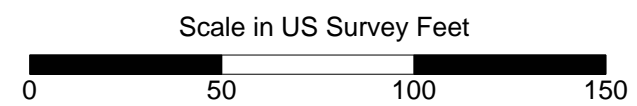
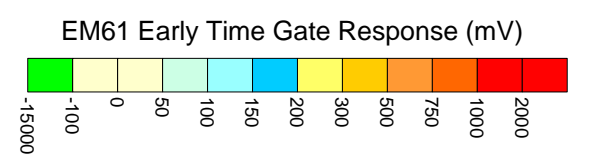


GSSI SIR-3000



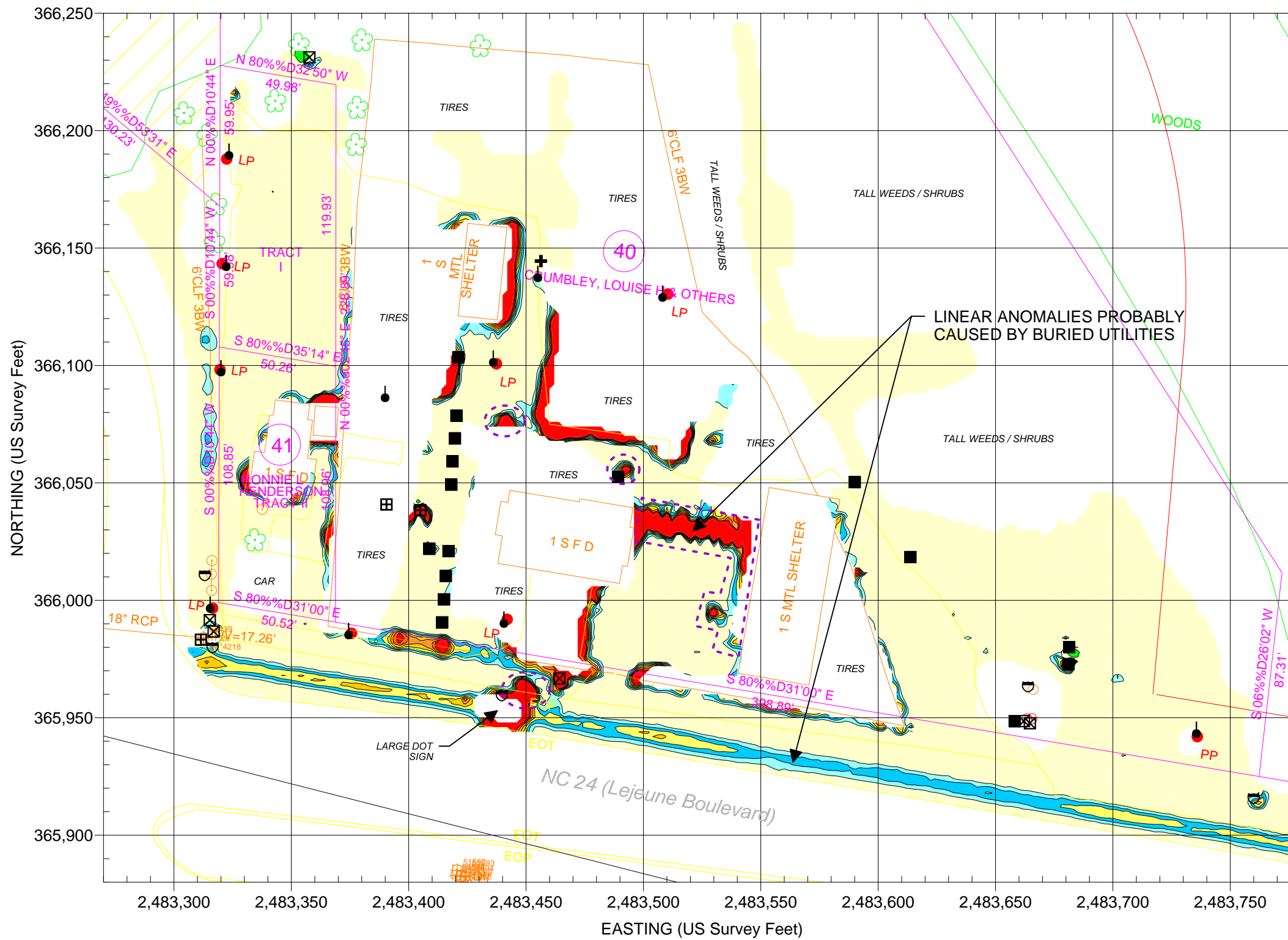
| EXPLANATION |                                   |
|-------------|-----------------------------------|
|             | SIGN                              |
|             | UTILITY POLE                      |
|             | GUY WIRE                          |
|             | MISCELLANEOUS METALLIC OBJECT     |
|             | UTILITY MANHOLE, METER, BOX, ETC. |
|             | STORM SEWER INLET                 |
|             | DOT PROPOSED RW                   |
|             | PROPERTY LINE                     |
|             | GPR SURVEY AREA                   |

REF.: NCDOT FILE: u5132\_rdy\_psh06.dgn  
(FOR SOME SITE FEATURES)



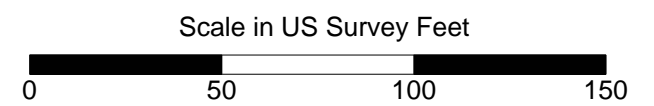
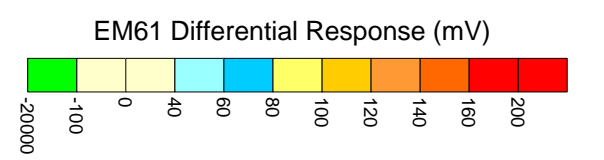
Note: The contour plot shows the earliest and most sensitive time gate of the EM61 bottom coil/channel in millivolts (mV). The EM data were collected on September 13 through 15, 2010, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina Zone 3200, using the NAD 1983 datum. GPR data were acquired on September 15, 2010, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.

|  |                                 |                      |
|--|---------------------------------|----------------------|
|  | STATE PROJECT U-5132            | PARCELS 905 & 906    |
|  | NC DEPARTMENT OF TRANSPORTATION | EM61 EARLY TIME GATE |
|  | ONSLOW COUNTY, NORTH CAROLINA   | RESPONSE             |
|  | PROJECT NO. 09210013.28         | FIGURE 3             |



| EXPLANATION |                                   |
|-------------|-----------------------------------|
|             | SIGN                              |
|             | UTILITY POLE                      |
|             | GUY WIRE                          |
|             | MISCELLANEOUS METALLIC OBJECT     |
|             | UTILITY MANHOLE, METER, BOX, ETC. |
|             | STORM SEWER INLET                 |
|             | DOT PROPOSED RW                   |
|             | PROPERTY LINE                     |
|             | GPR SURVEY AREA                   |

REF.: NCDOT FILE: u5132\_rdy\_psh06.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 September 13 through 15, 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 September 15, 2010, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.

|  |                                 |                            |
|--|---------------------------------|----------------------------|
|  | STATE PROJECT U-5132            | PARCELS 905 & 906          |
|  | NC DEPARTMENT OF TRANSPORTATION | EM61 DIFFERENTIAL RESPONSE |
|  | PROJECT NO. 09210013.28         | FIGURE 4                   |

## **APPENDIX B**

### **PROCEDURES FOR COLLECTING SOIL SAMPLES**

### **Procedure for Collecting Soil Samples for Laboratory Testing Using the Geoprobe**

- MACTEC will collect the soil samples using the Geoprobe hammer impact system. Downforce or percussion will be utilized to advance the sampler to the desired depth to obtain the soil sample.
- Soil cores will be retrieved from the sampler and classified by an on-site geologist or engineer. The one-inch diameter cores are approximately four feet in length and are contained within a pre-cleaned, disposable plastic sleeve.
- Soil samples from the boring soil cores will be placed in pre-labeled, airtight, plastic "twin" bags.
- After several minutes, the gas contained in the "headspace" or void area within one of the twin bags will be tested with a photoionization detector (PID) or flame ionization detector (FID).
- The duplicate of the sample that exhibits the highest headspace reading will be submitted to the laboratory for testing. The remaining portion of the soil core will be utilized for classification purposes.
- The soils will be classified in accordance with the Unified Soils Classification System.
- The soil sample will be placed into laboratory-supplied bottles.
- Sample bottles will be labeled prior to sample collection.
- Caps will be secured on bottles.
- All sample containers will be placed in plastic bags and the bags sealed.
- Documentation, including chain-of-custody record and laboratory analytical request form, will be completed for all samples.
- Samples will be packed in coolers with "bubble wrap" and ice packs for shipment to the laboratory.
- The chain-of-custody record and analytical request form will be placed inside the cooler, which will be sealed with security tape.
- Samples will be sent to the analytical laboratory by overnight courier.

**APPENDIX C**  
**SOIL BORING RECORDS**



MACTEC Engineering and Consulting, Inc.  
 3301 Atlantic Avenue  
 Raleigh, North Carolina

Soil Boring Sample Record

MACTEC Project ID: Ronnie Henderson Property, Parcel #906

MACTEC Field Representative

MACTEC Project #: 6470-10-0207

Gillis

Date: 9-20-10

Boring ID: SB-15

| Depth Interval | Soil Description                               | Time | Headspace Screening Results (in ppm) |  | Comments |
|----------------|--|------|--------------------------------------|--|----------|
|                |  |      | PID                                  |  |          |
| 0-1            | Brown silty fine to medium sand with gravel    |      | 0.0                                  |  |          |
| 1-2            | Brown silty fine to medium sand with gravel    |      | 0.0                                  |  |          |
| 2-3            | Light brown to gray clayey fine to medium sand |      | 0.0                                  |  |          |
| 3-4            | Light brown to gray clayey fine to medium sand |      | 0.0                                  |  |          |
| 4-5            | Light brown to gray clayey fine to medium sand |      | 0.0                                  |  |          |
| 5-6            | Light brown to gray clayey fine to medium sand |      | 0.0                                  |  |          |
| 6-7            | Light brown to gray clayey fine to medium sand |      | 0.0                                  |  |          |
| 7-8            | Light brown to gray clayey fine to medium sand | 1510 | 0.0                                  |  | Sample   |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |

Prepared by: MJS Date: 10-1-10

Checked by: CBS Date: 10/28/10



MACTEC Engineering and Consulting, Inc.  
3301 Atlantic Avenue  
Raleigh, North Carolina

Soil Boring Sample Record

MACTEC Project ID: Ronnie Henderson Property, Parcel #906  
MACTEC Project #: 6470-10-0207  
MACTEC Field Representative  
Gillis

Date: 9-20-10  
Boring ID: SB-16

| Depth Interval | Soil Description                                 | Time | Headspace Screening Results (in ppm) |  | Comments |
|----------------|--|------|--------------------------------------|--|----------|
|                |  |      | PID                                  |  |          |
| 0-1            | Brown silty fine to medium sand                  |      | 0.0                                  |  |          |
| 1-2            | Brown silty fine to medium sand                  |      | 0.0                                  |  |          |
| 2-3            | Brown silty fine to medium sand                  |      | 0.0                                  |  |          |
| 3-4            | Brown silty fine to medium sand                  |      | 0.0                                  |  |          |
| 4-5            | Light brown clayey fine to medium sand           |      | 0.0                                  |  |          |
| 5-6            | Light brown clayey fine to medium sand           |      | 0.0                                  |  |          |
| 6-7            | Light brown clayey fine to medium sand           | 1520 | 0.0                                  |  | Sample   |
| 7-8            | Light brown to white fine to medium sand (Moist) |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |

Prepared by: MSG Date: 10-1-10

Checked by: CBS Date: 10/28/10





MACTEC Engineering and Consulting, Inc.  
 3301 Atlantic Avenue  
 Raleigh, North Carolina

Soil Boring Sample Record

MACTEC Project ID: Ronnie Henderson Property, Parcel #906  
 MACTEC Project #: 6470-10-0207

MACTEC Field Representative  
 Gillis

Date: 9-20-10

Boring ID: SB-17

| Depth Interval | Soil Description                            | Time | Headspace Screening Results (in ppm) |  | Comments |
|----------------|---|------|--------------------------------------|--|----------|
|                |   |      | PID                                  |  |          |
| 0-1            | Brown silty fine to medium sand with gravel |      | 0.0                                  |  |          |
| 1-2            | Brown to black clayey fine to medium sand   |      | 0.0                                  |  |          |
| 2-3            | Brown to black clayey fine to medium sand   |      | 0.0                                  |  |          |
| 3-4            | Brown to black clayey fine to medium sand   |      | 0.0                                  |  |          |
| 4-5            | Brown to black clayey fine to medium sand   |      | 0.0                                  |  |          |
| 5-6            | Brown to black clayey fine to medium sand   |      | 0.0                                  |  |          |
| 6-7            | Brown to black clayey fine to medium sand   |      | 0.0                                  |  |          |
| 7-8            | Brown to black clayey fine to medium sand   | 1530 | 0.0                                  |  | Sample   |
|                |   |      |                                      |  |          |
|                |   |      |                                      |  |          |
|                |   |      |                                      |  |          |
|                |   |      |                                      |  |          |
|                |   |      |                                      |  |          |
|                |   |      |                                      |  |          |

Prepared by: MJG Date: 10-1-10

Checked by: CBS Date: 10/28/10



MACTEC Engineering and Consulting, Inc.  
3301 Atlantic Avenue  
Raleigh, North Carolina

Soil Boring Sample Record

MACTEC Project ID: Ronnie Henderson Property, Parcel #906

MACTEC Field Representative

MACTEC Project #: 6470-10-0207

Gillis

Date: 9-20-10

Boring ID: SB-18

| Depth Interval | Soil Description                       | Time | Headspace Screening Results (in ppm) |  | Comments |
|----------------|--|------|--------------------------------------|--|----------|
|                |  |      | PID                                  |  |          |
| 0-1            | Brown silty fine to medium sand        |      | 0.0                                  |  |          |
| 1-2            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 2-3            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 3-4            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 4-5            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 5-6            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 6-7            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 7-8            | Light brown clayey fine to medium sand | 1540 | 0.0                                  |  | Sample   |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |

Prepared by: MJS Date: 10-1-10

Checked by: CB Date: 10/28/10



MACTEC Engineering and Consulting, Inc.  
3301 Atlantic Avenue  
Raleigh, North Carolina

Soil Boring Sample Record

MACTEC Project ID: Ronnie Henderson Property, Parcel #906

MACTEC Field Representative

MACTEC Project #: 6470-10-0207

Gillis

Date: 9-20-10

Boring ID: SB-19

| Depth Interval | Soil Description                                 | Time | Headspace Screening Results (in ppm) |  | Comments |
|----------------|--|------|--------------------------------------|--|----------|
|                |  |      | PID                                  |  |          |
| 0-1            | Light brown silty fine to medium sand            |      | 0.0                                  |  |          |
| 1-2            | Light brown clayey fine to medium sand           |      | 0.0                                  |  |          |
| 2-3            | Light brown clayey fine to medium sand           |      | 0.0                                  |  |          |
| 3-4            | Light brown clayey fine to medium sand           |      | 0.0                                  |  |          |
| 4-5            | Light brown clayey fine to medium sand           | 1550 | 0.0                                  |  | Sample   |
| 5-6            | Light brown to white fine to medium sand (Moist) |      |                                      |  |          |
| 6-7            | Light brown to white fine to medium sand (Moist) |      |                                      |  |          |
| 7-8            | Light brown to white fine to medium sand (Moist) |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |

Prepared by: MJB Date: 10-1-10

Checked by: CBS Date: 10/28/10



MACTEC Engineering and Consulting, Inc.  
3301 Atlantic Avenue  
Raleigh, North Carolina

Soil Boring Sample Record

MACTEC Project ID: Ronnie Henderson Property, Parcel #906  
MACTEC Project #: 6470-10-0207

MACTEC Field Representative  
Gillis

Date: 9-20-10

Boring ID: SB-20

| Depth Interval | Soil Description                       | Time | Headspace Screening Results (in ppm) |  | Comments |
|----------------|--|------|--------------------------------------|--|----------|
|                |  |      | PID                                  |  |          |
| 0-1            | Brown silty fine to medium sand        |      | 0.0                                  |  |          |
| 1-2            | Brown silty fine to medium sand        |      | 0.0                                  |  |          |
| 2-3            | Brown silty fine to medium sand        |      | 0.0                                  |  |          |
| 3-4            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 4-5            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 5-6            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 6-7            | Light brown clayey fine to medium sand |      | 0.0                                  |  |          |
| 7-8            | Light brown clayey fine to medium sand | 1600 | 0.0                                  |  | Sample   |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |
|                |  |      |                                      |  |          |

Prepared by: MJT Date: 10-1-10

Checked by: CBS Date: 10/28/10

**APPENDIX D**

**LABORATORY ANALYTICAL REPORTS  
AND CHAIN-OF-CUSTODY RECORDS**



Matt Gillis  
Mactec  
3301 Atlantic Ave.  
Raleigh, NC 27604

Report Number: G132-2239

Client Project: NCDOT Jacksonville

Dear Matt Gillis,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Barbara Hager at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America, Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America, Inc.

Barbara Hager      28-Sept.-10  
Project Manager      Date  
Barbara Hager

SGS North America, Inc.  
List of Reporting Abbreviations  
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

UJ = Target analytes with recoveries that are  $10\% < \%R < LCL$ ; # of MEs are allowable and compounds are not detected in the sample.

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

**Special Notes:**

- 1) Metals and mercury samples are digested with a hot block; see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.

**Results for Total Petroleum Hydrocarbons  
by GC/FID 8015**

Client Sample ID: SB-15  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-15D  
 Lab Project ID: G132-2239

Date Collected: 9/20/2010 15:10  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 79.22  
 Report Basis: Dry Weight

| Parameter                      | Result | RL                 | Units                 | Dilution Factor     | Date Analyzed           |
|--------------------------------|--------|--------------------|-----------------------|---------------------|-------------------------|
| Diesel Range Organics          | 17.9   | 7.63               | mg/Kg                 | 1                   | 09/24/10 16:02          |
| <b>Surrogate Spike Results</b> |        | <b>Spike Added</b> | <b>Control Limits</b> | <b>Spike Result</b> | <b>Percent Recovery</b> |
| OTP                            |        | 40                 | 40-140                | 30.7                | 76.7                    |

**Comments:**

**Batch Information**

Analytical Batch: EP092410  
 Analytical Method: 8015  
 Instrument: GC6  
 Analyst: BWS

Prep batch: 17435  
 Prep Method: 3541  
 Prep Date: 09/24/10  
 Initial Prep Wt/Vol: 33.07 G  
 Prep Final Vol: 10 mL



**Results for Total Petroleum Hydrocarbons  
by GC/FID 8015**

Client Sample ID: SB-16  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-16D  
 Lab Project ID: G132-2239

Date Collected: 9/20/2010 15:20  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 78.26  
 Report Basis: Dry Weight

| Parameter                      | Result | RL                 | Units                 | Dilution Factor     | Date Analyzed           |
|--------------------------------|--------|--------------------|-----------------------|---------------------|-------------------------|
| Diesel Range Organics          | BQL    | 7.78               | mg/Kg                 | 1                   | 09/24/10 16:30          |
| <b>Surrogate Spike Results</b> |        | <b>Spike Added</b> | <b>Control Limits</b> | <b>Spike Result</b> | <b>Percent Recovery</b> |
| OTP                            |        | 40                 | 40-140                | 30.2                | 75.4                    |

Comments:

**Batch Information**


Analytical Batch: EP092410  
 Analytical Method: 8015  
 Instrument: GC6  
 Analyst: BWS

Prep batch: 17435  
 Prep Method: 3541  
 Prep Date: 09/24/10  
 Initial Prep Wt/Vol: 32.84 G  
 Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

N.C. Certification #481

Reviewed By:   
 DRO.XLS

**Results for Total Petroleum Hydrocarbons  
by GC/FID 8015**

Client Sample ID: SB-17  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-17D  
 Lab Project ID: G132-2239

Date Collected: 9/20/2010 15:30  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 77.25  
 Report Basis: Dry Weight

| Parameter                      | Result | RL                 | Units                 | Dilution Factor     | Date Analyzed           |
|--------------------------------|--------|--------------------|-----------------------|---------------------|-------------------------|
| Diesel Range Organics          | 17.2   | 7.91               | mg/Kg                 | 1                   | 09/24/10 16:58          |
| <b>Surrogate Spike Results</b> |        | <b>Spike Added</b> | <b>Control Limits</b> | <b>Spike Result</b> | <b>Percent Recovery</b> |
| OTP                            |        | 40                 | 40-140                | 30.5                | 76.3                    |

**Comments:**

**Batch Information**

Analytical Batch: EP092410  
 Analytical Method: 8015  
 Instrument: GC6  
 Analyst: BWS

Prep batch: 17435  
 Prep Method: 3541  
 Prep Date: 09/24/10  
 Initial Prep Wt/Vol: 32.75 G  
 Prep Final Vol: 10 mL

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: SB-18  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-18D  
 Lab Project ID: G132-2239

Date Collected: 9/20/2010 15:40  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 83.46  
 Report Basis: Dry Weight

| Parameter               | Result | RL          | Units          | Dilution Factor | Date Analyzed    |
|-------------------------|--------|-------------|----------------|-----------------|------------------|
| Diesel Range Organics   | BQL    | 7.37        | mg/Kg          | 1               | 09/24/10 17:26   |
| Surrogate Spike Results |        | Spike Added | Control Limits | Spike Result    | Percent Recovery |
| OTP                     |        | 40          | 40-140         | 28.4            | 71.1             |

**Comments:**

**Batch Information**


Analytical Batch: EP092410  
 Analytical Method: 8015  
 Instrument: GC6  
 Analyst: BWS

Prep batch: 17435  
 Prep Method: 3541  
 Prep Date: 09/24/10  
 Initial Prep Wt/Vol: 32.53 G  
 Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

N.C. Certification #481

Reviewed By:   
DRO.XLS

**Results for Total Petroleum Hydrocarbons  
by GC/FID 8015**

Client Sample ID: SB-19  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-19D  
 Lab Project ID: G132-2239

Date Collected: 9/20/2010 15:50  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 88.32  
 Report Basis: Dry Weight

| Parameter                      | Result | RL                 | Units                 | Dilution Factor     | Date Analyzed           |
|--------------------------------|--------|--------------------|-----------------------|---------------------|-------------------------|
| Diesel Range Organics          | BQL    | 6.96               | mg/Kg                 | 1                   | 09/24/10 17:55          |
| <b>Surrogate Spike Results</b> |        | <b>Spike Added</b> | <b>Control Limits</b> | <b>Spike Result</b> | <b>Percent Recovery</b> |
| OTP                            |        | 40                 | 40-140                | 33.7                | 84.4                    |

Comments:

**Batch Information**


Analytical Batch: EP092410  
 Analytical Method: 8015  
 Instrument: GC6  
 Analyst: BWS

Prep batch: 17435  
 Prep Method: 3541  
 Prep Date: 09/24/10  
 Initial Prep Wt/Vol: 32.55 G  
 Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

N.C. Certification #481

Reviewed By:   
DRO.XLS

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: SB-20  
Client Project ID: NCDOT Jacksonville  
Lab Sample ID: G132-2239-20D  
Lab Project ID: G132-2239

Date Collected: 9/20/2010 16:00  
Date Received: 9/22/2010  
Matrix: Soil  
Solids 84.56  
Report Basis: Dry Weight

| Parameter                      | Result | RL                 | Units                 | Dilution Factor     | Date Analyzed           |
|--------------------------------|--------|--------------------|-----------------------|---------------------|-------------------------|
| Diesel Range Organics          | BQL    | 7.34               | mg/Kg                 | 1                   | 09/24/10 18:23          |
| <b>Surrogate Spike Results</b> |        | <b>Spike Added</b> | <b>Control Limits</b> | <b>Spike Result</b> | <b>Percent Recovery</b> |
| OTP                            |        | 40                 | 40-140                | 29.5                | 73.7                    |

Comments:

**Batch Information**


Analytical Batch: EP092410  
Analytical Method: 8015  
Instrument: GC6  
Analyst: BWS

Prep batch: 17435  
Prep Method: 3541  
Prep Date: 09/24/10  
Initial Prep Wt/Vol: 32.22 G  
Prep Final Vol: 10 mL

Analyst: FX

NC Certification #481

N.C. Certification #481

Reviewed By:   
DRO.XLS

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: SB-15  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-15A  
 Lab Project ID: G132-2239  
 Report Basis: Dry Weight

Analyzed By: LMC  
 Date Collected: 9/20/2010 15:10  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 79.22

| Analyte                 | Result | RL   | Units | Dilution Factor | Date Analyzed  |
|-------------------------|--------|------|-------|-----------------|----------------|
| Gasoline Range Organics | BQL    | 5.06 | mg/Kg | 1               | 09/24/10 17:52 |

**Surrogate Spike Results**

|     | Added | Result | Recovery | Flag | Limits |
|-----|-------|--------|----------|------|--------|
| BFB | 100   | 105.0  | 105.0    |      | 70-130 |

**Comments:**

**Batch Information**

Analytical Batch: VP092410  
 Analytical Method: 8015  
 Instrument ID: GC4  
 Analyst: LMC

Prep Method: 5035  
 Initial Wt/Vol: 7.49 g  
 Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By: [Signature]  
GRO.XLS

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: SB-16  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-16A  
 Lab Project ID: G132-2239  
 Report Basis: Dry Weight

Analyzed By: LMC  
 Date Collected: 9/20/2010 15:20  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 78.26

| Analyte                 | Result | RL   | Units | Dilution Factor | Date Analyzed  |
|-------------------------|--------|------|-------|-----------------|----------------|
| Gasoline Range Organics | BQL    | 5.51 | mg/Kg | 1               | 09/24/10 18:19 |

**Surrogate Spike Results**

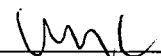
|     | Added | Result | Recovery | Flag | Limits |
|-----|-------|--------|----------|------|--------|
| BFB | 100   | 108.0  | 108.0    |      | 70-130 |

**Comments:**


**Batch Information**

Analytical Batch: VP092410  
 Analytical Method: 8015  
 Instrument ID: GC4  
 Analyst: LMC

Prep Method: 5035  
 Initial Wt/Vol: 6.96 g  
 Final Volume: 5 mL

Analyst: 

NC Certification #481

Reviewed By:   
GRO.XLS

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: SB-17  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-17A  
 Lab Project ID: G132-2239  
 Report Basis: Dry Weight

Analyzed By: LMC  
 Date Collected: 9/20/2010 15:30  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 77.25

| Analyte                 | Result | RL   | Units | Dilution Factor | Date Analyzed  |
|-------------------------|--------|------|-------|-----------------|----------------|
| Gasoline Range Organics | BQL    | 5.28 | mg/Kg | 1               | 09/24/10 18:46 |

**Surrogate Spike Results**

|     | Added | Result | Recovery | Flag | Limits |
|-----|-------|--------|----------|------|--------|
| BFB | 100   | 106.0  | 106.0    |      | 70-130 |

**Comments:**

**Batch Information**

Analytical Batch: VP092410  
 Analytical Method: 8015  
 Instrument ID: GC4  
 Analyst: LMC

Prep Method: 5035  
 Initial Wt/Vol: 7.35 g  
 Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By: [Signature]  
GRO.XLS



**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: SB-18  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-18A  
 Lab Project ID: G132-2239  
 Report Basis: Dry Weight

Analyzed By: LMC  
 Date Collected: 9/20/2010 15:40  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 83.46

| Analyte                 | Result | RL   | Units | Dilution Factor | Date Analyzed  |
|-------------------------|--------|------|-------|-----------------|----------------|
| Gasoline Range Organics | BQL    | 4.58 | mg/Kg | 1               | 09/24/10 19:13 |

**Surrogate Spike Results**

|     | Added | Result | Recovery | Flag | Limits |
|-----|-------|--------|----------|------|--------|
| BFB | 100   | 106.0  | 106.0    |      | 70-130 |

**Comments:**

**Batch Information**

Analytical Batch: VP092410  
 Analytical Method: 8015  
 Instrument ID: GC4  
 Analyst: LMC

Prep Method: 5035  
 Initial Wt/Vol: 7.84 g  
 Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By: [Signature]  
GRO.XLS

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: SB-19  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-19A  
 Lab Project ID: G132-2239  
 Report Basis: Dry Weight

Analyzed By: LMC  
 Date Collected: 9/20/2010 15:50  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 88.32

| Analyte                 | Result | RL   | Units | Dilution Factor | Date Analyzed  |
|-------------------------|--------|------|-------|-----------------|----------------|
| Gasoline Range Organics | BQL    | 4.72 | mg/Kg | 1               | 09/24/10 19:40 |

**Surrogate Spike Results**

|     | Added | Result | Recovery | Flag | Limits |
|-----|-------|--------|----------|------|--------|
| BFB | 100   | 106.0  | 106.0    |      | 70-130 |

**Comments:**

**Batch Information**

Analytical Batch: VP092410  
 Analytical Method: 8015  
 Instrument ID: GC4  
 Analyst: LMC

Prep Method: 5035  
 Initial Wt/Vol: 7.2 g  
 Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By: [Signature]  
GRO.XLS

**Results for Total Petroleum Hydrocarbons**  
by GC/FID 8015

Client Sample ID: SB-20  
 Client Project ID: NCDOT Jacksonville  
 Lab Sample ID: G132-2239-20A  
 Lab Project ID: G132-2239  
 Report Basis: Dry Weight

Analyzed By: LMC  
 Date Collected: 9/20/2010 16:00  
 Date Received: 9/22/2010  
 Matrix: Soil  
 Solids 84.56

| Analyte                 | Result | RL   | Units | Dilution Factor | Date Analyzed  |
|-------------------------|--------|------|-------|-----------------|----------------|
| Gasoline Range Organics | BQL    | 5.01 | mg/Kg | 1               | 09/24/10 20:07 |

**Surrogate Spike Results**

|     | Added | Result | Recovery | Flag | Limits |
|-----|-------|--------|----------|------|--------|
| BFB | 100   | 104.0  | 104.0    |      | 70-130 |

**Comments:**

**Batch Information**

Analytical Batch: VP092410  
 Analytical Method: 8015  
 Instrument ID: GC4  
 Analyst: LMC

Prep Method: 5035  
 Initial Wt/Vol: 7.08 g  
 Final Volume: 5 mL

Analyst: LMC

NC Certification #481

Reviewed By: [Signature]  
GRO.XLS



# CHAIN OF CUSTODY RECORD SGS North America Inc.

- Locations Nationwide
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100872

1 CLIENT: **MATEC** PHONE NO: (919) 876 0416

CONTACT: **Watt Gillis**

PROJECT: **NCDOT Jacksonville: 6470-10-0207**

REPORTS TO: **Bob Miller b.miller@mactec.com**

INVOICE TO: **NCDOT**

FAX NO.:( ) **State Paper**

QUOTE #: **U-5132**

P.O. NUMBER: **WBS 45155.1.1**

SGS Reference: **4122-2239**

Preservatives Used: **3**

Analysis Required: **DRD GIRD**

| LAB NO. | SAMPLE IDENTIFICATION | DATE    | TIME | MATRIX | No CONTAINERS | SAMPLE TYPE | C= COMP | G= GRAB | REMARKS |
|---------|-----------------------|---------|------|--------|---------------|-------------|---------|---------|---------|
| SB-11   |                       | 9/20/10 | 1410 | Soil   | 3             | G           |         |         |         |
| SB-12   |                       |         | 1420 |        |               |             |         |         |         |
| SB-13   |                       |         | 1430 |        |               |             |         |         |         |
| SB-14   |                       |         | 1445 |        |               |             |         |         |         |
| SB-15   |                       |         | 1510 |        |               |             |         |         |         |
| SB-16   |                       |         | 1520 |        |               |             |         |         |         |
| SB-17   |                       |         | 1530 |        |               |             |         |         |         |
| SB-18   |                       |         | 1540 |        |               |             |         |         |         |
| SB-19   |                       |         | 1550 |        |               |             |         |         |         |
| SB-20   |                       |         | 1600 |        |               |             |         |         |         |

5 Collected/Relinquished By: (1) **Matt Gillis** Date: **9/20/10** Time: **1330** Received By: **Na Red**

Relinquished By: (2) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

Relinquished By: (3) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

Relinquished By: (4) \_\_\_\_\_ Date: **9/20/10** Time: **10:05** Received By: **[Signature]**

Shipping Carrier: \_\_\_\_\_

Shipping Ticket No: \_\_\_\_\_

Special Deliverable Requirements: \_\_\_\_\_

Special Instructions: \_\_\_\_\_

Requested Turnaround Time:  RUSH  STD Date Needed: \_\_\_\_\_

Samples Received Cold? (Circle) YES NO

Temperature °C: **2.0, 3.0**

Chain of Custody Seal: (Circle) INTACT BROKEN **ABSENT**

PAGE \_\_\_\_\_ OF \_\_\_\_\_