

**UNDERGROUND STORAGE TANK CLOSURE REPORT**

**Walter Williams Property - Parcel 98 (including Parcels 99 & 101)**

210 West 10<sup>th</sup> Street

Greenville, Pitt County, North Carolina

ATC Project No. 45.19873.0007

NCDOT Project U-3315

WBS Element 35781.1.2



2725 East Millbrook Road  
Suite 121  
Raleigh, NC 27604  
Tel: 919-871-0999  
Fax: 919-871-0335  
www.atcassociates.com  
N.C. Engineering License No. C-1598

January 5, 2015

Mr. Gordon Box  
**NC Department of Transportation**  
GeoEnvironmental Section  
1589 Mail Service Center  
Raleigh, North Carolina, 27699-1589

Re: **UST CLOSURE**  
**Walter Williams Property - Parcel 98 (including Parcels 99 & 101)**  
210 West 10<sup>th</sup> Street  
Greenville, Pitt County, North Carolina  
State Project: U-3315  
WBS Element: 35781.1.2  
ATC Project No. 45.19873.0007

Dear Mr. Box:

ATC Associates of North Carolina, P.C., on behalf of NCDOT, is submitting this UST Closure Report for NCDOT Project U-3315, WBS Element 35781.1.2 located on 210 West 10<sup>th</sup> Street in Greenville, Pitt County, North Carolina. The report documents a UST closure at the site.

If you have any questions or require additional information, please contact our office at (919) 871-0999.

Sincerely,

**ATC Associates of North Carolina, P.C.**

Garrett Stancil  
Staff Scientist

Jeffrey A. Corson  
Senior Project Manager

cc: Terry Farr

## TABLE OF CONTENTS

<b>I. SITE INFORMATION .....</b>	<b>1</b>
<b>II. INTRODUCTION .....</b>	<b>2</b>
A. Site History .....	2
<b>III. GENERAL INFORMATION .....</b>	<b>3</b>
A. UST Information .....	3
B. Site Characteristics .....	4
<b>IV. CLOSURE PROCEDURES .....</b>	<b>4</b>
A. Preparations for Closure.....	4
B. Amount of Residual Material.....	5
C. Storage, Sampling, and Disposal of Residual Material.....	5
D. Excavation.....	5
E. Contaminated Soil.....	6
<b>V. SITE INVESTIGATION.....</b>	<b>6</b>
A. Field Screening .....	6
B. Soil Sampling.....	6
C. Quality Control Measures .....	7
D. Investigation Results .....	7
<b>VI. CONCLUSIONS.....</b>	<b>7</b>

### TABLES

Table 1	Owner/Operator and UST System Information
Table 2	UST Closure Soil Analytical Summary

### FIGURES

Figure 1	Site Map
Figure 2	Sample Location Map

### APPENDICES

Appendix A	GW/UST-3
Appendix B	Disposal Manifests
Appendix C	Laboratory Analytical Reports

**I. SITE INFORMATION**

Date of Report: 1/5/2015  
Facility I.D.: N/A  
UST Incident Number (if known): 38393 (Parcel 98)  
Site Name: NCDOT U-3315 WBS Element 35781.1.2 Parcel 98 (including Parcels 99 & 101)  
Site Location: 210 West 10<sup>th</sup> Street  
Nearest City/Town: Greenville County: Pitt  
Description of Geographical Data Point (eg, diesel fill port): Multiple  
Location Method (GPS, Topographical map, other): GPS  
Latitude (decimal degrees): 35.606685 Longitude (decimal degrees): -77.376241

**Contact Information Associated with the UST System**

UST Owner: Abandoned in NCDOT Right of Way  
Address: 1589 Mail Service Center Raleigh, NC 27699-1589 Phone: 919-707-6850  
UST Operator: N/A  
Address: \_\_\_\_\_ Phone: \_\_\_\_\_  
Property Owner: NCDOT  
Address: 1589 Mail Service Center Raleigh, NC 27699-1589 Phone: 919-707-6850  
Property Occupant: N/A  
Address: \_\_\_\_\_ Phone: \_\_\_\_\_  
Consultant/Contractor: ATC Associates of North Carolina, P.C.  
Address: 2725 E. Millbrook Road, Raleigh, NC 27604 Phone: 919-871-0999  
Analytical Laboratory: Pace Analytical Services, Inc.  
Address: 9800 Kincey Avenue, Suite 100 Huntersville, NC 28078 Phone: 704-875-9092

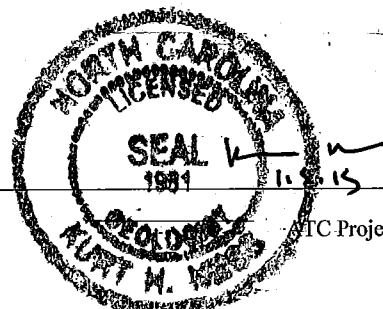
**Release Information**

Date Discovered: N/A  
Estimated Quantity of Release: N/A  
Cause of Release: N/A  
Source of Release (Piping/UST): N/A  
Sizes and contents of UST system(s) from which the release occurred: N/A

**Certification**

I, Kurt Ness a Professional Geologist for ATC Associates of North Carolina, P.C., do certify that the information contained in this report is correct and accurate to the best of my knowledge. *(Affix Seal and Signature)*

ATC Associates of North Carolina, P.C. is licensed to practice geology/engineering (circle one or both) in North Carolina. The certification number of the company or corporation is C-1598.



## II. INTRODUCTION

ATC Associates of North Carolina, P.C. (ATC) was retained by NCDOT to supervise the closure of multiple underground storage tanks (USTs) at 210 West 10<sup>th</sup> Street in Greenville, Pitt County, North Carolina from September 15 to September 18, 2014 and from September 29 to October 3, 2014. The site location is shown on a topographic map in *Figure 1*.

The scope of services provided by ATC included the following:

- Supervision of search and excavation of possible UST locations
- Supervision of the removal of two USTs
- Soil sampling and analyses
- Report preparation

This UST Closure Report presents a summary of field activities and observations and provides documentation of UST disposal and soil analytical results. As required by North Carolina Department of Environment and Natural Resources (NCDENR) guidelines, this UST closure report follows the GW/UST-12 format.

### A. Site History

GPS coordinates of anomalies identified as possible or known USTs were obtained from a previous consultant for Parcel 98 (including Parcels 99 & 101). On September 10, 2014 ATC contracted Stantec to conduct a utility locate and explore and mark out the coordinates of the previous anomalies identified as possible or known USTs using Ground Penetrating Radar (GPR) and Electromagnetic Equipment (EM).

On September 16, 2014 ATC contracted A&D Environmental Services, Inc. (A&D) to perform search, excavation and removal activities for suspected USTs. ATC supervised A&D in the search and excavation of Parcel 98 (including Parcels 99 & 101).

Four different possible UST locations were explored on Parcel 98. During initial exploration activities, a Sheriff Deputy from the Sheriff's office on the adjacent property informed ATC that tanks had been removed from these locations approximately 6 months prior. The information was noted and ATC proceeded to verify the existence of the USTs at the other possible locations. Each anomaly identified as a possible UST marked out by Stantec was explored using a backhoe, excavating an area approximately 8 feet wide by 8 feet long by 8 feet deep. Most of the soil

appeared to be backfill and no USTs were discovered. ATC collected pictures and backfilled the excavation locations.

One suspected UST location was explored on Parcel 99. This suspected UST location was approximately 5 feet from a marked water utility line and adjacent to the existing roadway (10<sup>th</sup> Ave.). The anomaly identified as a possible UST marked out by Stantec was explored using a backhoe, excavating an area approximately 6 feet wide by 6 feet long by 6 feet deep. The water line was encountered without disturbance, though no UST was located. ATC collected pictures and backfilled the excavation location. After further discussion with NCDOT, the decision was made to perform a lane closure and explore further into the adjacent lane of 10<sup>th</sup> avenue. This was conducted on October 6, 2014. A&D excavated an area under the existing roadway approximately 4 feet wide by 8 feet long by 8 feet deep, however no UST was located. ATC collected pictures and backfilled the excavation location with confirmation on compaction from NCDOT onsite personnel.

Three suspected UST locations were identified on Parcel 101. These suspected USTs were not in the original scope of work but after discussion with NCDOT, the decision was made to proceed with location and removal of these USTs. The USTs had previously been abandoned in place and filled with concrete. On September 29, 2014 through October 3, 2014 ATC supervised A&D during the excavation of the three USTs on Parcel 101. This report documents the removal and closure assessment of the USTs.

### III. GENERAL INFORMATION

#### A. UST Information

*Table 1*

UST #	Installation Date	Size in Gallons	Tank Dimensions	Last Contents	Previous Contents (if any)
1 (101)	Unknown	5,000	6' x 20'	Unknown	Unknown
2 (101)	Unknown	5,000	6' x 20'	Unknown	Unknown
3 (101)	Unknown	6,000	6' x 30'	Unknown	Unknown

## B. Site Characteristics

1. *Describe any past releases at this site:*

According to a Notice of Regulatory Requirements letter from NCDENR dated March 12, 2014 a release was confirmed on Parcel 98 under incident number 38393.

2. *Is the facility active or inactive at this time? If the facility is inactive, note the last time the UST(s) were in operation:*

Parcel 98 (including Parcels 99 & 101) is inactive and currently vacant. The last time these USTs were in operation is unknown.

3. *Describe surrounding property use (for example, residential, commercial, farming, etc.):*

Parcel 98 (including Parcels 99 & 101) is surrounded by commercial property to the north, commercial property to the west, W. 10<sup>th</sup> Street to the south and S. Washington Street to the east, which includes residential and retail commercial properties.

4. *Describe site geology/hydrogeology:*

The site lies within the coastal plain of North Carolina and is underlain by the Yorktown formation, which generally consists of fossiliferous clays and sands. The site lies in the Tar-Pamlico river basin.

During UST closure activities, the subsurface soils encountered consisted of light brown/orange, sandy clay. Groundwater was encountered at approximately 12 feet below ground surface during excavation activities.

5. *Describe results of receptor survey:*

ATC did not perform a receptor survey and there is no known completed survey.

## IV. CLOSURE PROCEDURES

### A. Preparations for Closure

In preparation of UST closure activities, ATC completed a Notice of Intent: UST Permanent Closure or Change-in-Service Form (GW/UST-3). A copy of the GW/UST-3 form is included in *Appendix A*. UST Information is included in *Table 1*.

ATC contacted the North Carolina One Call Center (ULOCO), as well as Stantec to mark underground utilities at the sites prior to tank closure activities. The Fire Marshall for the

City of Greenville was also notified by the tank removal subcontractor, A&D, prior to removal activities.

## **B. Amount of Residual Material**

Approximately 87.27 tons of residual concrete debris was removed from the USTs on Parcel 101 and stockpiled pending removal on October 16, 2014. Approximately 40.74 tons of residual impacted soil was removed from the tank pit in order to remove the USTs on Parcel 101 and stockpiled pending removal on September 30, 2014 and October 1, 2014.

## **C. Storage, Sampling, and Disposal of Residual Material**

Residual concrete debris and soil was stockpiled on top of a plastic barrier and covered with plastic. Bails of straw were also used around the perimeter of the stockpile to create a barrier. Residual concrete debris and soil removed from the USTs and tank pit was disposed of by A&D. Copies of the waste disposal manifests are included in *Appendix B*.

## **D. Excavation**

*1. Describe excavation procedures noting the condition of the soil encountered and the dimensions of the excavation in relation to the tanks, piping, and/or pumps:*

On October 2, 2014, two 5,000-gallon USTs and one 6,000-gallon UST that were positioned side by side were removed from Parcel 101. The UST pit was excavated approximately 30 feet by 30 feet by 12 feet deep, just large enough to remove the tanks. Groundwater was encountered at approximately 12 feet bgs. Impacted soils excavated in order to remove the USTs were stockpiled and disposed of by A&D. Impacted soils from beneath the tanks were not excavated per direction of NCDOT Request for Proposal because clean closure did not appear possible.

*2. Note the depth of tank burial(s) (from land surface to top of tank):*

The top of the USTs were buried to a depth of approximately four (4) feet bgs. The bottom of the tanks rested at approximately eight (10) feet bgs.

*3. Note volume of soil excavated:*

Approximately 40.74 tons of impacted soils were excavated in order to remove the USTs. Impacted soil beneath the tanks was retained in the tank pit per direction of NCDOT.



4. *Describe soil type(s) encountered:*

Soils encountered during excavation at the site consisted of light brown/ orange, sandy clays.

5. *Describe type and source of backfill used:*

Following the removal of the USTs, A&D backfilled the tank pits with clean soil consisting of brown silty sand.

6. *Describe condition of UST system(s) (i.e., pitting, holes, etc.):*

Upon removal of the tanks, the tanks were visually inspected and appeared to be in fair condition. Soils underneath the tanks appeared to be impacted.

## **E. Contaminated Soil**

1. *Describe how it was determined to what extent to excavate the soil:*

Soil was excavated to the extent necessary to remove the USTs and no other soil was excavated per direction of NCDOT.

2. *Describe method of temporary storage, sampling, and treatment/disposal of soil:*

Residual soil was stockpiled on top of a plastic barrier and covered with plastic. Bails of straw were also used around the perimeter of the stockpile to create a barrier. Soil was transported off-site for disposal by A&D and clean material provided by A&D was used to backfill the tank pit.

## **V. SITE INVESTIGATION**

### **A. Field Screening**

Following the removal of the USTs, soil samples were collected beneath the tanks for field screening by use of a PID. Sampling intervals were consistent with the Guidelines for Site Checks, Tank Closures, and Initial Response and Abatement for UST Releases (NCDENR, 2008). The highest PID field screening results was recorded from tank pit sample T1A-101 at 2107 parts per million (ppm).

### **B. Soil Sampling**

On October 2, 2014 soil closure samples were collected from a total of nine locations in the tank pits following the UST removal activities. Three samples were collected beneath each tank on Parcel 101 (T1A-101 through T3C-101). The samples were submitted for Total

Petroleum Hydrocarbons– Gasoline Range Organics (TPH-GRO, EPA Method 8015-5030) and Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO, EPA Method 8015-5030). The results of the laboratory analyses indicated concentrations of TPH-DRO above the NCDENR Action Level of 10 parts per million (ppm) in soil sample T1A-101, T1B-101 and T2A-101. The highest concentration of TPH-DRO was detected in sample T1A-101 at 79.8 mg/kg. Laboratory analyses also indicated concentrations of TPH-GRO above the NCDENR Action Level of 10 parts per million (ppm) in soil sample T1B-101. The highest concentration of TPH-GRO was detected in sample T1B-101 at 15.1 mg/kg. UST soil sample analytical results and locations are included in **Table 2** and **Figure 2**, respectively. The laboratory analytical report is provided in **Appendix C**. No piping associated with the UST system was encountered and samples were not collected.

### **C. Quality Control Measures**

Laboratory samples were placed in laboratory supplied containers and shipped in an ice-filled cooler to Pace Analytical Laboratories (Pace) in Huntersville, North Carolina under chain of custody procedure. Pace is approved by the State of North Carolina under Certification No. 5342.

### **D. Investigation Results**

The applicable action levels for the following compounds were exceeded:

- DRO: T1A-101, T1B-101, T2A-101
- GRO: T1B-101

## **VI. CONCLUSIONS**

ATC supervised the removal of three USTs on Parcel 101 on NCDOT Project U-3315 located in Greenville, North Carolina on September 29, 2014 through October 3, 2014. Based on field activities, observations, and soil analytical results, tank pit samples exceeded the NCDENR Action Levels for TPH-DRO and TPH-GRO. Impacted soil beneath the tanks was not excavated per direction of NCDOT. If impacted soil or groundwater is encountered during construction activities, appropriate measures should be taken to ensure worker safety. In addition, any impacted soil or groundwater disturbed during construction should be handled and disposed of in accordance with applicable regulations. ATC appreciates the opportunity to assist the NCDOT with this project. If you have questions or require additional information, please do not hesitate to contact us at (919) 871-0999.

## **TABLES**

**TABLE 1**

**OWNER/OPERATOR AND UST SYSTEM INFORMATION**

Walter Williams Property - Parcel 101  
 210 West 10th Street  
 Greenville, Pitt County, North Carolina  
 ATC Project No. 45.19873.0007  
 NCDOT Project U-3315

UST ID Number	Current/Last Product	Previous Contents	Capacity (gallons)	Tank Construction Details	Piping Construction Details	Date Installed - Tank-	Date Installed - Piping-	Status of UST/s	Was Release Associated With UST System? (Yes / No)
1 (101)	Unknown	Unknown	5,000	Steel	NA	Unknown	NA	Permanently removed 10/2/14	Yes
2 (101)	Unknown	Unknown	5,000	Steel	NA	Unknown	NA	Permanently removed 10/2/14	Yes
3 (101)	Unknown	Unknown	6,000	Steel	NA	Unknown	NA	Permanently removed 10/2/14	Yes

UST ID Number	Facility ID	Dates of Operation	Owner Information (Name/Address/Phone)	
		Unknown	NCDOT: 1589 Mail Service Center Raleigh, NC 27699-1589	
Operator Information			Other Responsible Party Information	
NA			NA	
Incident No/s	Date/s of Release or Discover	Material/s Released	Description of Release/s	
	NA	NA	NA	

**TABLE 2**

**UST CLOSURE  
SOIL ANALYTICAL DATA**

**Walter Williams Property - Parcel 101  
204 West 10th Street  
Greenville, Pitt County, North Carolina  
ATC Project No. 45.19873.0007  
NCDOT Project U-3315**

EPA Method:				5030/8015	3550/8015
Sample I.D.	Depth (feet)	Sampling Date	PID Reading (ppm)	TPH-GRO	TPH-DRO
T1A-101	NA	10/2/2014	2107	<8.7	<b>79.8</b>
T1B-101	NA	10/2/2014	1756	<b>15.1</b>	<b>55.5</b>
T1C-101	NA	10/2/2014	1842	9.1	<7.2
T2A-101	NA	10/2/2014	1671	<9.3	<b>79.4</b>
T2B-101	NA	10/2/2014	1613	<8.2	<7.7
T2C-101	NA	10/2/2014	1955	<8.1	<7.8
T3A-101	NA	10/2/2014	2004	<7.8	<7.4
T3B-101	NA	10/2/2014	1583	<7.1	<7.4
T3C-101	NA	10/2/2014	1490	<7.6	<7.5
<b>NCDENR Action Level</b>				<b>10</b>	<b>10</b>
<b>Soil-to-Groundwater MSCC</b>				--	--
<b>Residential MSCC</b>				--	--
<b>Industrial/Commercial MSCC</b>				--	--

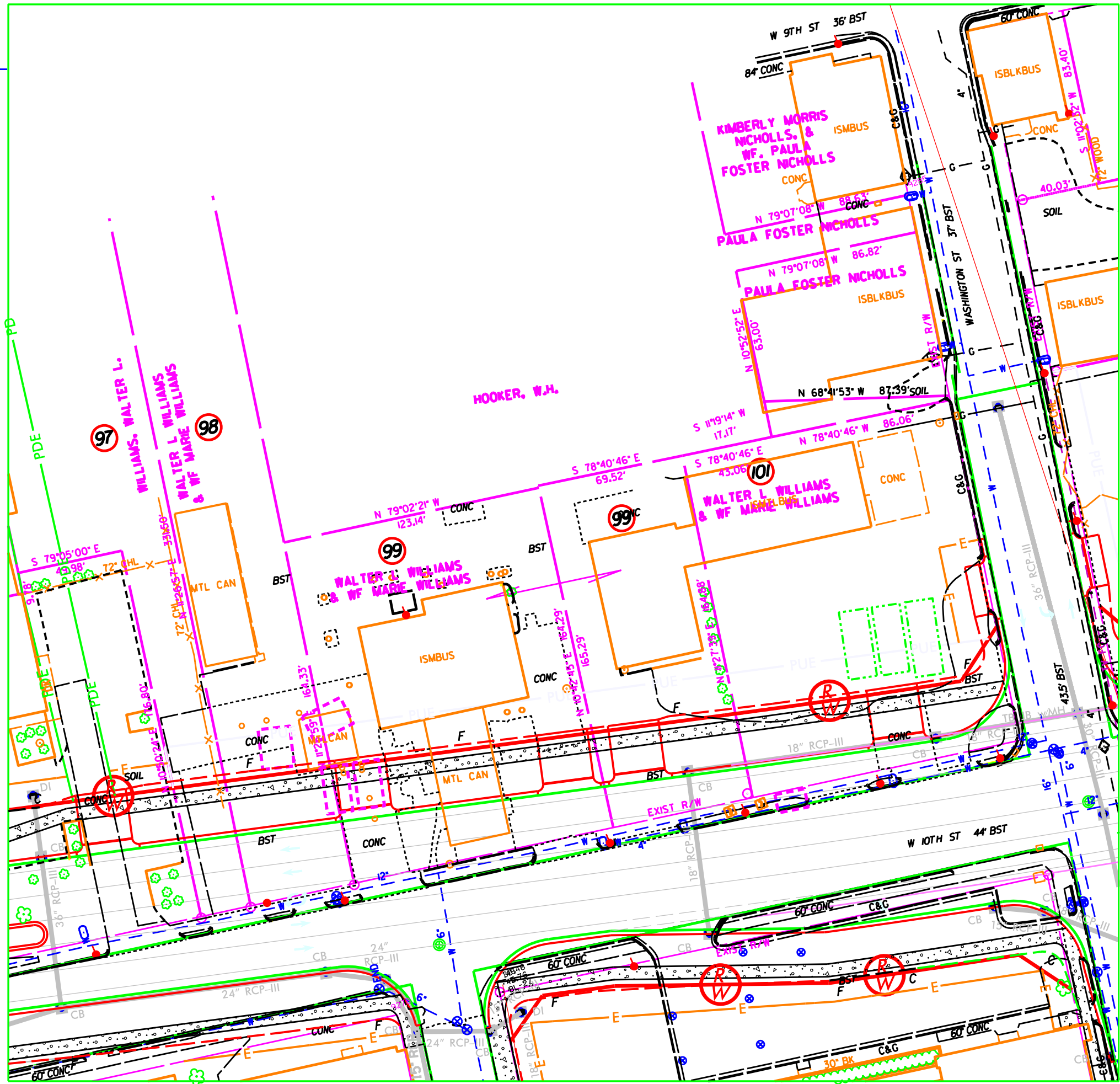
Notes:

1. TPH = Total petroleum hydrocarbons.
2. GRO = Gasoline range organics.
3. DRO = Diesel range organics.
4. Concentrations reported in milligrams per kilogram (mg/kg).
5. "<" = not detected at or above the laboratory detection limit.
6. MSCC = Maximum Soil Contaminant Concentration Levels.
7. NE = Not established.
8. MTBE = Methyl tertiary butyl ether.
9. Values in **BOLD** indicate levels above Soil-to-Groundwater MSCCs and/or the NCDENR Action Level.
10. # = Health based level > 100%.

## **FIGURES**

LEGEND

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPERTY LINE
- - - TV - - - U/G CABLE TV
- - - T - - - U/G CABLE TELEPHONE
- - - T FO - - - U/G CABLE TELEPHONE FIBER OPTIC
- P --- U/G ELECTRIC
- EXISTING HYDRO
- TV FO --- U/G CABLE TV FIBER OPTIC
- PUE --- PERMANENT UTILITY EASEMENT
- F --- FILL LINE
- C --- CUT LINE
- CHL CHAIN LINK
- CB CATCH BASIN
- RCP REINFORCED CONCRETE PIPE
- EOT EDGE OF TRAVEL
- MH MANHOLE
- TC TERRA COTTA PIPE
- UTILITY POLE
- LIGHT POLE
- SOIL BORING LOCATION
- TEMPORARY WELL LOCATION
- SEARCH/EXCAVATION LOCATION
- LOCATED UST



ATC Associates of North Carolina, P.C.  
 RALEIGH, NORTH CAROLINA (919) 871-0999 FAX (919) 871-0335  
 SCALE 1"=50'-0" DATE 11-26-2014 PROJECT NO. 45.19873.0007

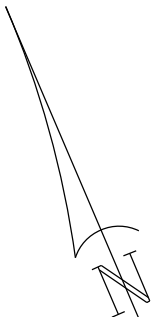
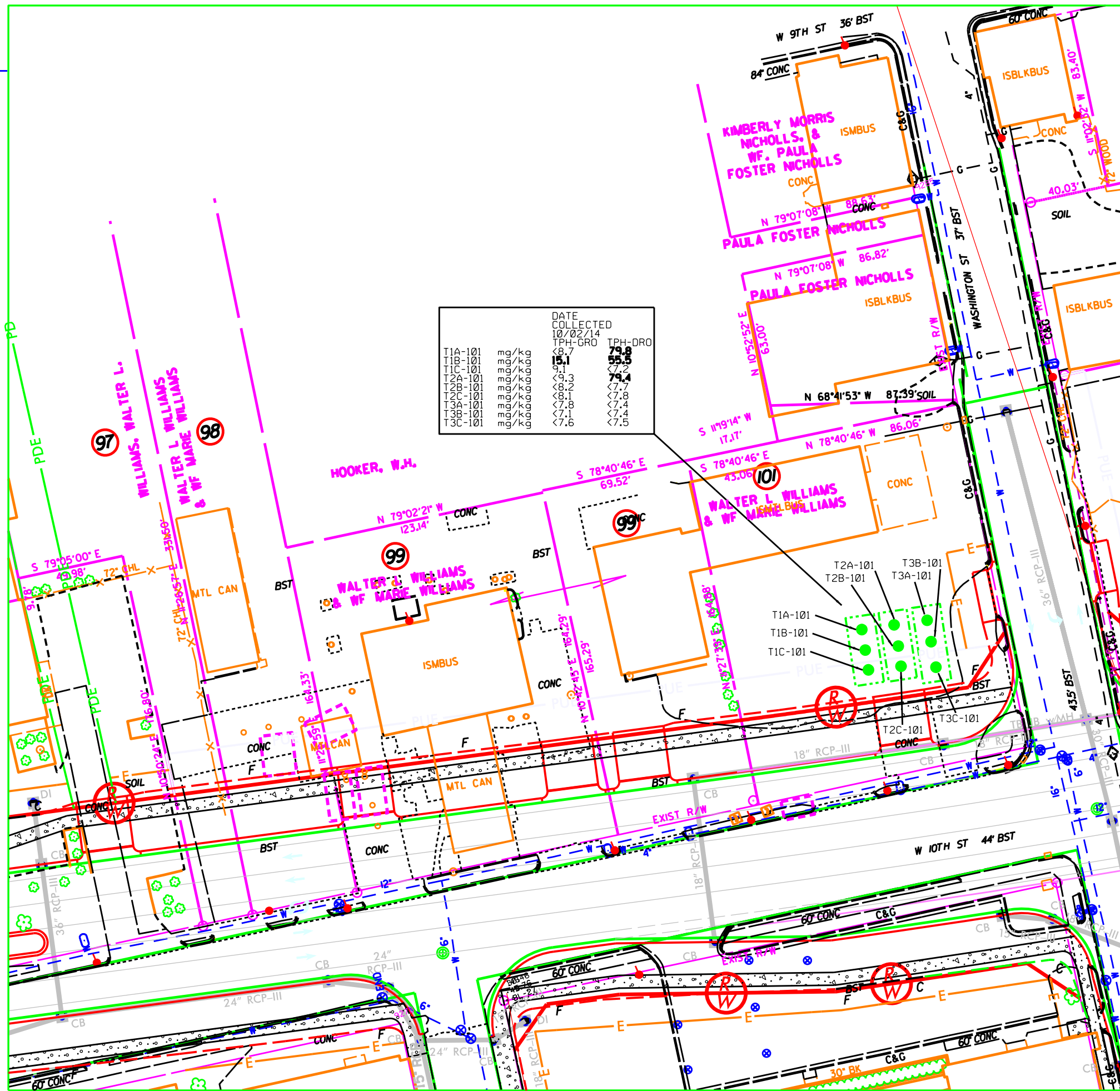
TITLE **FIGURE 1**  
 SITE MAP  
 WALTER WILLIAMS PROPERTY - PARCEL 98  
 210 WEST 10TH STREET  
 GREENVILLE NC 27858

CAD FILE MBS ELEMENT 35781.1.2  
 PREP. BY GS  
 REV. BY JC

NOTES:  
 1) THREE USTS WERE LOCATED AND REMOVED FROM THIS PARCEL.  
 2) OTHER POSSIBLE USTS WERE NOT FOUND DURING EXPLORATION.

LEGEND

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPERTY LINE
- - - TV - - - U/G CABLE TV
- - - T - - - U/G CABLE TELEPHONE
- - - T FO - - - U/G CABLE TELEPHONE FIBER OPTIC
- P --- U/G ELECTRIC
- EXISTING HYDRO
- TV FO --- U/G CABLE TV FIBER OPTIC
- PUE --- PERMANENT UTILITY EASEMENT
- F --- FILL LINE
- C --- CUT LINE
- CHL CHAIN LINK
- CB CATCH BASIN
- RCP REINFORCED CONCRETE PIPE
- EOT EDGE OF TRAVEL
- MH MANHOLE
- TC TERRA COTTA PIPE
- UTILITY POLE
- LIGHT POLE
- SOIL BORING LOCATION
- SAMPLE LOCATION
- SEARCH/EXCAVATION LOCATION
- LOCATED UST



ATC Associates of North Carolina, P.C.  
 RALEIGH, NORTH CAROLINA (919) 871-0999 FAX (919) 871-0335  
 DATE 11-26-2014 PROJECT NO. 45.19873.0007  
 SCALE 1"=50'-0"

TITLE **FIGURE 2**  
 SAMPLE LOCATION MAP  
 WALTER WILLIAMS PROPERTY - PARCEL 98  
 210 WEST 10TH STREET  
 GREENVILLE NC 27858  
 CAD FILE 35781.1.2  
 PREP. BY GS  
 REV. BY JC

NOTES:  
 1) VALUES IN BOLD INDICATE LEVELS ABOVE NC DENER ACTION LEVELS.



**APPENDIX A**

**FORM GW/UST-3**

# UST-3 Notice of Intent: UST Permanent Closure or Change-in-Service

**Return completed form to:**

The DWM Regional Office located in the area where the facility is located. Send a copy to the Central Office in Raleigh so that the status of the tank may be changed to "PERMANENTLY CLOSED" and your tank fee account can be closed out. SEE MAP ON THE BACK OF THIS FORM FOR THE CENTRAL AND REGIONAL OFFICE ADDRESSES.

STATE USE ONLY  
I.D. # \_\_\_\_\_  
Date Received \_\_\_\_\_

**INSTRUCTIONS (READ THIS FIRST)**

Complete and return at least **thirty (30) days** prior to closure or change-in-service activities. If a Professional Engineer (P.E.) or a Licensed Geologist (L.G.) provides supervision for closure or change-in-service site assessment activities and signs and seals all closure reports then at least a **five (5) working days** notice is acceptable.

Completed UST closure or change-in-service site assessment reports, along with a copy of the UST-2 form, should be submitted to the appropriate Division of Waste Management (DWM) Regional Office within thirty (30) days following closure activities. The UST-2 form should also be submitted to the Central Office in Raleigh so that the status of the tanks may be changed to permanently closed and your tank fee account can be closed out.

UST closure and change-in-service site assessments must be completed in accordance with the latest version of the *Guidelines for Tank Closure*. The *Guidelines for Tank Closure* can be obtained at [www.wastenotnc.org](http://www.wastenotnc.org).

You must make sure that USTs removed from your property are disposed of properly. When choosing a closure contractor, ask where the tank(s) will be taken for disposal. Usually, USTs are cleaned and cut up for scrap metal. This is dangerous work and must be performed by a qualified company. Tanks disposed of illegally in fields or other dumpsites can leak petroleum products and sludge into the environment. If your tanks are disposed of improperly, you could be held responsible for the cleanup of any environmental damage that occurs.

I. OWNERSHIP OF TANKS		II. LOCATION			
Owner Name (Corporation, Individual, Public Agency, or Other Entity) Abandoned in NCDOT Right of Way		Facility Name or Company Parcel 98 (NCDOT)			
Street Address 1589 Mail Service Center		Facility ID # (if known) Unknown			
City Raleigh	County Wake	Street Address 210 W. 10 <sup>th</sup> Street			
State NC	Zip Code 27699	City Greenville	County Pitt	Zip Code 27834	
Phone Number 919-707-6850		Phone Number 707-6850			

**III. CONTACT PERSONNEL**

Name: Jeff Corson	Company Name: ATC Associates	Job Title: Project Manager	Phone Number: 871-0999
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**IV. TANK REMOVAL, CLOSURE IN PLACE, CHANGE-IN SERVICE**

- Contact local fire marshal.
- Plan entire closure event.
- Conduct Site Soil Assessment.
- If removing tanks or closing in place, refer to API Publication 2015 *Cleaning Petroleum Storage Tanks* and 1604 *Removal and Disposal of Used Underground Petroleum Storage Tanks*.
- Provide a sketch locating piping, tanks and soil sampling locations.
- Submit a closure report in the format of UST-12 (including the form UST-2) within thirty (30) days following the site investigation.
- If a release from the tanks has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G. If a release has not occurred, the supervision, signature or seal of a P.E. or L.G. is not required.
- Keep closure records for three (3) years.

**V. WORK TO BE PERFORMED BY**

Contractor Name: A & D Environmental Services, Inc.		Contractor Company Name: A & D Environmental Services, Inc.		
Address: P.O. Box 484 High Point		State: NC	Zip Code: 27261	Phone No: 336-289-2835
Primary Consultant Name: ATC Associates		Primary Consultant Company Name: ATC Associates		Consultant Phone No: 919-871-0999

**VI. TANKS SCHEDULED FOR CLOSURE OR CHANGE-IN-SERVICE**

Tank ID No.	Size in Gallons	Last Contents	Proposed Activity		
			Closure		Change-In-Service
			Removal	Abandonment in Place *	New Contents Stored
10	6000	Gasoline, Gas Mix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11	12000	Gasoline, Gas Mix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12	12000	Gasoline, Gas Mix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	

\* Prior written approval to abandon a tank in place must be received from a DWM Regional Office.

**VII. OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE**

I understand that I can be held responsible for environmental damage resulting from the improper disposal of my USTs.

Print name and official title: Garrett Stencil - Staff Scientist

Signature <u>Garrett Stencil (on behalf of NCDOT)</u>	Date Signed <u>2/13/15</u>	SCHEDULED REMOVAL DATE <u>9/16/14</u>	Notify your DWM Regional Office 48 hours before this date if scheduled removal date changes
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**APPENDIX B**  
**DISPOSAL MANIFESTS**



# Environmental Services, Inc.

P.O. Box 484 • High Point, NC • Phone (336) 434-7750 • FAX (336) 434-7752

## TANK DISPOSAL MANIFEST

1) Tank Owner/Authorized Representative: Name and Mailing Address NCDOT  
1589 Mail Service Center  
Raleigh, NC 27604

2) Tank Owner/Authorized Representative: Contact Jeff Corson  
Phone#: (919) 871-0999

3) Description Of Tanks:

<u>Tank No.</u>	<u>Capacity</u>	<u>Previous Contents</u>	<u>Comments</u>
<u>1</u>	<u>5,000 gal</u>	<u>petro products</u>	<u>were concrete filled</u>
<u>2</u>	<u>6,000 gal</u>	<u>petro products</u>	<u>were concrete filled</u>
<u>3</u>	<u>5,000 gal</u>	<u>petro products</u>	<u>were concrete filled</u>

4) Tank Owner/Authorized Representative Certification: The undersigned certifies that the above listed storage tanks have been removed from the premises of the tank owner.

Garrett Stancil (For ATC/DoT) [Signature] 10/2/14  
Printed/Typed Name Signature Month/Day/Year

5) Transporter: The undersigned certifies that the above listed storage tanks have been transported to A&D Environmental and Industrial Services, 2718 Uwharrie Road, Archdale, N.C. 27263.

Richard Joyce [Signature] 10-2-14  
Printed/Typed Name Signature Month/Day/Year

6) Disposal Certification: The undersigned certifies that the above-named storage tank(s) have been cut into scrap pieces and accepted by the metal recycling facility.

Recycling Facility: EJE Recycling - Greenville, NC  
Michael Stoneman [Signature] 10-2-14  
Printed/Typed Name Signature Month/Day/Year



Blue

# NON-HAZARDOUS WASTE MANIFEST

# 1811428

1. Generator's US EPA ID Number <b>Not Applicable</b>		Manifest Document Number <b>1811428</b>		2. Page 1 of <b>1</b>	
3. Generator's Name and Mailing Address <b>NC Dept of Transportation 1020 Birch Ridge Dr Raleigh, NC 27610</b>			5. Generating Location (if different) <b>NC Dept. of Transportation Parcel 99 211 West 10th St Greenville, NC</b>		
4. Phone <b>919-707-6859</b>			6. Phone <b>919-707-6859</b>		
7. Transporter #1 Company Name <b>Evelyn Bayson Trucking Inc</b>		8. US EPA ID Number <b>EEB-7</b>		9. Transporter #1's Phone <b>910-298-4634</b>	
10. Transporter #2 Company Name		11. US EPA ID Number		12. Transporter #2's Phone	
13. Designated T/S/D Facility Name and Site Address <b>EAST CAROLINA LANDFILL 1922 REPUBLICAN ROAD AULANDER, NC</b>		14. US EPA ID Number <b>Not Applicable</b>		15. Facility's Phone <b>(252) 348-3322</b>	
16. Waste Shipping Name and Description		17. Republic Services Approval # and Exp. Date		18. Containers	
a. <b>Concrete Debris (Non-Hazardous Solid)</b>		b. <b>(Exp. 10-10-15) 30261417037</b>		19. Total Quantity <b>13.43 T</b>	
c.				20. Unit Wt/Vol <b>T</b>	
21. Additional Descriptions for Materials Listed Above <b>AND JOB # 72332</b>					
22. Special Handling Instructions and Additional Information					
23. GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
Printed/Typed Name		Signature		Month Day Year	
24. Transporter #1: Acknowledgement of Receipt of Materials					
Printed/Typed Name <b>Timothy Craig Futrell</b>		Signature <i>[Signature]</i>		Month Day Year	
25. Transporter #2: Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
26. Discrepancy Indication Space					
27. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)					
Printed/Typed Name <b>Chris Harley As Agent for NCDOT</b>		Signature <i>[Signature]</i>		Month Day Year <b>10 16 13</b>	

ORIGINAL - RETURN TO GENERATOR

SITE

EAST CAROLINA ENV LANDFILL

AULANDER, NC 27805 252-348-3322

CUSTOMER

000753  
A&D ENVIRONMENTALAND IND  
PO BOX 484  
PO# 23166  
30261417037

SITE	TICKET #	CELL
01	975510	
WEIGHMASTER		
JAMES E.		DATE/TIME OUT
DATE/TIME IN	10-16-2014 9:32 am	10-16-2014 9:52 am
VEHICLE		CONTAINER
TRUCK REFERENCE		
BLUE		INVOICE
BILL OF LADING		

SCALE IN	GROSS WEIGHT	52,480	NET TONS	13.43	
SCALE OUT	TARE WEIGHT	25,620	NET WEIGHT	26,860	INBOUND

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
13.43	TN	SW-CONST DEBRIS PITT				

**Indemnification. Generator agrees to indemnify, hold harmless, and defend Republic Services of NC, LLC, its subsidiaries, affiliates, employees, officer and directors from and against any and all liabilities, claims, penalties, forfeitures, suits, and cost and expenses incident thereto, including cost of defense, settlement and reasonable attorney's fees, which may be incurred, as a result of death or injuries to any person or damage to any property, contamination, or adverse effect on the environment.**

The undersigned individual signing this document on behalf of customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (07/12)

221

SIGNATURE



NON-HAZARDOUS WASTE MANIFEST

1361524

Please print or type

1. Generator's US EPA ID Number <i>Not Applicable</i>		Manifest Document Number		2. Page 1 of	
3. Generator's Name and Mailing Address <i>NCDOT 1020 Birch Ridge Drive Raleigh, NC 27610</i>			5. Generating Location (if different) <i>NCDOT Property Parcel 199 211 West 10th Street Greenville, NC</i>		
4. Phone ( ) <i>(919) 707-6859</i>			6. Phone ( ) <i>(919) 707-6859</i>		
7. Transporter #1 Company Name <i>Evelyn Bayader Trucking EE1356</i>		8. US EPA ID Number		9. Transporter #1's Phone <i>910-298-4634</i>	
10. Transporter #2 Company Name		11. US EPA ID Number		12. Transporter #2's Phone	
13. Designated T/S/D Facility Name and Site Address <i>EAST CAROLINA LANDFILL 1922 REPUBLICAN ROAD AULANDER, NC 27805</i>		14. US EPA ID Number <i>Not Applicable</i>		15. Facility's Phone <i>252-348-3322</i>	
16. Waste Shipping Name and Description		17. Allied Waste Approval # and Exp. Date		18. Containers	
				19. Total Quantity	
				20. Unit Wt/Vol	
a. <i>CONCRETE Debris (NON-HAZARDOUS Solid)</i>		<i>30261417037</i>		<i>01 DT 15.24 TONS</i>	
b.					
c.					
d.					
21. Additional Descriptions for Materials Listed Above <i>ADD Job # 72332</i>					
22. Special Handling Instructions and Additional Information					
23. GENERATOR'S CERTIFICATION: I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name			Signature		
24. Transporter #1: Acknowledgement of Receipt of Materials					
Printed/Typed Name			Signature		
25. Transporter #2: Acknowledgement of Receipt of Materials					
Printed/Typed Name			Signature		
26. Discrepancy Indication Space					
27. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)					
Printed/Typed Name <i>James Everett</i>			Signature <i>[Signature]</i>		
Chris Hooley, As Agent for NCDOT					
			Month Day Year <i>10 16 14</i>		

ORIGINAL - RETURN TO GENERATOR

919-649-7605

COM000033

SITE EAST CAROLINA ENV LANDFILL  
 AULANDER, NC 27805 252-348-3322  
 CUSTOMER  
 000753  
 A&D ENVIRONMENTALAND IND  
 PO BOX 484  
 PO# 23166  
 30261417037

SITE	TICKET #	CELL
01	975511	
WEIGHMASTER		
JAMES E.		
DATE/TIME IN	DATE/TIME OUT	
10-16-2014 9:23 am	10-16-2014 9:54 am	
VEHICLE	CONTAINER	
TRUCK REFERENCE		
RED INVOICE		
BILL OF LADING		

SCALE IN	GROSS WEIGHT	57,140	NET TONS	15.24	
SCALE OUT	TARE WEIGHT	26,660	NET WEIGHT	30,480	INBOUND

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
15.24	TN	SW-CONST DEBRIS PITT				

Indemnification. Generator agrees to indemnify, hold harmless, and defend Republic Services of NC, LLC, its subsidiaries, affiliates, employees, officer and directors from and against any and all liabilities, claims, penalties, forfeitures, suits, and cost and expenses incident thereto, including cost of defense, settlement and reasonable attorney's fees, which may be incurred, as a result of death or injuries to any person, or damage to any property, contamination of or adverse effect on

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

NET AMOUNT
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CHECK#

RS-F042UPR (07/12)

2/21

SIGNATURE





NON-HAZARDOUS WASTE MANIFEST

1811429

1. Generator's US EPA ID Number <b>Not Applicable</b>		Manifest Document Number <b>1811429</b>		2. Page 1 of <b>1</b>	
3. Generator's Name and Mailing Address <b>NC Dept. of Transportation 1020 Birch Ridge Dr. Raleigh NC 27610</b>				5. Generating Location (if different) <b>NC Dept of Transportation Parcel 99 211 West 10th St Greenville NC 919 707-6859</b>	
4. Phone <b>919 707-6859</b>		6. Phone <b>919 707-6859</b>		7. Transporter #1 Company Name	
8. US EPA ID Number		9. Transporter #1's Phone		10. Transporter #2 Company Name	
11. US EPA ID Number		12. Transporter #2's Phone		13. Designated T/S/D Facility Name and Site Address <b>EAST CAROLINA LANDFILL 1922 REPUBLICAN ROAD AULANDER, NC</b>	
14. US EPA ID Number <b>Not Applicable</b>		15. Facility's Phone <b>(252) 348-3322</b>			
16. Waste Shipping Name and Description		17. Republic Services Approval # and Exp. Date		18. Containers	
a. <b>Concrete Debris (NON-HAZARDOUS Solid)</b>		<b>(Exp. 10-10-15) 30261417037</b>		19. Total Quantity <b>11.18 T</b>	
b.				20. Unit Wt/Vol <b>T</b>	
c.					
21. Additional Descriptions for Materials Listed Above <b>A &amp; D Job # 72332</b>					
22. Special Handling Instructions and Additional Information					
23. GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
Printed/Typed Name <b>Bill Baysdon</b>		Signature		Month Day Year	
24. Transporter #1: Acknowledgement of Receipt of Materials					
Printed/Typed Name <b>[Signature]</b>		Signature		Month Day Year	
25. Transporter #2: Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
26. Discrepancy Indication Space					
27. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)					
Printed/Typed Name <b>Chris Hanley As Agent for NCDOT</b>		Signature <b>[Signature]</b>		Month Day Year <b>10 16 14</b>	

ORIGINAL - RETURN TO GENERATOR

SITE	EAST CAROLINA ENV LANDFILL		
	AULANDER, NC	27805	252-348-3322
CUSTOMER	000753 A&D ENVIRONMENTALAND IND PO BOX 484 PO# 23166 30261417037		

SITE	TICKET #	CELL
01	975533	
WEIGHMASTER		
JAMES E.		
DATE/TIME IN	DATE/TIME OUT	
10-16-2014 10:33 am	10-16-2014 10:52 am	
VEHICLE	CONTAINER	
TRUCK REFERENCE		
WHITE		INVOICE
BILL OF LADING		

SCALE IN	GROSS WEIGHT	46,120	NET TONS	11.18	
SCALE OUT	TARE WEIGHT	23,760	NET WEIGHT	22,360	INBOUND

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
11.18	TN	SW-CONST DEBRIS PITT				

Indemnification. Generator agrees to indemnify, hold harmless, and defend Republic Services of NC, LLC, its subsidiaries, affiliates, employees, officer and directors from and against any and all liabilities, claims, penalties, forfeitures, suits, and cost and expenses incident thereto, including cost of defense, settlement and reasonable attorney's fees, which may be incurred, as a result of death or injuries to any person, or damage to any property, contamination of, or adverse effect on

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

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RS-F042UPR (07/12)

2/21

SIGNATURE



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# NON-HAZARDOUS WASTE MANIFEST

1361514

1. Generator's US EPA ID Number <i>Not Applicable</i>		Manifest Document Number		2. Page 1 of 1	
3. Generator's Name and Mailing Address <i>NC DOT 1020 Birch Ridge Drive Raleigh, NC 27610</i>			5. Generating Location (if different) <i>NC DOT Property Parcel 99 217 West 10th Street Greensboro, NC</i>		
4. Phone <i>919 707-6859</i>		6. Phone <i>919 707-6859</i>			
7. Transporter #1 Company Name <i>Evelyn Baysden Trucking Inc EED7</i>		8. US EPA ID Number		9. Transporter #1's Phone <i>910-298-4634</i>	
10. Transporter #2 Company Name		11. US EPA ID Number		12. Transporter #2's Phone	
13. Designated T/S/D Facility Name and Site Address <i>East Carolina Landfill 1922 Republican Road Aulander, NC 27805</i>		14. US EPA ID Number <i>Not Applicable</i>		15. Facility's Phone <i>252-348-3322</i>	
16. Waste Shipping Name and Description <i>a. Concrete Debris (Non-Haz. Solid)</i>		17. Allied Waste Approval # and Exp. Date <i>302614</i>		18. Containers	
				No.	Type
b.		<i>17037</i>		<i>21</i>	<i>DT</i>
c.				<i>13.33</i>	<i>Tons</i>
d.					
21. Additional Descriptions for Materials Listed Above <i>A+D Job # 72332</i>					
22. Special Handling Instructions and Additional Information					
23. GENERATOR'S CERTIFICATION: I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name <i>Chris Hanley (ATC) As Agent for NCDOT</i>		Signature <i>[Signature]</i>		Month <i>10</i>	Day <i>16</i>
24. Transporter #1: Acknowledgement of Receipt of Materials		Signature <i>[Signature]</i>		Month <i>10</i>	Day <i>16</i>
25. Transporter #2: Acknowledgement of Receipt of Materials		Signature		Month	Day
26. Discrepancy Indication Space					
27. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)					
Printed/Typed Name <i>Archie Bus</i>		Signature <i>[Signature]</i>		Month <i>10</i>	Day <i>16</i>

GENERATOR

TRANSPORTER

T/S/D FACILITY

ORIGINAL - RETURN TO GENERATOR

EAST CAROLINA ENV LANDFILL

AULANDER, NC 27805 252-348-3322

CUSTOMER

000753  
A&D ENVIRONMENTALAND IND  
PO BOX 484  
PO# 23166  
30261417037

SITE 01	TICKET # 975556	CELL
WEIGHMASTER ARCHIE D.		
DATE/TIME IN 10-16-2014 12:38 pm	DATE/TIME OUT 10-16-2014 12:56 pm	
VEHICLE TRUCK		CONTAINER
REFERENCE EEB7		INVOICE
BILL OF LADING		

SCALE IN	GROSS WEIGHT	52,120	NET TONS	13.33	
MANUAL OUT	TARE WEIGHT	25,460	NET WEIGHT	26,660	INBOUND

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
13.33	TN	SW-CONST DEBRIS PITT				

Indemnification. Generator agrees to indemnify, hold harmless, and defend Republic Services of NC, LLC, its subsidiaries, affiliates, employees, officer and directors from and against any and all liabilities, claims, penalties, forfeitures, suits, and cost and expenses incident thereto, including cost of defense, settlement and reasonable attorney's fees, which may be incurred, as a result of death or injuries to any person, or damage to any property, contamination of or adverse effect on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

The undersigned individual signing this document on behalf of customer acknowledges that he or she has read and understands the terms and conditions

NET AMOUNT
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Please print or type

# NON-HAZARDOUS WASTE MANIFEST

1361513

1. Generator's US EPA ID Number <i>Not applicable</i>		Manifest Document Number		2. Page 1 of	
3. Generator's Name and Mailing Address <i>NCDOT 1020 Birch Ridge Drive Raleigh, NC 27610</i>			5. Generating Location (if different) <i>NCDOT Property Parcel 99 211 West 10th Street Erwinville, NC</i>		
4. Phone <i>919 707-6859</i>			6. Phone <i>(919) 707-6859</i>		
7. Transporter #1 Company Name <i>Evergen Bayden Trucking</i>		8. US EPA ID Number		9. Transporter #1's Phone <i>910-298-4654</i>	
10. Transporter #2 Company Name		11. US EPA ID Number		12. Transporter #2's Phone	
13. Designated T/S/D Facility Name and Site Address <i>East Carolina Landfill 1922 Republican Rd. Aulander NC 27905</i>		14. US EPA ID Number <i>Not Applicable</i>		15. Facility's Phone <i>252-348-3322</i>	
16. Waste Shipping Name and Description		17. Allied Waste Approval # and Exp. Date		18. Containers	
				19. Total Quantity	
				20. Unit Wt/Vol	
a. <i>Concrete Debris (Non-Haz Solids)</i>		<i>302614</i>		<i>02 DT 15.36 Tons</i>	
b.		<i>17037</i>			
c.					
d.					
21. Additional Descriptions for Materials Listed Above <i>ATD bb # 72332</i>					
22. Special Handling Instructions and Additional Information					
23. GENERATOR'S CERTIFICATION: I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste. <i>Chris Hanley (ATC) as Agent for NCDOT</i>					
Printed/Typed Name		Signature		Month Day Year <i>10 16 14</i>	
24. Transporter #1: Acknowledgement of Receipt of Materials					
Printed/Typed Name <i>Dennis J Edwards</i>		Signature 		Month Day Year <i>10 16 14</i>	
25. Transporter #2: Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
26. Discrepancy Indication Space					
27. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)					
Printed/Typed Name <i>Archie Paul</i>		Signature 		Month Day Year <i>10 16 14</i>	

GENERATOR

TRANSPORTER

T/S/D FACILITY

ORIGINAL - RETURN TO GENERATOR

COM 00033

SITE

EAST CAROLINA ENV LANDFILL

AULANDER, NC 27805 252-348-3322

CUSTOMER

000753  
A&D ENVIRONMENTALAND IND  
PO BOX 484  
PO# 23166  
30261417037

TICKET # 975557 CELL

WEIGHMASTER  
ARCHIE B.  
DATE/TIME IN 10-16-2014 12:39 pm DATE/TIME OUT 10-16-2014 1:04 pm  
VEHICLE TRUCK  
REFERENCE RED INVOICE  
BILL OF LADING

SCALE IN GROSS WEIGHT 57,180 NET TONS 15.36  
MANUAL OUT TARE WEIGHT 26,460 NET WEIGHT 30,720

INBOUND

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
15.36	TN	SW-CONST DEBRIS PITT				

Indemnification. Generator agrees to indemnify, hold harmless, and defend Republic Services of NC, LLC, its subsidiaries, affiliates, employees, officer and directors from and against any and all liabilities, claims, penalties, forfeitures, suits, and cost and expenses incident thereto, including cost of defense, settlement and reasonable attorney's fees, which may be incurred, as a result of death or injuries to any person or damage to any property contamination or adverse effect on

The undersigned individual signing this document on behalf of the customer, acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

NET AMOUNT
TENDERED
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SIGNATURE

*Daryl Edwards*



NON-HAZARDOUS WASTE MANIFEST

1361515

Please print or type

1. Generator's US EPA ID Number <i>Not Applicable</i>		Manifest Document Number		2. Page 1 of 1	
3. Generator's Name and Mailing Address <i>NCDOT 1020 Birch Ridge Drive Raleigh, NC 27610</i>			5. Generating Location (if different) <i>NCDOT Property Parcel 99 21 West 10th Street Erwinville, NC (919) 707-6259</i>		
4. Phone <i>(919) 707-6259</i>			6. Phone ( )		
7. Transporter #1 Company Name		8. US EPA ID Number		9. Transporter #1's Phone	
10. Transporter #2 Company Name		11. US EPA ID Number		12. Transporter #2's Phone	
13. Designated T/S/D Facility Name and Site Address <i>East Carolina Landfill 1922 Republican Road Aulander, NC 27905</i>		14. US EPA ID Number <i>Not Applicable</i>		15. Facility's Phone <i>252-348-3322</i>	
16. Waste Shipping Name and Description		17. Allied Waste Approval # and Exp. Date		18. Containers	
a. <i>Concrete Debris (Non-Hazardous Solid)</i>		<i>302614</i>		19. Total Quantity <i>1 DT 18.73 Tons</i>	
b.		<i>17037</i>			
c.					
d.					
21. Additional Descriptions for Materials Listed Above <i>A+D Job # 72332</i>					
22. Special Handling Instructions and Additional Information					
23. GENERATOR'S CERTIFICATION: I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name			Signature		
24. Transporter #1: Acknowledgement of Receipt of Materials			Signature		
Printed/Typed Name <i>William R Langley</i>			Signature <i>William R Langley</i>		
25. Transporter #2: Acknowledgement of Receipt of Materials			Signature		
Printed/Typed Name			Signature		
26. Discrepancy Indication Space					
27. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)					
Printed/Typed Name <i>NCDOT Chris Hanley As Agent for NCDOT</i>			Signature <i>[Signature]</i>		
Printed/Typed Name <i>James E. [Signature]</i>			Signature <i>[Signature]</i>		
			Month Day Year <i>10 16 14</i>		

ORIGINAL - RETURN TO GENERATOR

EAST CAROLINA ENV LANDFILL

AULANDER, NC 27805 252-348-3322

CUSTOMER

000753  
A&D ENVIRONMENTALAND IND  
PO BOX 484  
PO# 23166  
30261417037

TICKET #	01	975560	CELL
WEIGHMASTER			
IN	ARCHIE B.	OUT	JAMES H.
DATE/TIME IN	10-16-2014	12:52 pm	DATE/TIME OUT
VEHICLE			CONTAINER
TRUCK REFERENCE	vch9		
BILL OF LADING	INVOICE		

MANUAL IN SCALE OUT      GROSS WEIGHT      68,180      NET TONS      18.73  
TARE WEIGHT      30,720      NET WEIGHT      37,460

INBOUND

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	TRACKING QTY				
18.73	TN	SW-CONST DEBRIS				
		PITT				

Indemnification. Generator agrees to indemnify, hold harmless, and defend Republic Services of NC, LLC, its subsidiaries, affiliates, employees, officer and directors from and against any and all liabilities, claims, penalties, forfeitures, suits, and cost and expenses incident thereto, including cost of defense, settlement and reasonable attorney's fees, which may be incurred, as a result of death or injuries to any person, or damage to any property, contamination of or adverse effects on the environment. The undersigned individual signing this document on behalf of customer acknowledges that he or she has read the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

NET AMOUNT
TENDERED
CHANGE
CHECK#

SIGNATURE William R. Lupton



**Soilworks, Inc.****Certificate of Disposal**

Facility Address:

7534 Hwy. 42E  
Selma, NC 27576

Mailing Address:

7230 Hwy. 42 East  
Selma, NC 27576

NCDENR

Permit

SRU600075

Phone (919) 366-1500

Fax (919) 553-5832

laura@soilworksnc.com

Soilworks, Inc., operating under Permit SRU600075, hereby acknowledges the receipt of 40.74 tons of soil contaminated with petroleum hydrocarbons and will properly execute the disposal of this soil in the prescribed manner set forth by the North Carolina Department of Environment and Natural Resources, Division of Waste Management in accordance with the requirements of SRU600075.

**CLIENT**

A&amp;D Environmental Services, Inc.

P.O. Box 484

High Point, NC 27262

**GENERATOR**

NC Department of Transportation

1020 Birch Ridge Drive

Raleigh, NC 27610

Site: 211 West 10th Street, Greenville, NC 27834

**TRANSPORTER**

A&amp;D Environmental Services, Inc.

P.O. Box 484

High Point, NC 27262

**DATE(S) ACCEPTED**

September 20-October 1, 2014

**CERTIFICATION BY  
SOILWORKS, INC.**  
SIGNATURE

Laura Buchanan

PRINTED NAME

10/20/14

DATE

**Soilworks, Inc.****Manifest**

Facility Address: 7534 Hwy. 42E  
Selma, NC 27576

Mailing Address: 7230 Hwy. 42 East  
Selma, NC 27576

NCDENR  
Permit  
SRU600075

Phone (919) 366-1500  
Fax (919) 553-5832  
laura@soilworksnc.com

**CLIENT** A&D Environmental Services, Inc.  
P.O. Box 484  
High Point, NC 27262  
(800) 434-7750

**SHIPMENT INFORMATION**

Material Description:  
***Petroleum Contaminated Soil***

Contaminant(s): gasoline

**GENERATOR** NC Department of Transportation  
**MAILING ADDRESS** 1020 Birch Ridge Drive  
Raleigh, NC 27610  
**SITE ADDRESS** NCDOT  
211 West 10th Street  
Greenville, NC 27834

Manifest Number: 1

Date Weighed: 9/30/14

Truck Number: D6

**CONSULTANT** Cardno ATC  
2725 E. Millbrook Road Ste. 121  
Raleigh, NC 27604

Gross Weight (lbs): 48320

Tare Weight (lbs): 25840

Net Weight (lbs): 22480

**TRANSPORTER** A&D Environmental Services, Inc.  
P.O. Box 484  
High Point, NC 27262

Equivalent Tons: 11.24

**INSPECTED & ACCEPTED BY SOILWORKS, INC.:**

*Laura Buchanan*  
SIGNATURE

Laura Buchanan  
PRINTED NAME

9/30/14  
DATE

**Sollworks, Inc.****Manifest**

Facility Address: 7534 Hwy. 42E  
Selma, NC 27576

Mailing Address: 7230 Hwy. 42 East  
Selma, NC 27576

NCDENR  
Permit  
SRU600075

Phone (919) 366-1500  
Fax (919) 553-5832  
laura@soilworksnc.com

<b>CLIENT</b>	A&D Environmental Services, Inc. P.O. Box 484 High Point, NC 27262 (800) 434-7750	<b>SHIPMENT INFORMATION</b>	
		Material Description:	<u>Petroleum Contaminated Soil</u>
		Contaminant(s):	<u>gasoline</u>
<b>GENERATOR</b>	NC Department of Transportation	Manifest Number:	<u>2</u>
<b>MAILING ADDRESS</b>	1020 Birch Ridge Drive Raleigh, NC 27610	Date Weighed:	<u>9/30/14</u>
<b>SITE ADDRESS</b>	NCDOT 211 West 10th Street Greenville, NC 27834	Truck Number:	<u>D6</u>
<b>CONSULTANT</b>	Cardno ATC 2725 E. Millbrook Road Ste. 121 Raleigh, NC 27604	Gross Weight (lbs):	<u>53540</u>
		Tare Weight (lbs):	<u>25840</u>
		Net Weight (lbs):	<u>27700</u>
<b>TRANSPORTER</b>	A&D Environmental Services, Inc. P.O. Box 484 High Point, NC 27262	Equivalent Tons:	<u>13.85</u>

INSPECTED & ACCEPTED BY SOILWORKS, INC.:

Laura Buchanan  
SIGNATURE

Laura Buchanan  
PRINTED NAME

9/30/14  
DATE

Weight tickets will be issued using scales owned and operated by Soilworks, Inc (regulated by the NCDA-Standards Division [registration #582]). Weight tickets are certified by a Public Weighmaster.

**Soilworks, Inc.**



**Manifest**

Facility Address: 7534 Hwy. 42E  
Selma, NC 27576

Mailing Address: 7230 Hwy. 42 East  
Selma, NC 27576

NCDENR  
Permit  
SRU600075

Phone (919) 366-1500  
Fax (919) 553-5832  
laura@soilworksnc.com

**CLIENT** A&D Environmental Services, Inc.  
P.O. Box 484  
High Point, NC 27262  
(800) 434-7750

**SHIPMENT INFORMATION**

Material Description:  
**Petroleum Contaminated Soil**

Contaminant(s): gasoline

**GENERATOR** NC Department of Transportation  
**MAILING ADDRESS** 1020 Birch Ridge Drive  
Raleigh, NC 27610  
**SITE ADDRESS** NCDOT  
211 West 10th Street  
Greenville, NC 27834

Manifest Number: 3

Date Weighed: 10/1/14

Truck Number: D6

**CONSULTANT** Cardno ATC  
2725 E. Millbrook Road Ste. 121  
Raleigh, NC 27604

Gross Weight (lbs): 57140

Tare Weight (lbs): 25840

Net Weight (lbs): 31300

**TRANSPORTER** A&D Environmental Services, Inc.  
P.O. Box 484  
High Point, NC 27262

Equivalent Tons: 15.65

**INSPECTED & ACCEPTED BY SOILWORKS, INC.:**

Laura Buchanan  
SIGNATURE

Laura Buchanan  
PRINTED NAME

10/1/14  
DATE

Weight tickets will be issued using scales owned and operated by Soilworks, Inc (regulated by the NCDA-Standards Division [registration #582]). Weight tickets are certified by a Public Weighmaster.

# Soilworks, Inc.



7534 Hwy. 42 East  
Selma, NC 27576  
(919) 366-1500  
Permit SRU600075

②

EMPTY WT TRUCK D-6

Transporter A3D

12:07pm 09/30/2014  
53540 1b GR

Client A3D

Project 210 W. 117th St, Cville

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
RAYMOND EDWARD EARP 31977

Raymond E. Earp  
INVALID UNLESS SIGNED

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
BOBBY G PAGAN 33380

INVALID UNLESS SIGNED

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
LAURA BUCHANAN 31739

INVALID UNLESS SIGNED

# Soilworks, Inc.



7534 Hwy. 42 East  
Selma, NC 27576  
(919) 366-1500  
Permit SRU600075

(3)

01:41pm 10/01/2014  
57140 lb GR

EMPTY WT TRUCK DG

Transporter AED

Client AED EOLV

Project 210W. 1057. GREENVILLE

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
RAYMOND EDWARD EARP 31977

INVALID UNLESS SIGNED

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
BOBBY G PAGAN 33380

*Bobby Pagan*  
INVALID UNLESS SIGNED

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
JOEY SULLIVAN 37250

INVALID UNLESS SIGNED

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
LAURA BUCHANAN 31739

INVALID UNLESS SIGNED

*EW*

# Soilworks, Inc.



7534 Hwy. 42 East  
Selma, NC 27576  
(919) 366-1500  
Permit SRU600075

EMPTY WT TRUCK D6

Transporter A3D

Client A3D

Project 210 W 10<sup>th</sup> St, Gv. Yla

09:02am 09/30/2014  
25840 1b GR

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
RAYMOND EDWARD EARP 31977

*Raymond Earp*  
INVALID UNLESS SIGNED

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
BOBBY G PAGAN 33380

INVALID UNLESS SIGNED

NORTH CAROLINA  
PUBLIC WEIGHMASTER  
LICENSE EXPIRES JUNE 30, 2015  
LAURA BUCHANAN 31739

INVALID UNLESS SIGNED

**APPENDIX C**

**LABORATORY ANALYTICAL REPORTS**



October 14, 2014

Chemical Testing Engineer  
NCDOT  
Materials & Tests Unit  
1801 Blue Ridge Road  
Raleigh, NC 27607

RE: Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219858

Dear Chemical Engineer:

Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Godwin  
kevin.godwin@pacelabs.com  
Project Manager

Enclosures

cc: Jeff Corson, Cardno ATC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

---

### Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219858

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92219858001	T1A	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C
92219858002	T1B	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C
92219858003	T1C	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C
92219858004	T2A	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C
92219858005	T2B	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C
92219858006	T2C	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C
92219858007	T3A	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C
92219858008	T3B	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C
92219858009	T3C	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

---

**Method:** EPA 8015 Modified

**Description:** 8015 GCS THC-Diesel

**Client:** NCDOT North East

**Date:** October 14, 2014

**General Information:**

9 samples were analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

---

**Method:** EPA 8015 Modified

**Description:** Gasoline Range Organics

**Client:** NCDOT North East

**Date:** October 14, 2014

**General Information:**

9 samples were analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 5035A/5030B with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

**Sample: T1A**      **Lab ID: 92219858001**      Collected: 10/02/14 08:30      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	<b>79.8</b>	mg/kg	8.4	1	10/07/14 08:09	10/08/14 02:31		
<b>Surrogates</b>								
n-Pentacosane (S)	67	%	41-119	1	10/07/14 08:09	10/08/14 02:31	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	ND	mg/kg	8.7	1	10/10/14 10:00	10/13/14 20:11		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	86	%	70-167	1	10/10/14 10:00	10/13/14 20:11	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>40.3</b>	%	0.10	1		10/07/14 14:47		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

**Sample: T1B**      **Lab ID: 92219858002**      Collected: 10/02/14 08:40      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	<b>55.5</b>	mg/kg	8.1	1	10/07/14 08:09	10/08/14 02:31		
<b>Surrogates</b>								
n-Pentacosane (S)	72	%	41-119	1	10/07/14 08:09	10/08/14 02:31	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	<b>15.1</b>	mg/kg	8.7	1	10/06/14 13:30	10/06/14 20:40		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	90	%	70-167	1	10/06/14 13:30	10/06/14 20:40	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>38.0</b>	%	0.10	1		10/07/14 14:47		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219858

**Sample: T1C**      **Lab ID: 92219858003**      Collected: 10/02/14 08:50      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	ND	mg/kg	7.2	1	10/07/14 08:09	10/08/14 02:54		
<b>Surrogates</b>								
n-Pentacosane (S)	67	%	41-119	1	10/07/14 08:09	10/08/14 02:54	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	9.1	mg/kg	8.1	1	10/06/14 13:30	10/06/14 21:03		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	84	%	70-167	1	10/06/14 13:30	10/06/14 21:03	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	30.2	%	0.10	1		10/07/14 14:47		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

**Sample: T2A**      **Lab ID: 92219858004**      Collected: 10/02/14 09:00      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	<b>79.4</b>	mg/kg	7.5	1	10/07/14 08:09	10/08/14 02:54		
<b>Surrogates</b>								
n-Pentacosane (S)	71	%	41-119	1	10/07/14 08:09	10/08/14 02:54	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	ND	mg/kg	9.3	1	10/06/14 13:30	10/06/14 21:26		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	84	%	70-167	1	10/06/14 13:30	10/06/14 21:26	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>33.6</b>	%	0.10	1		10/07/14 14:47		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

**Sample: T2B**      **Lab ID: 92219858005**      Collected: 10/02/14 09:10      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	ND	mg/kg	7.7	1	10/07/14 08:09	10/08/14 03:17		
<b>Surrogates</b>								
n-Pentacosane (S)	69	%	41-119	1	10/07/14 08:09	10/08/14 03:17	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	ND	mg/kg	8.2	1	10/06/14 13:30	10/06/14 21:49		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	88	%	70-167	1	10/06/14 13:30	10/06/14 21:49	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	34.7	%	0.10	1		10/07/14 14:47		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

**Sample: T2C**      **Lab ID: 92219858006**      Collected: 10/02/14 09:20      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	ND	mg/kg	7.8	1	10/07/14 08:09	10/08/14 03:17		
<b>Surrogates</b>								
n-Pentacosane (S)	68	%	41-119	1	10/07/14 08:09	10/08/14 03:17	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	ND	mg/kg	8.1	1	10/10/14 10:00	10/13/14 20:33		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	87	%	70-167	1	10/10/14 10:00	10/13/14 20:33	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	35.9	%	0.10	1		10/07/14 14:47		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

**Sample: T3A**      **Lab ID: 92219858007**      Collected: 10/02/14 09:30      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	ND	mg/kg	7.4	1	10/07/14 08:09	10/08/14 03:41		
<b>Surrogates</b>								
n-Pentacosane (S)	69	%	41-119	1	10/07/14 08:09	10/08/14 03:41	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	ND	mg/kg	7.8	1	10/07/14 09:40	10/07/14 13:02		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	95	%	70-167	1	10/07/14 09:40	10/07/14 13:02	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	32.5	%	0.10	1		10/07/14 14:48		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

**Sample: T3B**      **Lab ID: 92219858008**      Collected: 10/02/14 09:40      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	ND	mg/kg	7.4	1	10/07/14 08:09	10/08/14 04:04		
<b>Surrogates</b>								
n-Pentacosane (S)	79	%	41-119	1	10/07/14 08:09	10/08/14 04:04	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	ND	mg/kg	7.1	1	10/07/14 09:40	10/07/14 13:24		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	90	%	70-167	1	10/07/14 09:40	10/07/14 13:24	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>32.8</b>	%	0.10	1		10/07/14 14:48		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

**Sample: T3C**      **Lab ID: 92219858009**      Collected: 10/02/14 09:50      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	ND	mg/kg	7.5	1	10/07/14 08:09	10/08/14 04:28		
<b>Surrogates</b>								
n-Pentacosane (S)	64	%	41-119	1	10/07/14 08:09	10/08/14 04:28	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	ND	mg/kg	7.6	1	10/07/14 09:40	10/07/14 13:47		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	87	%	70-167	1	10/07/14 09:40	10/07/14 13:47	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	33.2	%	0.10	1		10/07/14 14:48		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

QC Batch: GCV/8624

Analysis Method: EPA 8015 Modified

QC Batch Method: EPA 5035A/5030B

Analysis Description: Gasoline Range Organics

Associated Lab Samples: 92219858002, 92219858003, 92219858004, 92219858005

METHOD BLANK: 1300231

Matrix: Solid

Associated Lab Samples: 92219858002, 92219858003, 92219858004, 92219858005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	6.0	10/06/14 12:25	
4-Bromofluorobenzene (S)	%	79	70-167	10/06/14 12:25	

LABORATORY CONTROL SAMPLE: 1300232

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	50	48.1	96	70-165	
4-Bromofluorobenzene (S)	%			81	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1300233 1300234

Parameter	Units	92219858005		1300234		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result					
Gas Range Organics (C6-C10)	mg/kg	ND	68.3	68.3	81.9	73.2	113	101	47-187	11
4-Bromofluorobenzene (S)	%						81	82	70-167	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

QC Batch: GCV/8627 Analysis Method: EPA 8015 Modified  
 QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics  
 Associated Lab Samples: 92219858007, 92219858008, 92219858009

METHOD BLANK: 1300687 Matrix: Solid

Associated Lab Samples: 92219858007, 92219858008, 92219858009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	6.0	10/07/14 10:44	
4-Bromofluorobenzene (S)	%	81	70-167	10/07/14 10:44	

LABORATORY CONTROL SAMPLE: 1300688

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	50	46.8	94	70-165	
4-Bromofluorobenzene (S)	%			84	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1300689 1300690

Parameter	Units	92219858009		1300689		1300690		% Rec Limits	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec			
Gas Range Organics (C6-C10)	mg/kg	ND	63.6	63.6	84.5	82.7	129	126	47-187	2
4-Bromofluorobenzene (S)	%						91	86	70-167	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

QC Batch:	GCV/8647	Analysis Method:	EPA 8015 Modified
QC Batch Method:	EPA 5035A/5030B	Analysis Description:	Gasoline Range Organics
Associated Lab Samples:	92219858001, 92219858006		

METHOD BLANK: 1303867 Matrix: Solid

Associated Lab Samples: 92219858001, 92219858006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	6.0	10/13/14 16:45	
4-Bromofluorobenzene (S)	%	84	70-167	10/13/14 16:45	

LABORATORY CONTROL SAMPLE: 1303868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	50	50.1	100	70-165	
4-Bromofluorobenzene (S)	%			85	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1303869 1303870

Parameter	Units	92219858006		1303870		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result					
Gas Range Organics (C6-C10)	mg/kg	ND	67.4	67.4	92.9	90.3	138	134	47-187	3
4-Bromofluorobenzene (S)	%						91	91	70-167	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219858

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92219858001	T1A	EPA 3546	OEXT/30292	EPA 8015 Modified	GCSV/19117
92219858002	T1B	EPA 3546	OEXT/30292	EPA 8015 Modified	GCSV/19117
92219858003	T1C	EPA 3546	OEXT/30292	EPA 8015 Modified	GCSV/19117
92219858004	T2A	EPA 3546	OEXT/30292	EPA 8015 Modified	GCSV/19117
92219858005	T2B	EPA 3546	OEXT/30292	EPA 8015 Modified	GCSV/19117
92219858006	T2C	EPA 3546	OEXT/30292	EPA 8015 Modified	GCSV/19117
92219858007	T3A	EPA 3546	OEXT/30292	EPA 8015 Modified	GCSV/19117
92219858008	T3B	EPA 3546	OEXT/30292	EPA 8015 Modified	GCSV/19117
92219858009	T3C	EPA 3546	OEXT/30292	EPA 8015 Modified	GCSV/19117
92219858001	T1A	EPA 5035A/5030B	GCV/8647	EPA 8015 Modified	GCV/8649
92219858002	T1B	EPA 5035A/5030B	GCV/8624	EPA 8015 Modified	GCV/8628
92219858003	T1C	EPA 5035A/5030B	GCV/8624	EPA 8015 Modified	GCV/8628
92219858004	T2A	EPA 5035A/5030B	GCV/8624	EPA 8015 Modified	GCV/8628
92219858005	T2B	EPA 5035A/5030B	GCV/8624	EPA 8015 Modified	GCV/8628
92219858006	T2C	EPA 5035A/5030B	GCV/8647	EPA 8015 Modified	GCV/8649
92219858007	T3A	EPA 5035A/5030B	GCV/8627	EPA 8015 Modified	GCV/8633
92219858008	T3B	EPA 5035A/5030B	GCV/8627	EPA 8015 Modified	GCV/8633
92219858009	T3C	EPA 5035A/5030B	GCV/8627	EPA 8015 Modified	GCV/8633
92219858001	T1A	ASTM D2974-87	PMST/7096		
92219858002	T1B	ASTM D2974-87	PMST/7096		
92219858003	T1C	ASTM D2974-87	PMST/7096		
92219858004	T2A	ASTM D2974-87	PMST/7096		
92219858005	T2B	ASTM D2974-87	PMST/7096		
92219858006	T2C	ASTM D2974-87	PMST/7096		
92219858007	T3A	ASTM D2974-87	PMST/7096		
92219858008	T3B	ASTM D2974-87	PMST/7096		
92219858009	T3C	ASTM D2974-87	PMST/7096		

### REPORT OF LABORATORY ANALYSIS

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Document Name: **Sample Condition Upon Receipt (SCUR)**

Document Revised: September 2011  
Page 1 of 2

Document Number:  
**F-CHR-CS-003-rev.15**

Issuing Authority:  
Pace Huntersville Quality Office

Client Name: Cardno ATC

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Packing Material:  Bubble V  p  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun **(T1401)**    Type of Ice: **(Wet)** Blue None  Samples on ice, cooling process has begun

Temp Correction Factor **T1401** No Correction

Corrected Cooler Temp.: 2.2 °C

Biological Tissue is Frozen: Yes No **(N/A)**

Date and Initials of person examining contents: CE 10/3/14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review:

*[Signature]*

Date:

10/3/14

Place label here

SRF Review:

*[Signature]*

Date:

10/3/14

**WO#: 92219858**

Note: Whenever there is a discrepancy affecting North Carolina con samples, a copy of this form will be sent to the North Carolina DE Certification Office (i.e. out of hold, incorrect preservative, out of incorrect containers)



number (le)



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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1  
000522

**Section A**  
Required Client Information:

Company: **CARDNO ATC**  
Address: **2725 E. Millbrook Rd. Suite 121 Raleigh, NC 27604**  
Email To: **Jeff, Corson@cardno.com**  
Phone: **919-871-0999** Fax:  
Requested Due Date/TAT:

**Section B**  
Required Project Information:

Report To: **Jeff, Corson@cardno.com**  
Copy To: **Garnett Stancil@cardno.com**  
Purchase Order No.:  
Project Name: **Greenville NCDOT**  
Project Number: **45.19873.0007**

**Section C**  
Invoice Information:

Attention:  
Company Name:  
Address:  
Pace Quote Reference:  
Pace Project Manager:  
Pace Profile #: **6147-1**

**REGULATORY AGENCY**  
 NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER  
Site Location STATE: **NC**

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START	COMPOSITE END/GRAB							
1	T1A	Drinking Water	SL G	G	10/21/14	8:30							001
2	T1B	Water				8:40							002
3	T1C	Waste Water				8:50							003
4	T2A	Product				9:00							004
5	T2B	Oil				9:10							005
6	T2C	Wipe				9:20							006
7	T3A	Air				9:30							007
8	T3B	Tissue				9:40							008
9	T3C	Other				9:50							009
10	CSP-1		SL G	G	10/21/14	14:45							005
11													
12													

ADDITIONAL COMMENTS: **Concrete sample CSP-1**  
**Needs RUSH RESULTS!!**  
**THANKS!**

RELINQUISHED BY / AFFILIATION: **Garnett Stancil** DATE: **10/21/14** TIME: **15:00**

ACCEPTED BY / AFFILIATION: **Chris Burtz** DATE: **10/31/14** TIME: **800**

SAMPLE CONDITIONS: **2.2 Y N Y**

ORIGINAL

SAMPLER NAME AND SIGNATURE: **Garnett Stancil** DATE Signed: **10/21/14**

PRINT Name of SAMPLER: **Garnett Stancil** DATE Signed (MM/DD/YY): **10/21/14**

SIGNATURE of SAMPLER: **Garnett Stancil**

Temp in °C: **2.2** Received on Ice (Y/N): **Y** Custody Sealed Cooler (Y/N): **N** Samples Intact (Y/N): **Y**

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007



October 09, 2014

Chemical Testing Engineer  
NCDOT  
Materials & Tests Unit  
1801 Blue Ridge Road  
Raleigh, NC 27607

RE: Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219859

Dear Chemical Engineer:

Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Godwin  
kevin.godwin@pacelabs.com  
Project Manager

Enclosures

cc: Jeff Corson, Cardno ATC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

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### Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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### Asheville Certification IDs

2225 Riverside Dr., Asheville, NC 28804  
Florida/NELAP Certification #: E87648  
Massachusetts Certification #: M-NC030  
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40  
South Carolina Certification #: 99030001  
West Virginia Certification #: 356  
Virginia/VELAP Certification #: 460222

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92219859001	CSP-1	EPA 6010	JMW	7	PASI-A
		EPA 7470	HVK	1	PASI-A
		EPA 8270	RES	18	PASI-C
		EPA 8260	DLK	14	PASI-C
		EPA 8260	DLK	4	PASI-C
		ASTM D2974-87	ACS	1	PASI-C

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219859

---

**Method:** EPA 6010  
**Description:** 6010 MET ICP, TCLP  
**Client:** NCDOT North East  
**Date:** October 09, 2014

**General Information:**

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219859

---

**Method:** EPA 7470  
**Description:** 7470 Mercury, TCLP  
**Client:** NCDOT North East  
**Date:** October 09, 2014

**General Information:**

1 sample was analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

---

**Method:** EPA 8270

**Description:** 8270 MSSV TCLP Sep Funnel

**Client:** NCDOT North East

**Date:** October 09, 2014

**General Information:**

1 sample was analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: OEXT/30325

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92219859001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1302188)
  - Pyridine

R1: RPD value was outside control limits.

- MSD (Lab ID: 1302189)
  - Pyridine

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

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**Method:** EPA 8260

**Description:** 8260 MSV TCLP

**Client:** NCDOT North East

**Date:** October 09, 2014

**General Information:**

1 sample was analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

Analyte Comments:

QC Batch: MSV/28650

1g: 8260 results are from a total analysis which show that analytes are not present or that they are present but at such low levels that the appropriate regulatory levels could not possibly be exceeded, per Section 1.2 of Method 1311.

- CSP-1 (Lab ID: 92219859001)
  - 1,2-Dichloroethane-d4 (S)

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## PROJECT NARRATIVE

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

---

**Method:** EPA 8260

**Description:** 8260/5035A Volatile Organics

**Client:** NCDOT North East

**Date:** October 09, 2014

**General Information:**

1 sample was analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

Analyte Comments:

QC Batch: MSV/28648

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- CSP-1 (Lab ID: 92219859001)
- Toluene-d8 (S)

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

**Sample: CSP-1**      **Lab ID: 92219859001**      Collected: 10/02/14 14:45      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**6010 MET ICP, TCLP**

Analytical Method: EPA 6010      Preparation Method: EPA 3010

Leachate Method/Date: EPA 1311; 10/06/14 20:00

Arsenic	ND	mg/L	0.050	1	10/07/14 15:00	10/08/14 13:01	7440-38-2	
Barium	<b>0.60</b>	mg/L	0.25	1	10/07/14 15:00	10/08/14 13:01	7440-39-3	
Cadmium	ND	mg/L	0.0050	1	10/07/14 15:00	10/08/14 13:01	7440-43-9	
Chromium	ND	mg/L	0.025	1	10/07/14 15:00	10/08/14 13:01	7440-47-3	
Lead	ND	mg/L	0.025	1	10/07/14 15:00	10/08/14 13:01	7439-92-1	
Selenium	ND	mg/L	0.10	1	10/07/14 15:00	10/08/14 13:01	7782-49-2	
Silver	ND	mg/L	0.025	1	10/07/14 15:00	10/08/14 13:01	7440-22-4	

**7470 Mercury, TCLP**

Analytical Method: EPA 7470      Preparation Method: EPA 7470

Leachate Method/Date: EPA 1311; 10/06/14 20:00

Mercury	ND	ug/L	0.20	1	10/07/14 15:50	10/08/14 13:39	7439-97-6	
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**8270 MSSV TCLP Sep Funnel**

Analytical Method: EPA 8270      Preparation Method: EPA 3510

Leachate Method/Date: EPA 1311; 10/07/14 14:20

1,4-Dichlorobenzene	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	106-46-7	
2,4-Dinitrotoluene	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	121-14-2	
Hexachloro-1,3-butadiene	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	87-68-3	
Hexachlorobenzene	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	118-74-1	
Hexachloroethane	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42		
Nitrobenzene	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	98-95-3	
Pentachlorophenol	ND	ug/L	100	1	10/08/14 13:20	10/08/14 19:42	87-86-5	
Pyridine	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	110-86-1	
2,4,5-Trichlorophenol	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	50.0	1	10/08/14 13:20	10/08/14 19:42	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	85	%	12-102	1	10/08/14 13:20	10/08/14 19:42	4165-60-0	
2-Fluorobiphenyl (S)	82	%	13-107	1	10/08/14 13:20	10/08/14 19:42	321-60-8	
Terphenyl-d14 (S)	89	%	21-132	1	10/08/14 13:20	10/08/14 19:42	1718-51-0	
Phenol-d6 (S)	30	%	10-110	1	10/08/14 13:20	10/08/14 19:42	13127-88-3	
2-Fluorophenol (S)	43	%	10-110	1	10/08/14 13:20	10/08/14 19:42	367-12-4	
2,4,6-Tribromophenol (S)	78	%	27-108	1	10/08/14 13:20	10/08/14 19:42	118-79-6	

**8260 MSV TCLP**

Analytical Method: EPA 8260      Leachate Method/Date: EPA 1311; 10/05/14 11:57

Benzene	<b>154</b>	ug/L	125	25	10/07/14 17:14	71-43-2	
2-Butanone (MEK)	ND	ug/L	250	25	10/07/14 17:14	78-93-3	
Carbon tetrachloride	ND	ug/L	125	25	10/07/14 17:14	56-23-5	
Chlorobenzene	ND	ug/L	125	25	10/07/14 17:14	108-90-7	
Chloroform	ND	ug/L	125	25	10/07/14 17:14	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	125	25	10/07/14 17:14	106-46-7	
1,2-Dichloroethane	ND	ug/L	125	25	10/07/14 17:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	125	25	10/07/14 17:14	75-35-4	
Tetrachloroethene	ND	ug/L	125	25	10/07/14 17:14	127-18-4	
Trichloroethene	ND	ug/L	125	25	10/07/14 17:14	79-01-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

**Sample: CSP-1**      **Lab ID: 92219859001**      Collected: 10/02/14 14:45      Received: 10/03/14 08:00      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV TCLP</b>		Analytical Method: EPA 8260    Leachate Method/Date: EPA 1311; 10/05/14 11:57						
Vinyl chloride	ND	ug/L	125	25		10/07/14 17:14	75-01-4	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	97 %		70-130	25		10/07/14 17:14	17060-07-0	1g
Toluene-d8 (S)	98 %		67-135	25		10/07/14 17:14	2037-26-5	
4-Bromofluorobenzene (S)	101 %		70-130	25		10/07/14 17:14	460-00-4	
<b>8260/5035A Volatile Organics</b>		Analytical Method: EPA 8260						
Benzene	197	ug/kg	159	25		10/07/14 17:14	71-43-2	
<b>Surrogates</b>								
Toluene-d8 (S)	98 %		70-130	25		10/07/14 17:14	2037-26-5	D3
4-Bromofluorobenzene (S)	101 %		70-130	25		10/07/14 17:14	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %		70-132	25		10/07/14 17:14	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	21.6	%	0.10	1		10/07/14 14:47		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219859

QC Batch: MERP/7152                      Analysis Method: EPA 7470  
QC Batch Method: EPA 7470                Analysis Description: 7470 Mercury TCLP  
Associated Lab Samples: 92219859001

METHOD BLANK: 1301305                      Matrix: Water  
Associated Lab Samples: 92219859001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	10/08/14 13:02	

LABORATORY CONTROL SAMPLE: 1301306

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.3	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1301307                      1301308

Parameter	Units	92218342001		MSD		MS		MSD		% Rec Limits	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
Mercury	ug/L	0.30	2.5	2.5	2.5	2.5	2.5	88	89	75-125	1	

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

QC Batch:	MPRP/17061	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET TCLP
Associated Lab Samples:	92219859001		

METHOD BLANK: 1301239 Matrix: Water

Associated Lab Samples: 92219859001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.050	10/08/14 12:12	
Barium	mg/L	ND	0.25	10/08/14 12:12	
Cadmium	mg/L	ND	0.0050	10/08/14 12:12	
Chromium	mg/L	ND	0.025	10/08/14 12:12	
Lead	mg/L	ND	0.025	10/08/14 12:12	
Selenium	mg/L	ND	0.10	10/08/14 12:12	
Silver	mg/L	ND	0.025	10/08/14 12:12	

LABORATORY CONTROL SAMPLE: 1301240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	2.5	2.7	107	80-120	
Barium	mg/L	2.5	2.5	100	80-120	
Cadmium	mg/L	2.5	2.6	105	80-120	
Chromium	mg/L	2.5	2.5	99	80-120	
Lead	mg/L	2.5	2.5	98	80-120	
Selenium	mg/L	2.5	2.7	108	80-120	
Silver	mg/L	1.2	1.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1301241 1301242

Parameter	Units	92218342001		MSD		MS		MSD		% Rec Limits	RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result	MS Result	MSD Result	MS % Rec	MSD % Rec			
Arsenic	mg/L	2.5	ND	2.5	2.5	2.7	2.7	107	110	75-125	2	
Barium	mg/L	2.5	0.60	2.5	2.5	3.1	3.2	99	103	75-125	3	
Cadmium	mg/L	2.5	0.28	2.5	2.5	2.9	3.0	105	108	75-125	2	
Chromium	mg/L	2.5	ND	2.5	2.5	2.4	2.4	96	94	75-125	1	
Lead	mg/L	2.5	0.40	2.5	2.5	2.8	2.9	96	98	75-125	3	
Selenium	mg/L	2.5	ND	2.5	2.5	2.7	2.8	108	111	75-125	2	
Silver	mg/L	1.2	ND	1.2	1.2	1.3	1.3	102	103	75-125	1	

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

QC Batch:	MSV/28650	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV TCLP
Associated Lab Samples:	92219859001		

METHOD BLANK: 1300780 Matrix: Water

Associated Lab Samples: 92219859001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	5.0	10/07/14 10:37	
1,2-Dichloroethane	ug/L	ND	5.0	10/07/14 10:37	
1,4-Dichlorobenzene	ug/L	ND	5.0	10/07/14 10:37	
2-Butanone (MEK)	ug/L	ND	10.0	10/07/14 10:37	
Benzene	ug/L	ND	5.0	10/07/14 10:37	
Carbon tetrachloride	ug/L	ND	5.0	10/07/14 10:37	
Chlorobenzene	ug/L	ND	5.0	10/07/14 10:37	
Chloroform	ug/L	ND	5.0	10/07/14 10:37	
Tetrachloroethene	ug/L	ND	5.0	10/07/14 10:37	
Trichloroethene	ug/L	ND	5.0	10/07/14 10:37	
Vinyl chloride	ug/L	ND	5.0	10/07/14 10:37	
1,2-Dichloroethane-d4 (S)	%	92	70-130	10/07/14 10:37	
4-Bromofluorobenzene (S)	%	96	70-130	10/07/14 10:37	
Toluene-d8 (S)	%	102	67-135	10/07/14 10:37	

LABORATORY CONTROL SAMPLE: 1300781

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	50	55.1	110	66-135	
1,2-Dichloroethane	ug/L	50	52.4	105	67-128	
1,4-Dichlorobenzene	ug/L	50	52.7	105	78-130	
2-Butanone (MEK)	ug/L	100	95.6	96	61-144	
Benzene	ug/L	50	51.6	103	80-125	
Carbon tetrachloride	ug/L	50	53.4	107	69-131	
Chlorobenzene	ug/L	50	52.9	106	81-122	
Chloroform	ug/L	50	53.5	107	73-127	
Tetrachloroethene	ug/L	50	48.3	97	78-122	
Trichloroethene	ug/L	50	54.9	110	78-122	
Vinyl chloride	ug/L	50	51.5	103	58-137	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Toluene-d8 (S)	%			100	67-135	

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

QC Batch:	MSV/28648	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	92219859001		

METHOD BLANK: 1300773 Matrix: Solid

Associated Lab Samples: 92219859001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	5.0	10/07/14 10:57	
1,2-Dichloroethane-d4 (S)	%	92	70-132	10/07/14 10:57	
4-Bromofluorobenzene (S)	%	95	70-130	10/07/14 10:57	
Toluene-d8 (S)	%	103	70-130	10/07/14 10:57	

LABORATORY CONTROL SAMPLE: 1300774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	55.2	58.9	107	73-135	
1,2-Dichloroethane-d4 (S)	%			99	70-132	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1301852

Parameter	Units	92219809019 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	ND	32.7	32.5	99	50-166	
1,2-Dichloroethane-d4 (S)	%				116	70-132	
4-Bromofluorobenzene (S)	%				105	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1301851

Parameter	Units	92219708004 Result	Dup Result	RPD	Qualifiers
Benzene	ug/kg	ND	ND		
1,2-Dichloroethane-d4 (S)	%	91	101	6	
4-Bromofluorobenzene (S)	%	92	100	4	
Toluene-d8 (S)	%	102	99	8	

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

QC Batch:	OEXT/30325	Analysis Method:	EPA 8270
QC Batch Method:	EPA 3510	Analysis Description:	8270 TCLP MSSV
Associated Lab Samples:	92219859001		

METHOD BLANK: 1302186 Matrix: Water

Associated Lab Samples: 92219859001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	50.0	10/08/14 18:48	
2,4,5-Trichlorophenol	ug/L	ND	50.0	10/08/14 18:48	
2,4,6-Trichlorophenol	ug/L	ND	50.0	10/08/14 18:48	
2,4-Dinitrotoluene	ug/L	ND	50.0	10/08/14 18:48	
2-Methylphenol(o-Cresol)	ug/L	ND	50.0	10/08/14 18:48	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50.0	10/08/14 18:48	
Hexachloro-1,3-butadiene	ug/L	ND	50.0	10/08/14 18:48	
Hexachlorobenzene	ug/L	ND	50.0	10/08/14 18:48	
Hexachloroethane	ug/L	ND	50.0	10/08/14 18:48	
Nitrobenzene	ug/L	ND	50.0	10/08/14 18:48	
Pentachlorophenol	ug/L	ND	100	10/08/14 18:48	
Pyridine	ug/L	ND	50.0	10/08/14 18:48	
2,4,6-Tribromophenol (S)	%	77	27-108	10/08/14 18:48	
2-Fluorobiphenyl (S)	%	78	13-107	10/08/14 18:48	
2-Fluorophenol (S)	%	40	10-110	10/08/14 18:48	
Nitrobenzene-d5 (S)	%	81	12-102	10/08/14 18:48	
Phenol-d6 (S)	%	29	10-110	10/08/14 18:48	
Terphenyl-d14 (S)	%	84	21-132	10/08/14 18:48	

LABORATORY CONTROL SAMPLE: 1302187

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	500	339	68	10-110	
2,4,5-Trichlorophenol	ug/L	500	384	77	39-108	
2,4,6-Trichlorophenol	ug/L	500	380	76	40-104	
2,4-Dinitrotoluene	ug/L	500	436	87	42-109	
2-Methylphenol(o-Cresol)	ug/L	500	319	64	31-110	
3&4-Methylphenol(m&p Cresol)	ug/L	500	283	57	30-110	
Hexachloro-1,3-butadiene	ug/L	500	328	66	10-110	
Hexachlorobenzene	ug/L	500	376	75	39-121	
Hexachloroethane	ug/L	500	329	66	10-110	
Nitrobenzene	ug/L	500	424	85	32-101	
Pentachlorophenol	ug/L	1000	478	48	18-108	
Pyridine	ug/L	500	97.2	19	10-110	
2,4,6-Tribromophenol (S)	%			75	27-108	
2-Fluorobiphenyl (S)	%			80	13-107	
2-Fluorophenol (S)	%			42	10-110	
Nitrobenzene-d5 (S)	%			82	12-102	
Phenol-d6 (S)	%			30	10-110	
Terphenyl-d14 (S)	%			85	21-132	

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

Parameter	92219859001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Qual
	Units	Result	Spike Conc.	MS Spike Conc.	MS Result	MSD Result	% Rec	% Rec						
1,4-Dichlorobenzene	ug/L	ND	500	500	360	352	72	70	30-150	2				
2,4,5-Trichlorophenol	ug/L	ND	500	500	398	401	80	80	30-150	1				
2,4,6-Trichlorophenol	ug/L	ND	500	500	399	392	80	78	30-150	2				
2,4-Dinitrotoluene	ug/L	ND	500	500	449	455	90	91	30-150	1				
2-Methylphenol(o-Cresol)	ug/L	ND	500	500	330	334	66	67	30-150	1				
3&4-Methylphenol(m&p Cresol)	ug/L	ND	500	500	305	304	61	61	30-150	0				
Hexachloro-1,3-butadiene	ug/L	ND	500	500	347	327	69	65	30-150	6				
Hexachlorobenzene	ug/L	ND	500	500	410	400	82	80	30-150	2				
Hexachloroethane	ug/L	ND	500	500	349	337	70	67	30-150	4				
Nitrobenzene	ug/L	ND	500	500	439	430	88	86	30-150	2				
Pentachlorophenol	ug/L	ND	1000	1000	542	570	53	55	30-150	5				
Pyridine	ug/L	ND	500	500	86.5	163	17	33	30-150	61	M1,R1			
2,4,6-Tribromophenol (S)	%						81	77	27-108					
2-Fluorobiphenyl (S)	%						80	80	13-107					
2-Fluorophenol (S)	%						44	43	10-110					
Nitrobenzene-d5 (S)	%						84	83	12-102					
Phenol-d6 (S)	%						31	31	10-110					
Terphenyl-d14 (S)	%						88	83	21-132					

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

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QC Batch:	PMST/7096	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	92219859001		

---

SAMPLE DUPLICATE: 1299478

Parameter	Units	92219925001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	9.9	16.0	48	R1

---

SAMPLE DUPLICATE: 1299479

Parameter	Units	92219858009 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	33.2	32.6	2	

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### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

1g 8260 results are from a total analysis which show that analytes are not present or that they are present but at such low levels that the appropriate regulatory levels could not possibly be exceeded, per Section 1.2 of Method 1311.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219859

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92219859001	CSP-1	EPA 3010	MPRP/17061	EPA 6010	ICP/15382
92219859001	CSP-1	EPA 7470	MERP/7152	EPA 7470	MERC/6880
92219859001	CSP-1	EPA 3510	OEXT/30325	EPA 8270	MSSV/9750
92219859001	CSP-1	EPA 8260	MSV/28650		
92219859001	CSP-1	EPA 8260	MSV/28648		
92219859001	CSP-1	ASTM D2974-87	PMST/7096		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt (SCUR)

Document Number:

F-CHR-CS-003-rev.15

Issuing Authority: Pace Huntersville Quality Office

Client Name: Cardno ATC

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble V  ip  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1401 Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 2.2 °C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: CE 10/3/14

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / I / N

Person Contacted: Jeff Carson Date/Time: 10/3/14

Comments/ Resolution: Jeff requested TCLP 8260, TLLP 8270 & TCLP Metals for TCLP

SCUR Review:	<u>[Signature]</u>	Date:	<u>10/3/14</u>
SRF Review:	<u>[Signature]</u>	Date:	<u>10/3/14</u>

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92219859



92219859



October 14, 2014

Chemical Testing Engineer  
NCDOT  
Materials & Tests Unit  
1801 Blue Ridge Road  
Raleigh, NC 27607

RE: Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219433

Dear Chemical Engineer:

Enclosed are the analytical results for sample(s) received by the laboratory on October 01, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kevin Godwin  
kevin.godwin@pacelabs.com  
Project Manager

Enclosures

cc: Jeff Corson, Cardno ATC



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219433

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### Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078  
North Carolina Drinking Water Certification #: 37706  
North Carolina Field Services Certification #: 5342  
North Carolina Wastewater Certification #: 12  
South Carolina Certification #: 99006001

Florida/NELAP Certification #: E87627  
Kentucky UST Certification #: 84  
West Virginia Certification #: 357  
Virginia/VELAP Certification #: 460221

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219433

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92219433001	SSP-1	EPA 8015 Modified	RES	2	PASI-C
		EPA 8015 Modified	BFW	2	PASI-C
		ASTM D2974-87	ACS	1	PASI-C

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219433

---

**Method:** EPA 8015 Modified  
**Description:** 8015 GCS THC-Diesel  
**Client:** NCDOT North East  
**Date:** October 14, 2014

**General Information:**

1 sample was analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: OEXT/30198

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92219314001

M3: Matrix spike recovery was outside laboratory control limits due to matrix interferences.

- MS (Lab ID: 1296485)
  - Diesel Range Organics(C10-C28)
- MSD (Lab ID: 1296486)
  - Diesel Range Organics(C10-C28)

R1: RPD value was outside control limits.

- MSD (Lab ID: 1296486)
  - Diesel Range Organics(C10-C28)

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219433

---

**Method:** EPA 8015 Modified

**Description:** Gasoline Range Organics

**Client:** NCDOT North East

**Date:** October 14, 2014

**General Information:**

1 sample was analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 5035A/5030B with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219433

**Sample: SSP-1**      **Lab ID: 92219433001**      Collected: 09/30/14 10:00      Received: 10/01/14 09:45      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015 GCS THC-Diesel</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 3546						
Diesel Range Organics(C10-C28)	<b>92.8</b>	mg/kg	7.3	1	10/01/14 15:35	10/02/14 17:27		
<b>Surrogates</b>								
n-Pentacosane (S)	51	%	41-119	1	10/01/14 15:35	10/02/14 17:27	629-99-2	
<b>Gasoline Range Organics</b>		Analytical Method: EPA 8015 Modified    Preparation Method: EPA 5035A/5030B						
Gas Range Organics (C6-C10)	<b>323</b>	mg/kg	67.5	10	10/10/14 10:00	10/14/14 00:22		
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	86	%	70-167	10	10/10/14 10:00	10/14/14 00:22	460-00-4	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974-87						
Percent Moisture	<b>31.4</b>	%	0.10	1		10/03/14 13:11		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219433

QC Batch:	GCV/8647	Analysis Method:	EPA 8015 Modified
QC Batch Method:	EPA 5035A/5030B	Analysis Description:	Gasoline Range Organics
Associated Lab Samples:	92219433001		

METHOD BLANK: 1303867 Matrix: Solid

Associated Lab Samples: 92219433001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	ND	6.0	10/13/14 16:45	
4-Bromofluorobenzene (S)	%	84	70-167	10/13/14 16:45	

LABORATORY CONTROL SAMPLE: 1303868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gas Range Organics (C6-C10)	mg/kg	50	50.1	100	70-165	
4-Bromofluorobenzene (S)	%			85	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1303869 1303870

Parameter	Units	92219858006		1303869		1303870		% Rec Limits	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec			
Gas Range Organics (C6-C10)	mg/kg	ND	67.4	67.4	92.9	90.3	138	134	47-187	3
4-Bromofluorobenzene (S)	%						91	91	70-167	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219433

QC Batch:	OEXT/30198	Analysis Method:	EPA 8015 Modified
QC Batch Method:	EPA 3546	Analysis Description:	8015 Solid GCSV
Associated Lab Samples:	92219433001		

METHOD BLANK: 1296483 Matrix: Solid

Associated Lab Samples: 92219433001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics(C10-C28)	mg/kg	ND	5.0	10/01/14 17:49	
n-Pentacosane (S)	%	62	41-119	10/01/14 17:49	

LABORATORY CONTROL SAMPLE: 1296484

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range Organics(C10-C28)	mg/kg	66.7	42.7	64	49-113	
n-Pentacosane (S)	%			71	41-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1296485 1296486

Parameter	Units	92219314001		1296485		1296486		% Rec	% Rec	% Rec	Limits	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec						
Diesel Range Organics(C10-C28)	mg/kg	500	97.6	97.6	503	241	3	-266	10-146	70	M3,R1		
n-Pentacosane (S)	%						78	70	41-119				

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Greenville DOT U3315 35781.12  
Pace Project No.: 92219433

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QC Batch: PMST/7089	Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87	Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92219433001	

---

SAMPLE DUPLICATE: 1298209

Parameter	Units	92219200002 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	23.3	35.0	40	R1

---

SAMPLE DUPLICATE: 1298210

Parameter	Units	92219599002 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	92.2	92.2	0	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219433

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

M3 Matrix spike recovery was outside laboratory control limits due to matrix interferences.

R1 RPD value was outside control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Greenville DOT U3315 35781.12

Pace Project No.: 92219433

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92219433001	SSP-1	EPA 3546	OEXT/30198	EPA 8015 Modified	GCSV/19064
92219433001	SSP-1	EPA 5035A/5030B	GCV/8647	EPA 8015 Modified	GCV/8649
92219433001	SSP-1	ASTM D2974-87	PMST/7089		

### REPORT OF LABORATORY ANALYSIS

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Document Number:  
F-CHR-CS-003-rev.15

Issuing Authority:  
Pace Huntersville Quality Office

Client Name: Cardno ATC

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no    Seals intact:  yes  no

Optional  
Proj. Due Date:  
Proj. Name:

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used: IR Gun T1401    Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 4.6 °C    Biological Tissue is Frozen: Yes No (N/A)

Date and Initials of person examining contents: gms 10/1/14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

SCURF Review:		Date:	<u>10/1/14</u>
SRF Review:		Date:	<u>10/2/14</u>

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Place label here

**WO# : 92219433**

92219433



**CHAIN-OF-CUSTODY / Analytical Request Document**  
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
Required Client Information:

**Section B**  
Required Project Information:

**Section C**  
Invoice Information:

Company: **CARDNO ATC** Report To: **Jeff Corson @ cardno.com** Attention: **Jeff Corson @ cardno.com**

Address: **2725 E Millbrook Rd, Switzal** Copy To: **Garnett, Stan @ cardno.com** Company Name: **Jeff Corson @ cardno.com**

City: **Raleigh, NC 27604** Purchase Order No.: **Greenville NCDOT** Address: **Greenville NCDOT**

Email To: **Jeff Corson @ cardno.com** Project Name: **Greenville NCDOT** Pace Quote Reference: **2147-1**

Phone: **(919) 871-0999** Fax: **Project Number: 45.19873.0067** Pace Project Manager: **Request Analysis Filtered (Y/N)**

Requested Due Date/TAT: **Requested Due Date/TAT: 45.19873.0067** Pace Profile #: **NC**

REGULATORY AGENCY:  NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER

Site Location STATE: **NC**

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	TSP	BAK				
1	SSP-1	(A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	SL	G	9/30/14	10:00										92219433
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

ADDITIONAL COMMENTS: **Relinquished by / Affiliation: *Ronney Starnel* Date: *9/30/14* Time: *10:30* Accepted by / Affiliation: *Juliana Wilson Pace* Date: *10/1/14* Time: *0945* A.G. *Y* Sample Conditions: *N Y***

RELINQUISHED BY / AFFILIATION: **DATE TIME ACCEPTED BY / AFFILIATION DATE TIME**

SAMPLER NAME AND SIGNATURE: **PRINT Name of SAMPLER: *Garnett Starnel* SIGNATURE of SAMPLER: *Ronney Starnel* DATE Signed (MM/DD/YY): *9/30/14***

Temp in °C: **Received on Ice (Y/N): *Y* Custody Sealed Cooler (Y/N): *N* Samples Intact (Y/N): *Y***

**ORIGINAL**

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.  
F-ALL-Q-020rev.07, 15-May-2007