ATC ASSOCIATES OF NORTH CAROLINA, P.C.
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November 1, 2012

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

Reference: Preliminary Site Assessment
Parcel 50
1404 W 14th Avenue, Greenville, NC 27834
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. (ATC) has prepared this report to document the results of a preliminary site assessment (PSA) conducted at the above referenced site. The assessment was conducted in accordance with the Technical and Cost Proposal submitted to the North Carolina Department of Transportation (NCDOT) on July 27, 2012, and a Notice to Proceed letter issued by the NCDOT on August 16, 2012. This report describes field activities, laboratory results, estimated impacted soil quantities, and conclusions based on the collected data.

1.0 BACKGROUND INFORMATION

According to the request for technical and cost proposal (RFP) dated July 10, 2012, parcel 50 (site) is located at 1404 West 14th Street in Greenville, North Carolina. Note that the Pitt County online parcel information system (OPIS) lists the site's location as 1404 West 14th Avenue, as opposed to West 14th Street. Furthermore, OPIS indicates that Parcel 51 is comprised of two adjacent county parcels oriented northeast-southwest. The address for the northwest parcel is 450 Spruce Street. A site plan is included as ***Figure 1***. Per the RFP, the site building is a religious worship center which is currently operating and may have formerly functioned as an industrial facility. The site is bounded to the west by 14th Avenue and partly bounded to the south by Spruce Street. Adjacent properties toward the southeast are zoned commercial and function as an automotive body shop (Parcel 51).

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 and groundwater flows generally to the northeast across the site. A groundwater gradient map for the site and surrounding parcels is included as ***Figure 1.***

Though parcel 50 has been identified for total take status, NCDOT requested investigative actions only be performed on the northwest county parcel (450 Spruce Street) because the southwest county parcel is covered by the site building. A parcel identification map is included as ***Figure 2***.

As per the Technical and Cost Proposal, ATC obtained a report provided by Environmental Data Resources, Inc. (EDR) of Milford, Connecticut. The report was reviewed for information regarding reported releases of hazardous substances and petroleum products on or near the site. ATC also reviewed the "unmappable" (also referred to as "orphan") listings within the database report, cross-referencing available address information and facility names. Unmappable sites are listings that could not be plotted with confidence, but are potentially in the general area of the property in question based on the partial street address, city, or zip code. No unmappable sites were identified by ATC as being within the approximate minimum search distance from Parcel 50 based on the site reconnaissance and/or cross-referencing to mapped listings. In addition, Parcel 50 was not listed on any federal or state databases reviewed for this part of the historical assessment. The 1923, 1929, and 1946 Sanborn Maps for the site depict the property with a road (Farmville Boulevard). The 1958 Sanborn Map depicts the road configuration changed for the adjacent Growers Warehouse. The current building first appears in the 1958 Sanborn Map and is identified as a store. The aerial photographs appear to depict the property building. The complete EDR report is included in ***Appendix A***.

2.0 FIELD ACTIVITIES

2.1 Geophysical Survey

Prior to performing soil assessment activities, ATC contacted Stantec Consulting Services, Inc. (Stantec) to perform a geophysical survey of the site. The purpose of the survey was to locate USTs and/or other buried structures on the parcel. This was to be done in the area of the proposed NCDOT right of way and included proposed excavations for drainage lines, utilities, and slope stake cuts. The survey was conducted on July 18 through 19, 2012 and included electromagnetic (EM) induction-magnetic detection and ground penetrating radar (GPR) surveys. According to Stantec's survey, two probable USTs exist in the subsurface with sizes ranging from approximately 5 to 6 feet long and 4 feet wide. The probable USTs were marked in the field along with utilities and/or conduit. Based on the findings of the survey and proposed construction details, ATC performed a drilling event to assess soil and groundwater conditions in the vicinity of the UST system and the remaining parcel. The geophysical investigation report is included in ***Appendix B*** and details of the soil and groundwater assessment are included in ***Sections 2.2*** and ***2.3***.

2.2 Soil Assessment

Based on the results of the geophysical survey and in anticipation of a total take by the NCDOT, a soil assessment was completed on-site. On August 7, 2012, ATC mobilized to the site with South Atlantic Environmental Drilling and Construction Company (SAEDACCO) to conduct sampling activities. Over the course of the event, fifteen borings (SB50-1 through SB50-14 and

TW50-1) were advanced using direct-push technology (DPT) drilling techniques. Prior to the drilling, Stantec was contracted to conduct utility clearance in conjunction with the geophysical survey investigation. The NCDOT and North Carolina's 811 service were also notified prior to field activities.

The locations of the borings are shown on the attached ***Figure 1***. Each boring was advanced to a depth of five feet below ground surface (bgs) via hand auger prior to utilizing DPT drilling techniques to complete the sampling. Soil samples were collected every 1 to 3 feet and screened with a photo-ionization detector (PID). Soils encountered consisted primarily of tan to gray silty sands and clays. The highest PID reading collected during the soil assessment was 5.0 parts per million (ppm) in the 2.5-5 feet bgs interval of SB50-3. Boring logs are included in ***Appendix C***.

One soil sample from each boring was submitted for laboratory analysis. This was determined by either submitting the interval with the highest PID reading, or, if not applicable, the deepest interval at which proposed construction would take place. Samples were submitted to SGS Analytical Perspectives (SGS) in Wilmington, North Carolina. Following proper chain-of-custody protocol, the samples were placed in laboratory supplied containers in an ice filled cooler for analysis of Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO) and Diesel Range Organics (TPH-DRO) by EPA Method 8015 Modified. Due to their proximity to the probable UST locations, select samples (SB50-1 through SB50-4 and TW50-1) were also analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) by EPA methods 8260B and 8270D, respectively. A discussion of the laboratory results is provided in ***Section 3.0***.

2.3 Groundwater Assessment

ATC supervised SAEDACCO during the installation of temporary well TW50-1 on August 7, 2012. The boring was advanced to a depth of five feet bgs via hand auger prior to utilizing DPT drilling techniques to complete the well installation activities. Temporary well TW50-1 was installed to a depth of 12 feet bgs using 10 feet of 0.010-inch machine slotted 1-inch poly vinyl chloride (PVC) well screen and solid PVC riser. The annular space of the boring was filled with washed silica sand to an approximate depth of 2 feet bgs. The location of the temporary well is shown on the attached ***Figure 1*** and a boring log is included in ***Appendix C***.

Following the temporary well installation, ATC gauged an approximate depth to water level of 2.7 feet below the top of well casing. A peristaltic pump and dedicated polyethylene tubing were used to purge approximately one gallon prior to collecting a groundwater sample. The sample was submitted to SGS under chain-of-custody protocol for analysis of VOCs by EPA Method 8260B and SVOCs by EPA Method 8270D. Following sampling, the top of well casing was surveyed for vertical elevation using standard surveying practices from a temporary benchmark with an arbitrary, assumed elevation of 100.00 feet. This was done in conjunction with adjacent temporary wells installed on the surrounding parcels. Following surveying, the borings were filled with native soil and finished to approximately 6 inches below surface grade with bentonite. The remainder of the boring was then filled using material to match the surround surface.

3.0 LABORATORY RESULTS

The results of the laboratory analyses for soil samples collected on-site indicated no detectable concentrations of TPH-GRO in all samples and detectable concentrations of TPH-DRO only in SB50-1 and SB50-13. Comparison of detected concentrations to the NCDENR action level of 10 milligrams per kilogram (mg/kg) indicated exceedences of TPH-DRO in SB50-1. The results of the VOC and SVOC analyses indicated concentrations of benzene and MTBE above the NCDENR soil-to-groundwater maximum soil contaminant concentration levels (MSCCs) in TW50-1.

The results of laboratory analyses for groundwater sample TW50-1 indicated levels of benzene, MTBE, and naphthalene at concentrations above NC Title 15A NCAC 2L .0202 Groundwater Standards (2L Standards). No other compounds were detected above laboratory detection limits. The laboratory analytical report is included in ***Appendix D*** and a summary of the laboratory results for the soil and groundwater sampling are provided in ***Tables 1*** and ***2***, respectively.

4.0 IMPACTED SOIL ASSESSMENT

The results of the soil and groundwater assessment indicate that soil has been impacted above the NCDENR action level. Therefore, ATC proceeded with estimating the quantity of impacted soil as directed in the RFP. Specifically, soil samples collected from borings SB50-1 (0-2.5' bgs) and TW50-1 (5-6' bgs) were used to calculate volumes in two locations. At the request of the NCDOT, volume calculations are separated into two categories. The first volume estimation represents the total quantity of impacted soil on-site. Due to the shallow groundwater table at the site, this estimation was calculated using the "Estimated Extent of Impacted Soil" as depicted on ***Figure 4*** and in ***Appendix E***. The second volume estimation represents the quantity of impacted soil that will need to be handled during the proposed construction. This estimation was calculated using the "Estimated Extent of Impacted Groundwater" as depicted on ***Figure 5*** and in ***Appendix E***. The volume to be handled during the proposed construction was estimated based on proposed drainage, utility, and cut/fill construction elevations provided by the NCDOT. Quantities are estimated in cubic yards and converted to tons using an NCDOT provided multiplier of 1.5 tons per cubic yard.

For the first volume estimation, ATC calculated a volume of approximately 64.78 cubic yards (97.17 tons) for the total volume of impacted soil on-site. For the second volume estimation, ATC calculated a volume of approximately 121.9 cubic yards (182.85 tons) for the volume of impacted soil that may need to be handled during proposed construction. It should be noted that the exact horizontal extent of impacted soil has not been fully delineated. As such, ATC's estimations should be considered approximations and actual quantities may vary. If the NCDOT requires a greater level of assurance regarding the extent, additional sampling could be performed for confirmation. In addition, a traffic signal pole is in close proximity to the "Estimated Extent of Impacted Groundwater." Therefore, an additional 13.96 cubic yards (20.94 tons) of impacted soil may need to be handled during the proposed construction. Detailed calculations, references, and ATC's assumptions are included in ***Appendix E***.

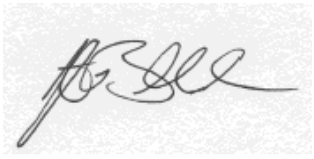
5.0 CONCLUSIONS

ATC has completed PSA activities at the Parcel 50 site in Greenville, North Carolina. The results of the assessment indicate that soil at the site has been impacted above NCDENR action levels and soil-to-groundwater MSCCs. Groundwater assessed on-site indicated constituents above 2L Standards. Based on a review of the site's historical data, geophysical investigation, and field assessment, ATC concludes that the impacted soil and groundwater may be associated with the probable USTs and/or possible former commercial/industrial activities at the site. ATC recommends that the collected data be provided to the NCDENR Division of Waste Management. 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.

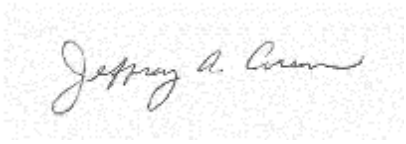
ATC appreciates the opportunity to assist the NCDOT with this project. If you have questions or require additional information, please do not hesitate to contact us at (919) 871-0999.

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

Corey M. Scheip
Staff Scientist



Justin C. Ballard, P.G.
Project Geologist



Jeffrey A. Corson
Project Manager

Attachments:

1. Table 1 – Soil Analytical Data
2. Table 2 – Groundwater Analytical Data
3. Figure 1 – Project Groundwater Gradient Map
4. Figure 2 – Parcel Identification Map
5. Figure 3 – Sample Location Map
6. Figure 4 – Soil Analytical Data Map
7. Figure 5 – Groundwater Analytical Data Map
8. Appendix A – EDR Report
9. Appendix B – Geophysical Investigation Report
10. Appendix C – Boring Logs
11. Appendix D – Laboratory Analytical Report
12. Appendix E – Volumetric Calculations

TABLES

TABLE 1

PSA
SOIL ANALYTICAL DATA

PARCEL 50
GREENVILLE, PITT COUNTY, NORTH CAROLINA
ATC PROJECT NO. 45.19873.0007
WBS ELEMENT NO. 35781.1.2

EPA Method:				5030/8015	3550/8015	EPA 8260 AND 8270							
Boring I.D.	**Depth (feet)**	**Sampling Date**	**PID Reading (ppm)**	**TPH-GRO**	**TPH-DRO**	**Benzene**	**Toluene**	**Ethyl benzene**	**Total Xylenes**	**MTBE**	**Naphthalene**	**Acetone**	**1,2,4-Trimethylbenzene**
SB50-1	0-2.5	8/7/2012	0	<3.87	**15.8**	<0.00492	<0.00492	<0.00492	<0.00492	<0.00492	<0.00492	<0.0492	<0.00492
SB50-2	2.5-5	8/8/2012	0.7	<4.37	<8.78	<0.00615	<0.00615	<0.00615	<0.00615	<0.00615	<0.00615	<0.0615	<0.00615
SB50-3	2.5-5	8/8/2012	5.0	<4.64	<8.42	<0.00502	<0.00502	<0.00502	<0.00502	0.0431	0.0114	0.124	<0.00502
SB50-4	2.5-5	8/8/2012	4.9	<4.31	<8.1	<0.00515	<0.00515	<0.00515	<0.00515	<0.00515	<0.00515	0.0597	<0.00515
SB50-5	0-2.5	8/8/2012	3.6	<3.53	<7.39	NA	NA	NA	NA	NA	NA	NA	NA
SB50-6	2.5-5	8/8/2012	3.2	<3.45	<7.39	NA	NA	NA	NA	NA	NA	NA	NA
SB50-7	2.5-5	8/8/2012	4.4	<3.22	<7.65	NA	NA	NA	NA	NA	NA	NA	NA
SB50-8	2.5-5	8/8/2012	4.0	<4.14	<7.24	NA	NA	NA	NA	NA	NA	NA	NA
SB50-9	0-2.5	8/8/2012	2.0	<3.7	<7.5	NA	NA	NA	NA	NA	NA	NA	NA
SB50-10	2.5-5	8/8/2012	3.1	<3.68	<7.96	NA	NA	NA	NA	NA	NA	NA	NA
SB50-11	2.5-5	8/8/2012	1.4	<3.47	<6.97	NA	NA	NA	NA	NA	NA	NA	NA
SB50-12	2.5-5	8/8/2012	0.6	<3.62	<7.79	NA	NA	NA	NA	NA	NA	NA	NA
SB50-13	0-2.5	8/8/2012	0	<4.33	7.64	NA	NA	NA	NA	NA	NA	NA	NA
SB50-14	0-2.5	8/8/2012	0	<3.17	<7.62	NA	NA	NA	NA	NA	NA	NA	NA
TW50-1	5-6	8/7/2012	0	<4.61	<9.04	**0.149**	<0.0579	0.0834	<0.0579	**0.354**	0.0787	<1.45	0.151
NCDENR Action Level				**10**	**10**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Soil-to-Groundwater MSCC				**--**	**--**	**0.0056**	**4.3**	**4.9**	**4.6**	**0.091**	**0.16**	**24**	**8.5**
Residential MSCC				**--**	**--**	**18**	**1,200**	**1,560**	**3,129**	**350**	**313**	**14,000**	**782**
Industrial/Commercial MSCC				**--**	**--**	**164**	**32,000**	**40,000**	**81,760**	**3,100**	**8,176**	**360,000**	**20,440**

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. NA = Not analyzed.
9. MTBE = Methyl tertiary butyl ether.
10. Values in **BOLD** indicate levels above Soil-to-Groundwater MSCCs and/or the NCDENR Action Level.
11. # = Health based level > 100%.

TABLE 2

PSA
GROUNDWATER ANALYTICAL DATA

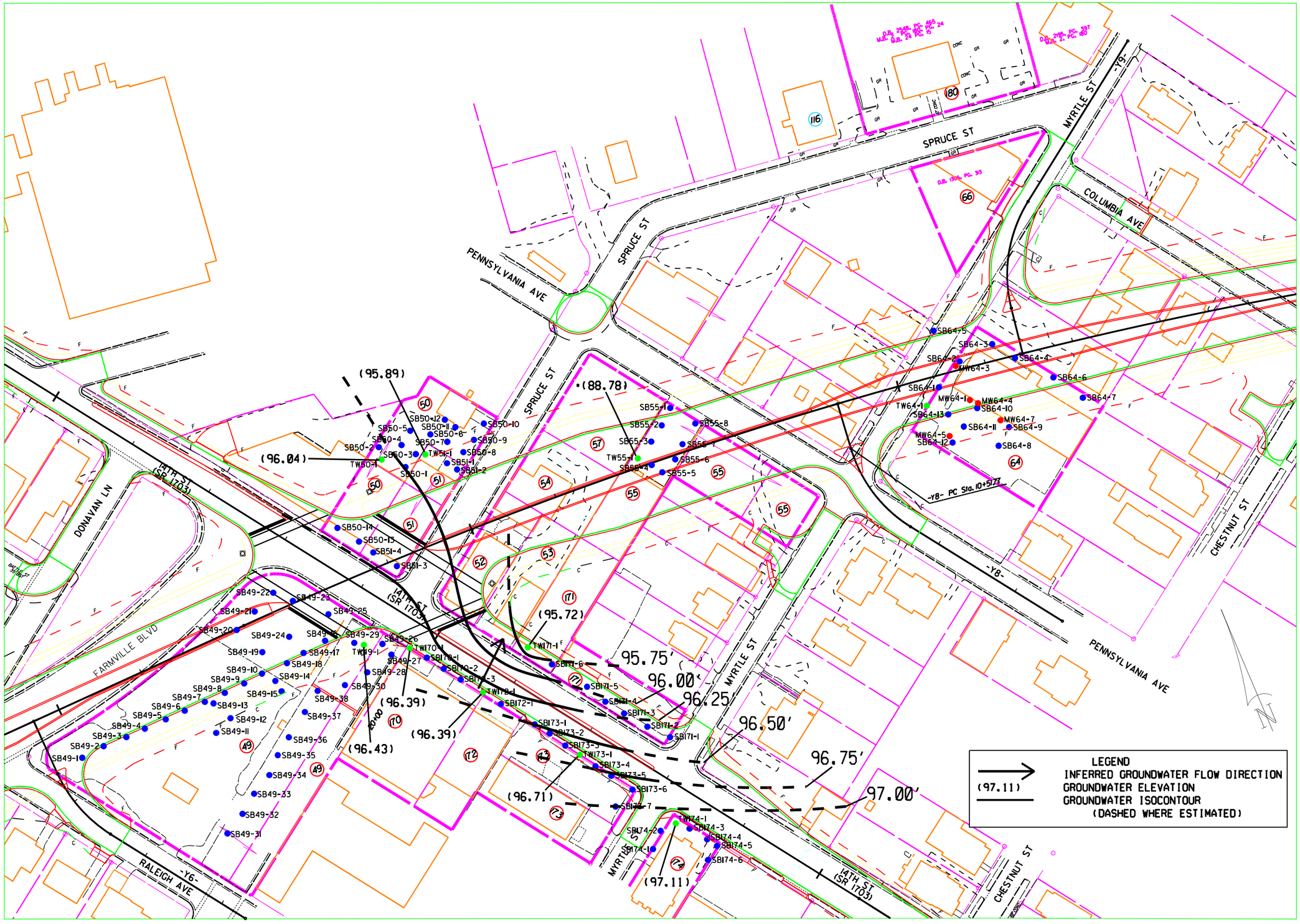
PARCEL 50
GREENVILLE, PITT COUNTY, NORTH CAROLINA
ATC PROJECT NO. 45.19873.0007
WBS ELEMENT NO. 35781.1.2

Analytical Method		EPA Method 8260B and 8270D						
Contaminant of Concern		Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	MTBE	Naphthalene
Well ID	Date Collected							
TW50-1	8/9/2012	**30.6**	<20	<20	<20	30.6	**343**	**9.29**
2L Standard (mg/l)		**1**	**600**	**600**	**500**	**NE**	**20**	**6**
GCL (mg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**NE**	**20,000**	**6,000**

Notes:

1. "<" or ND = Not detected at or above the laboratory detection limit.
2. Concentrations are reported in micrograms per liter (µg/l) = parts per billion.
3. Concentrations in bold print equal or exceed the NCDENR 2L Standard (2L).
4. NCDENR = North Carolina Department of Environment and Natural Resources.
5. GCL = Gross Contaminantion Level.
6. NE = Not Established.
7. MTBE = Methyl Tertiary Butyl Ether.
8. Gross Contamination Levels for Groundwater are referenced in the Guidelines for Assessment and Corrective Action, November 2008, updated January 2010.
9. BTEX = Benzene, Toluene, Ethylbenzene, Total Xylenes
10. Temporary well TW50-1 was installed on 8/7/2012, sampled on 8/9/2012, and abandoned on 8/9/2012.

FIGURES



NOTES:
1. WELL TW55-1 NOT USED TO CONSTRUCT CONTOURS.

TITLE FIGURE 1
PROJECT GROUNDWATER GRADIENT MAP
STANTONSBURG ROAD/TENTH STREET CONNECTOR FROM MEMORIAL DRIVE (US13) TO EVAN STREET
GREENVILLE, NC
NCDOT PROJECT U-3315

CAD FILE | WBS ELEMENT 35781.1.2 | PREP. BY CS | REV. BY JB | SCALE 1"= 100' | DATE 10-31-2012 | PROJECT NO. 45.19873.0007

ATC Associates of North Carolina, P.C.
RALEIGH, NORTH CAROLINA (919) 871-0999 FAX (919) 871-0335

LEGEND

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPERTY LINE
- U/G CABLE TV
- U/G CABLE TELEPHONE
- U/G CABLE TELEPHONE FIBER OPTIC
- EXISTING HYDRO
- U/G CABLE TV FIBER OPTIC
- PERMANENT UTILITY EASEMENT
- FILL LINE
- CUT LINE

CHL	CHAIN LINK
CB	CATCH BASIN
RCP	REINFORCED CONCRETE PIPE
EOT	EDGE OF TRAVEL
MH	MANHOLE
TC	TERRA COTTA PIPE
▣	TRAFFIC SIGNAL POLE

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PROJECT NO.	DATE	SCALE	REV. BY	PREP. BY
45.19873.0007	10-30-2012	1"=60'-0"	KN	JB

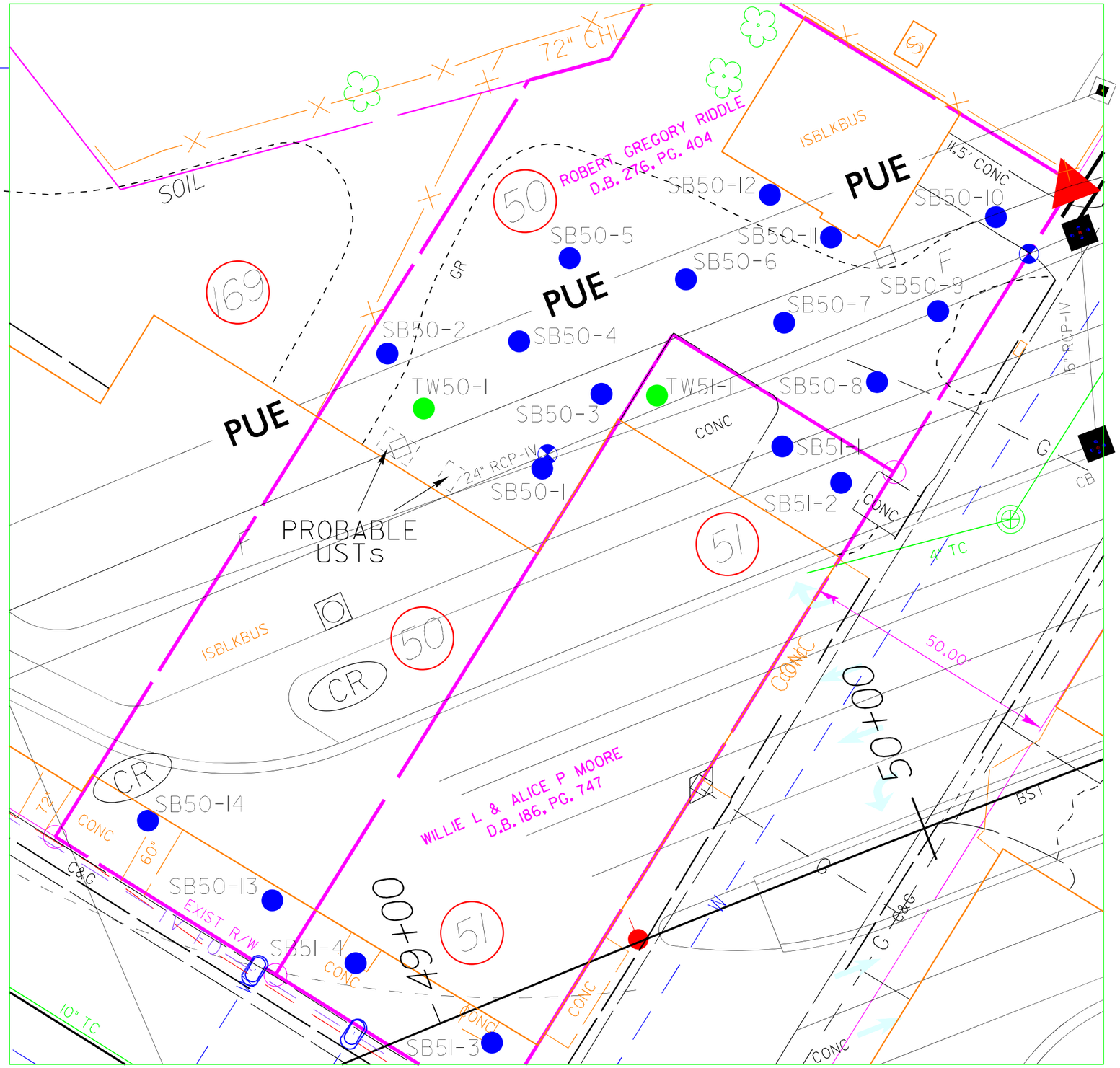
WBS ELEMENT	CAD FILE
35781.1.2	

TITLE FIGURE 2
PARCEL IDENTIFICATION MAP
WILLIE L & ALICE P MOORE PROPERTY - PARCEL 51
ROBERT GREGORY RIDDLE PROPERTY - PARCEL 50
1402 & 1404 W 14TH AVE
GREENVILLE NC 27858

NOTES:

LEGEND

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPERTY LINE
- U/G CABLE TV
- U/G CABLE TELEPHONE
- U/G CABLE TELEPHONE FIBER OPTIC
- U/G ELECTRIC
- EXISTING HYDRO
- U/G CABLE TV FIBER OPTIC
- PERMANENT UTILITY EASEMENT
- FILL LINE
- CUT LINE
- CHL CHAIN LINK
- CB CATCH BASIN
- RCP REINFORCED CONCRETE PIPE
- EOT EDGE OF TRAVEL
- MH MANHOLE
- TC TERRA COTTA PIPE
- TRAFFIC SIGNAL POLE
- UTILITY POLE
- L LIGHT POLE
- SOIL BORING LOCATION
- TEMPORARY WELL LOCATION



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RALEIGH, NORTH CAROLINA

PROJECT NO.	DATE	SCALE	REV. BY	PREP. BY
45.19873.0007	10-30-2012	1"=20'-0"	KN	JB

TITLE FIGURE 3
SAMPLE LOCATION MAP
WILLIE L & ALICE P MOORE PROPERTY - PARCEL 51
ROBERT GREGORY RIDDLE PROPERTY - PARCEL 50
1402 & 1404 W 14TH AVE
GREENVILLE NC 27858

WBS ELEMENT	CAD FILE
35781.1.2	

NOTES:

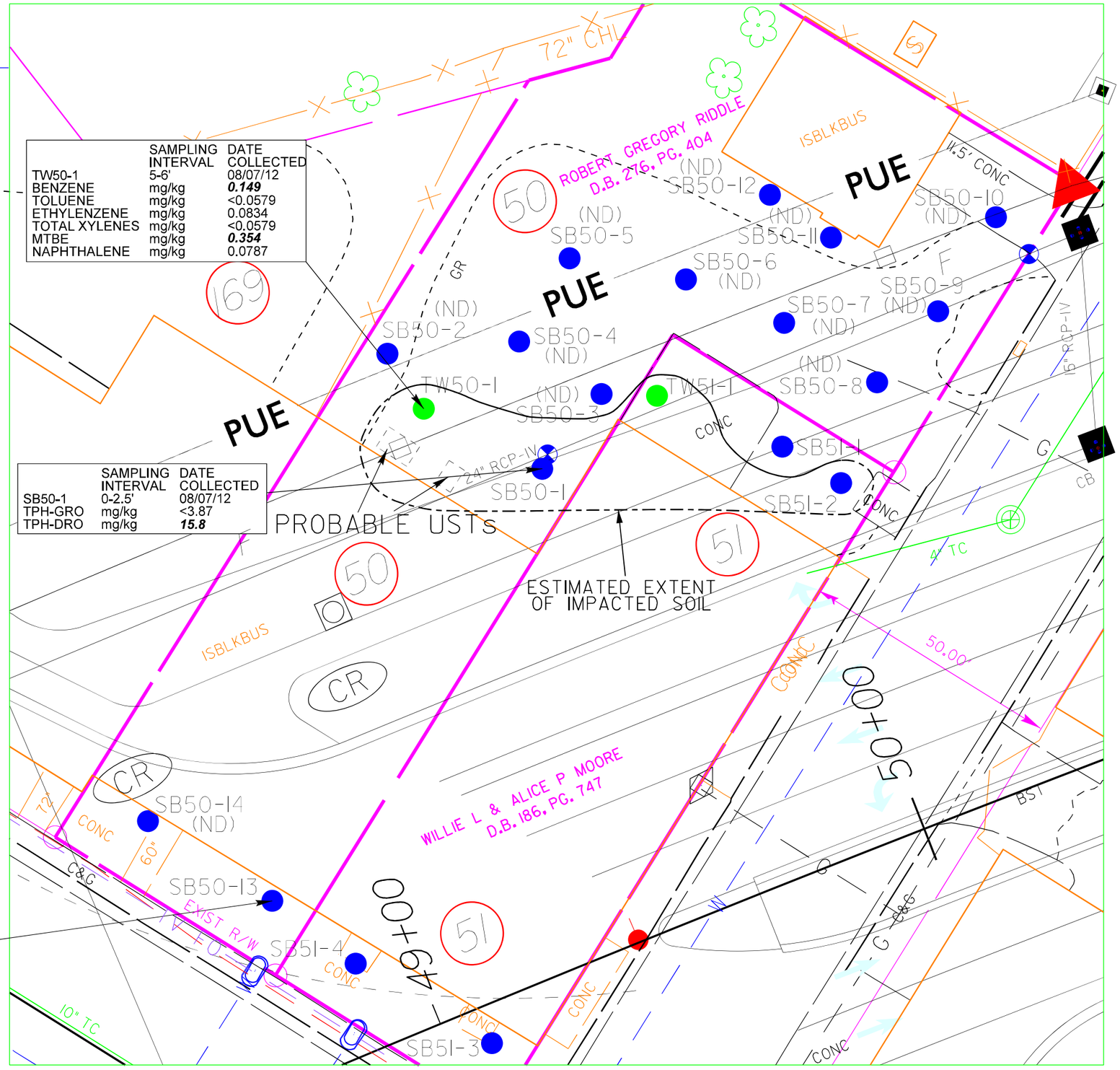
LEGEND

- EXISTING RIGHT OF WAY
- PROPOSED RIGHT OF WAY
- PROPERTY LINE
- U/G CABLE TV
- U/G CABLE TELEPHONE
- U/G CABLE TELEPHONE FIBER OPTIC
- U/G ELECTRIC
- EXISTING HYDRO
- U/G CABLE TV FIBER OPTIC
- PERMANENT UTILITY EASEMENT
- FILL LINE
- CUT LINE
- CHL CHAIN LINK
- CB CATCH BASIN
- RCP REINFORCED CONCRETE PIPE
- EOT EDGE OF TRAVEL
- MH MANHOLE
- TC TERRA COTTA PIPE
- TRAFFIC SIGNAL POLE
- UTILITY POLE
- LIGHT POLE
- SOIL BORING LOCATION
- TEMPORARY WELL LOCATION
- ESTIMATED EXTENT OF IMPACTED SOIL (DASHED WHERE INFERRED)
- ND NO ANALYZED COMPOUNDS DETECTED AT OR ABOVE MSCCS AND/OR NCDENR ACTION LEVELS
- NS NOT SAMPLED

	SAMPLING INTERVAL	DATE COLLECTED
TW50-1	5-6'	08/07/12
BENZENE	mg/kg	***0.149***
TOLUENE	mg/kg	<0.0579
ETHYLENZENE	mg/kg	0.0834
TOTAL XYLENES	mg/kg	<0.0579
MTBE	mg/kg	***0.354***
NAPHTHALENE	mg/kg	0.0787

	SAMPLING INTERVAL	DATE COLLECTED
SB50-1	0-2.5'	08/07/12
TPH-GRO	mg/kg	<3.87
TPH-DRO	mg/kg	***15.8***

	SAMPLING INTERVAL	DATE COLLECTED
SB50-13	0-2.5'	08/08/12
TPH-GRO	mg/kg	<4.33
TPH-DRO	mg/kg	7.64



NOTES:
1) VALUES IN BOLD INDICATE LEVELS ABOVE SOIL-TO-GROUNDWATER MAXIMUM SOIL CONTAMINANT CONCENTRATIONS (MSCC) AND/OR NCDENR ACTION LEVELS.

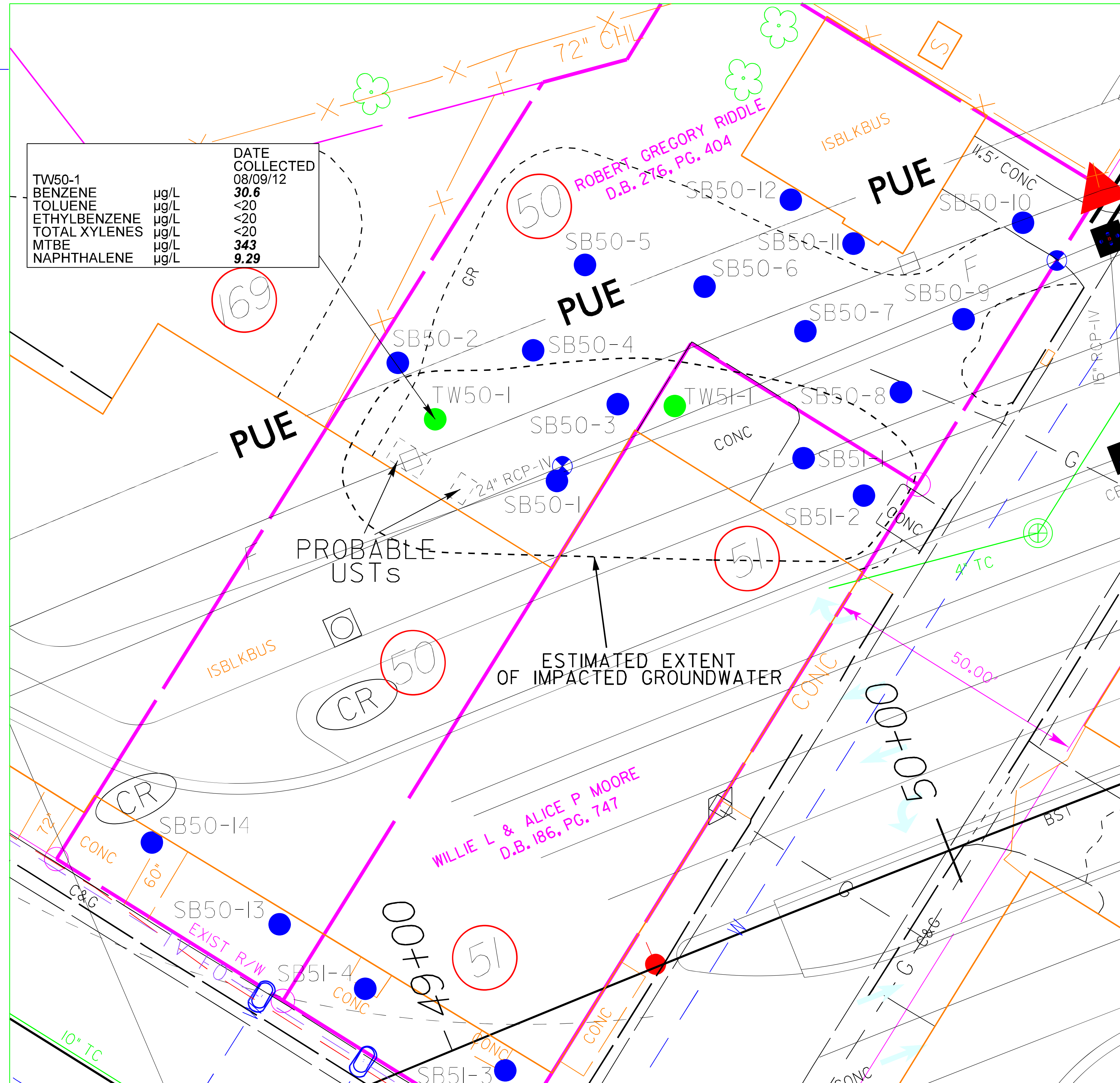
TITLE FIGURE 4
SOIL ANALYTICAL DATA MAP
ROBERT GREGORY RIDDLE PROPERTY - PARCEL 50
1404 W 14TH AVE
GREENVILLE NC 27858

CAD FILE
WBS ELEMENT 35781.1.2
PREP. BY CS
REV. BY JB
SCALE 1"=20'-0"
DATE 10-30-2012
PROJECT NO. 45.19873.0007

ATC
ATC Associates of North Carolina, P.C.
RALEIGH, NORTH CAROLINA (919) 871-0999 FAX (919) 871-0335

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
⊡	TRAFFIC SIGNAL POLE
◎	UTILITY POLE
L	LIGHT POLE
● (blue)	SOIL BORING LOCATION
● (green)	TEMPORARY WELL LOCATION
———	ESTIMATED EXTENT OF IMPACTED GROUNDWATER (DASHED WHERE INFERRED)
ND	NO ANALYZED COMPOUNDS DETECTED AT OR ABOVE MSCCS AND/OR NCDENR ACTION LEVELS
NS	NOT SAMPLED



N

NOTES:
1) VALUES IN BOLD INDICATE LEVELS AT OR ABOVE NC 2L STANDARDS.
2) TW50-1 SET AT 12' BELOW GROUND SURFACE (BGS) WITH A SCREENED INTERVAL OF 2-12 BGS.

TITLE FIGURE 5
GROUNDWATER ANALYTICAL DATA MAP
ROBERT GREGORY RIDDLE PROPERTY - PARCEL 50
1404 W 14TH AVE
GREENVILLE NC 27858

ATC
ATC Associates of North Carolina, P.C.
RALEIGH, NORTH CAROLINA
(919) 871-0999 FAX (919) 871-0335

PROJECT NO.	45.19873.0007
DATE	10-30-2012
SCALE	1"=20'-0"
REV. BY	JB
PREP. BY	CS
WBS ELEMENT	35781.1.2
CAD FILE	

APPENDIX A

EDR REPORT

U-3315
West 14th Street
Greenville, NC 27834

Inquiry Number: 3363129.5
July 10, 2012

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Date EDR Searched Historical Sources:

Aerial Photography July 10, 2012

Target Property:

West 14th Street

Greenville, NC 27834

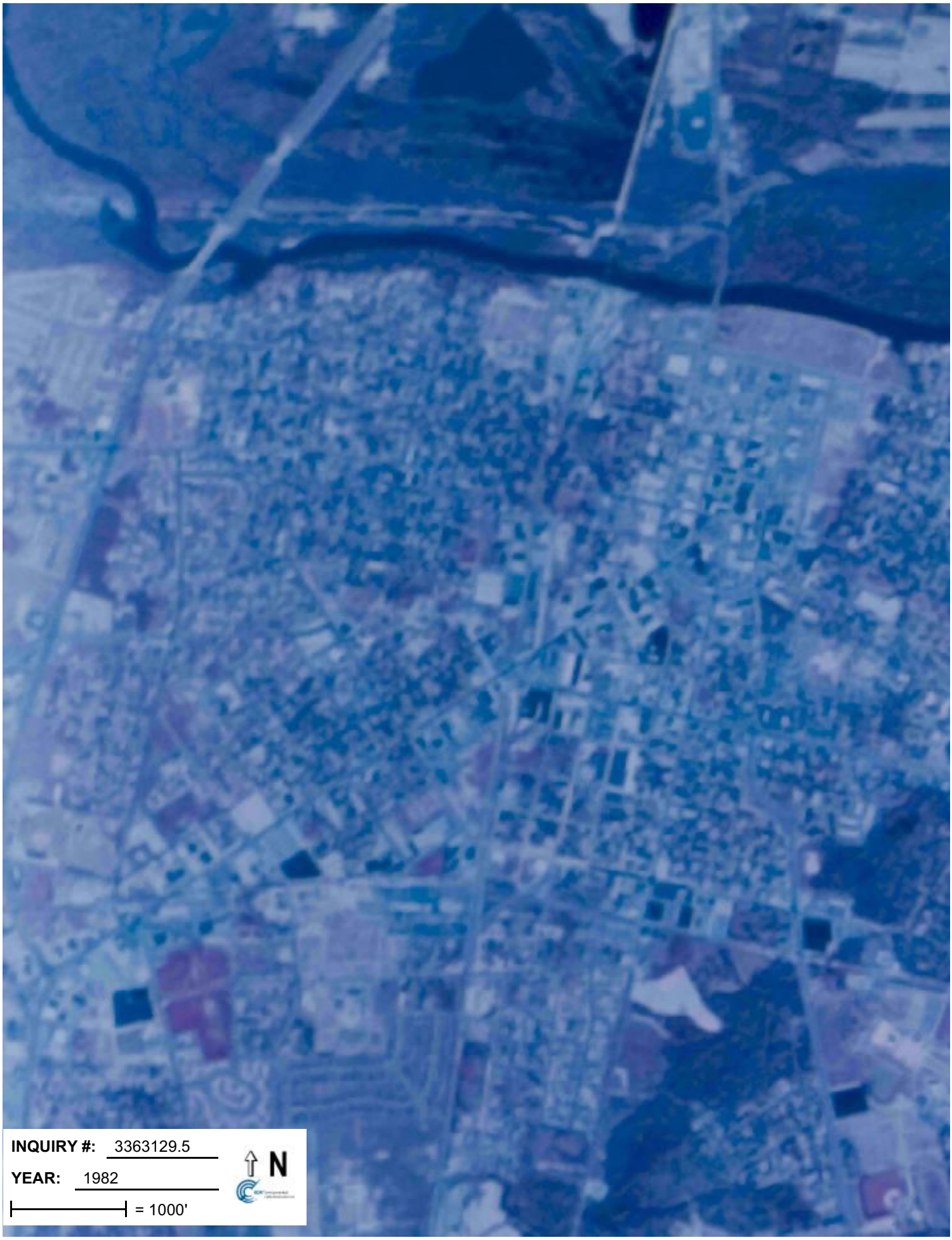
Year	Scale	Details	Source
1957	Aerial Photograph. Scale: 1"=500'	Panel #: 35077-E4, Greenville SW, NC;/Flight Date: March 10, 1957	EDR
1961	Aerial Photograph. Scale: 1"=1000'	Panel #: 35077-E4, Greenville SW, NC;/Flight Date: October 16, 1961	EDR
1974	Aerial Photograph. Scale: 1"=1000'	Panel #: 35077-E4, Greenville SW, NC;/Flight Date: April 10, 1974	EDR
1977	Aerial Photograph. Scale: 1"=750'	Panel #: 35077-E4, Greenville SW, NC;/Flight Date: January 30, 1977	EDR
1982	Aerial Photograph. Scale: 1"=1000'	Panel #: 35077-E4, Greenville SW, NC;/Flight Date: March 29, 1982	EDR
1993	Aerial Photograph. Scale: 1"=500'	Panel #: 35077-E4, Greenville SW, NC;/Composite DOQQ - acquisition dates: March 08, 1993	EDR
1999	Aerial Photograph. Scale: 1"=1000'	Panel #: 35077-E4, Greenville SW, NC;/Flight Date: September 23, 1999	EDR
2005	Aerial Photograph. Scale: 1"=500'	Panel #: 35077-E4, Greenville SW, NC;/Flight Year: 2005	EDR
2006	Aerial Photograph. Scale: 1"=500'	Panel #: 35077-E4, Greenville SW, NC;/Flight Year: 2006	EDR
2008	Aerial Photograph. Scale: 1"=500'	Panel #: 35077-E4, Greenville SW, NC;/Flight Year: 2008	EDR


INQUIRY #: 3363129.5
YEAR: 1957
= 500'
N


INQUIRY #: 3363129.5
YEAR: 1961
= 1000'
N


INQUIRY #: 3363129.5
YEAR: 1974
= 1000'
N


INQUIRY #: 3363129.5
YEAR: 1977
= 750'
N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YEAR: 1982
= 1000'
N


INQUIRY #: 3363129.5
YEAR: 1993
= 500'
N


INQUIRY #: 3363129.5
YEAR: 1999
= 1000'
N


INQUIRY #: 3363129.5
YEAR: 2005
= 500'
N


INQUIRY #: 3363129.5
YEAR: 2006
= 500'
N


INQUIRY #: 3363129.5
YEAR: 2008
= 500'
N

U-3315
West 14th Street
Greenville, NC 27834

Inquiry Number: 3363129.3
July 10, 2012

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

7/10/12

Site Name:
U-3315
West 14th Street
Greenville, NC 27834

Client Name:
ATC Associates Inc. #45
2725 East Millbrook Road
Raleigh, NC 27604

EDR Inquiry # 3363129.3

Contact: Jeff Corson

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by ATC Associates Inc. #45 were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: U-3315
Address: West 14th Street
City, State, Zip: Greenville, NC 27834
Cross Street:
P.O. # NA
Project: NA
Certification # D067-4C5F-9194

Maps Provided:

1958
1946
1929
1923

Sanborn® Library search results
Certification # D067-4C5F-9194

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

ATC Associates Inc. #45 (the client) is permitted to make up to THREE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Sanborn Sheet Thumbnails

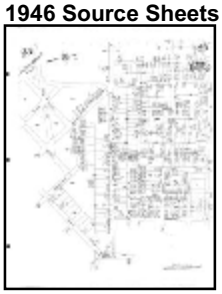
This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1958 Source Sheets

Volume 1, Sheet 23

Volume 1, Sheet 25

1946 Source Sheets



Volume 1, Sheet 23

Volume 1, Sheet 25

1929 Source Sheets

Volume 1, Sheet 23

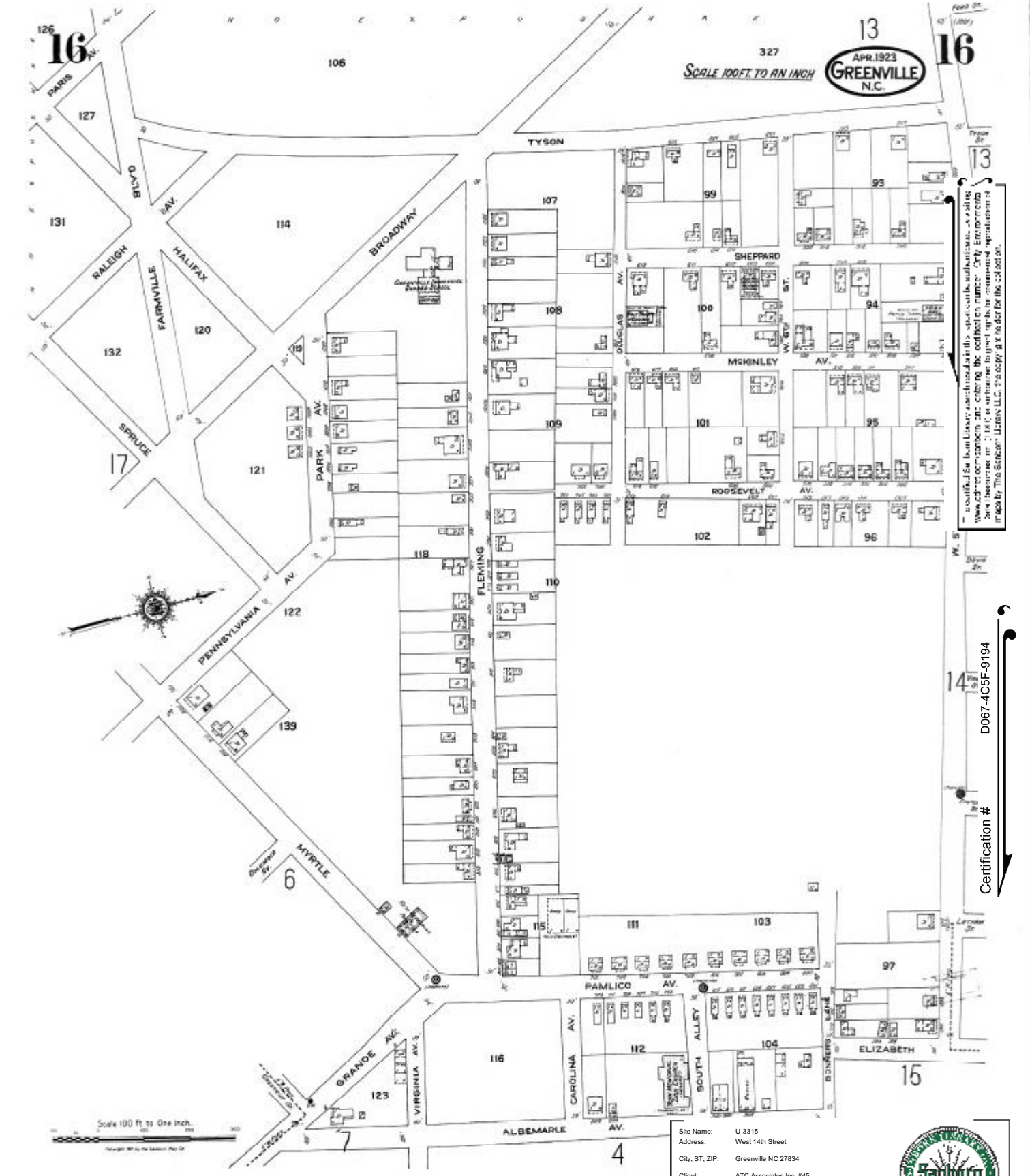
Volume 1, Sheet 25

1923 Source Sheets

Volume 1, Sheet 16

Volume 1, Sheet 17

1923 Certified Sanborn Map



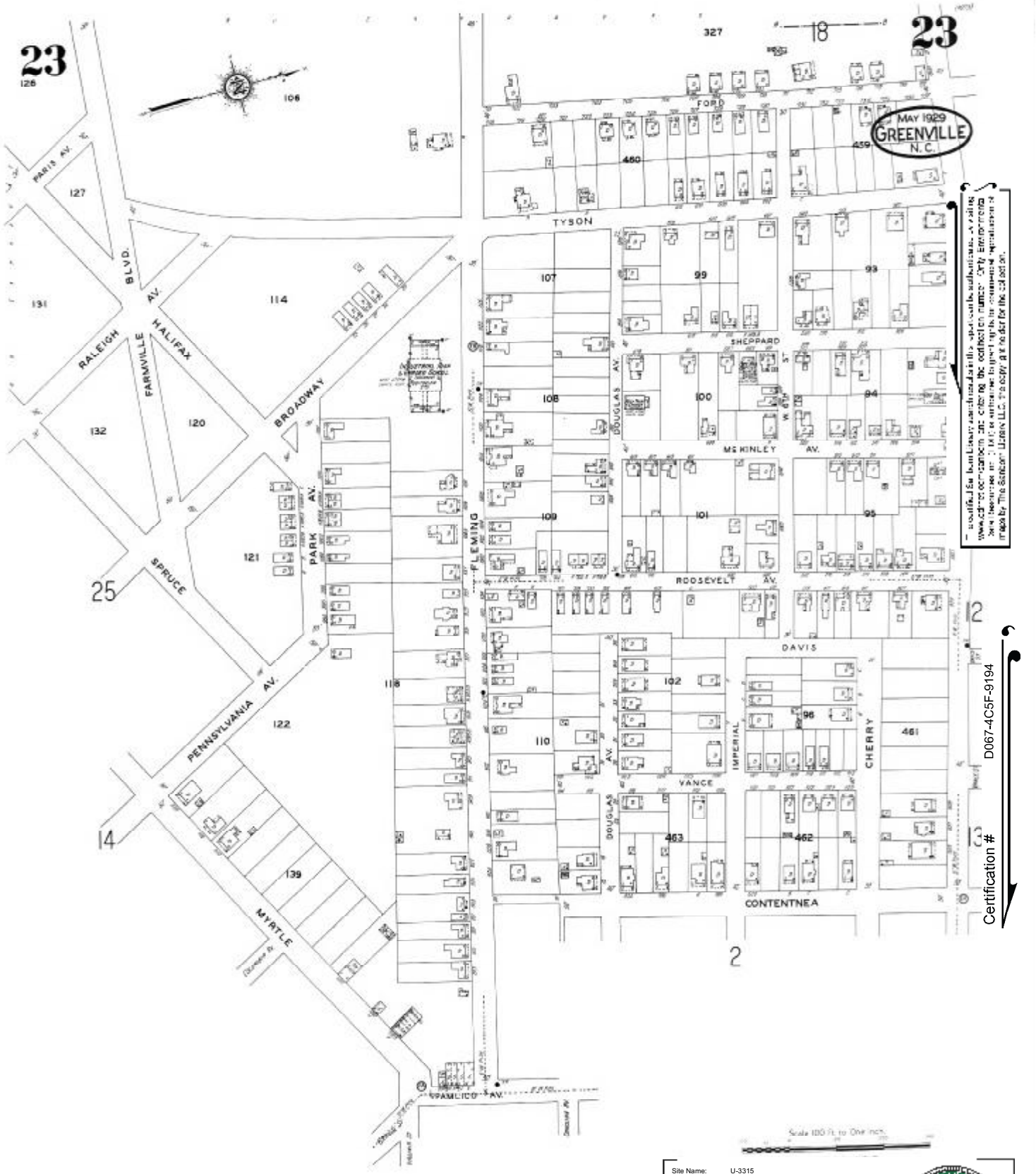
Site Name:	U-3315
Address:	West 14th Street
City, ST, ZIP:	Greenville NC 27834
Client:	ATC Associates Inc. #45
EDR Inquiry:	3363129.3
Order Date:	7/10/2012 9:52:03 AM
Certification #	D067-4C5F-9194
Copyright:	1923

1923 Certified Sanborn Map

Certification # D067-4C5F-9194

Site Name:	U-3315
Address:	West 14th Street
City, ST, ZIP:	Greenville NC 27834
Client:	ATC Associates Inc. #45
EDR Inquiry:	3363129.3
Order Date:	7/10/2012 9:52:03 AM
Certification #	D067-4C5F-9194
Copyright:	1923

1929 Certified Sanborn Map



Scale 100 Ft. to One inch.

Site Name:	U-3315
Address:	West 14th Street
City, ST, ZIP:	Greenville NC 27834
Client:	ATC Associates Inc. #45
EDR Inquiry:	3363129.3
Order Date:	7/10/2012 9:52:03 AM
Certification #	D067-4C5F-9194
Copyright:	1929

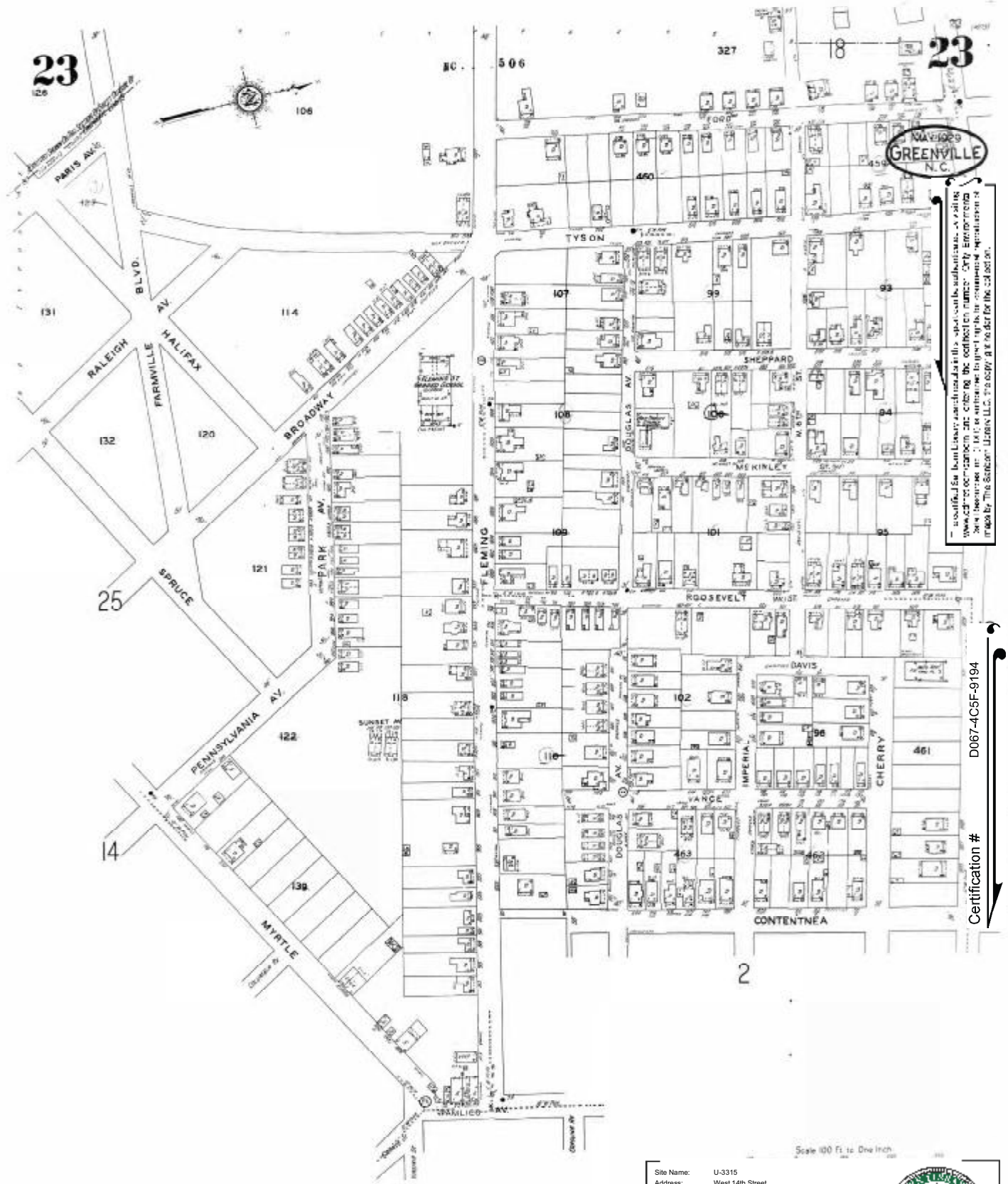
1929 Certified Sanborn Map

Certification # D067-4C5F-9194

Site Name:	U-3315
Address:	West 14th Street
City, ST, ZIP:	Greenville NC 27834
Client:	ATC Associates Inc. #45
EDR Inquiry:	3363129.3
Order Date:	7/10/2012 9:52:03 AM
Certification #	D067-4C5F-9194

Copyright: 1929

1946 Certified Sanborn Map



Site Name:	U-3315
Address:	West 14th Street
City, ST, ZIP:	Greenville NC 27834
Client:	ATC Associates Inc. #45
EDR Inquiry:	3363129.3
Order Date:	7/10/2012 9:52:03 AM
Certification #	D067-4C5F-9194
Copyright:	1946

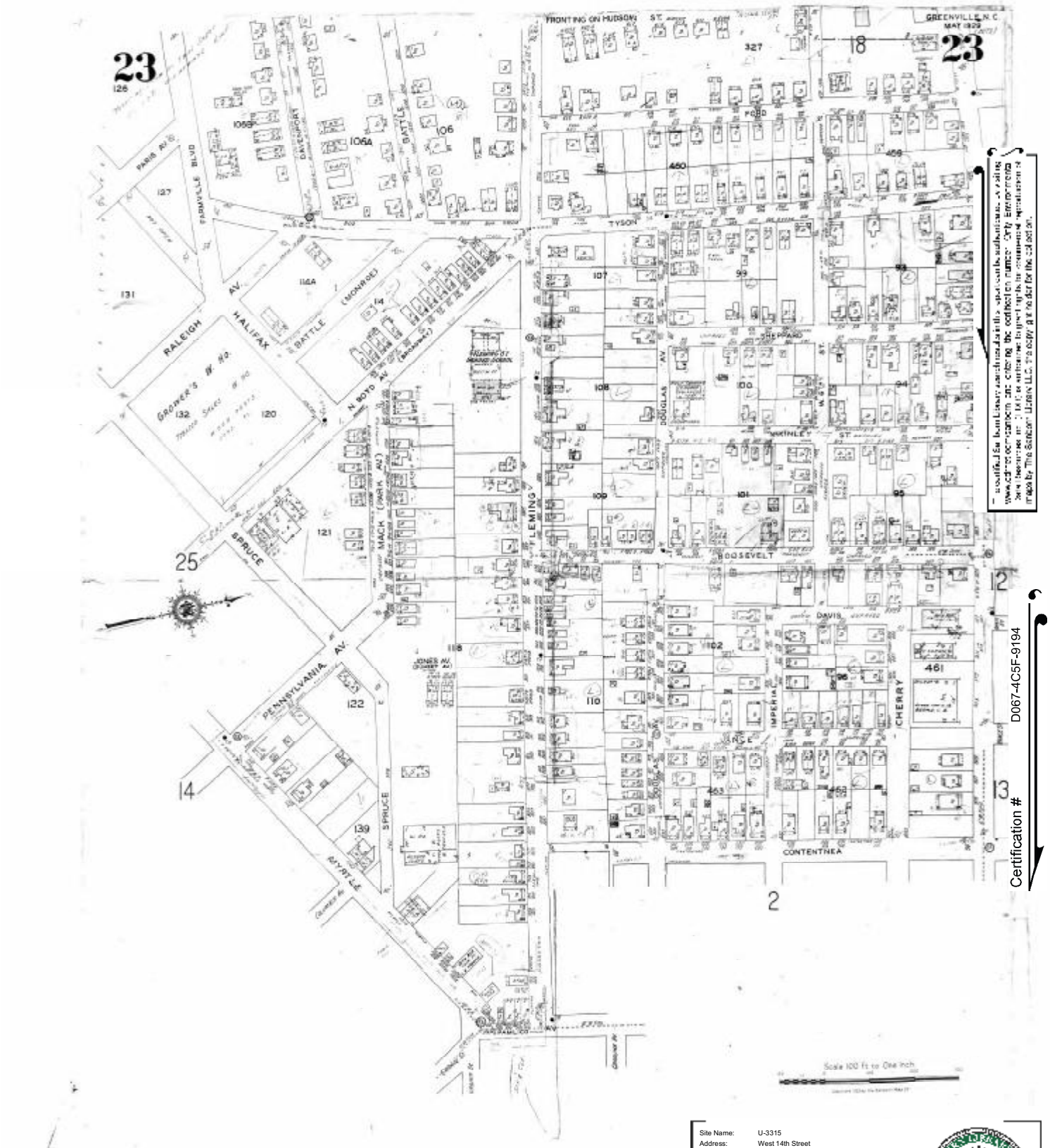
1946 Certified Sanborn Map

Certification # D067-4C5F-9194

Site Name:	U-3315
Address:	West 14th Street
City, ST, ZIP:	Greenville NC 27834
Client:	ATC Associates Inc. #45
EDR Inquiry:	3363129.3
Order Date:	7/10/2012 9:52:03 AM
Certification #	D067-4C5F-9194

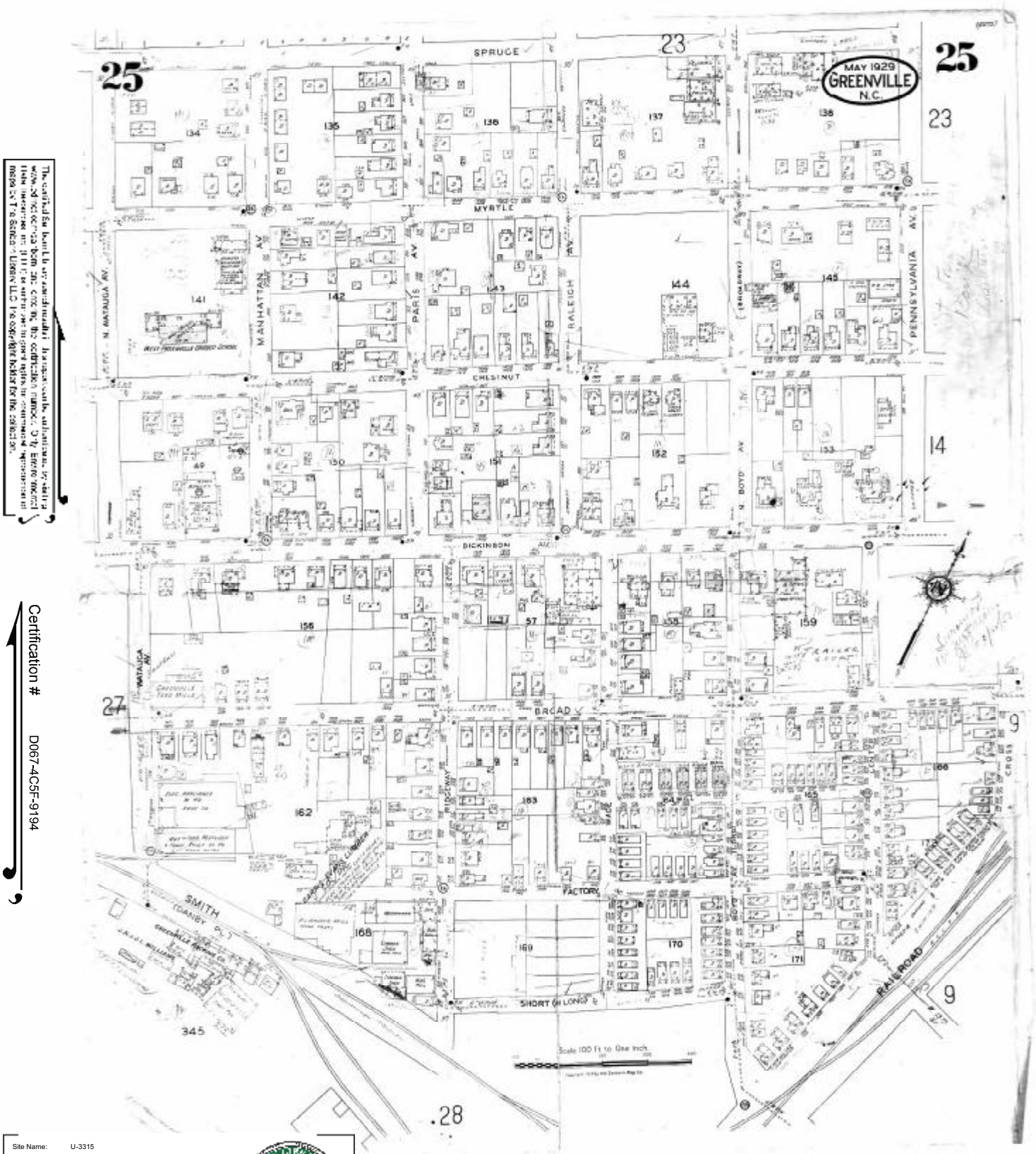
Copyright: 1946

1958 Certified Sanborn Map



Site Name:	U-3315
Address:	West 14th Street
City, ST, ZIP:	Greenville NC 27834
Client:	ATC Associates Inc. #45
EDR Inquiry:	3363129.3
Order Date:	7/10/2012 9:52:03 AM
Certification #	D067-4C5F-9194
Copyright:	1958

1958 Certified Sanborn Map



Certification # D067-4C5F-9194

Site Name:	U-3315
Address:	West 14th Street
City, ST, ZIP:	Greenville NC 27834
Client:	ATC Associates Inc. #45
EDR Inquiry:	3363129.3
Order Date:	7/10/2012 9:52:03 AM
Certification #	D067-4C5F-9194

Copyright: 1958

APPENDIX B

GEOPHYSICAL REPORT

SUBSURFACE INVESTIGATION REPORT

Electromagnetic Induction, Magnetic Detection *& GPR Survey*

Riddle, Robert Gregory Property (Parcel 50)
New Beginning Christian Center
1404 West 14th Street
Greenville, North Carolina

July 19, 2012

Report prepared for:
Justin C. Ballard, P.G.
ATC Associates of North Carolina
2725 Millbrook Road, Suite 121
Raleigh, North Carolina 27604

Investigative Team: Shane Haniford, Joe Chiocca

Reviewed by: Bruce Beavers P.L.S. and Alex Baldwin L.S.S.

Stantec Consulting Services Inc.
801 Jones Franklin Road, Suite 300
Raleigh, NC 27606
(919) 851-6866

ATC Associates of North Carolina
Subsurface Investigation Report
Riddle, Robert Gregory Property (Parcel 50)
1404 West 14th Street
Greenville, North Carolina

1.0 PURPOSE

Stantec Consulting Services Inc. performed a subsurface investigation utilizing surface Ground Penetrating Radar (GPR), Magnetic Detection and Electromagnetic Induction (EM) to survey the subject site located at 1404 West 14th Street in the City of Greenville, North Carolina and bordered on the southwest by West 14th Avenue, the east by Spruce Street and at the terminus of Farmville Blvd.

This site is currently a worship center, but may have been an industrial facility in the past.

ATC Associates representative Mr. Justin C. Ballard, P.G. provided information and maps identifying the geophysical survey area to Stantec personnel prior to conducting the investigation.

Survey was conducted at the request of Justin C. Ballard, P.G. on July 18th to 19th and September 19th 2012.

The purpose of this investigation was to:

• Survey for detectable structures, including underground storage tanks (UST), and other subsurface anomalies.

The specified survey area was described as 1404 West 14th Street in the City of Greenville, North Carolina and bordered on the southwest by West 14th Avenue, to the east by Spruce Street and at the terminus of Farmville Blvd.

A map depicting this area is included herein.

1.1 LIMITING CONDITIONS

In the event portions of the subject site were not accessible due to obstructions and/or stored items, those areas will be noted as inaccessible. An attempt was made to be as thorough as possible in the survey process. The surveyed area was defined, at the time of the investigation, by the Client. Client representative on site was Aaron Leff with ATC Associates of North Carolina.

In order to accurately conduct a radar survey, linear scans were made across the target area. Confined, obstructed or non-level areas which restrict the scanning pattern can impede the data collected and reduce the accuracy of the desired results.

The assessment of this site is based on our professional evaluation of the data gathered, and our experience with the properties with surface ground penetrating radar within this setting and scope. The evaluation rendered in this report meets the standards of our profession and was conducted in accordance with generally accepted guidelines for EM, Magnetic Detection and GPR surveys. It is generally recognized that the results of the EM, Magnetic Detection and GPR are non-unique and may not represent actual subsurface conditions.

Note: A diligent effort has been made to obtain the highest quality data and make useful interpretations.

Analysis of data was accomplished by visual inspection in the field and then recording the data for post processing.

1.2 APPROACH

Multiple tools involving differing technologies were used in this investigation.

For the GPR analysis, the entire subject survey area was divided logistically into manageable/workable sections.These isometric sections represent the arrangement of the survey scans. Within these sections, scans were made in an orthogonal pattern on two foot centers. This provided two separate data sets for each section.

For Magnetic Detection and Electromagnetic Induction the area was systematically scanned in such a pattern so to cover over 100% of the accessible portions of the site. This is possible due to the size and shape of the resulting fields produced from the sensors thus resulting in an “overlapping” of each transect covered.

2.0 METHODOLOGY

2.1 GROUND PENETRATING RADAR (GPR) EQUIPMENT

The GPR method transmits electromagnetic waves, which are pulsed at discrete distance/ time intervals.

The transmitted pulse radiates through the earth whereby a portion of the energy is reflected from interfaces of contrasting electrical properties (e.g. pavement and soil interface, soil stratigraphic changes and buried metallic objects) while the remaining energy continues until reaching additional reflectors where the process is repeated.

Reflected energy is received by the antennae and recorded for later processing and interpretation. Factors such as soil moisture, clay content, and variations in the dielectric constants of materials control the effectiveness of the GPR method. Wet conductive soils severely attenuate GPR signals and thus the effective depth of exploration.

The presence of foreign products leeched into the soil can eschew the data collected thereby affecting the images.

GPR energy cannot transmit through ferrous objects since metal acts as a pure reflector.

Stantec employed a MALA X3M/GPR digital radar unit with a 250 MHz center frequency, bistatic antenna to survey the site. The instrument was configured to detect moderately shallow reflectors within the geologic strata. The chosen instrument configuration facilitates the analysis. The GPR system unit was configured for data collection as follows:

- Trigger Source: Cart
- Range: 0-66 ns
- Samples per Scan: 250-512
- Sampling Frequency: 10852.27 to 7234.85 MHz
- Vertical High Pass Filter: 15 Samples
- Vertical Low Pass Filter: 5 Samples
- Point Interval: 0.669 to 0.906 in
- Pulses/Ft: 108.48

Software utilized for the collection and analysis of these data included RAMAC Ground Vision GPR Software version 3. 1. 19. (5).

2.2 ELECTROMAGNETIC (EM) AND MAGNETIC DETECTION EQUIPMENT

The magnetic detection method is a Low Frequency (30 to 300 kHz) or Very Low Frequency (below 30 kHz) receiver for detecting electromagnetic fields which radiate off of metallic objects. Magnetic locators operate on a simple principal.

An electronic transmitter and receiving antennae are mounted on a support structure. The two antennae are mounted a fixed distance apart aligned opposing so that the magnetic field measured by one sensor is negative of the magnetic field measured by the other. Each measures the average magnetic field component along their axis i.e. the magnetic field component along the longitudinal axis between the antennae.

This is calibrated in the field to a position (setting) which is neutral to the earth's natural magnetic field. When a metallic object is introduced within this field, it is detected as a differing field. This differing magnetic field is the field of interest.

Stantec employed this method of locating buried metallic objects as a compliment to GPR for the subject site.

Stantec selected the following instruments for this particular task:

- Subsurface Magnetic Locator ML-1M
- Schonstedt GA-52Cx. HeliFlux magnetic field sensors—drive frequency 7.5 KHz.
- RadioDetection 8000 T-10 model utilizing 512 hertz, 8 KHz, 33 KHz, 65 KHz, 50/60 hertz, long wave radio frequencies

3.0 DATA PROCESSING AND ANALYSIS-GPR

Stantec calculated the average radar propagation velocity for the subject sites. This procedure is necessary to provide reasonably accurate depth estimates for reflection events in the subsurface strata.

The average radar velocity for the site was estimated. It should be noted that the dielectric constants and hence the corresponding radar propagation velocities did vary by an order of degree(s) of magnitude across the surveyed area. Additionally, radar propagation velocity decreases with depth in most geologic sections.

Data processing of the GPR data prior to interpretation included band pass filtering, background removal, horizontal smoothing, trace editing, and time gain adjustments. After processing, the data profiles were reviewed for analysis. These processing techniques were applied to the GPR data to provide the highest quality data and therefore facilitate the overall interpretation process.

4.0 RESULTS & CONCLUSIONS

Stantec Consulting Services Inc. has completed a subsurface investigation of the subject site. Multiple methods and technologies were used where permitted by the environment.

Survey scans were made throughout the targeted area.

The survey revealed anomalies within the subject site.

Target A: A Probable UST approximately 6 feet by 4 feet was noted. There are three small metal pipes approximately 2 inches in diameter protruding from a two 2 foot square concrete pad over the Probable UST. This anomaly abuts to the face of the exterior wall in which the footings interfere with the readings of the instrumentation used. This discovery was made using magnetics indicating metallic objects and ground penetrating radar. Surface Ground Penetrating Radar data showed a metallic signature and the stratigraphic walls of two different soil conditions. A sketch of this area is included on page 10.

Target B: A Probable UST approximately 5 feet by 4 feet was noted. There are two small metal pipes approximately 2 inches in diameter protruding from a 2 foot square concrete pad over the Probable UST. Two standing barrier posts are on the north side of this anomaly. This discovery was made using magnetics indicating metallic objects and ground penetrating radar. Surface Ground Penetrating Radar data showed a metallic signature and the stratigraphic walls of two different soil conditions. A sketch of this area is included on page 10.

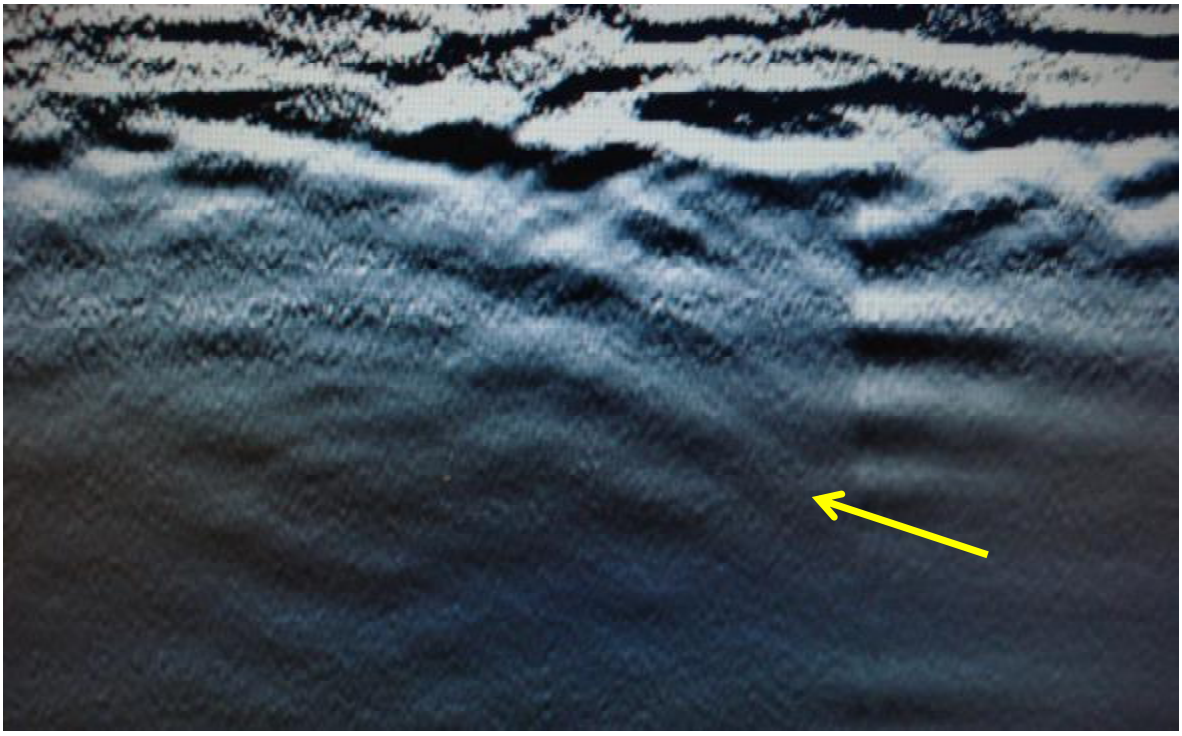
1. A gas meter at the rear of the building with service running to road was located. This was discovered with Electromagnetic Induction on frequency 8 kHz and verified with long wave radio. A sketch of this area is included on page 10.
2. Gas service from the rear of the block building to road was located. This was discovered with Electromagnetic Induction on frequency 65 kHz and verified with long wave radio. A sketch of this area is included on page 10.

3. A water meter in front of the building with service running to the building and road. This was discovered with Electromagnetic Induction on frequency 8 kHz and verified with long wave radio. A sketch of this area is included on page 10.

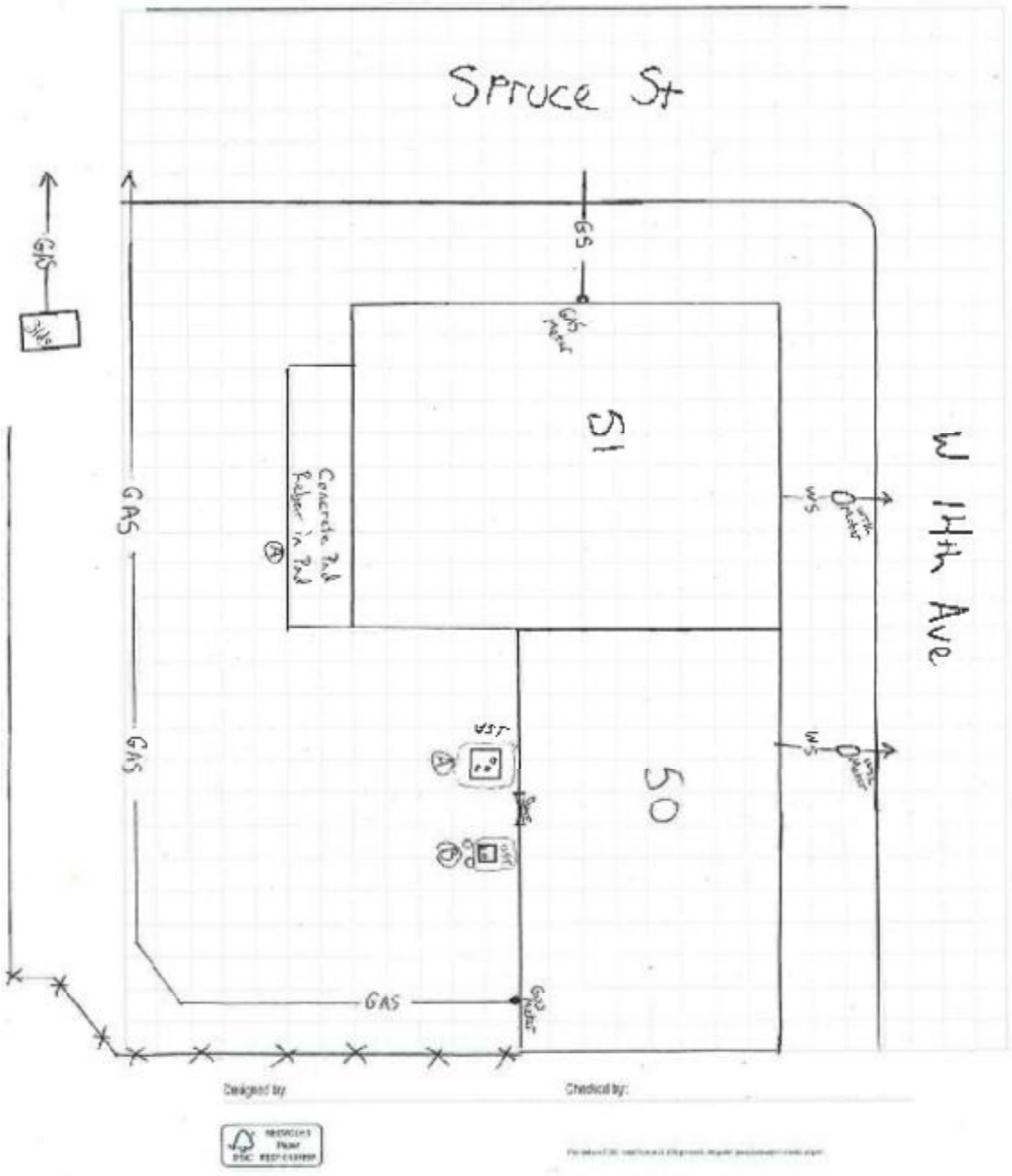
PHOTO SHOWING VENTS FOR PROBABLE UST'S ON BACK SIDE OF BUILDING EITHER SIDE OF DOOR

BACK OF BUILDING GAS METER ON RIGHT SIDE AND SERVICE TO BUILDING

FRONT OF BUILDING SHOWING WATER METER AND SERVICE TO BUILDING



GPR READINGS SHOWING SOIL DIFERENTIATIONS AT WALLS OF PROBABLE UST AND HYPERBOLAE WITH METAL CONTENT INCLUDING NEAR SPIKE FROM VENT PIPES



SKETCH MAP OF THE SURVEY AREA

Parcel 50
Geophysical Project Map

Pitt County, NC
July 2012

Target Delineation

Study Area

Stantec

APPENDIX C

BORING LOGS

BORING LOG: SB50-1

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/7/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0			Grass and gravelly topsoil		
1	SW		Tan and brown, silty SAND, dry	0.0	x
2	ML		Gray, SILT, moist		
3	CL		Tan and brown, silty CLAY, dry	0.0	
4					
5	CL		Stiff, gray and orangish tan, CLAY, dry	0.0	
6					
7				0.0	
8	SW		Tan and gray, silty SAND, saturated		
9				wet	
10					
11				wet	
12			End of boring at 12' bgs		

Soil sample was collected from 0'-2.5' bgs interval.

BORING LOG: SB50-2

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0			Grass and gravelly sandy topsoil		
1	SW		Gray and tan, silty CLAY	0.6	
2					
3	CL		Gray and tan, silty CLAY, moist		
4	ML		Gray and tan, clayey SILT, saturated	0.7	x
5			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-3

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
1	ML		Dark gray, sandy SILT	2.4	
2					
3	CL		Gray and tan, silty CLAY		
4				5.0	x
	ML		Gray and tan, clayey, sandy SILT, saturated		
5			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-4

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
1	CL		Gray and tan, silty CLAY, moist	4.0	
2					
3	CL		Gray and tan, clayey SILT, moist	4.9	x
4	ML		Gray and tan, clayey SILT, saturated		
5			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-5

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
1	ML		Tan, coarse grained SAND, moist	3.6	x
2	CL		Gray, silty, fine grained SAND		
3	CL		Gray and tan, silty CLAY	3.0	
5	ML		Gray, clayey SILT, wet		
7	CL		Gray, silty CLAY, moist		
8			End of boring at 8' bgs		

Soil sample was collected from 0'-2.5' bgs interval.

BORING LOG: SB50-6

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
	SW		Light brown, silty SAND		
1	ML		Light gray, sandy SILT	2.3	
2					
3	CL		Gray and tan mottled, CLAY, moist	3.2	x
4	CL		Gray and tan mottled, CLAY, saturated		
5			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-7

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
	SW		Light brown, silty SAND		
1	ML		Gray, sandy SILT	3.3	
	CL		Gray and brown, CLAY, moist		
2					
3				4.4	x
4	CL		Gray, clayey SILT, saturated		
5			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-8

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
1	SW		Dark gray, silty SAND	2.9	
2					
3	CL		Gray and tan, CLAY, moist		
4				4.0	x
	SW		Gray, silty SAND, saturated		
5			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-9

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
1	ML		Tan and gray, clayey SILT	2.0	x
2					
3	CL		Tan and gray, CLAY, moist		
4				0.9	
5	CL		Gray, clayey, sandy SILT, saturated		
			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-10

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
1	SW		Tan and gray, clayey SILT	0.0	
2					
3	CL		Tan and gray, CLAY, moist		
4				3.1	x
5	CL		Gray, clayey SILT, saturated		
6	SW		Tan, silty SAND, saturated		
7	SW		Tan and gray, clayey SAND, moist		
8			End of boring at 8' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-11

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
1	SW		Gray, silty SAND	4.7	
2					
3	CL		Tan and gray, CLAY, moist	1.4	x
4					
5	ML		Gray, clayey SILT, saturated		
			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-12

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	AR		Sandy gravel		
1	SW		Gray, silty SAND	0.2	
2					
3	CL		Tan and gray, CLAY, moist		
4				0.6	x
5	ML		Gray, clayey SILT, saturated		
			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5' bgs interval.

BORING LOG: SB50-13

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0			Grass and sandy topsoil		
1	SW		Brown, silty SAND	0.0	x
3	CL		Gray and tan, CLAY, moist	0.0	
4	ML		Gray, sandy SILT, saturated		
5			End of boring at 5' bgs		

Soil sample was collected from 0'-2.5' bgs interval.

BORING LOG: SB50-14

Client: NCDOT
Project: U-3315 Parcel 50
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 8/8/2012	Boring Diameter	: 2.25 Inches
Driller	: SAEDACCO	Sampling Method	: Macrocore
Drilling Method	: Direct Push	Sampling Interval	: Continuous
		Logged By	: Aaron Leff

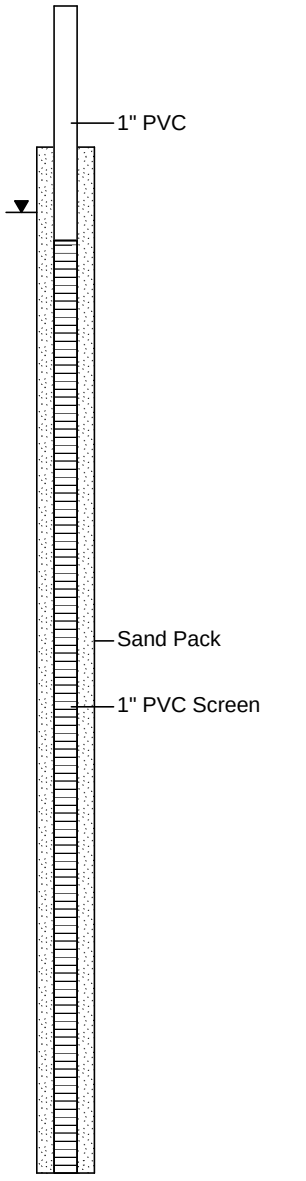
Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0			Grass and sandy topsoil		
1	SW		Brown, silty SAND, moist	0.0	x
2					
3	CL		Gray and tan, CLAY, moist	0.0	
4	ML		Gray, sandy SILT, saturated		
5			End of boring at 5' bgs		

Soil sample was collected from 0'-2.5' bgs interval.

WELL LOG: TW50-1

Client: NCDOT Project: U-3315 Parcel 50 Greenville, Pitt County, North Carolina		Date Drilled Drilling Company Drilling Method	: 8/7/2012 : SAEDACCO : Direct-Push	Boring Diameter Sampling Method Sampling Interval	: 2.25 inches : Macrocore : Continuous
WBS Element 35784.1.1.2					
ATC Project No. 45.19873.0007				Logged By	: Aaron Leff

DEPTH	USCS	GRAPHIC	DESCRIPTION	PID (ppm)
0			Grass and sandy topsoil	
1	ML		Brown, sandy clayey SILT, dry	0.0
2				
3			Soft, brown and gray CLAY, moist	0.0
4				
5	CL			0.0
6				
7				wet
8			Soft, gray and tan CLAY, very moist	
9				
10	CL			
11				
12			Temporary well TW50-1 set at 12 feet bgs	



Temporary well TW50-1 set at 12 feet bgs and screened from 2-12 feet bgs.
Soil sample taken at 5-6 feet bgs.
Depth to water approximately 2.70 feet from top of casing (TOC).
TOC is approximately 1 foot above ground surface.

03-01-2013 S:\Enviro\NCDOT\NCDOT Projects\U-3315\Boring Logs\TW50-1.bor

APPENDIX D

LABORATORY ANALYTICAL REPORTS

Laboratory Report of Analysis

To: Justin Ballard
ATC Associates
2725 E. Millbrook Rd
Suite 121
Raleigh, NC 27604

Report Number: **31202558**

Client Project: **NCDOT U-3315**

Dear Justin Ballard,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

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

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

Sincerely,
SGS North America Inc.

Digitally signed by: Michael Page
Date: 2012.10.03 16:03:27 -04'00'

Michael D. Page — Date
Project Manager
michael.page@sgs.com

Print Date: 08/23/2012 N.C. Certification # 481

Laboratory Qualifiers

Report Definitions

DL	Method, Instrument, or Estimated Detection Limit per Analytical Method
CL	Control Limits for the recovery result of a parameter
LOQ	Reporting Limit
DF	Dilution Factor
RPD	Relative Percent Difference
LCS(D)	Laboratory Control Spike (Duplicate)
MS(D)	Matrix Spike (Duplicate)
MB	Method Blank

Qualifier Definitions

*	Recovery or RPD outside of control limits
B	Analyte was detected in the Lab Method Blank at a level above the LOQ
U	Undetected (Reported as ND or < DL)
V	Recovery is below quality control limit. The data has been validated based on a favorable signal-to-noise and detection limit
A	Amount detected is less than the Lower Method Calibration Limit
J	Estimated Concentration.
O	The recovery of this analyte in the OPR is above the Method QC Limits and the reported concentration in the sample may be biased high
E	Amount detected is greater than the Upper Calibration Limit
S	The amount of analyte present has saturated the detector. This situation results in an underestimation of the affected analyte(s)
Q	Indicates the presence of a quantitative interference. This situation may result in an underestimation of the affected analyte(s)
I	Indicates the presence of a qualitative interference that could cause a false positive or an overestimation of the affected analyte(s)
DPE	Indicates the presence of a peak in the polychlorinated diphenylether channel that could cause a false positive or an overestimation of the affected analyte(s)
TIC	Tentatively Identified Compound
EMPC	Estimated Maximum possible Concentration due to ion ratio failure
ND	Not Detected
K	Result is estimated due to ion ratio failure in High Resolution PCB Analysis
P	RPD > 40% between results of dual columns
D	Spike or surrogate was diluted out in order to achieve a parameter result within instrument calibration range

Samples requiring manual integrations for various congeners and/or standards are marked and dated by the analyst. A code definition is provided below:

M1	Mis-identified peak
M2	Software did not integrate peak
M3	Incorrect baseline construction (i.e. not all of peak included; two peaks integrated as one)
M4	Pattern integration required (i.e. DRO, GRO, PCB, Toxaphene and Technical Chlordane)
M5	Other - Explained in case narrative

Note Results pages that include a value for "Solids (%)" have been adjusted for moisture content.

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
TW50-1 (5-6)	31202558011	08/07/2012 14:10	08/10/2012 15:45	Soil-Solid as dry weight
SB50-1 (0-2.5)	31202558013	08/07/2012 15:45	08/10/2012 15:45	Soil-Solid as dry weight
SB50-3 (2.5-5)	31202558014	08/08/2012 14:00	08/10/2012 15:45	Soil-Solid as dry weight
SB50-9 (0-2.5)	31202558015	08/08/2012 14:15	08/10/2012 15:45	Soil-Solid as dry weight
SB50-6 (2.5-5)	31202558016	08/08/2012 14:20	08/10/2012 15:45	Soil-Solid as dry weight
SB50-8 (2.5-5)	31202558017	08/08/2012 14:30	08/10/2012 15:45	Soil-Solid as dry weight
SB50-10 (2.5-5)	31202558018	08/08/2012 14:40	08/10/2012 15:45	Soil-Solid as dry weight
SB50-4 (2.5-5)	31202558019	08/08/2012 14:45	08/10/2012 15:45	Soil-Solid as dry weight
SB50-2 (2.5-5)	31202558020	08/08/2012 14:55	08/10/2012 15:45	Soil-Solid as dry weight
TW50-1	31202558021	08/09/2012 08:10	08/10/2012 15:45	Water
SB50-7 (2.5-5)	31202558026	08/08/2012 15:15	08/10/2012 15:45	Soil-Solid as dry weight
SB50-11 (2.5-5)	31202558027	08/08/2012 15:25	08/10/2012 15:45	Soil-Solid as dry weight
SB50-5 (0-2.5)	31202558028	08/08/2012 15:25	08/10/2012 15:45	Soil-Solid as dry weight
SB50-12 (2.5-5)	31202558031	08/08/2012 16:50	08/10/2012 15:45	Soil-Solid as dry weight
SB50-13 (0-2.5)	31202558033	08/08/2012 17:50	08/10/2012 15:45	Soil-Solid as dry weight
SB50-14 (0-2.5)	31202558034	08/08/2012 18:00	08/10/2012 15:45	Soil-Solid as dry weight

Results of **TW50-1 (5-6)**

Client Sample ID: **TW50-1 (5-6)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558011-D
Lab Project ID: 31202558

Collection Date: 08/07/2012 14:10
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 68.60

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,1,1-Trichloroethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,1,2,2-Tetrachloroethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,1,2-Trichloroethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,1-Dichloroethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,1-Dichloroethene	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,1-Dichloropropene	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,2,3-Trichlorobenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,2,3-Trichloropropane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,2,4-Trichlorobenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,2,4-Trimethylbenzene	**151**		57.9	ug/Kg	50	08/13/2012 17:21
1,2-Dibromo-3-chloropropane	ND		290	ug/Kg	50	08/13/2012 17:21
1,2-Dibromoethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,2-Dichlorobenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,2-Dichloroethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,2-Dichloropropane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,3,5-Trimethylbenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,3-Dichlorobenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,3-Dichloropropane	ND		57.9	ug/Kg	50	08/13/2012 17:21
1,4-Dichlorobenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
2,2-Dichloropropane	ND		57.9	ug/Kg	50	08/13/2012 17:21
2-Butanone	ND		1450	ug/Kg	50	08/13/2012 17:21
2-Chlorotoluene	ND		57.9	ug/Kg	50	08/13/2012 17:21
2-Hexanone	ND		290	ug/Kg	50	08/13/2012 17:21
4-Chlorotoluene	ND		57.9	ug/Kg	50	08/13/2012 17:21
4-Isopropyltoluene	ND		57.9	ug/Kg	50	08/13/2012 17:21
4-Methyl-2-pentanone	ND		290	ug/Kg	50	08/13/2012 17:21
Acetone	ND		1450	ug/Kg	50	08/13/2012 17:21
Benzene	**149**		57.9	ug/Kg	50	08/13/2012 17:21
Bromobenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
Bromochloromethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
Bromodichloromethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
Bromoform	ND		57.9	ug/Kg	50	08/13/2012 17:21
Bromomethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
n-Butylbenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
Carbon disulfide	ND		57.9	ug/Kg	50	08/13/2012 17:21
Carbon tetrachloride	ND		57.9	ug/Kg	50	08/13/2012 17:21
Chlorobenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
Chloroethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
Chloroform	ND		57.9	ug/Kg	50	08/13/2012 17:21
Chloromethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
Dibromochloromethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
Dibromomethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
Dichlorodifluoromethane	ND		290	ug/Kg	50	08/13/2012 17:21

Print Date: 08/23/2012

N.C. Certification # 481

Results of **TW50-1 (5-6)**

Client Sample ID: **TW50-1 (5-6)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558011-D
Lab Project ID: 31202558

Collection Date: 08/07/2012 14:10
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 68.60

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		57.9	ug/Kg	50	08/13/2012 17:21
trans-1,3-Dichloropropene	ND		57.9	ug/Kg	50	08/13/2012 17:21
Diisopropyl Ether	ND		57.9	ug/Kg	50	08/13/2012 17:21
Ethyl Benzene	**83.4**		57.9	ug/Kg	50	08/13/2012 17:21
Hexachlorobutadiene	ND		57.9	ug/Kg	50	08/13/2012 17:21
Isopropylbenzene (Cumene)	ND		57.9	ug/Kg	50	08/13/2012 17:21
Methyl iodide	ND		57.9	ug/Kg	50	08/13/2012 17:21
Methylene chloride	ND		290	ug/Kg	50	08/13/2012 17:21
Naphthalene	**78.7**		57.9	ug/Kg	50	08/13/2012 17:21
Styrene	ND		57.9	ug/Kg	50	08/13/2012 17:21
Tetrachloroethene	ND		57.9	ug/Kg	50	08/13/2012 17:21
Toluene	ND		57.9	ug/Kg	50	08/13/2012 17:21
Trichloroethene	ND		57.9	ug/Kg	50	08/13/2012 17:21
Trichlorofluoromethane	ND		57.9	ug/Kg	50	08/13/2012 17:21
Vinyl chloride	ND		57.9	ug/Kg	50	08/13/2012 17:21
Xylene (total)	ND		116	ug/Kg	50	08/13/2012 17:21
cis-1,2-Dichloroethene	ND		57.9	ug/Kg	50	08/13/2012 17:21
m,p-Xylene	ND		116	ug/Kg	50	08/13/2012 17:21
n-Propylbenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
o-Xylene	ND		57.9	ug/Kg	50	08/13/2012 17:21
sec-Butylbenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
tert-Butyl methyl ether (MTBE)	**354**		57.9	ug/Kg	50	08/13/2012 17:21
tert-Butylbenzene	ND		57.9	ug/Kg	50	08/13/2012 17:21
trans-1,2-Dichloroethene	ND		57.9	ug/Kg	50	08/13/2012 17:21
trans-1,4-Dichloro-2-butene	ND		290	ug/Kg	50	08/13/2012 17:21
Surrogates						
1,2-Dichloroethane-d4	96.0		55.0-173	%	50	08/13/2012 17:21
4-Bromofluorobenzene	103		23.0-141	%	50	08/13/2012 17:21
Toluene d8	105		57.0-134	%	50	08/13/2012 17:21

Batch Information

Analytical Batch: **VMS2470**
Analytical Method: **SW-846 8260B**
Instrument: **MSD3**
Analyst: **BWS**
Analytical Date/Time: **08/13/2012 17:21**

Prep Batch: **VXX3818**
Prep Method: **SW-846 5035 SM**
Prep Date/Time: **08/13/2012 10:37**
Prep Initial Wt./Vol.: **6.29 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **TW50-1 (5-6)**

Client Sample ID: **TW50-1 (5-6)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558011-E
Lab Project ID: 31202558

Collection Date: 08/07/2012 14:10
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 68.60

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		4.61	mg/kg	1	08/16/2012 19:25
Surrogates						
4-Bromofluorobenzene	108		70.0-130	%	1	08/16/2012 19:25

Batch Information

Analytical Batch: **VGC2073**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/16/2012 19:25**

Prep Batch: **VXX3837**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 10:37**
Prep Initial Wt./Vol.: **6.32 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **TW50-1 (5-6)**

Client Sample ID: **TW50-1 (5-6)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558011-H
Lab Project ID: 31202558

Collection Date: 08/07/2012 14:10
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 68.60

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		462	ug/Kg	1	08/20/2012 20:30
1,2-Dichlorobenzene	ND		462	ug/Kg	1	08/20/2012 20:30
1,3-Dichlorobenzene	ND		462	ug/Kg	1	08/20/2012 20:30
1,4-Dichlorobenzene	ND		462	ug/Kg	1	08/20/2012 20:30
2,4,5-Trichlorophenol	ND		462	ug/Kg	1	08/20/2012 20:30
2,4,6-Trichlorophenol	ND		462	ug/Kg	1	08/20/2012 20:30
2,4-Dichlorophenol	ND		462	ug/Kg	1	08/20/2012 20:30
2,4-Dinitrophenol	ND		923	ug/Kg	1	08/20/2012 20:30
2,4-Dinitrotoluene	ND		462	ug/Kg	1	08/20/2012 20:30
2,6-Dinitrotoluene	ND		462	ug/Kg	1	08/20/2012 20:30
2-Chloronaphthalene	ND		462	ug/Kg	1	08/20/2012 20:30
2-Chlorophenol	ND		462	ug/Kg	1	08/20/2012 20:30
2-Methylnaphthalene	ND		462	ug/Kg	1	08/20/2012 20:30
2-Methylphenol	ND		462	ug/Kg	1	08/20/2012 20:30
2-Nitroaniline	ND		462	ug/Kg	1	08/20/2012 20:30
2-Nitrophenol	ND		462	ug/Kg	1	08/20/2012 20:30
3 and/or 4-Methylphenol	ND		462	ug/Kg	1	08/20/2012 20:30
3,3'-Dichlorobenzidine	ND		462	ug/Kg	1	08/20/2012 20:30
3-Nitroaniline	ND		462	ug/Kg	1	08/20/2012 20:30
4,6-Dinitro-2-methylphenol	ND		462	ug/Kg	1	08/20/2012 20:30
4-Chloro-3-methylphenol	ND		462	ug/Kg	1	08/20/2012 20:30
4-Chloroaniline	ND		462	ug/Kg	1	08/20/2012 20:30
4-Chlorophenyl phenyl ether	ND		462	ug/Kg	1	08/20/2012 20:30
Acenaphthene	ND		462	ug/Kg	1	08/20/2012 20:30
Acenaphthylene	ND		462	ug/Kg	1	08/20/2012 20:30
Anthracene	ND		462	ug/Kg	1	08/20/2012 20:30
Benzo(a)anthracene	ND		462	ug/Kg	1	08/20/2012 20:30
Benzo(a)pyrene	ND		462	ug/Kg	1	08/20/2012 20:30
Benzo(b)fluoranthene	ND		462	ug/Kg	1	08/20/2012 20:30
Benzo(g,h,i)perylene	ND		462	ug/Kg	1	08/20/2012 20:30
Benzo(k)fluoranthene	ND		462	ug/Kg	1	08/20/2012 20:30
Benzoic acid	ND		462	ug/Kg	1	08/20/2012 20:30
Bis(2-Chloroethoxy)methane	ND		462	ug/Kg	1	08/20/2012 20:30
Bis(2-Chloroethyl)ether	ND		462	ug/Kg	1	08/20/2012 20:30
Bis(2-Chloroisopropyl)ether	ND		462	ug/Kg	1	08/20/2012 20:30
Bis(2-Ethylhexyl)phthalate	ND		462	ug/Kg	1	08/20/2012 20:30
4-Bromophenyl phenyl ether	ND		462	ug/Kg	1	08/20/2012 20:30
Butyl benzyl phthalate	ND		462	ug/Kg	1	08/20/2012 20:30
Chrysene	ND		462	ug/Kg	1	08/20/2012 20:30
Di-n-butyl phthalate	ND		462	ug/Kg	1	08/20/2012 20:30
Di-n-octyl phthalate	ND		462	ug/Kg	1	08/20/2012 20:30
Dibenz(a,h)anthracene	ND		462	ug/Kg	1	08/20/2012 20:30
Dibenzofuran	ND		462	ug/Kg	1	08/20/2012 20:30
Diethyl phthalate	ND		462	ug/Kg	1	08/20/2012 20:30

Print Date: 08/23/2012

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Results of **TW50-1 (5-6)**

Client Sample ID: **TW50-1 (5-6)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558011-H
Lab Project ID: 31202558

Collection Date: 08/07/2012 14:10
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 68.60

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		462	ug/Kg	1	08/20/2012 20:30
2,4-Dimethylphenol	ND		462	ug/Kg	1	08/20/2012 20:30
Diphenylamine	ND		462	ug/Kg	1	08/20/2012 20:30
Fluoranthene	ND		462	ug/Kg	1	08/20/2012 20:30
Fluorene	ND		462	ug/Kg	1	08/20/2012 20:30
Hexachlorobenzene	ND		462	ug/Kg	1	08/20/2012 20:30
Hexachlorobutadiene	ND		462	ug/Kg	1	08/20/2012 20:30
Hexachlorocyclopentadiene	ND		462	ug/Kg	1	08/20/2012 20:30
Hexachloroethane	ND		462	ug/Kg	1	08/20/2012 20:30
Indeno(1,2,3-cd)pyrene	ND		462	ug/Kg	1	08/20/2012 20:30
Isophorone	ND		462	ug/Kg	1	08/20/2012 20:30
Naphthalene	ND		462	ug/Kg	1	08/20/2012 20:30
4-Nitroaniline	ND		462	ug/Kg	1	08/20/2012 20:30
Nitrobenzene	ND		462	ug/Kg	1	08/20/2012 20:30
4-Nitrophenol	ND		462	ug/Kg	1	08/20/2012 20:30
Pentachlorophenol	ND		462	ug/Kg	1	08/20/2012 20:30
Phenanthrene	ND		462	ug/Kg	1	08/20/2012 20:30
Phenol	ND		462	ug/Kg	1	08/20/2012 20:30
Pyrene	ND		462	ug/Kg	1	08/20/2012 20:30
n-Nitrosodi-n-propylamine	ND		462	ug/Kg	1	08/20/2012 20:30
Surrogates						
2,4,6-Tribromophenol	80.0		41.0-129	%	1	08/20/2012 20:30
2-Fluorobiphenyl	79.0		48.0-123	%	1	08/20/2012 20:30
2-Fluorophenol	77.0		42.0-123	%	1	08/20/2012 20:30
Nitrobenzene-d5	84.0		46.0-117	%	1	08/20/2012 20:30
Phenol-d6	88.0		48.0-125	%	1	08/20/2012 20:30
Terphenyl-d14	83.0		44.0-140	%	1	08/20/2012 20:30

Batch Information

Analytical Batch: **XMS1642**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/20/2012 20:30**

Prep Batch: **XXX2922**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 10:24**
Prep Initial Wt./Vol.: **31.57 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

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Results of **TW50-1 (5-6)**

Client Sample ID: **TW50-1 (5-6)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558011-H
Lab Project ID: 31202558

Collection Date: 08/07/2012 14:10
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 68.60

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		9.04	mg/kg	1	08/15/2012 5:22
Surrogates						
o-Terphenyl	55.7		40.0-140	%	1	08/15/2012 5:22

Batch Information

Analytical Batch: **XGC2444**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/15/2012 05:22**

Prep Batch: **XXX2919**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/13/2012 17:19**
Prep Initial Wt./Vol.: **32.22 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-1 (0-2.5)**

Client Sample ID: **SB50-1 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558013-B
Lab Project ID: 31202558

Collection Date: 08/07/2012 15:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 80.50

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,1,1-Trichloroethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,1,2,2-Tetrachloroethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,1,2-Trichloroethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,1-Dichloroethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,1-Dichloroethene	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,1-Dichloropropene	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,2,3-Trichlorobenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,2,3-Trichloropropane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,2,4-Trichlorobenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,2,4-Trimethylbenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,2-Dibromo-3-chloropropane	ND		29.5	ug/Kg	1	08/16/2012 18:18
1,2-Dibromoethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,2-Dichlorobenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,2-Dichloroethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,2-Dichloropropane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,3,5-Trimethylbenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,3-Dichlorobenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,3-Dichloropropane	ND		4.92	ug/Kg	1	08/16/2012 18:18
1,4-Dichlorobenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
2,2-Dichloropropane	ND		4.92	ug/Kg	1	08/16/2012 18:18
2-Butanone	ND		24.6	ug/Kg	1	08/16/2012 18:18
2-Chlorotoluene	ND		4.92	ug/Kg	1	08/16/2012 18:18
2-Hexanone	ND		12.3	ug/Kg	1	08/16/2012 18:18
4-Chlorotoluene	ND		4.92	ug/Kg	1	08/16/2012 18:18
4-Isopropyltoluene	ND		4.92	ug/Kg	1	08/16/2012 18:18
4-Methyl-2-pentanone	ND		12.3	ug/Kg	1	08/16/2012 18:18
Acetone	ND		49.2	ug/Kg	1	08/16/2012 18:18
Benzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Bromobenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Bromochloromethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
Bromodichloromethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
Bromoform	ND		4.92	ug/Kg	1	08/16/2012 18:18
Bromomethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
n-Butylbenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Carbon disulfide	ND		4.92	ug/Kg	1	08/16/2012 18:18
Carbon tetrachloride	ND		4.92	ug/Kg	1	08/16/2012 18:18
Chlorobenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Chloroethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
Chloroform	ND		4.92	ug/Kg	1	08/16/2012 18:18
Chloromethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
Dibromochloromethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
Dibromomethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
Dichlorodifluoromethane	ND		4.92	ug/Kg	1	08/16/2012 18:18

Print Date: 08/23/2012

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Results of **SB50-1 (0-2.5)**

Client Sample ID: **SB50-1 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558013-B
Lab Project ID: 31202558

Collection Date: 08/07/2012 15:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 80.50

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		4.92	ug/Kg	1	08/16/2012 18:18
trans-1,3-Dichloropropene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Diisopropyl Ether	ND		4.92	ug/Kg	1	08/16/2012 18:18
Ethyl Benzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Hexachlorobutadiene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Isopropylbenzene (Cumene)	ND		4.92	ug/Kg	1	08/16/2012 18:18
Methyl iodide	ND		4.92	ug/Kg	1	08/16/2012 18:18
Methylene chloride	ND		19.7	ug/Kg	1	08/16/2012 18:18
Naphthalene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Styrene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Tetrachloroethene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Toluene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Trichloroethene	ND		4.92	ug/Kg	1	08/16/2012 18:18
Trichlorofluoromethane	ND		4.92	ug/Kg	1	08/16/2012 18:18
Vinyl chloride	ND		4.92	ug/Kg	1	08/16/2012 18:18
Xylene (total)	ND		9.85	ug/Kg	1	08/16/2012 18:18
cis-1,2-Dichloroethene	ND		4.92	ug/Kg	1	08/16/2012 18:18
m,p-Xylene	ND		9.85	ug/Kg	1	08/16/2012 18:18
n-Propylbenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
o-Xylene	ND		4.92	ug/Kg	1	08/16/2012 18:18
sec-Butylbenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
tert-Butyl methyl ether (MTBE)	ND		4.92	ug/Kg	1	08/16/2012 18:18
tert-Butylbenzene	ND		4.92	ug/Kg	1	08/16/2012 18:18
trans-1,2-Dichloroethene	ND		4.92	ug/Kg	1	08/16/2012 18:18
trans-1,4-Dichloro-2-butene	ND		24.6	ug/Kg	1	08/16/2012 18:18
Surrogates						
1,2-Dichloroethane-d4	108		55.0-173	%	1	08/16/2012 18:18
4-Bromofluorobenzene	89.0		23.0-141	%	1	08/16/2012 18:18
Toluene d8	100		57.0-134	%	1	08/16/2012 18:18

Batch Information

Analytical Batch: **VMS2480**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**
Analytical Date/Time: **08/16/2012 18:18**

Prep Batch: **VXX3835**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **08/13/2012 10:45**
Prep Initial Wt./Vol.: **6.31 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

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Results of **SB50-1 (0-2.5)**

Client Sample ID: **SB50-1 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558013-E
Lab Project ID: 31202558

Collection Date: 08/07/2012 15:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 80.50

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.87	mg/kg	1	08/17/2012 16:49
Surrogates						
4-Bromofluorobenzene	119		70.0-130	%	1	08/17/2012 16:49

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 16:49**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 10:45**
Prep Initial Wt./Vol.: **6.42 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

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Results of **SB50-1 (0-2.5)**

Client Sample ID: **SB50-1 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558013-H
Lab Project ID: 31202558

Collection Date: 08/07/2012 15:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 80.50

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		374	ug/Kg	1	08/20/2012 21:16
1,2-Dichlorobenzene	ND		374	ug/Kg	1	08/20/2012 21:16
1,3-Dichlorobenzene	ND		374	ug/Kg	1	08/20/2012 21:16
1,4-Dichlorobenzene	ND		374	ug/Kg	1	08/20/2012 21:16
2,4,5-Trichlorophenol	ND		374	ug/Kg	1	08/20/2012 21:16
2,4,6-Trichlorophenol	ND		374	ug/Kg	1	08/20/2012 21:16
2,4-Dichlorophenol	ND		374	ug/Kg	1	08/20/2012 21:16
2,4-Dinitrophenol	ND		746	ug/Kg	1	08/20/2012 21:16
2,4-Dinitrotoluene	ND		374	ug/Kg	1	08/20/2012 21:16
2,6-Dinitrotoluene	ND		374	ug/Kg	1	08/20/2012 21:16
2-Chloronaphthalene	ND		374	ug/Kg	1	08/20/2012 21:16
2-Chlorophenol	ND		374	ug/Kg	1	08/20/2012 21:16
2-Methylnaphthalene	ND		374	ug/Kg	1	08/20/2012 21:16
2-Methylphenol	ND		374	ug/Kg	1	08/20/2012 21:16
2-Nitroaniline	ND		374	ug/Kg	1	08/20/2012 21:16
2-Nitrophenol	ND		374	ug/Kg	1	08/20/2012 21:16
3 and/or 4-Methylphenol	ND		374	ug/Kg	1	08/20/2012 21:16
3,3'-Dichlorobenzidine	ND		374	ug/Kg	1	08/20/2012 21:16
3-Nitroaniline	ND		374	ug/Kg	1	08/20/2012 21:16
4,6-Dinitro-2-methylphenol	ND		374	ug/Kg	1	08/20/2012 21:16
4-Chloro-3-methylphenol	ND		374	ug/Kg	1	08/20/2012 21:16
4-Chloroaniline	ND		374	ug/Kg	1	08/20/2012 21:16
4-Chlorophenyl phenyl ether	ND		374	ug/Kg	1	08/20/2012 21:16
Acenaphthene	ND		374	ug/Kg	1	08/20/2012 21:16
Acenaphthylene	ND		374	ug/Kg	1	08/20/2012 21:16
Anthracene	ND		374	ug/Kg	1	08/20/2012 21:16
Benzo(a)anthracene	ND		374	ug/Kg	1	08/20/2012 21:16
Benzo(a)pyrene	ND		374	ug/Kg	1	08/20/2012 21:16
Benzo(b)fluoranthene	ND		374	ug/Kg	1	08/20/2012 21:16
Benzo(g,h,i)perylene	ND		374	ug/Kg	1	08/20/2012 21:16
Benzo(k)fluoranthene	ND		374	ug/Kg	1	08/20/2012 21:16
Benzoic acid	ND		374	ug/Kg	1	08/20/2012 21:16
Bis(2-Chloroethoxy)methane	ND		374	ug/Kg	1	08/20/2012 21:16
Bis(2-Chloroethyl)ether	ND		374	ug/Kg	1	08/20/2012 21:16
Bis(2-Chloroisopropyl)ether	ND		374	ug/Kg	1	08/20/2012 21:16
Bis(2-Ethylhexyl)phthalate	ND		374	ug/Kg	1	08/20/2012 21:16
4-Bromophenyl phenyl ether	ND		374	ug/Kg	1	08/20/2012 21:16
Butyl benzyl phthalate	ND		374	ug/Kg	1	08/20/2012 21:16
Chrysene	ND		374	ug/Kg	1	08/20/2012 21:16
Di-n-butyl phthalate	ND		374	ug/Kg	1	08/20/2012 21:16
Di-n-octyl phthalate	ND		374	ug/Kg	1	08/20/2012 21:16
Dibenz(a,h)anthracene	ND		374	ug/Kg	1	08/20/2012 21:16
Dibenzofuran	ND		374	ug/Kg	1	08/20/2012 21:16
Diethyl phthalate	ND		374	ug/Kg	1	08/20/2012 21:16

Print Date: 08/23/2012

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Results of **SB50-1 (0-2.5)**

Client Sample ID: **SB50-1 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558013-H
Lab Project ID: 31202558

Collection Date: 08/07/2012 15:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 80.50

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		374	ug/Kg	1	08/20/2012 21:16
2,4-Dimethylphenol	ND		374	ug/Kg	1	08/20/2012 21:16
Diphenylamine	ND		374	ug/Kg	1	08/20/2012 21:16
Fluoranthene	ND		374	ug/Kg	1	08/20/2012 21:16
Fluorene	ND		374	ug/Kg	1	08/20/2012 21:16
Hexachlorobenzene	ND		374	ug/Kg	1	08/20/2012 21:16
Hexachlorobutadiene	ND		374	ug/Kg	1	08/20/2012 21:16
Hexachlorocyclopentadiene	ND		374	ug/Kg	1	08/20/2012 21:16
Hexachloroethane	ND		374	ug/Kg	1	08/20/2012 21:16
Indeno(1,2,3-cd)pyrene	ND		374	ug/Kg	1	08/20/2012 21:16
Isophorone	ND		374	ug/Kg	1	08/20/2012 21:16
Naphthalene	ND		374	ug/Kg	1	08/20/2012 21:16
4-Nitroaniline	ND		374	ug/Kg	1	08/20/2012 21:16
Nitrobenzene	ND		374	ug/Kg	1	08/20/2012 21:16
4-Nitrophenol	ND		374	ug/Kg	1	08/20/2012 21:16
Pentachlorophenol	ND		374	ug/Kg	1	08/20/2012 21:16
Phenanthrene	ND		374	ug/Kg	1	08/20/2012 21:16
Phenol	ND		374	ug/Kg	1	08/20/2012 21:16
Pyrene	ND		374	ug/Kg	1	08/20/2012 21:16
n-Nitrosodi-n-propylamine	ND		374	ug/Kg	1	08/20/2012 21:16
Surrogates						
2,4,6-Tribromophenol	84.0		41.0-129	%	1	08/20/2012 21:16
2-Fluorobiphenyl	84.0		48.0-123	%	1	08/20/2012 21:16
2-Fluorophenol	74.0		42.0-123	%	1	08/20/2012 21:16
Nitrobenzene-d5	83.0		46.0-117	%	1	08/20/2012 21:16
Phenol-d6	87.0		48.0-125	%	1	08/20/2012 21:16
Terphenyl-d14	87.0		44.0-140	%	1	08/20/2012 21:16

Batch Information

Analytical Batch: **XMS1642**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/20/2012 21:16**

Prep Batch: **XXX2922**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 10:24**
Prep Initial Wt./Vol.: **33.32 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-1 (0-2.5)**

Client Sample ID: **SB50-1 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558013-H
Lab Project ID: 31202558

Collection Date: 08/07/2012 15:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 80.50

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**15.8**		7.12	mg/kg	1	08/15/2012 19:50
Surrogates						
o-Terphenyl	99.3		40.0-140	%	1	08/15/2012 19:50

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/15/2012 19:50**

Prep Batch: **XXX2919**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/13/2012 17:19**
Prep Initial Wt./Vol.: **34.9 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-3 (2.5-5)**

Client Sample ID: **SB50-3 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558014-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:00
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 70.90

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,1,1-Trichloroethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,1,2,2-Tetrachloroethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,1,2-Trichloroethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,1-Dichloroethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,1-Dichloroethene	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,1-Dichloropropene	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,2,3-Trichlorobenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,2,3-Trichloropropane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,2,4-Trichlorobenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,2,4-Trimethylbenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,2-Dibromo-3-chloropropane	ND		30.1	ug/Kg	1	08/18/2012 14:54
1,2-Dibromoethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,2-Dichlorobenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,2-Dichloroethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,2-Dichloropropane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,3,5-Trimethylbenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,3-Dichlorobenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,3-Dichloropropane	ND		5.02	ug/Kg	1	08/18/2012 14:54
1,4-Dichlorobenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
2,2-Dichloropropane	ND		5.02	ug/Kg	1	08/18/2012 14:54
2-Butanone	ND		25.1	ug/Kg	1	08/18/2012 14:54
2-Chlorotoluene	ND		5.02	ug/Kg	1	08/18/2012 14:54
2-Hexanone	ND		12.6	ug/Kg	1	08/18/2012 14:54
4-Chlorotoluene	ND		5.02	ug/Kg	1	08/18/2012 14:54
4-Isopropyltoluene	ND		5.02	ug/Kg	1	08/18/2012 14:54
4-Methyl-2-pentanone	ND		12.6	ug/Kg	1	08/18/2012 14:54
Acetone	**124**		50.2	ug/Kg	1	08/18/2012 14:54
Benzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Bromobenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Bromochloromethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
Bromodichloromethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
Bromoform	ND		5.02	ug/Kg	1	08/18/2012 14:54
Bromomethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
n-Butylbenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Carbon disulfide	ND		5.02	ug/Kg	1	08/18/2012 14:54
Carbon tetrachloride	ND		5.02	ug/Kg	1	08/18/2012 14:54
Chlorobenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Chloroethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
Chloroform	ND		5.02	ug/Kg	1	08/18/2012 14:54
Chloromethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
Dibromochloromethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
Dibromomethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
Dichlorodifluoromethane	ND		5.02	ug/Kg	1	08/18/2012 14:54

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-3 (2.5-5)**

Client Sample ID: **SB50-3 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558014-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:00
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 70.90

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		5.02	ug/Kg	1	08/18/2012 14:54
trans-1,3-Dichloropropene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Diisopropyl Ether	ND		5.02	ug/Kg	1	08/18/2012 14:54
Ethyl Benzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Hexachlorobutadiene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Isopropylbenzene (Cumene)	ND		5.02	ug/Kg	1	08/18/2012 14:54
Methyl iodide	ND		5.02	ug/Kg	1	08/18/2012 14:54
Methylene chloride	ND		20.1	ug/Kg	1	08/18/2012 14:54
Naphthalene	**11.4**		5.02	ug/Kg	1	08/18/2012 14:54
Styrene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Tetrachloroethene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Toluene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Trichloroethene	ND		5.02	ug/Kg	1	08/18/2012 14:54
Trichlorofluoromethane	ND		5.02	ug/Kg	1	08/18/2012 14:54
Vinyl chloride	ND		5.02	ug/Kg	1	08/18/2012 14:54
Xylene (total)	ND		10.0	ug/Kg	1	08/18/2012 14:54
cis-1,2-Dichloroethene	ND		5.02	ug/Kg	1	08/18/2012 14:54
m,p-Xylene	ND		10.0	ug/Kg	1	08/18/2012 14:54
n-Propylbenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
o-Xylene	ND		5.02	ug/Kg	1	08/18/2012 14:54
sec-Butylbenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
tert-Butyl methyl ether (MTBE)	**43.1**		5.02	ug/Kg	1	08/18/2012 14:54
tert-Butylbenzene	ND		5.02	ug/Kg	1	08/18/2012 14:54
trans-1,2-Dichloroethene	ND		5.02	ug/Kg	1	08/18/2012 14:54
trans-1,4-Dichloro-2-butene	ND		25.1	ug/Kg	1	08/18/2012 14:54
Surrogates						
1,2-Dichloroethane-d4	109		55.0-173	%	1	08/18/2012 14:54
4-Bromofluorobenzene	99.0		23.0-141	%	1	08/18/2012 14:54
Toluene d8	103		57.0-134	%	1	08/18/2012 14:54

Batch Information

Analytical Batch: **VMS2486**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**
Analytical Date/Time: **08/18/2012 14:54**

Prep Batch: **VXX3850**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **08/13/2012 10:47**
Prep Initial Wt./Vol.: **7.02 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-3 (2.5-5)**

Client Sample ID: **SB50-3 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558014-E
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:00
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 70.90

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		4.64	mg/kg	1	08/17/2012 17:15
Surrogates						
4-Bromofluorobenzene	107		70.0-130	%	1	08/17/2012 17:15

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 17:15**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 10:47**
Prep Initial Wt./Vol.: **6.08 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-3 (2.5-5)**

Client Sample ID: **SB50-3 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558014-H
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:00
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 70.90

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		412	ug/Kg	1	08/20/2012 21:39
1,2-Dichlorobenzene	ND		412	ug/Kg	1	08/20/2012 21:39
1,3-Dichlorobenzene	ND		412	ug/Kg	1	08/20/2012 21:39
1,4-Dichlorobenzene	ND		412	ug/Kg	1	08/20/2012 21:39
2,4,5-Trichlorophenol	ND		412	ug/Kg	1	08/20/2012 21:39
2,4,6-Trichlorophenol	ND		412	ug/Kg	1	08/20/2012 21:39
2,4-Dichlorophenol	ND		412	ug/Kg	1	08/20/2012 21:39
2,4-Dinitrophenol	ND		823	ug/Kg	1	08/20/2012 21:39
2,4-Dinitrotoluene	ND		412	ug/Kg	1	08/20/2012 21:39
2,6-Dinitrotoluene	ND		412	ug/Kg	1	08/20/2012 21:39
2-Chloronaphthalene	ND		412	ug/Kg	1	08/20/2012 21:39
2-Chlorophenol	ND		412	ug/Kg	1	08/20/2012 21:39
2-Methylnaphthalene	ND		412	ug/Kg	1	08/20/2012 21:39
2-Methylphenol	ND		412	ug/Kg	1	08/20/2012 21:39
2-Nitroaniline	ND		412	ug/Kg	1	08/20/2012 21:39
2-Nitrophenol	ND		412	ug/Kg	1	08/20/2012 21:39
3 and/or 4-Methylphenol	ND		412	ug/Kg	1	08/20/2012 21:39
3,3'-Dichlorobenzidine	ND		412	ug/Kg	1	08/20/2012 21:39
3-Nitroaniline	ND		412	ug/Kg	1	08/20/2012 21:39
4,6-Dinitro-2-methylphenol	ND		412	ug/Kg	1	08/20/2012 21:39
4-Chloro-3-methylphenol	ND		412	ug/Kg	1	08/20/2012 21:39
4-Chloroaniline	ND		412	ug/Kg	1	08/20/2012 21:39
4-Chlorophenyl phenyl ether	ND		412	ug/Kg	1	08/20/2012 21:39
Acenaphthene	ND		412	ug/Kg	1	08/20/2012 21:39
Acenaphthylene	ND		412	ug/Kg	1	08/20/2012 21:39
Anthracene	ND		412	ug/Kg	1	08/20/2012 21:39
Benzo(a)anthracene	ND		412	ug/Kg	1	08/20/2012 21:39
Benzo(a)pyrene	ND		412	ug/Kg	1	08/20/2012 21:39
Benzo(b)fluoranthene	ND		412	ug/Kg	1	08/20/2012 21:39
Benzo(g,h,i)perylene	ND		412	ug/Kg	1	08/20/2012 21:39
Benzo(k)fluoranthene	ND		412	ug/Kg	1	08/20/2012 21:39
Benzoic acid	ND		412	ug/Kg	1	08/20/2012 21:39
Bis(2-Chloroethoxy)methane	ND		412	ug/Kg	1	08/20/2012 21:39
Bis(2-Chloroethyl)ether	ND		412	ug/Kg	1	08/20/2012 21:39
Bis(2-Chloroisopropyl)ether	ND		412	ug/Kg	1	08/20/2012 21:39
Bis(2-Ethylhexyl)phthalate	ND		412	ug/Kg	1	08/20/2012 21:39
4-Bromophenyl phenyl ether	ND		412	ug/Kg	1	08/20/2012 21:39
Butyl benzyl phthalate	ND		412	ug/Kg	1	08/20/2012 21:39
Chrysene	ND		412	ug/Kg	1	08/20/2012 21:39
Di-n-butyl phthalate	ND		412	ug/Kg	1	08/20/2012 21:39
Di-n-octyl phthalate	ND		412	ug/Kg	1	08/20/2012 21:39
Dibenz(a,h)anthracene	ND		412	ug/Kg	1	08/20/2012 21:39
Dibenzofuran	ND		412	ug/Kg	1	08/20/2012 21:39
Diethyl phthalate	ND		412	ug/Kg	1	08/20/2012 21:39

Print Date: 08/23/2012

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Results of **SB50-3 (2.5-5)**

Client Sample ID: **SB50-3 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558014-H
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:00
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 70.90

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		412	ug/Kg	1	08/20/2012 21:39
2,4-Dimethylphenol	ND		412	ug/Kg	1	08/20/2012 21:39
Diphenylamine	ND		412	ug/Kg	1	08/20/2012 21:39
Fluoranthene	ND		412	ug/Kg	1	08/20/2012 21:39
Fluorene	ND		412	ug/Kg	1	08/20/2012 21:39
Hexachlorobenzene	ND		412	ug/Kg	1	08/20/2012 21:39
Hexachlorobutadiene	ND		412	ug/Kg	1	08/20/2012 21:39
Hexachlorocyclopentadiene	ND		412	ug/Kg	1	08/20/2012 21:39
Hexachloroethane	ND		412	ug/Kg	1	08/20/2012 21:39
Indeno(1,2,3-cd)pyrene	ND		412	ug/Kg	1	08/20/2012 21:39
Isophorone	ND		412	ug/Kg	1	08/20/2012 21:39
Naphthalene	ND		412	ug/Kg	1	08/20/2012 21:39
4-Nitroaniline	ND		412	ug/Kg	1	08/20/2012 21:39
Nitrobenzene	ND		412	ug/Kg	1	08/20/2012 21:39
4-Nitrophenol	ND		412	ug/Kg	1	08/20/2012 21:39
Pentachlorophenol	ND		412	ug/Kg	1	08/20/2012 21:39
Phenanthrene	ND		412	ug/Kg	1	08/20/2012 21:39
Phenol	ND		412	ug/Kg	1	08/20/2012 21:39
Pyrene	ND		412	ug/Kg	1	08/20/2012 21:39
n-Nitrosodi-n-propylamine	ND		412	ug/Kg	1	08/20/2012 21:39
Surrogates						
2,4,6-Tribromophenol	76.0		41.0-129	%	1	08/20/2012 21:39
2-Fluorobiphenyl	78.0		48.0-123	%	1	08/20/2012 21:39
2-Fluorophenol	72.0		42.0-123	%	1	08/20/2012 21:39
Nitrobenzene-d5	77.0		46.0-117	%	1	08/20/2012 21:39
Phenol-d6	84.0		48.0-125	%	1	08/20/2012 21:39
Terphenyl-d14	84.0		44.0-140	%	1	08/20/2012 21:39

Batch Information

Analytical Batch: **XMS1642**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/20/2012 21:39**

Prep Batch: **XXX2922**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 10:24**
Prep Initial Wt./Vol.: **34.29 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-3 (2.5-5)**

Client Sample ID: **SB50-3 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558014-H
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:00
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 70.90

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		8.42	mg/kg	1	08/15/2012 20:18
Surrogates						
o-Terphenyl	84.4		40.0-140	%	1	08/15/2012 20:18

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/15/2012 20:18**

Prep Batch: **XXX2919**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/13/2012 17:19**
Prep Initial Wt./Vol.: **33.51 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-9 (0-2.5)**

Client Sample ID: **SB50-9 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558015-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:15
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 81.60

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.70	mg/kg	1	08/17/2012 17:40
Surrogates						
4-Bromofluorobenzene	107		70.0-130	%	1	08/17/2012 17:40

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 17:40**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 10:49**
Prep Initial Wt./Vol.: **6.62 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-9 (0-2.5)**

Client Sample ID: **SB50-9 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558015-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:15
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 81.60

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.50	mg/kg	1	08/15/2012 20:47
Surrogates						
o-Terphenyl	83.9		40.0-140	%	1	08/15/2012 20:47

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/15/2012 20:47**

Prep Batch: **XXX2919**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/13/2012 17:19**
Prep Initial Wt./Vol.: **32.69 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-6 (2.5-5)**

Client Sample ID: **SB50-6 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558016-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:20
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 77.80

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.45	mg/kg	1	08/17/2012 18:05
Surrogates						
4-Bromofluorobenzene	109		70.0-130	%	1	08/17/2012 18:05

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 18:05**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 10:50**
Prep Initial Wt./Vol.: **7.45 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-6 (2.5-5)**

Client Sample ID: **SB50-6 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558016-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:20
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 77.80

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.39	mg/kg	1	08/15/2012 21:15
Surrogates						
o-Terphenyl	85.7		40.0-140	%	1	08/15/2012 21:15

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/15/2012 21:15**

Prep Batch: **XXX2919**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/13/2012 17:19**
Prep Initial Wt./Vol.: **34.77 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-8 (2.5-5)**

Client Sample ID: **SB50-8 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558017-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:30
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 81.90

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		4.14	mg/kg	1	08/17/2012 18:30
Surrogates						
4-Bromofluorobenzene	109		70.0-130	%	1	08/17/2012 18:30

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 18:30**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 10:51**
Prep Initial Wt./Vol.: **5.9 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-8 (2.5-5)**

Client Sample ID: **SB50-8 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558017-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:30
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 81.90

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.24	mg/kg	1	08/15/2012 21:43
Surrogates						
o-Terphenyl	94.8		40.0-140	%	1	08/15/2012 21:43

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/15/2012 21:43**

Prep Batch: **XXX2919**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/13/2012 17:19**
Prep Initial Wt./Vol.: **33.72 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-10 (2.5-5)**

Client Sample ID: **SB50-10 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558018-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:40
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 81.20

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.68	mg/kg	1	08/17/2012 18:55
Surrogates						
4-Bromofluorobenzene	109		70.0-130	%	1	08/17/2012 18:55

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 18:55**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 10:52**
Prep Initial Wt./Vol.: **6.682 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-10 (2.5-5)**

Client Sample ID: **SB50-10 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558018-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:40
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 81.20

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.96	mg/kg	1	08/15/2012 22:11
Surrogates						
o-Terphenyl	89.7		40.0-140	%	1	08/15/2012 22:11

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/15/2012 22:11**

Prep Batch: **XXX2919**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/13/2012 17:19**
Prep Initial Wt./Vol.: **30.95 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-4 (2.5-5)**

Client Sample ID: **SB50-4 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558019-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.80

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,1,1-Trichloroethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,1,2,2-Tetrachloroethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,1,2-Trichloroethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,1-Dichloroethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,1-Dichloroethene	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,1-Dichloropropene	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,2,3-Trichlorobenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,2,3-Trichloropropane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,2,4-Trichlorobenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,2,4-Trimethylbenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,2-Dibromo-3-chloropropane	ND		30.9	ug/Kg	1	08/18/2012 15:20
1,2-Dibromoethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,2-Dichlorobenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,2-Dichloroethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,2-Dichloropropane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,3,5-Trimethylbenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,3-Dichlorobenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,3-Dichloropropane	ND		5.15	ug/Kg	1	08/18/2012 15:20
1,4-Dichlorobenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
2,2-Dichloropropane	ND		5.15	ug/Kg	1	08/18/2012 15:20
2-Butanone	ND		25.7	ug/Kg	1	08/18/2012 15:20
2-Chlorotoluene	ND		5.15	ug/Kg	1	08/18/2012 15:20
2-Hexanone	ND		12.9	ug/Kg	1	08/18/2012 15:20
4-Chlorotoluene	ND		5.15	ug/Kg	1	08/18/2012 15:20
4-Isopropyltoluene	ND		5.15	ug/Kg	1	08/18/2012 15:20
4-Methyl-2-pentanone	ND		12.9	ug/Kg	1	08/18/2012 15:20
Acetone	**59.7**		51.5	ug/Kg	1	08/18/2012 15:20
Benzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Bromobenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Bromochloromethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
Bromodichloromethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
Bromoform	ND		5.15	ug/Kg	1	08/18/2012 15:20
Bromomethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
n-Butylbenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Carbon disulfide	ND		5.15	ug/Kg	1	08/18/2012 15:20
Carbon tetrachloride	ND		5.15	ug/Kg	1	08/18/2012 15:20
Chlorobenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Chloroethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
Chloroform	ND		5.15	ug/Kg	1	08/18/2012 15:20
Chloromethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
Dibromochloromethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
Dibromomethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
Dichlorodifluoromethane	ND		5.15	ug/Kg	1	08/18/2012 15:20

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-4 (2.5-5)**

Client Sample ID: **SB50-4 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558019-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.80

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		5.15	ug/Kg	1	08/18/2012 15:20
trans-1,3-Dichloropropene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Diisopropyl Ether	ND		5.15	ug/Kg	1	08/18/2012 15:20
Ethyl Benzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Hexachlorobutadiene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Isopropylbenzene (Cumene)	ND		5.15	ug/Kg	1	08/18/2012 15:20
Methyl iodide	ND		5.15	ug/Kg	1	08/18/2012 15:20
Methylene chloride	ND		20.6	ug/Kg	1	08/18/2012 15:20
Naphthalene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Styrene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Tetrachloroethene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Toluene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Trichloroethene	ND		5.15	ug/Kg	1	08/18/2012 15:20
Trichlorofluoromethane	ND		5.15	ug/Kg	1	08/18/2012 15:20
Vinyl chloride	ND		5.15	ug/Kg	1	08/18/2012 15:20
Xylene (total)	ND		10.3	ug/Kg	1	08/18/2012 15:20
cis-1,2-Dichloroethene	ND		5.15	ug/Kg	1	08/18/2012 15:20
m,p-Xylene	ND		10.3	ug/Kg	1	08/18/2012 15:20
n-Propylbenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
o-Xylene	ND		5.15	ug/Kg	1	08/18/2012 15:20
sec-Butylbenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
tert-Butyl methyl ether (MTBE)	ND		5.15	ug/Kg	1	08/18/2012 15:20
tert-Butylbenzene	ND		5.15	ug/Kg	1	08/18/2012 15:20
trans-1,2-Dichloroethene	ND		5.15	ug/Kg	1	08/18/2012 15:20
trans-1,4-Dichloro-2-butene	ND		25.7	ug/Kg	1	08/18/2012 15:20
Surrogates						
1,2-Dichloroethane-d4	111		55.0-173	%	1	08/18/2012 15:20
4-Bromofluorobenzene	102		23.0-141	%	1	08/18/2012 15:20
Toluene d8	104		57.0-134	%	1	08/18/2012 15:20

Batch Information

Analytical Batch: **VMS2486**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**
Analytical Date/Time: **08/18/2012 15:20**

Prep Batch: **VXX3850**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **08/13/2012 10:54**
Prep Initial Wt./Vol.: **6.58 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

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Results of **SB50-4 (2.5-5)**

Client Sample ID: **SB50-4 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558019-E
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.80

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		4.31	mg/kg	1	08/17/2012 19:20
Surrogates						
4-Bromofluorobenzene	107		70.0-130	%	1	08/17/2012 19:20

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 19:20**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 10:54**
Prep Initial Wt./Vol.: **6.28 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-4 (2.5-5)**

Client Sample ID: **SB50-4 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558019-H
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.80

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		404	ug/Kg	1	08/20/2012 22:01
1,2-Dichlorobenzene	ND		404	ug/Kg	1	08/20/2012 22:01
1,3-Dichlorobenzene	ND		404	ug/Kg	1	08/20/2012 22:01
1,4-Dichlorobenzene	ND		404	ug/Kg	1	08/20/2012 22:01
2,4,5-Trichlorophenol	ND		404	ug/Kg	1	08/20/2012 22:01
2,4,6-Trichlorophenol	ND		404	ug/Kg	1	08/20/2012 22:01
2,4-Dichlorophenol	ND		404	ug/Kg	1	08/20/2012 22:01
2,4-Dinitrophenol	ND		807	ug/Kg	1	08/20/2012 22:01
2,4-Dinitrotoluene	ND		404	ug/Kg	1	08/20/2012 22:01
2,6-Dinitrotoluene	ND		404	ug/Kg	1	08/20/2012 22:01
2-Chloronaphthalene	ND		404	ug/Kg	1	08/20/2012 22:01
2-Chlorophenol	ND		404	ug/Kg	1	08/20/2012 22:01
2-Methylnaphthalene	ND		404	ug/Kg	1	08/20/2012 22:01
2-Methylphenol	ND		404	ug/Kg	1	08/20/2012 22:01
2-Nitroaniline	ND		404	ug/Kg	1	08/20/2012 22:01
2-Nitrophenol	ND		404	ug/Kg	1	08/20/2012 22:01
3 and/or 4-Methylphenol	ND		404	ug/Kg	1	08/20/2012 22:01
3,3'-Dichlorobenzidine	ND		404	ug/Kg	1	08/20/2012 22:01
3-Nitroaniline	ND		404	ug/Kg	1	08/20/2012 22:01
4,6-Dinitro-2-methylphenol	ND		404	ug/Kg	1	08/20/2012 22:01
4-Chloro-3-methylphenol	ND		404	ug/Kg	1	08/20/2012 22:01
4-Chloroaniline	ND		404	ug/Kg	1	08/20/2012 22:01
4-Chlorophenyl phenyl ether	ND		404	ug/Kg	1	08/20/2012 22:01
Acenaphthene	ND		404	ug/Kg	1	08/20/2012 22:01
Acenaphthylene	ND		404	ug/Kg	1	08/20/2012 22:01
Anthracene	ND		404	ug/Kg	1	08/20/2012 22:01
Benzo(a)anthracene	ND		404	ug/Kg	1	08/20/2012 22:01
Benzo(a)pyrene	ND		404	ug/Kg	1	08/20/2012 22:01
Benzo(b)fluoranthene	ND		404	ug/Kg	1	08/20/2012 22:01
Benzo(g,h,i)perylene	ND		404	ug/Kg	1	08/20/2012 22:01
Benzo(k)fluoranthene	ND		404	ug/Kg	1	08/20/2012 22:01
Benzoic acid	ND		404	ug/Kg	1	08/20/2012 22:01
Bis(2-Chloroethoxy)methane	ND		404	ug/Kg	1	08/20/2012 22:01
Bis(2-Chloroethyl)ether	ND		404	ug/Kg	1	08/20/2012 22:01
Bis(2-Chloroisopropyl)ether	ND		404	ug/Kg	1	08/20/2012 22:01
Bis(2-Ethylhexyl)phthalate	ND		404	ug/Kg	1	08/20/2012 22:01
4-Bromophenyl phenyl ether	ND		404	ug/Kg	1	08/20/2012 22:01
Butyl benzyl phthalate	ND		404	ug/Kg	1	08/20/2012 22:01
Chrysene	ND		404	ug/Kg	1	08/20/2012 22:01
Di-n-butyl phthalate	ND		404	ug/Kg	1	08/20/2012 22:01
Di-n-octyl phthalate	ND		404	ug/Kg	1	08/20/2012 22:01
Dibenz(a,h)anthracene	ND		404	ug/Kg	1	08/20/2012 22:01
Dibenzofuran	ND		404	ug/Kg	1	08/20/2012 22:01
Diethyl phthalate	ND		404	ug/Kg	1	08/20/2012 22:01

Print Date: 08/23/2012

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Results of **SB50-4 (2.5-5)**

Client Sample ID: **SB50-4 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558019-H
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.80

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		404	ug/Kg	1	08/20/2012 22:01
2,4-Dimethylphenol	ND		404	ug/Kg	1	08/20/2012 22:01
Diphenylamine	ND		404	ug/Kg	1	08/20/2012 22:01
Fluoranthene	ND		404	ug/Kg	1	08/20/2012 22:01
Fluorene	ND		404	ug/Kg	1	08/20/2012 22:01
Hexachlorobenzene	ND		404	ug/Kg	1	08/20/2012 22:01
Hexachlorobutadiene	ND		404	ug/Kg	1	08/20/2012 22:01
Hexachlorocyclopentadiene	ND		404	ug/Kg	1	08/20/2012 22:01
Hexachloroethane	ND		404	ug/Kg	1	08/20/2012 22:01
Indeno(1,2,3-cd)pyrene	ND		404	ug/Kg	1	08/20/2012 22:01
Isophorone	ND		404	ug/Kg	1	08/20/2012 22:01
Naphthalene	ND		404	ug/Kg	1	08/20/2012 22:01
4-Nitroaniline	ND		404	ug/Kg	1	08/20/2012 22:01
Nitrobenzene	ND		404	ug/Kg	1	08/20/2012 22:01
4-Nitrophenol	ND		404	ug/Kg	1	08/20/2012 22:01
Pentachlorophenol	ND		404	ug/Kg	1	08/20/2012 22:01
Phenanthrene	ND		404	ug/Kg	1	08/20/2012 22:01
Phenol	ND		404	ug/Kg	1	08/20/2012 22:01
Pyrene	ND		404	ug/Kg	1	08/20/2012 22:01
n-Nitrosodi-n-propylamine	ND		404	ug/Kg	1	08/20/2012 22:01
Surrogates						
2,4,6-Tribromophenol	77.0		41.0-129	%	1	08/20/2012 22:01
2-Fluorobiphenyl	79.0		48.0-123	%	1	08/20/2012 22:01
2-Fluorophenol	75.0		42.0-123	%	1	08/20/2012 22:01
Nitrobenzene-d5	80.0		46.0-117	%	1	08/20/2012 22:01
Phenol-d6	86.0		48.0-125	%	1	08/20/2012 22:01
Terphenyl-d14	85.0		44.0-140	%	1	08/20/2012 22:01

Batch Information

Analytical Batch: **XMS1642**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/20/2012 22:01**

Prep Batch: **XXX2922**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 10:24**
Prep Initial Wt./Vol.: **33.59 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-4 (2.5-5)**

Client Sample ID: **SB50-4 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558019-H
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:45
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.80

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		8.10	mg/kg	1	08/15/2012 22:39
Surrogates						
o-Terphenyl	86.9		40.0-140	%	1	08/15/2012 22:39

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/15/2012 22:39**

Prep Batch: **XXX2919**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/13/2012 17:19**
Prep Initial Wt./Vol.: **33.44 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-2 (2.5-5)**

Client Sample ID: **SB50-2 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558020-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:55
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.30

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,1,1-Trichloroethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,1,2,2-Tetrachloroethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,1,2-Trichloroethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,1-Dichloroethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,1-Dichloroethene	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,1-Dichloropropene	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,2,3-Trichlorobenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,2,3-Trichloropropane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,2,4-Trichlorobenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,2,4-Trimethylbenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,2-Dibromo-3-chloropropane	ND		36.9	ug/Kg	1	08/18/2012 15:47
1,2-Dibromoethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,2-Dichlorobenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,2-Dichloroethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,2-Dichloropropane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,3,5-Trimethylbenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,3-Dichlorobenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,3-Dichloropropane	ND		6.15	ug/Kg	1	08/18/2012 15:47
1,4-Dichlorobenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
2,2-Dichloropropane	ND		6.15	ug/Kg	1	08/18/2012 15:47
2-Butanone	ND		30.7	ug/Kg	1	08/18/2012 15:47
2-Chlorotoluene	ND		6.15	ug/Kg	1	08/18/2012 15:47
2-Hexanone	ND		15.4	ug/Kg	1	08/18/2012 15:47
4-Chlorotoluene	ND		6.15	ug/Kg	1	08/18/2012 15:47
4-Isopropyltoluene	ND		6.15	ug/Kg	1	08/18/2012 15:47
4-Methyl-2-pentanone	ND		15.4	ug/Kg	1	08/18/2012 15:47
Acetone	ND		61.5	ug/Kg	1	08/18/2012 15:47
Benzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Bromobenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Bromochloromethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
Bromodichloromethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
Bromoform	ND		6.15	ug/Kg	1	08/18/2012 15:47
Bromomethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
n-Butylbenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Carbon disulfide	ND		6.15	ug/Kg	1	08/18/2012 15:47
Carbon tetrachloride	ND		6.15	ug/Kg	1	08/18/2012 15:47
Chlorobenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Chloroethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
Chloroform	ND		6.15	ug/Kg	1	08/18/2012 15:47
Chloromethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
Dibromochloromethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
Dibromomethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
Dichlorodifluoromethane	ND		6.15	ug/Kg	1	08/18/2012 15:47

Print Date: 08/23/2012

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Results of **SB50-2 (2.5-5)**

Client Sample ID: **SB50-2 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558020-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:55
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.30

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		6.15	ug/Kg	1	08/18/2012 15:47
trans-1,3-Dichloropropene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Diisopropyl Ether	ND		6.15	ug/Kg	1	08/18/2012 15:47
Ethyl Benzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Hexachlorobutadiene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Isopropylbenzene (Cumene)	ND		6.15	ug/Kg	1	08/18/2012 15:47
Methyl iodide	ND		6.15	ug/Kg	1	08/18/2012 15:47
Methylene chloride	ND		24.6	ug/Kg	1	08/18/2012 15:47
Naphthalene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Styrene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Tetrachloroethene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Toluene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Trichloroethene	ND		6.15	ug/Kg	1	08/18/2012 15:47
Trichlorofluoromethane	ND		6.15	ug/Kg	1	08/18/2012 15:47
Vinyl chloride	ND		6.15	ug/Kg	1	08/18/2012 15:47
Xylene (total)	ND		12.3	ug/Kg	1	08/18/2012 15:47
cis-1,2-Dichloroethene	ND		6.15	ug/Kg	1	08/18/2012 15:47
m,p-Xylene	ND		12.3	ug/Kg	1	08/18/2012 15:47
n-Propylbenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
o-Xylene	ND		6.15	ug/Kg	1	08/18/2012 15:47
sec-Butylbenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
tert-Butyl methyl ether (MTBE)	ND		6.15	ug/Kg	1	08/18/2012 15:47
tert-Butylbenzene	ND		6.15	ug/Kg	1	08/18/2012 15:47
trans-1,2-Dichloroethene	ND		6.15	ug/Kg	1	08/18/2012 15:47
trans-1,4-Dichloro-2-butene	ND		30.7	ug/Kg	1	08/18/2012 15:47
Surrogates						
1,2-Dichloroethane-d4	112		55.0-173	%	1	08/18/2012 15:47
4-Bromofluorobenzene	99.0		23.0-141	%	1	08/18/2012 15:47
Toluene d8	104		57.0-134	%	1	08/18/2012 15:47

Batch Information

Analytical Batch: **VMS2486**
Analytical Method: **SW-846 8260B**
Instrument: **MSD9**
Analyst: **DVO**
Analytical Date/Time: **08/18/2012 15:47**

Prep Batch: **VXX3850**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **08/13/2012 10:58**
Prep Initial Wt./Vol.: **5.55 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

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Results of **SB50-2 (2.5-5)**

Client Sample ID: **SB50-2 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558020-E
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:55
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.30

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		4.37	mg/kg	1	08/17/2012 19:45
Surrogates						
4-Bromofluorobenzene	108		70.0-130	%	1	08/17/2012 19:45

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 19:45**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 10:58**
Prep Initial Wt./Vol.: **6.24 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-2 (2.5-5)**

Client Sample ID: **SB50-2 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558020-H
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:55
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.30

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		442	ug/Kg	1	08/20/2012 22:24
1,2-Dichlorobenzene	ND		442	ug/Kg	1	08/20/2012 22:24
1,3-Dichlorobenzene	ND		442	ug/Kg	1	08/20/2012 22:24
1,4-Dichlorobenzene	ND		442	ug/Kg	1	08/20/2012 22:24
2,4,5-Trichlorophenol	ND		442	ug/Kg	1	08/20/2012 22:24
2,4,6-Trichlorophenol	ND		442	ug/Kg	1	08/20/2012 22:24
2,4-Dichlorophenol	ND		442	ug/Kg	1	08/20/2012 22:24
2,4-Dinitrophenol	ND		882	ug/Kg	1	08/20/2012 22:24
2,4-Dinitrotoluene	ND		442	ug/Kg	1	08/20/2012 22:24
2,6-Dinitrotoluene	ND		442	ug/Kg	1	08/20/2012 22:24
2-Chloronaphthalene	ND		442	ug/Kg	1	08/20/2012 22:24
2-Chlorophenol	ND		442	ug/Kg	1	08/20/2012 22:24
2-Methylnaphthalene	ND		442	ug/Kg	1	08/20/2012 22:24
2-Methylphenol	ND		442	ug/Kg	1	08/20/2012 22:24
2-Nitroaniline	ND		442	ug/Kg	1	08/20/2012 22:24
2-Nitrophenol	ND		442	ug/Kg	1	08/20/2012 22:24
3 and/or 4-Methylphenol	ND		442	ug/Kg	1	08/20/2012 22:24
3,3'-Dichlorobenzidine	ND		442	ug/Kg	1	08/20/2012 22:24
3-Nitroaniline	ND		442	ug/Kg	1	08/20/2012 22:24
4,6-Dinitro-2-methylphenol	ND		442	ug/Kg	1	08/20/2012 22:24
4-Chloro-3-methylphenol	ND		442	ug/Kg	1	08/20/2012 22:24
4-Chloroaniline	ND		442	ug/Kg	1	08/20/2012 22:24
4-Chlorophenyl phenyl ether	ND		442	ug/Kg	1	08/20/2012 22:24
Acenaphthene	ND		442	ug/Kg	1	08/20/2012 22:24
Acenaphthylene	ND		442	ug/Kg	1	08/20/2012 22:24
Anthracene	ND		442	ug/Kg	1	08/20/2012 22:24
Benzo(a)anthracene	ND		442	ug/Kg	1	08/20/2012 22:24
Benzo(a)pyrene	ND		442	ug/Kg	1	08/20/2012 22:24
Benzo(b)fluoranthene	ND		442	ug/Kg	1	08/20/2012 22:24
Benzo(g,h,i)perylene	ND		442	ug/Kg	1	08/20/2012 22:24
Benzo(k)fluoranthene	ND		442	ug/Kg	1	08/20/2012 22:24
Benzoic acid	ND		442	ug/Kg	1	08/20/2012 22:24
Bis(2-Chloroethoxy)methane	ND		442	ug/Kg	1	08/20/2012 22:24
Bis(2-Chloroethyl)ether	ND		442	ug/Kg	1	08/20/2012 22:24
Bis(2-Chloroisopropyl)ether	ND		442	ug/Kg	1	08/20/2012 22:24
Bis(2-Ethylhexyl)phthalate	ND		442	ug/Kg	1	08/20/2012 22:24
4-Bromophenyl phenyl ether	ND		442	ug/Kg	1	08/20/2012 22:24
Butyl benzyl phthalate	ND		442	ug/Kg	1	08/20/2012 22:24
Chrysene	ND		442	ug/Kg	1	08/20/2012 22:24
Di-n-butyl phthalate	ND		442	ug/Kg	1	08/20/2012 22:24
Di-n-octyl phthalate	ND		442	ug/Kg	1	08/20/2012 22:24
Dibenz(a,h)anthracene	ND		442	ug/Kg	1	08/20/2012 22:24
Dibenzofuran	ND		442	ug/Kg	1	08/20/2012 22:24
Diethyl phthalate	ND		442	ug/Kg	1	08/20/2012 22:24

Print Date: 08/23/2012

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Results of **SB50-2 (2.5-5)**

Client Sample ID: **SB50-2 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558020-H
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:55
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.30

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		442	ug/Kg	1	08/20/2012 22:24
2,4-Dimethylphenol	ND		442	ug/Kg	1	08/20/2012 22:24
Diphenylamine	ND		442	ug/Kg	1	08/20/2012 22:24
Fluoranthene	ND		442	ug/Kg	1	08/20/2012 22:24
Fluorene	ND		442	ug/Kg	1	08/20/2012 22:24
Hexachlorobenzene	ND		442	ug/Kg	1	08/20/2012 22:24
Hexachlorobutadiene	ND		442	ug/Kg	1	08/20/2012 22:24
Hexachlorocyclopentadiene	ND		442	ug/Kg	1	08/20/2012 22:24
Hexachloroethane	ND		442	ug/Kg	1	08/20/2012 22:24
Indeno(1,2,3-cd)pyrene	ND		442	ug/Kg	1	08/20/2012 22:24
Isophorone	ND		442	ug/Kg	1	08/20/2012 22:24
Naphthalene	ND		442	ug/Kg	1	08/20/2012 22:24
4-Nitroaniline	ND		442	ug/Kg	1	08/20/2012 22:24
Nitrobenzene	ND		442	ug/Kg	1	08/20/2012 22:24
4-Nitrophenol	ND		442	ug/Kg	1	08/20/2012 22:24
Pentachlorophenol	ND		442	ug/Kg	1	08/20/2012 22:24
Phenanthrene	ND		442	ug/Kg	1	08/20/2012 22:24
Phenol	ND		442	ug/Kg	1	08/20/2012 22:24
Pyrene	ND		442	ug/Kg	1	08/20/2012 22:24
n-Nitrosodi-n-propylamine	ND		442	ug/Kg	1	08/20/2012 22:24
Surrogates						
2,4,6-Tribromophenol	75.0		41.0-129	%	1	08/20/2012 22:24
2-Fluorobiphenyl	75.0		48.0-123	%	1	08/20/2012 22:24
2-Fluorophenol	72.0		42.0-123	%	1	08/20/2012 22:24
Nitrobenzene-d5	78.0		46.0-117	%	1	08/20/2012 22:24
Phenol-d6	84.0		48.0-125	%	1	08/20/2012 22:24
Terphenyl-d14	82.0		44.0-140	%	1	08/20/2012 22:24

Batch Information

Analytical Batch: **XMS1642**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/20/2012 22:24**

Prep Batch: **XXX2922**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 10:24**
Prep Initial Wt./Vol.: **30.94 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

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Results of **SB50-2 (2.5-5)**

Client Sample ID: **SB50-2 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558020-H
Lab Project ID: 31202558

Collection Date: 08/08/2012 14:55
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 73.30

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		8.78	mg/kg	1	08/16/2012 0:03
Surrogates						
o-Terphenyl	101		40.0-140	%	1	08/16/2012 0:03

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/16/2012 00:03**

Prep Batch: **XXX2924**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 16:42**
Prep Initial Wt./Vol.: **31.1 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

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Results of **TW50-1**

Client Sample ID: **TW50-1**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558021-A
Lab Project ID: 31202558

Collection Date: 08/09/2012 08:10
Received Date: 08/10/2012 15:45
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		20.0	ug/L	20	08/13/2012 15:40
1,1,1-Trichloroethane	ND		20.0	ug/L	20	08/13/2012 15:40
1,1,2,2-Tetrachloroethane	ND		20.0	ug/L	20	08/13/2012 15:40
1,1,2-Trichloroethane	ND		20.0	ug/L	20	08/13/2012 15:40
1,1-Dichloroethane	ND		20.0	ug/L	20	08/13/2012 15:40
1,1-Dichloroethene	ND		20.0	ug/L	20	08/13/2012 15:40
1,1-Dichloropropene	ND		20.0	ug/L	20	08/13/2012 15:40
1,2,3-Trichlorobenzene	ND		20.0	ug/L	20	08/13/2012 15:40
1,2,3-Trichloropropane	ND		20.0	ug/L	20	08/13/2012 15:40
1,2,4-Trichlorobenzene	ND		20.0	ug/L	20	08/13/2012 15:40
1,2,4-Trimethylbenzene	ND		20.0	ug/L	20	08/13/2012 15:40
1,2-Dibromo-3-chloropropane	ND		100	ug/L	20	08/13/2012 15:40
1,2-Dibromoethane	ND		20.0	ug/L	20	08/13/2012 15:40
1,2-Dichlorobenzene	ND		20.0	ug/L	20	08/13/2012 15:40
1,2-Dichloroethane	ND		20.0	ug/L	20	08/13/2012 15:40
1,2-Dichloropropane	ND		20.0	ug/L	20	08/13/2012 15:40
1,3,5-Trimethylbenzene	ND		20.0	ug/L	20	08/13/2012 15:40
1,3-Dichlorobenzene	ND		20.0	ug/L	20	08/13/2012 15:40
1,3-Dichloropropane	ND		20.0	ug/L	20	08/13/2012 15:40
1,4-Dichlorobenzene	ND		20.0	ug/L	20	08/13/2012 15:40
2,2-Dichloropropane	ND		20.0	ug/L	20	08/13/2012 15:40
2-Butanone	ND		500	ug/L	20	08/13/2012 15:40
2-Chlorotoluene	ND		20.0	ug/L	20	08/13/2012 15:40
2-Hexanone	ND		100	ug/L	20	08/13/2012 15:40
4-Chlorotoluene	ND		20.0	ug/L	20	08/13/2012 15:40
4-Isopropyltoluene	ND		20.0	ug/L	20	08/13/2012 15:40
4-Methyl-2-pentanone	ND		100	ug/L	20	08/13/2012 15:40
Acetone	ND		500	ug/L	20	08/13/2012 15:40
Benzene	**30.6**		20.0	ug/L	20	08/13/2012 15:40
Bromobenzene	ND		20.0	ug/L	20	08/13/2012 15:40
Bromochloromethane	ND		20.0	ug/L	20	08/13/2012 15:40
Bromodichloromethane	ND		20.0	ug/L	20	08/13/2012 15:40
Bromoform	ND		20.0	ug/L	20	08/13/2012 15:40
Bromomethane	ND		20.0	ug/L	20	08/13/2012 15:40
n-Butylbenzene	ND		20.0	ug/L	20	08/13/2012 15:40
Carbon disulfide	ND		20.0	ug/L	20	08/13/2012 15:40
Carbon tetrachloride	ND		20.0	ug/L	20	08/13/2012 15:40
Chlorobenzene	ND		20.0	ug/L	20	08/13/2012 15:40
Chloroethane	ND		20.0	ug/L	20	08/13/2012 15:40
Chloroform	ND		20.0	ug/L	20	08/13/2012 15:40
Chloromethane	ND		20.0	ug/L	20	08/13/2012 15:40
Dibromochloromethane	ND		20.0	ug/L	20	08/13/2012 15:40
Dibromomethane	ND		20.0	ug/L	20	08/13/2012 15:40
Dichlorodifluoromethane	ND		100	ug/L	20	08/13/2012 15:40

Print Date: 08/23/2012

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Results of **TW50-1**

Client Sample ID: **TW50-1**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558021-A
Lab Project ID: 31202558

Collection Date: 08/09/2012 08:10
Received Date: 08/10/2012 15:45
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		20.0	ug/L	20	08/13/2012 15:40
trans-1,3-Dichloropropene	ND		20.0	ug/L	20	08/13/2012 15:40
Diisopropyl Ether	ND		20.0	ug/L	20	08/13/2012 15:40
Ethyl Benzene	ND		20.0	ug/L	20	08/13/2012 15:40
Hexachlorobutadiene	ND		20.0	ug/L	20	08/13/2012 15:40
Isopropylbenzene (Cumene)	ND		20.0	ug/L	20	08/13/2012 15:40
Methyl iodide	ND		20.0	ug/L	20	08/13/2012 15:40
Methylene chloride	ND		100	ug/L	20	08/13/2012 15:40
Naphthalene	ND		20.0	ug/L	20	08/13/2012 15:40
Styrene	ND		20.0	ug/L	20	08/13/2012 15:40
Tetrachloroethene	ND		20.0	ug/L	20	08/13/2012 15:40
Toluene	ND		20.0	ug/L	20	08/13/2012 15:40
Trichloroethene	ND		20.0	ug/L	20	08/13/2012 15:40
Trichlorofluoromethane	ND		20.0	ug/L	20	08/13/2012 15:40
Vinyl chloride	ND		20.0	ug/L	20	08/13/2012 15:40
Xylene (total)	ND		40.0	ug/L	20	08/13/2012 15:40
cis-1,2-Dichloroethene	ND		20.0	ug/L	20	08/13/2012 15:40
m,p-Xylene	ND		40.0	ug/L	20	08/13/2012 15:40
n-Propylbenzene	ND		20.0	ug/L	20	08/13/2012 15:40
o-Xylene	ND		20.0	ug/L	20	08/13/2012 15:40
sec-Butylbenzene	ND		20.0	ug/L	20	08/13/2012 15:40
tert-Butyl methyl ether (MTBE)	**343**		20.0	ug/L	20	08/13/2012 15:40
tert-Butylbenzene	ND		20.0	ug/L	20	08/13/2012 15:40
trans-1,2-Dichloroethene	ND		20.0	ug/L	20	08/13/2012 15:40
trans-1,4-Dichloro-2-butene	ND		100	ug/L	20	08/13/2012 15:40
Surrogates						
1,2-Dichloroethane-d4	104		64.0-140	%	20	08/13/2012 15:40
4-Bromofluorobenzene	102		85.0-115	%	20	08/13/2012 15:40
Toluene d8	105		82.0-117	%	20	08/13/2012 15:40

Batch Information

Analytical Batch: **VMS2470**
Analytical Method: **SW-846 8260B**
Instrument: **MSD3**
Analyst: **BWS**
Analytical Date/Time: **08/13/2012 15:40**

Prep Batch: **VXX3811**
Prep Method: **SW-846 5030B**
Prep Date/Time: **08/13/2012 10:02**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **TW50-1**

Client Sample ID: **TW50-1**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558021-D
Lab Project ID: 31202558

Collection Date: 08/09/2012 08:10
Received Date: 08/10/2012 15:45
Matrix: Water

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		5.08	ug/L	1	08/20/2012 23:33
1,2-Dichlorobenzene	ND		5.08	ug/L	1	08/20/2012 23:33
1,3-Dichlorobenzene	ND		5.08	ug/L	1	08/20/2012 23:33
1,4-Dichlorobenzene	ND		5.08	ug/L	1	08/20/2012 23:33
2,4,5-Trichlorophenol	ND		5.08	ug/L	1	08/20/2012 23:33
2,4,6-Trichlorophenol	ND		5.08	ug/L	1	08/20/2012 23:33
2,4-Dichlorophenol	ND		5.08	ug/L	1	08/20/2012 23:33
2,4-Dinitrophenol	ND		25.4	ug/L	1	08/20/2012 23:33
2,4-Dinitrotoluene	ND		5.08	ug/L	1	08/20/2012 23:33
2,6-Dinitrotoluene	ND		5.08	ug/L	1	08/20/2012 23:33
2-Chloronaphthalene	ND		5.08	ug/L	1	08/20/2012 23:33
2-Chlorophenol	ND		5.08	ug/L	1	08/20/2012 23:33
2-Methylnaphthalene	ND		5.08	ug/L	1	08/20/2012 23:33
2-Methylphenol	ND		5.08	ug/L	1	08/20/2012 23:33
2-Nitroaniline	ND		5.08	ug/L	1	08/20/2012 23:33
2-Nitrophenol	ND		5.08	ug/L	1	08/20/2012 23:33
3 and/or 4-Methylphenol	ND		5.08	ug/L	1	08/20/2012 23:33
3,3'-Dichlorobenzidine	ND		10.2	ug/L	1	08/20/2012 23:33
3-Nitroaniline	ND		25.4	ug/L	1	08/20/2012 23:33
4,6-Dinitro-2-methylphenol	ND		25.4	ug/L	1	08/20/2012 23:33
4-Chloro-3-methylphenol	ND		5.08	ug/L	1	08/20/2012 23:33
4-Chloroaniline	ND		25.4	ug/L	1	08/20/2012 23:33
4-Chlorophenyl phenyl ether	ND		5.08	ug/L	1	08/20/2012 23:33
Acenaphthene	ND		5.08	ug/L	1	08/20/2012 23:33
Acenaphthylene	ND		5.08	ug/L	1	08/20/2012 23:33
Anthracene	ND		5.08	ug/L	1	08/20/2012 23:33
Benzo(a)anthracene	ND		5.08	ug/L	1	08/20/2012 23:33
Benzo(a)pyrene	ND		5.08	ug/L	1	08/20/2012 23:33
Benzo(b)fluoranthene	ND		5.08	ug/L	1	08/20/2012 23:33
Benzo(g,h,i)perylene	ND		5.08	ug/L	1	08/20/2012 23:33
Benzo(k)fluoranthene	ND		5.08	ug/L	1	08/20/2012 23:33
Benzoic acid	ND		5.08	ug/L	1	08/20/2012 23:33
Bis(2-Chloroethoxy)methane	ND		5.08	ug/L	1	08/20/2012 23:33
Bis(2-Chloroethyl)ether	ND		5.08	ug/L	1	08/20/2012 23:33
Bis(2-Chloroisopropyl)ether	ND		5.08	ug/L	1	08/20/2012 23:33
Bis(2-Ethylhexyl)phthalate	ND		5.08	ug/L	1	08/20/2012 23:33
4-Bromophenyl phenyl ether	ND		5.08	ug/L	1	08/20/2012 23:33
Butyl benzyl phthalate	ND		5.08	ug/L	1	08/20/2012 23:33
Chrysene	ND		5.08	ug/L	1	08/20/2012 23:33
Di-n-butyl phthalate	ND		5.08	ug/L	1	08/20/2012 23:33
Di-n-octyl phthalate	ND		5.08	ug/L	1	08/20/2012 23:33
Dibenz(a,h)anthracene	ND		5.08	ug/L	1	08/20/2012 23:33
Dibenzofuran	ND		5.08	ug/L	1	08/20/2012 23:33
Diethyl phthalate	ND		5.08	ug/L	1	08/20/2012 23:33

Print Date: 08/23/2012

N.C. Certification # 481

Results of **TW50-1**

Client Sample ID: **TW50-1**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558021-D
Lab Project ID: 31202558

Collection Date: 08/09/2012 08:10
Received Date: 08/10/2012 15:45
Matrix: Water

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		5.08	ug/L	1	08/20/2012 23:33
2,4-Dimethylphenol	ND		5.08	ug/L	1	08/20/2012 23:33
Diphenylamine	ND		5.08	ug/L	1	08/20/2012 23:33
Fluoranthene	ND		5.08	ug/L	1	08/20/2012 23:33
Fluorene	ND		5.08	ug/L	1	08/20/2012 23:33
Hexachlorobenzene	ND		5.08	ug/L	1	08/20/2012 23:33
Hexachlorobutadiene	ND		5.08	ug/L	1	08/20/2012 23:33
Hexachlorocyclopentadiene	ND		10.2	ug/L	1	08/20/2012 23:33
Hexachloroethane	ND		5.08	ug/L	1	08/20/2012 23:33
Indeno(1,2,3-cd)pyrene	ND		5.08	ug/L	1	08/20/2012 23:33
Isophorone	ND		5.08	ug/L	1	08/20/2012 23:33
Naphthalene	**9.29**		5.08	ug/L	1	08/20/2012 23:33
4-Nitroaniline	ND		25.4	ug/L	1	08/20/2012 23:33
Nitrobenzene	ND		5.08	ug/L	1	08/20/2012 23:33
4-Nitrophenol	ND		25.4	ug/L	1	08/20/2012 23:33
Pentachlorophenol	ND		25.4	ug/L	1	08/20/2012 23:33
Phenanthrene	ND		5.08	ug/L	1	08/20/2012 23:33
Phenol	ND		5.08	ug/L	1	08/20/2012 23:33
Pyrene	ND		5.08	ug/L	1	08/20/2012 23:33
n-Nitrosodi-n-propylamine	ND		5.08	ug/L	1	08/20/2012 23:33
Surrogates						
2,4,6-Tribromophenol	94.0		29.3-152	%	1	08/20/2012 23:33
2-Fluorobiphenyl	83.0		50.0-107	%	1	08/20/2012 23:33
2-Fluorophenol	77.0		33.1-118	%	1	08/20/2012 23:33
Nitrobenzene-d5	87.0		46.0-118	%	1	08/20/2012 23:33
Phenol-d6	91.0		49.0-120	%	1	08/20/2012 23:33
Terphenyl-d14	95.0		22.1-142	%	1	08/20/2012 23:33

Batch Information

Analytical Batch: **XMS1642**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/20/2012 23:33**

Prep Batch: **XXX2937**
Prep Method: **SW-846 3520C**
Prep Date/Time: **08/15/2012 16:39**
Prep Initial Wt./Vol.: **985 mL**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-7 (2.5-5)**

Client Sample ID: **SB50-7 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558026-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 15:15
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 84.10

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.22	mg/kg	1	08/17/2012 20:11
Surrogates						
4-Bromofluorobenzene	108		70.0-130	%	1	08/17/2012 20:11

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 20:11**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 11:32**
Prep Initial Wt./Vol.: **7.38 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-7 (2.5-5)**

Client Sample ID: **SB50-7 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558026-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 15:15
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 84.10

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.65	mg/kg	1	08/16/2012 1:28
Surrogates						
o-Terphenyl	105		40.0-140	%	1	08/16/2012 1:28

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/16/2012 01:28**

Prep Batch: **XXX2924**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 16:42**
Prep Initial Wt./Vol.: **31.08 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-11 (2.5-5)**

Client Sample ID: **SB50-11 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558027-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 15:25
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 86.70

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.47	mg/kg	1	08/17/2012 20:36
Surrogates						
4-Bromofluorobenzene	110		70.0-130	%	1	08/17/2012 20:36

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 20:36**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 11:33**
Prep Initial Wt./Vol.: **6.65 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-11 (2.5-5)**

Client Sample ID: **SB50-11 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558027-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 15:25
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 86.70

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.97	mg/kg	1	08/16/2012 1:56
Surrogates						
o-Terphenyl	95.3		40.0-140	%	1	08/16/2012 1:56

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/16/2012 01:56**

Prep Batch: **XXX2924**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 16:42**
Prep Initial Wt./Vol.: **33.07 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-5 (0-2.5)**

Client Sample ID: **SB50-5 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558028-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 15:25
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 88.80

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.53	mg/kg	1	08/17/2012 21:01
Surrogates						
4-Bromofluorobenzene	109		70.0-130	%	1	08/17/2012 21:01

Batch Information

Analytical Batch: **VGC2078**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/17/2012 21:01**

Prep Batch: **VXX3848**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 11:34**
Prep Initial Wt./Vol.: **6.39 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-5 (0-2.5)**

Client Sample ID: **SB50-5 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558028-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 15:25
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 88.80

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.39	mg/kg	1	08/16/2012 3:20
Surrogates						
o-Terphenyl	96.4		40.0-140	%	1	08/16/2012 3:20

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/16/2012 03:20**

Prep Batch: **XXX2924**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 16:42**
Prep Initial Wt./Vol.: **30.49 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-12 (2.5-5)**

Client Sample ID: **SB50-12 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558031-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 16:50
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 79.50

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.62	mg/kg	1	08/22/2012 0:11
Surrogates						
4-Bromofluorobenzene	101		70.0-130	%	1	08/22/2012 0:11

Batch Information

Analytical Batch: **VGC2087**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/22/2012 00:11**

Prep Batch: **VXX3875**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 11:41**
Prep Initial Wt./Vol.: **6.95 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-12 (2.5-5)**

Client Sample ID: **SB50-12 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558031-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 16:50
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 79.50

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.79	mg/kg	1	08/16/2012 4:45
Surrogates						
o-Terphenyl	89.9		40.0-140	%	1	08/16/2012 4:45

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/16/2012 04:45**

Prep Batch: **XXX2924**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 16:42**
Prep Initial Wt./Vol.: **32.29 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-13 (0-2.5)**

Client Sample ID: **SB50-13 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558033-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 17:50
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 89.30

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		4.33	mg/kg	1	08/22/2012 1:02
Surrogates						
4-Bromofluorobenzene	102		70.0-130	%	1	08/22/2012 1:02

Batch Information

Analytical Batch: **VGC2087**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/22/2012 01:02**

Prep Batch: **VXX3875**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 11:45**
Prep Initial Wt./Vol.: **5.17 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-13 (0-2.5)**

Client Sample ID: **SB50-13 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558033-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 17:50
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 89.30

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**7.64**		6.82	mg/kg	1	08/16/2012 5:41
Surrogates						
o-Terphenyl	111		40.0-140	%	1	08/16/2012 5:41

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/16/2012 05:41**

Prep Batch: **XXX2924**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 16:42**
Prep Initial Wt./Vol.: **32.86 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-14 (0-2.5)**

Client Sample ID: **SB50-14 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558034-A
Lab Project ID: 31202558

Collection Date: 08/08/2012 18:00
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 81.00

Results by **SW-846 8015C GRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.17	mg/kg	1	08/22/2012 1:27
Surrogates						
4-Bromofluorobenzene	102		70.0-130	%	1	08/22/2012 1:27

Batch Information

Analytical Batch: **VGC2087**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/22/2012 01:27**

Prep Batch: **VXX3875**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/13/2012 11:46**
Prep Initial Wt./Vol.: **7.79 g**
Prep Extract Vol: **5 mL**

Print Date: 08/23/2012

N.C. Certification # 481

Results of **SB50-14 (0-2.5)**

Client Sample ID: **SB50-14 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202558034-C
Lab Project ID: 31202558

Collection Date: 08/08/2012 18:00
Received Date: 08/10/2012 15:45
Matrix: Soil-Solid as dry weight
Solids (%): 81.00

Results by **SW-846 8015C DRO**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.62	mg/kg	1	08/16/2012 6:10
Surrogates						
o-Terphenyl	101		40.0-140	%	1	08/16/2012 6:10

Batch Information

Analytical Batch: **XGC2452**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/16/2012 06:10**

Prep Batch: **XXX2924**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/14/2012 16:42**
Prep Initial Wt./Vol.: **32.41 g**
Prep Extract Vol: **10 mL**

Print Date: 08/23/2012

N.C. Certification # 481

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(1)

CLIENT: ATC ASSOCIATES

CONTACT: JUSTIN BALLARD PHONE NO:(919) 871-0999

PROJECT: NCDOT U-3315 SITE/PWSID# :

REPORTS TO:

JUSTIN BALLARD FAX NO.:(919 871-0735

INVOICE TO: NCDOT QUOTE #:

P.O. NUMBER:

SGS Reference: 31202558

PAGE 1 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Preservatives Used	Analysis Required (3) DRO	GRO	8260	8270	REMARKS
1	SB55-7 (0-2.5)	8/1/12	0845	Soil	3	G		X	X			
2	SB55-1 (0-2.5)	8/7/12	0740									
3	SB55-2 (0-2.5)	8/7/12	0730									
4	SB55-3 (0-2.5)	8/7/12	0705									
5	SB55-4 (0-2.5)	8/6/12	1430									
6	SB55-5 (0-2.5)	8/6/12	1500									
7	SB55-6 (0-2.5)	8/7/12	0830									
8	SB55-8 (0-2.5)	8/7/12	0910									
9	TW55-1 (0-2.5)	8/6/12	1520									
10	TW171-1 (0-2.5)	8/6/12	1250									

(5)

	Date	Time	
Collected/Relinquished By:(1)	8/9/12	12:45	Received By:
Relinquished By: (2)	8/10/12	13:20	Received By:
Relinquished By: (3)	8/10/12	15:45	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 1.9 0.7

Special Deliverable Requirements:

Chain of Custody Seal: (Circle)

INTACT BROKEN (ABSENT)

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☑ STD

☐ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
☐ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
- Alaska
- Maryland
- New Jersey
- New York
- North Carolina
- Ohio

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104636

(1)

CLIENT: ATC ASSOCIATES

CONTACT: JUSTIN BALLARD PHONE NO:(919) 871-0999

PROJECT: NCDOT U-3315 SITE/PWSID#:

REPORTS TO: JUSTIN BALLARD FAX NO.:(919) 871-0335

INVOICE TO: NCDOT QUOTE #:

P.O. NUMBER:

SGS Reference: 31202558

PAGE 2 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Preservatives Used	Analysis Required (3) DRO	GRO	8260	8270	REMARKS
11	TW50-1 (5-6)	8/7/12	1410	SOIL	8	G		X	X	X	X	
12	TW51-1 (0-2.5)	8/7/12	1315	↓	↓	↓		↓	↓	↓	↓	
13	SB50-1 (0-2.5)	8/7/12	1545	↓	↓	↓		↓	↓	↓	↓	
14	SB50-3 (2.5-5)	8/8/12	1400	X	X	X		X	X	X	X	
15	SB50-9 (0-2.5)	8/8/12	1415	X	3	X		X	X			
16	SB50-6 (2.5-5.0)	8/8/12	1420	X	3	X		X	X			
17	SB50-8 (2.5-5.0)	8/8/12	1430	X	3	X		X	X			
18	SB50-10 (2.5-5.0)	8/8/12	1440	X	3	X		X	X			
19	SB50-4 (2.5-5.0)	8/8/12	1445	X	8	X		X	X	X	X	
20	SB-50-7 (2.5-5.0)	8/8/12	1455	X	8	X		X	X	X	X	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
	8/10/12	1245	
Relinquished By: (2)	Date	Time	Received By:
	8/10/12	1320	
Relinquished By: (3)	Date	Time	Received By:
	8/11/12	1545	
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 1.7 1.9 0.7 8/10/12

Special Deliverable Requirements:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ Date Needed ☒ STD

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❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
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- New Jersey
- New York
- North Carolina
- Ohio

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(1)

CLIENT: ATC

CONTACT: JUSTIN BALLARD PHONE NO:(919 871 6999

PROJECT: SITE/PWSID# :

REPORTS TO: JUSTIN BALLARD FAX NO.:( )

INVOICE TO: NCDOT QUOTE #:

P.O. NUMBER:

SGS Reference: 31202558

PAGE 3 OF 4

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C= COMP, G= GRAB)	Preservatives Used	Analysis Required (3): 8260	8270	REMARKS
21	TW 50-1	8/9	0810	W	4	G		X	X	
22	TW 51-1	8/9	0835	W	4	G		X	X	
23	TW 171-1	8/9	0930	W	3	G		X		
24	TW 55-1	8/9	1000	W	3	G		X		
25	TW 172-166-8)	8/1	1045	S	3	G		X		

(5)

	Date	Time	
Collected/Relinquished By:(1)	8/9	4:00	Received By: 8/10/12 0949
Relinquished By: (2)	8/10/12	1320	Received By: 1245
Relinquished By: (3)	8/10/12	1545	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 1.9 0.7

Special Deliverable Requirements:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:

☐ RUSH _____ (Date Needed) ☒ STD

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
- Alaska
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104649

(1)

CLIENT: ATC

CONTACT: JUSTIN BALLARD PHONE NO:(919) 871 0999

PROJECT: NCDOT 3315 SITE/PWSID# :

REPORTS TO:
JUSTIN BALLARD FAX NO.:(919) 871 0335

INVOICE TO: NCDOT QUOTE #:

P.O. NUMBER:

SGS Reference: 31202558

PAGE 4 OF 4

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	Preservatives Used	Analysis Required (3) D20	G20	5260	5270						REMARKS
26	SB50-7 (2.5-5.0)	8/8/12	1515	S	3	G		X	X								
27	SB50-11 (2.5-5.0)	8/8/12	1525	S	3	G		X	X								
28	SB50-5 (0-2.5)	8/8/12	1525	S	3	G		X	X								
29	SB51-1 (0-2.5)	8/8/12	1600	S	8	G		X	X	X	X						
30	SB51-4 (0-2.5)	8/8/12	1630	S	3	G		X	X								
31	SB50-12 (2.5-5)	8/8	1650	S	3	G		X	X								
32	SB51-2 (0-2.5)	8/8	1700	S	8	G		X	X	X	X						
33	SB50-13 (0-2.5)	8/8	1750	S	3	G		X	X								
34	SB50-14 (0-2.5)	8/8	1800	S	3	G		X	X								
35	SB51-3 (0-2.5)	8/8	1830	S	3	G		X	X								

(5)

Collected/Relinquished By:(1)	Date 8/8	Time 1245	Received By: 8/10/12
Relinquished By: (2)	Date 8/10/12	Time 1320	Received By:
Relinquished By: (3)	Date 8/10/12	Time 1545	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) YES NO

Temperature°C: 1.9 1.7

Special Deliverable Requirements:

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Special Instructions:

Requested Turnaround Time:
☐ RUSH _____ (Date Needed) ☒ STD

☐ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
☐ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **NCDOT-ATC** Work Order No.: **31202558**

1. ___ Shipped
   X Hand Delivered
   Notes: SGS Courier

2. X COC Present on Receipt
   ___ No COC
   ___ Additional Transmittal Forms

3. ___ Custody Tape on Container
   X No Custody Tape

4. X Samples Intact
   ___ Samples Broken / Leaking

5. X Chilled on Receipt Actual Temp.(s) in °C: 1.9, 0.7
   ___ Ambient on Receipt
   ___ Walk-in on Ice; Coming down to temp.
   ___ Received Outside of Temperature Specifications

6. X Sufficient Sample Submitted
   ___ Insufficient Sample Submitted

7. ___ Chlorine absent
   ___ HNO3 < 2
   ___ HCL < 2
   ___ Additional Preservatives verified (see notes)

8. X Received Within Holding Time
   ___ Not Received Within Holding Time

9. X No Discrepancies Noted
   ___ Discrepancies Noted
   ___ NCDENR notified of Discrepancies*

10. X No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

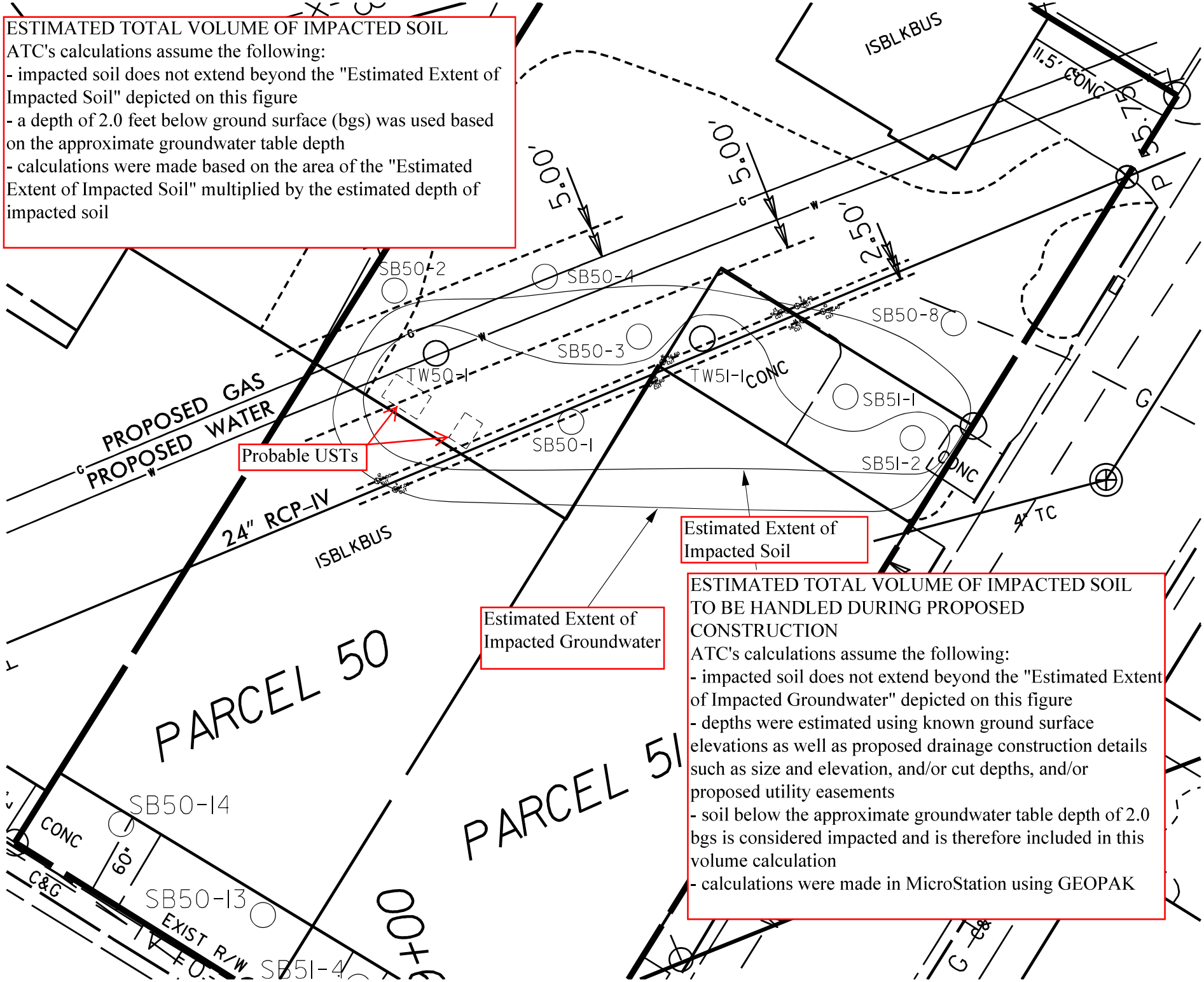
Comments:

Inspected and Logged in by: JMM
Date: Fri-8/10/12 00:00

*NCDENR must be notified when collection, holding time or preservation requirements are not met. MI_11.6

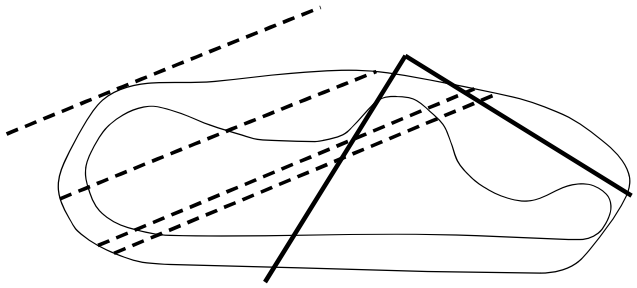
APPENDIX E

VOLUMETRIC CALCULATIONS

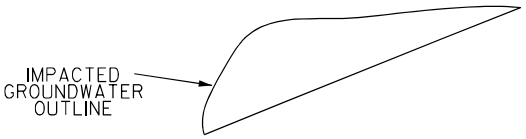

ESTIMATED TOTAL VOLUME OF IMPACTED SOIL
ATC's calculations assume the following:
- impacted soil does not extend beyond the "Estimated Extent of Impacted Soil" depicted on this figure
- a depth of 2.0 feet below ground surface (bgs) was used based on the approximate groundwater table depth
- calculations were made based on the area of the "Estimated Extent of Impacted Soil" multiplied by the estimated depth of impacted soil
ISBLKBUS
11.5' CONC
SB50-2
SB50-4
SB50-8
SB50-3
TW50-1
TW51-1
CONC
SB51-1
SB50-1
SB51-2
Probable USTs
PROPOSED GAS
PROPOSED WATER
24" RCP-IV
ISBLKBUS
4" TC
Estimated Extent of Impacted Soil
Estimated Extent of Impacted Groundwater
ESTIMATED TOTAL VOLUME OF IMPACTED SOIL TO BE HANDLED DURING PROPOSED CONSTRUCTION
ATC's calculations assume the following:
- impacted soil does not extend beyond the "Estimated Extent of Impacted Groundwater" depicted on this figure
- depths were estimated using known ground surface elevations as well as proposed drainage construction details such as size and elevation, and/or cut depths, and/or proposed utility easements
- soil below the approximate groundwater table depth of 2.0 bgs is considered impacted and is therefore included in this volume calculation
- calculations were made in MicroStation using GEOPAK
PARCEL 50
PARCEL 51
SB50-14
CONC
C&G
SB50-13
EXIST R/W
SB51-4

```
**********************************************************************
** Parcel 50 and 51 24" RCP (OD = 30")
**                                                                  **
** TIN to TIN Volume Report -- Mon Oct 29 11:19:33 2012
**                                                                  **
** From TIN <V:\1784\active\ATC - U3315\gpk\parcel50-51_top.tin>
** to TIN <V:\1784\active\ATC - U3315\gpk\parcel50-51_pipe.tin>
**                                                                  **
** Prismoidal Volume
**                                                                  **
**                                                                  **
**********************************************************************
**                                                                  **
**  Total Cut =         32.076 Cubic Yards
**  Total Fill =        0.000 Cubic Yards
**  Area =              21.417 Sq Yards
**  Balance =           32.076 Cubic Yards
**                                                                  **
** Boundary Polygon Used
**********************************************************************

Parcel 50 & 51 pipe vol. - Parcel 51 pipe vol. = Parcel 50 pipe vol.

(32.076 Cubic Yards) - (11.047 Cubic Yards) = 21.029 Cubic Yards

**********************************************************************

Parcel 50 Total Utility Trench volume

544.69 Sq.Ft. x 5 Ft. = 2723.45 C.Ft. = 100.87 Cubic Yards

**********************************************************************

Parcel 50 Total Impacted Soil Volume

874.52 Sq.Ft. x 2 Ft. = 1749.04 C.Ft. = 64.78 Cubic Yards

**********************************************************************
```

SQUARE FOOTAGE CALCULATIONS

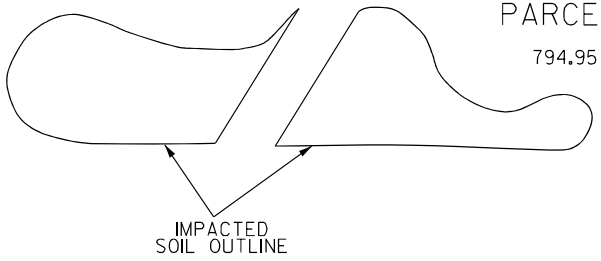


UTILITY TRENCH AREA
PARCEL 50
544.69



IMPACTED SOIL AREA
PARCEL 50
874.52

IMPACTED SOIL AREA
PARCEL 51
794.95



24" RCP AREA
PARCEL 50
122.77 + 7.01 = 129.78

24" RCP AREA
PARCEL 51
63.08