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November 1, 2012

incident:
WA-27385

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

Reference: Preliminary Site Assessment
Parcel 49
1311 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 49 (site) is located at 1311 West 14th Street in Greenville, North Carolina. Note that the Pitt County online parcel information system lists the site's location as 1401 West 14th Avenue. A site plan is included as ***Figure 1***. The parcel is currently vacant and contains a dilapidated single-story structure. According to the adjacent property owner (Jonathan Sutton), the site may have historically operated as a tobacco warehouse. The parcel is bounded to the north by Farmville Boulevard, to the east by West 14th Avenue, and to the west by Raleigh Avenue. Adjacent properties toward the south are zoned commercial. As cited in the RFP and referenced by the North Carolina Department of Environment and Natural Resources' (NCDENR) Underground Storage Tank (UST) Section's registry, four USTs under facility ID 0-028711 were removed in 1990, 1991, and 1993. In addition, one UST has been reportedly filled with concrete. The historic use of these USTs is unknown; therefore, ATC contacted Jeff Welti of NCDENR on July 16, 2012, to further investigate the site. According to Mr. Welti, NCDENR's records reflect the address of 1311 West 14th Street (as opposed to Avenue). However, the UST owner (AB Whitley, Inc.) is the same as the owner referenced in the RFP. In addition, the records obtained by ATC depict one 1,000-gallon gasoline UST, one diesel UST of unknown size, and one varsol

UST of unknown size. According to the November 1990 GW/UST-3 forms, the tanks were abandoned and left in place. A copy of the forms and closure analytical data is included in ***Appendix A***.

In addition to contacting NCDENR, 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 49 based on the site reconnaissance and/or cross-referencing to mapped listings. In addition, Parcel 49 was not listed on any federal databases reviewed for this part of the historical assessment. However, Parcel 49 was listed in the state regulatory section as a UST facility under the name AB Whitley Inc. and located at 1311 West 14th Street. The EDR reported the USTs were installed between 1965 and 1979 and were permanently closed between 1990 and 1993. Details of the report state that the USTs were a 1,000-gallon gasoline, 550-gallon diesel, 550-gallon of unknown contents, 550-gallon of used oil, and a 280-gallon of heating oil UST. No information regarding release incidents was discussed. The 1958 Sanborn Map for the site depicts Growers Warehouse (Tobacco Sales) located on Parcel 49. The 1957 aerial photograph also depicts a structure that appears to be the same warehouse. The remaining historical information depicts the site as vacant. Relevant sections of the EDR report are 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, one known and four possible USTs exist in the subsurface with sizes ranging from approximately 3 to 10 feet long and 4 to 5.5 feet wide. The possible 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 July 25, 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, thirty-nine borings (SB49-1 through SB49-38 and TW49-1) 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 55.6 parts per million (ppm) in the 8-10 feet bgs interval of SB49-25. 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. Based on PID readings, select samples (SB49-22 through SB49-25) were also analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) by EPA methods 8260B and 8270D, respectively. Note that certain samples were analyzed for 8260B and 8270D based on the parcel’s potential historical functions. 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 TW49-1 on August 1, 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 TW49-1 was installed to a depth of 15.8 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***. Note that the location was based on a requirement by the NCDOT to place the temporary well in close proximity to a proposed traffic signal pole foundation.

Following the temporary well installation, ATC gauged an approximate depth to water level of 3.65 feet below the top of well casing. Based on this shallow depth, the well was raised approximately 5 feet in order for the water table to intersect the screen. Following this adjustment, 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 detectable concentrations of TPH-GRO and/or TPH-DRO in numerous samples. Comparison of detected concentrations to the NCDENR action level of 10 milligrams per kilogram (mg/kg) indicated exceedences of TPH-GRO in SB49-1 and TPH-DRO in SB49-28. The results of the VOC and SVOC analyses did not indicate any concentrations above the NCDENR soil-to-groundwater maximum soil contaminant concentration levels (MSCCs).

The results of laboratory analyses for groundwater sample TW49-1 did not indicate any compounds at concentrations above NC Title 15A NCAC 2L .0202 Groundwater Standards (2L Standards). Only one compound, chloromethane, was detected above laboratory detection limits but below 2L Standards. 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 the 2.5-5 feet bgs interval in borings SB49-1 and SB49-28 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. The second volume estimation represents the quantity of impacted soil that will need to be handled during the proposed construction. 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 217.5 cubic yards (326.25 tons) for the total volume of impacted soil on-site. For the second volume estimation, ATC calculated a volume of approximately 51.16 cubic yards (76.74 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. Detailed calculations, references, and ATC's assumptions are included in ***Appendix E***.

5.0 CONCLUSIONS

ATC has completed PSA activities at the Parcel 49 site in Greenville, North Carolina. The results of the assessment indicate that soil at the site has been impacted above NCDENR action levels. Groundwater assessed in the area of a proposed traffic signal pole did not indicate 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 may be associated with current and/or 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

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 – GW/UST-3 Forms and 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 49
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
SB49-1	2.5-5	7/25/2012	0	**11.7**	<7.51	NA	NA	NA	NA	NA	NA	NA
SB49-2	2.5-5	7/25/2012	0	<3.64	<7.16	NA	NA	NA	NA	NA	NA	NA
SB49-3	2.5-5	7/25/2012	0	4.13	<6.95	NA	NA	NA	NA	NA	NA	NA
SB49-4	2.5-5	7/25/2012	0	<3.66	<7.09	NA	NA	NA	NA	NA	NA	NA
SB49-5	2.5-5	7/25/2012	0	<4.21	<7.84	NA	NA	NA	NA	NA	NA	NA
SB49-6	2.5-5	7/25/2012	0	<4.03	<7.98	NA	NA	NA	NA	NA	NA	NA
SB49-7	2.5-5	7/25/2012	0	<3.98	<6.86	NA	NA	NA	NA	NA	NA	NA
SB49-8	2.5-5	7/25/2012	0	4.82	<7.59	NA	NA	NA	NA	NA	NA	NA
SB49-9	2.5-5	7/25/2012	0	<3.71	<7.05	NA	NA	NA	NA	NA	NA	NA
SB49-10	2.5-5	7/25/2012	0	<3.2	<7.19	NA	NA	NA	NA	NA	NA	NA
SB49-11	2.5-5	7/25/2012	0	<3.46	<6.27	NA	NA	NA	NA	NA	NA	NA
SB49-12	2.5-5	7/25/2012	0	<3.81	<6.75	NA	NA	NA	NA	NA	NA	NA
SB49-13	0-2.5	7/25/2012	0	<3.39	7.38	NA	NA	NA	NA	NA	NA	NA
SB49-14	2.5-5	7/25/2012	0	<4.01	<7.19	NA	NA	NA	NA	NA	NA	NA
SB49-15	2.5-5	7/25/2012	0	<3.45	<7.1	NA	NA	NA	NA	NA	NA	NA
SB49-16	2.5-5	7/26/2012	0	<2.68	<7.18	NA	NA	NA	NA	NA	NA	NA
SB49-17	2.5-5	7/26/2012	0.4	<3.16	<7.79	NA	NA	NA	NA	NA	NA	NA
SB49-18	2.5-5	7/26/2012	1.3	<3.19	<6.95	NA	NA	NA	NA	NA	NA	NA
SB49-19	2.5-5	7/26/2012	5.8	<3.49	<6.88	NA	NA	NA	NA	NA	NA	NA
SB49-20	2.5-5	7/26/2012	1.7	<3.99	<7.04	NA	NA	NA	NA	NA	NA	NA
SB49-21	2.5-5	7/26/2012	2.0	<3.12	<7.07	NA	NA	NA	NA	NA	NA	NA
SB49-22	10-12	7/26/2012	32.9	<5.85	<9.42	<0.00626	<0.00626	<0.00626	<0.00626	<0.00626	<0.00626	<0.0626
SB49-23	6-8	7/26/2012	43.5	<3.8	<8.71	<0.00503	<0.00503	<0.00503	<0.00503	<0.00503	<0.00503	<0.0503
SB49-24	10-12	7/26/2012	70.8	<5.48	<8.95	<0.00639	<0.00639	<0.00639	<0.00639	<0.00639	<0.00639	<0.0639
SB49-25	8-10	7/26/2012	55.6	<4.69	<8.43	<0.00545	<0.00545	<0.00545	<0.00545	<0.00545	<0.00545	<0.0545
SB49-26	2.5-5	7/27/2012	0	<3.47	<6.85	NA	NA	NA	NA	NA	NA	NA
SB49-27	2.5-5	7/27/2012	0	<3.5	<7.87	NA	NA	NA	NA	NA	NA	NA
SB49-28	2.5-5	7/27/2012	0	<3.39	**12.1**	NA	NA	NA	NA	NA	NA	NA
SB49-29	2.5-5	7/27/2012	0	<3.18	<7.66	NA	NA	NA	NA	NA	NA	NA
SB49-30	2.5-5	7/27/2012	0	<3.94	8.41	NA	NA	NA	NA	NA	NA	NA
SB49-31	2.5-5	7/30/2012	0	<3.72	<7.1	NA	NA	NA	NA	NA	NA	NA
SB49-32	2.5-5	7/30/2012	0	<3.53	9.8	NA	NA	NA	NA	NA	NA	NA
SB49-33	2.5-5	7/31/2012	0	<3.8	<7.01	NA	NA	NA	NA	NA	NA	NA
SB49-34	2.5-5	7/31/2012	0	<3.45	<6.96	NA	NA	NA	NA	NA	NA	NA
SB49-35	Not sampled due to multiple shallow refusals.											
SB49-36	2.5-5	7/31/2012	0	<3.23	<6.78	NA	NA	NA	NA	NA	NA	NA
SB49-37	2.5-5	7/31/2012	0	<3.47	8.88	NA	NA	NA	NA	NA	NA	NA
SB49-38	2.5-5	7/31/2012	0	<3.46	<7.52	NA	NA	NA	NA	NA	NA	NA
TW49-1	2.5-5	8/1/2012	0	<3.68	<7.48	<0.00411	<0.00411	<0.00411	<0.00411	<0.00411	<0.00411	0.0993
NCDENR Action Level				**10**	**10**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Soil-to-Groundwater MSCC				**--**	**--**	**0.0056**	**4.3**	**4.9**	**4.6**	**0.091**	**0.16**	**24**
Residential MSCC				**--**	**--**	**18**	**1,200**	**1,560**	**3,129**	**350**	**313**	**14,000**
Industrial/Commercial MSCC				**--**	**--**	**164**	**32,000**	**40,000**	**81,760**	**3,100**	**8,176**	**360,000**

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

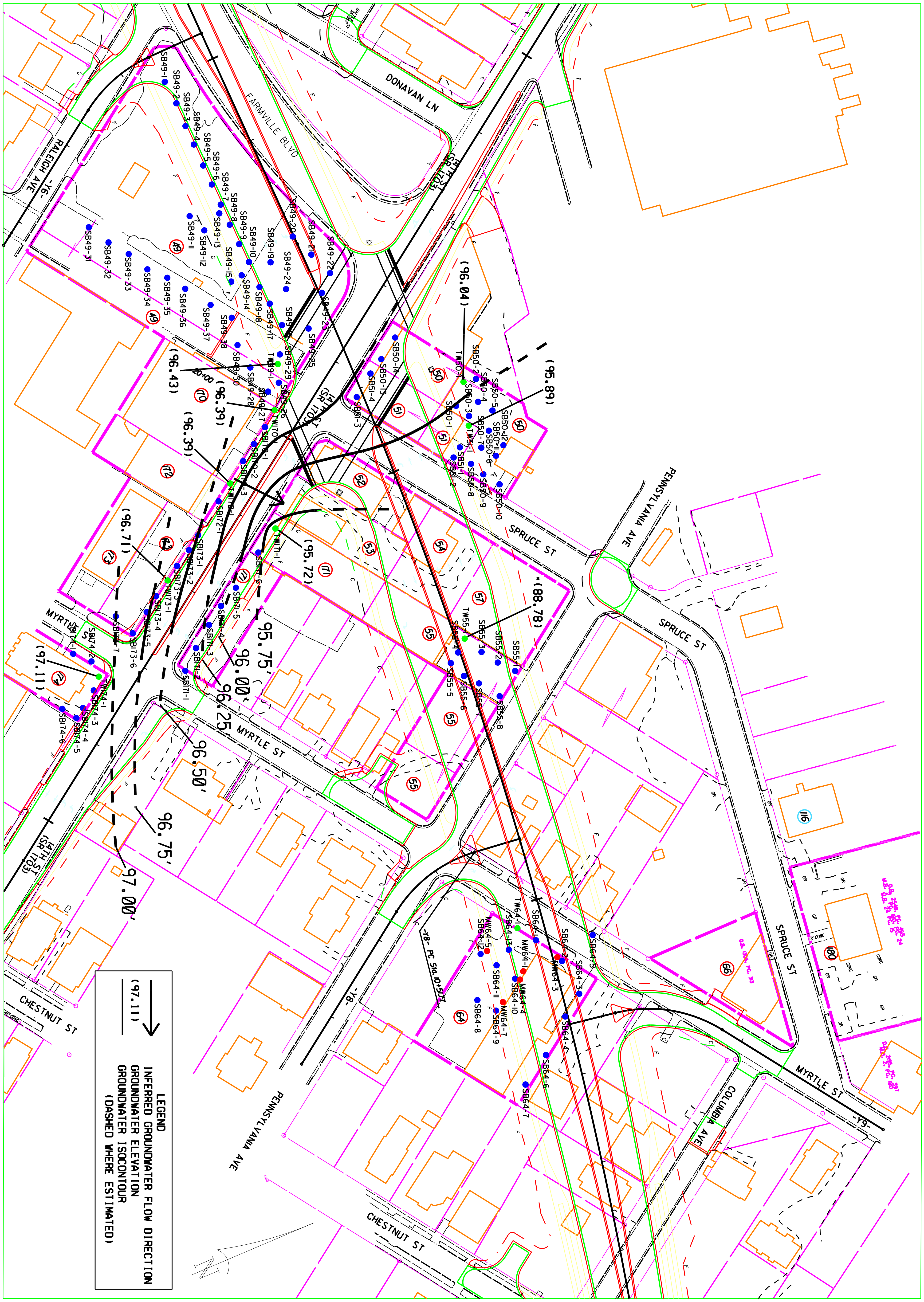
PARCEL 49
GREENVILLE, PITT COUNTY, NORTH CAROLINA
ATC PROJECT NO. 45.19873.0007
WBS ELEMENT NO. 35781.1.2

Analytical Method		**EPA Method 8260B and 8270D**							
Contaminant of Concern		**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**Total BTEX**	**MTBE**	**Naphthalene**	**Chloromethane**
Well ID	**Date Collected**								
TW49-1	8/1/2012	<1.0	<1.0	<1.0	<2.0	NE	<1.0	<1.0	1.05
2L Standard (mg/l)		**1**	**600**	**600**	**500**	**NE**	**20**	**6**	**3**
GCL (mg/l)		**5,000**	**260,000**	**84,500**	**85,500**	**NE**	**20,000**	**6,000**	**3,000**

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 TW49-1 was installed, sampled, and abandoned on 8/1/2012.

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

ATC
ATC Associates of North Carolina, P.C.

RALEIGH, NORTH CAROLINA (919) 871-0999 FAX (919) 871-0335

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

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
———	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

NOTES:

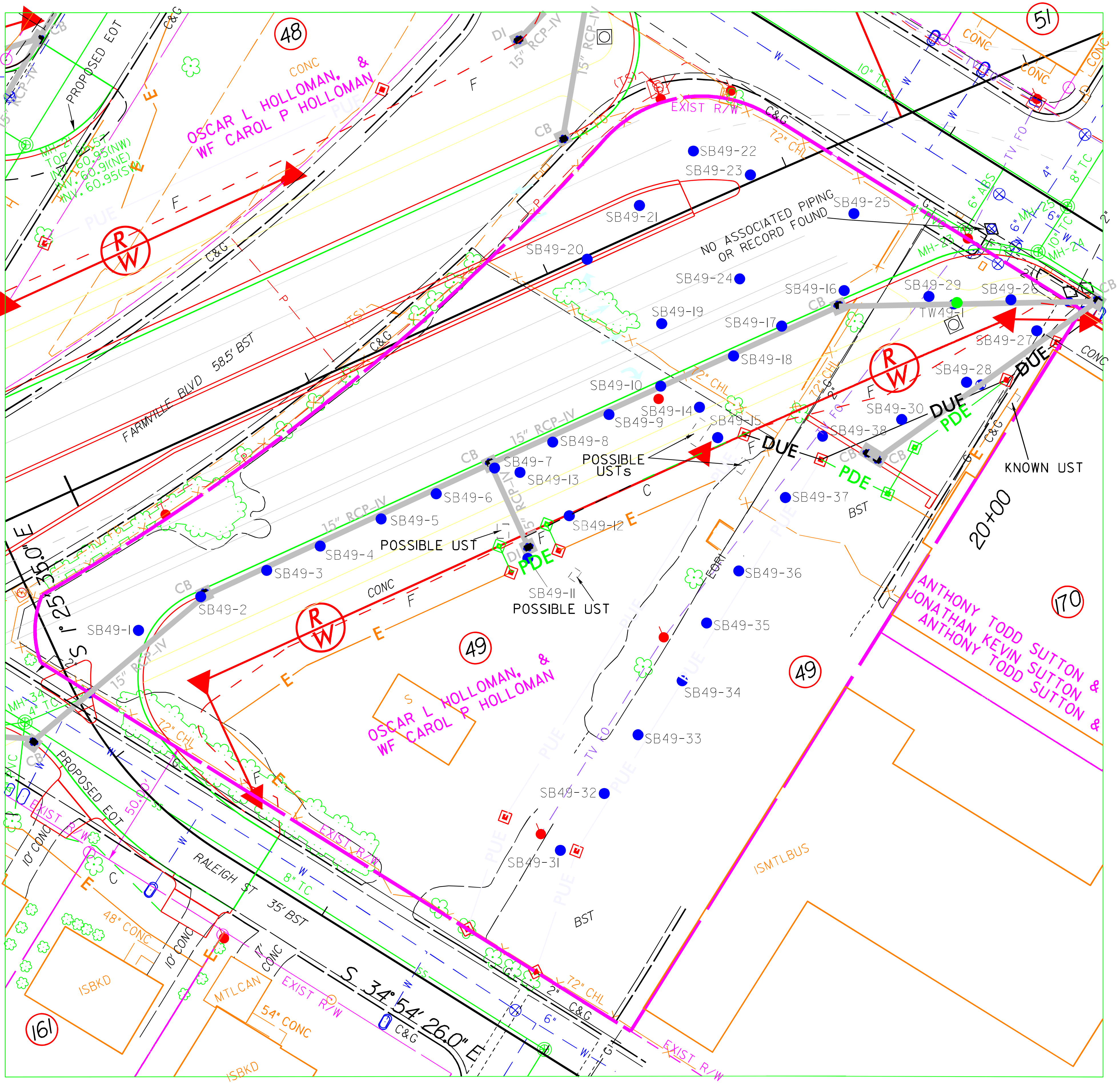
TITLE FIGURE 2
PARCEL IDENTIFICATION MAP
OSCAR L & CAROL P HOLLOWMAN PROPERTY - PARCEL 49
1401 W 14TH AVE
GREENVILLE NC 27858

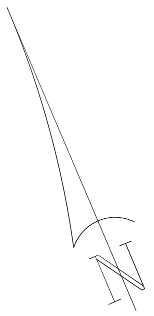
ATC Associates of North Carolina, P.C.
RALEIGH, NORTH CAROLINA (919) 871-0999 FAX (919) 871-0335

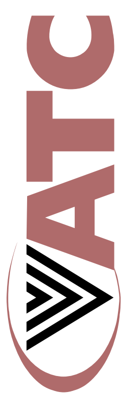
CAD FILE	WBS ELEMENT	PREP. BY	REV. BY	SCALE	DATE	PROJECT NO.
	35781.1.2	JB	KN	1"=60'-0"	10-30-2012	45.19873.0007

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
●	SOIL BORING LOCATION
●	TEMPORARY WELL LOCATION







ATC Associates of North Carolina, P.C.

RALEIGH, NORTH CAROLINA (919) 871-0999 FAX (919) 871-0335

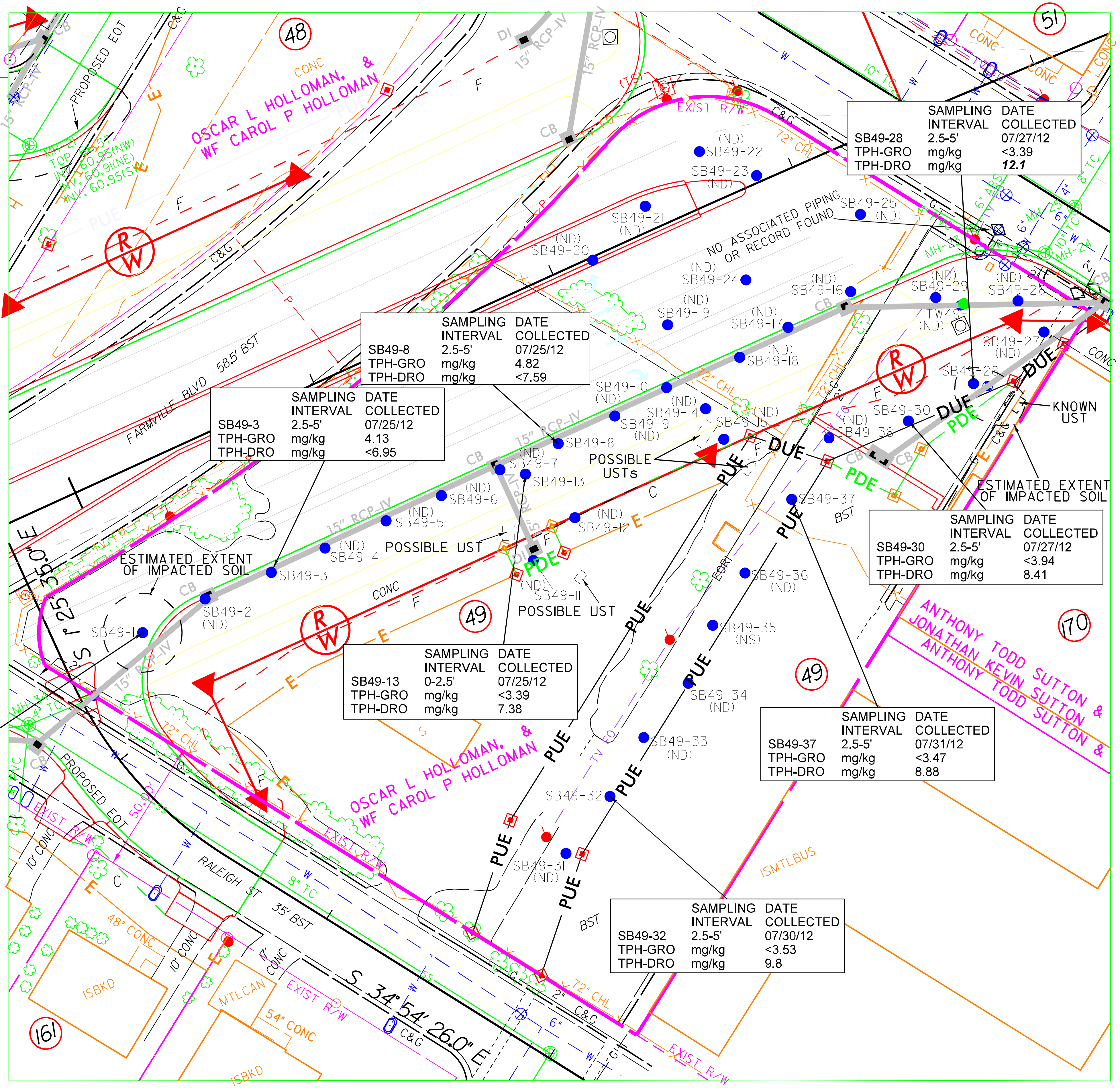
TITLE FIGURE 3
SAMPLE LOCATION MAP
OSCAR L & CAROL P HOLLOWMAN PROPERTY - PARCEL 49
1401 W 14TH AVE
GREENVILLE NC 27858

CAD FILE	WBS ELEMENT	PREP. BY	REV. BY	SCALE	DATE	PROJECT NO.
	35781.1.2	JB	KN	1"=40'-0"	10-30-2012	45.19873.0007

NOTES:

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
●	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



SB49-28	SAMPLING INTERVAL	DATE COLLECTED
	2.5-5'	07/27/12
TPH-GRO	mg/kg	<3.39
TPH-DRO	mg/kg	**12.1**

SB49-8	SAMPLING INTERVAL	DATE COLLECTED
	2.5-5'	07/25/12
TPH-GRO	mg/kg	4.82
TPH-DRO	mg/kg	<7.59

SB49-3	SAMPLING INTERVAL	DATE COLLECTED
	2.5-5'	07/25/12
TPH-GRO	mg/kg	4.13
TPH-DRO	mg/kg	<6.95

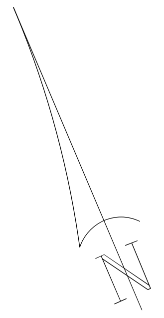
SB49-30	SAMPLING INTERVAL	DATE COLLECTED
	2.5-5'	07/27/12
TPH-GRO	mg/kg	<3.94
TPH-DRO	mg/kg	8.41

SB49-13	SAMPLING INTERVAL	DATE COLLECTED
	0-2.5'	07/25/12
TPH-GRO	mg/kg	<3.39
TPH-DRO	mg/kg	7.38

SB49-37	SAMPLING INTERVAL	DATE COLLECTED
	2.5-5'	07/31/12
TPH-GRO	mg/kg	<3.47
TPH-DRO	mg/kg	8.88

SB49-1	SAMPLING INTERVAL	DATE COLLECTED
	2.5-5'	07/25/12
TPH-GRO	mg/kg	**11.7**
TPH-DRO	mg/kg	<7.51

SB49-32	SAMPLING INTERVAL	DATE COLLECTED
	2.5-5'	07/30/12
TPH-GRO	mg/kg	<3.53
TPH-DRO	mg/kg	9.8



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

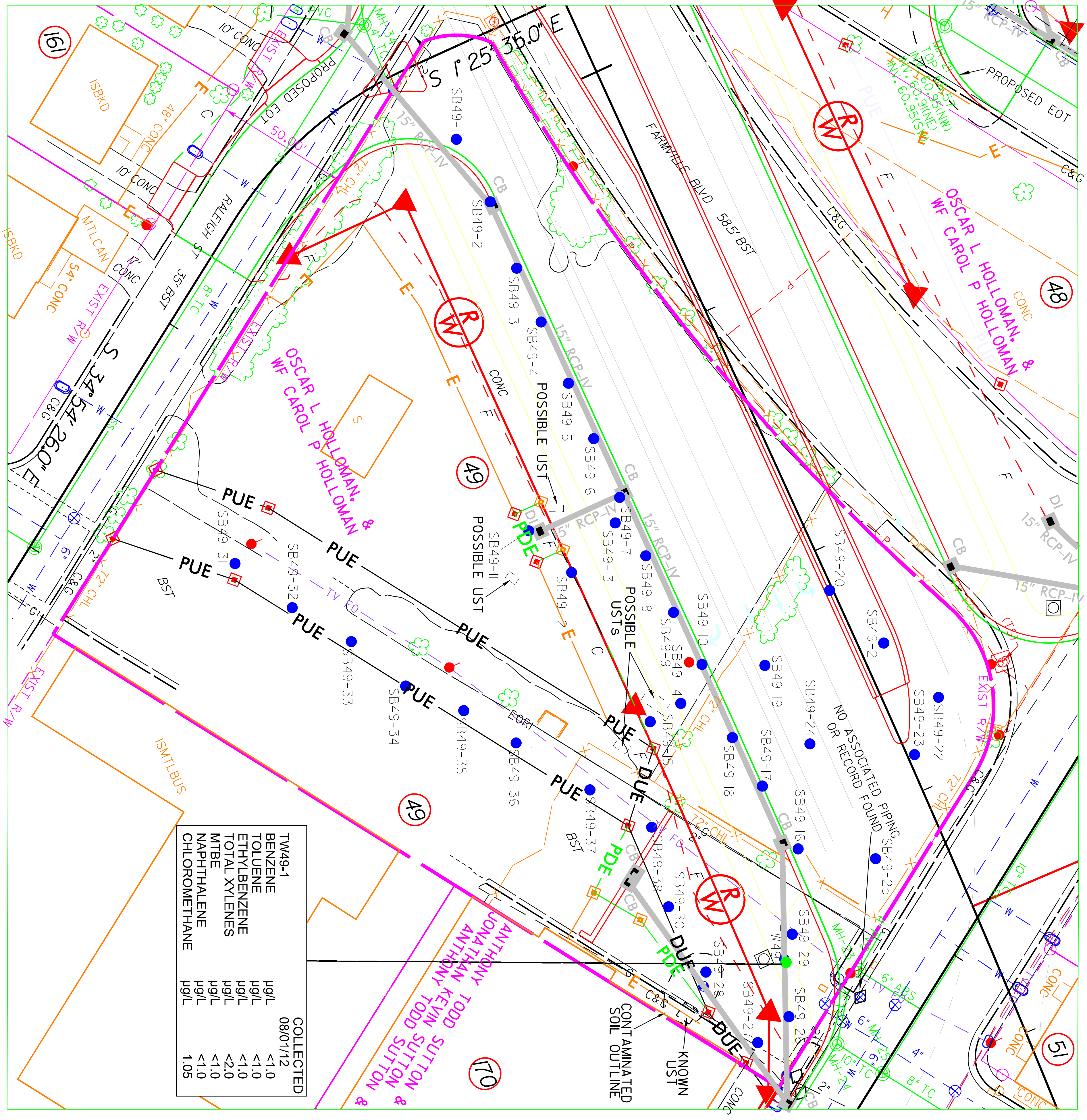
TITLE
FIGURE 4
SOIL ANALYTICAL DATA MAP
OSCAR L & CAROL P HOLLOWMAN PROPERTY - PARCEL 49
1401 W 14TH AVE
GREENVILLE NC 27858

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

CAD FILE	WBS ELEMENT	PREP. BY	REV. BY	SCALE	DATE	PROJECT NO.
	35781.1.2	CS	JB	1"=40'-0"	10-30-2012	45.19873.0007

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
●	SOIL BORING LOCATION
●	TEMPORARY WELL LOCATION
— —	ESTIMATED EXTENT OF IMPACTED SOIL (DASHED WHERE INFERRED)



TW49-1		COLLECTED 08/01/12
BENZENE	µg/L	<1.0
TOLUENE	µg/L	<1.0
ETHYLBENZENE	µg/L	<1.0
TOTAL XYLENES	µg/L	<2.0
MTBE	µg/L	<1.0
NAPHTHALENE	µg/L	<1.0
CHLOROMETHANE	µg/L	1.05

NOTES:
1) VALUES IN BOLD INDICATE LEVELS AT OR ABOVE NC 2L STANDARDS.
2) TW49-1 SET AT 15.8' BELOW GROUND SURFACE (BGS) AND SCREEN INTERNAL OF 5.8-15.8' BGS.

TITLE FIGURE 5
GROUNDWATER ANALYTICAL DATA MAP
OSCAR L & CAROL P HOLLOWMAN PROPERTY - PARCEL 49
1401 W 14TH AVE
GREENVILLE NC 27858

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

CAD FILE	WBS ELEMENT	PREP. BY	REV. BY	SCALE	DATE	PROJECT NO.
	35781.1.2	CS	JB	1"=40'-0"	10-30-2012	45.19873.0007

APPENDIX A

GW/UST-3 FORMS and EDR REPORT

State of North Carolina
Department of Environment,
Health and Natural Resources

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
Steven J. Levitas, Deputy Secretary

DEHNR

DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION
Washington Regional Office
June 24, 1993

A.B. Whitley, Incorporated
1311 W. 14th Street
Greenville, NC 27834

RE: A.B. Whitley, Inc., 1311 W. 14th Street, Greenville

Dear UST Owner/Operator,

This office has received your notification of intent to permanently close underground storage tanks. All tank closure actions must comply with State requirements and provisions established in **North Carolina Administrative Code Title 15A Subchapter 2N (15A NCAC 2N), Underground Storage Tanks.** **Your thirty day waiting period is waived**; however, this office requires a **24-hour** notice before tank closure is performed.

Within **30 days** of tank closure, please **submit in duplicate to this Office**, the completed form **GW/UST-2** ("Site Investigation Report For Permanent Closure of UST") and **all information required** in "Guidelines for Assessing Underground Storage Tank Sites at Closure or Change-in-Service". You must update your existing UST registration (GW/UST-1) with our Raleigh Central Office.

Also, be aware that **owners and operators must report any and all suspected or confirmed releases within 24 hours of discovery** and proceed with requirements per 15A NCAC 2N, under penalty of law. **Any stockpiles of contaminated soils must be placed on plastic and covered; soil treatment/disposal must be performed within 45 days of excavation. Contact this office for proper approval or permits. Finally, please take time to review the enclosed information**. Should you have any questions, please contact the Groundwater Section in the Washington Office at (919) 946-6481.

Thank you,

DEM Groundwater Section

CC: UST Closure File 1336-Pitt
rev.2-93/RRP

P.O. Box 2188, Washington, North Carolina 27889-2188 Telephone 919-946-6481 FAX: 919-975-3716 / 919-946-6639

Notice of Intent to Permanently Close Underground Storage Tank(s)

FOR TANKS IN **NC**

North Carolina - Department of Environment, Health, & Natural Resources
Division of Environmental Management - Groundwater Section - U.S.T.
P.O. Box 27687
Raleigh, NC 27611 (919)733-8303

346

State Use Only
I. D. Number ____________
Date Received ____________

INSTRUCTIONS

Please complete and return thirty (30) days prior to permanently closing tank(s).

I. OWNERSHIP OF TANK(S)

Tank Owner Name: Daughtridge Oil of Greenville
(Corporation, Individual, Public Agency, or Other Entry
Street Address: 2102 Dickinson Avenue
County: Pitt
City: Greenville State: NC Zip Code: 27834
Telephone Number (Area Code): ____________

II. LOCATION OF TANK(S)

Facility Name or Company: A. B. Whitley INC
Street Address or State Road: 1311 W. 14th Street
County: Pitt
City: Greenville State: NC Zip Code: 27834
Telephone Number (Area Code): ____________

Contact Person

Name: Bobby L. Tripp Job Title: General Manager Telephone Number:(919) 756-1345

TANK REMOVAL OR CLOSURE IN PLACE

1. Contact Local Fire Marshall.
2. Plan the Closure Event.
3. Make Site Soil Assessments.
4. Remove Tanks or Close in Place in a Safe and Secure Manner Per API Pubs. "2015 Cleaning" and "1604 Removal & Disposal".
5. Provide a sketch Locating Tanks and Soil Tests.
6. Keep Records for 3 Years.

TANK(S) CLOSURE OPERATIONS TO BE PERFORMED BY:

(Contractor) Name: Bobby L. Tripp
Address: 2102 Dickinson Ave.-Greenville State NC Zip Code 27834
Contact: Bobby L. Tripp Phone: 919/756-1345

TANK(S) SCHEDULED FOR CLOSURE OR TO BE CLOSED

TANK NUMBER	TANK ID #	TANK CAPACITY	LAST CONTENTS	CLOSURE METHOD Remove	Close in Ground
Tank 1	None	1000	Gasoline	☐	xxxx
Tank 2				☐	☐
Tank 3				☐	☐
Tank 4				☐	☐
Tank 5				☐	☐
Tank 6				☐	☐
Tank 7				☐	☐
Tank 8				☐	☐
Tank 9				☐	☐

Name and Official title of Owner's Authorized Representative
Bobby L. Tripp, General Manager
*Scheduled Removal Date: ASAP
Signature:
Date Submitted: November 29, 1990

*If scheduled removal date changes, Forty-eight hours verbal notice of tank removal is required.

GW/UST-3

White Copy - Owner
Yellow Copy - Regional Office
Blue Copy - Central Office
Pink Copy - Central Files

SOUTHERN TESTING AND RESEARCH LABORATORIES, INC.
3709 AIRPORT DRIVE - WILSON, NC 27893
PHONE (919) 237-4175

REPORT OF ANALYSIS

LAB SAMPLE NO.(s): 661T9-12
DATE OF REPORT: 90/12/28

RECEIVED FROM
DATE RECEIVED : 90/12/14

NAM : BOBBIE TRIPP
ORG : DAUGHTRIDGE OIL COMPANY
ADD : P.O. BOX 567
CSZ : GREENVILLE, NC 27834

ACCOUNT NO.:

TELEPHONE :

SAMPLE(s) of: SOIL for Total Petroleum Hydrocarbon (TPH) analysis.

MARKED A: REGIONAL AUTO 12-10 A
B: REGIONAL AUTO 12-10 B
C: AB WHITLEY G1
D: AB WHITLEY G2

-----SAMPLE/TEST NO.--------> ANALYSIS	A: 661T9	B: 661T10	C: 661T11	D: 661T12
1. TPH w/ BTEX distinction (Water--EPA602 P&T/GC/PID/HECD) (Soil --SW846-5030/8020 P&T/GC/PID/HECD)				
Total TPH as Gasoline (ppm):				
Benzene (ppm):				
Chlorobenzene (ppm):				
1,2-Dichlorobenzene (ppm):				
1,3-Dichlorobenzene (ppm):				
1,4-Dichlorobenzene (ppm):				
Ethylbenzene (ppm):				
Toluene (ppm):				
+ Xylenes (ppm):				
+ MTBE (ppm):				
+ EDB (ppm):				
2. TPH w/o BTEX distinction (Water--SW846-3510/8015 Micro Liq-Liq Ext/HRGC/FID) (Soil --SW846-3550/8015 Micro Sonic Ext/HRGC/FID)				
Low-to-Medium Boiling (ppm): (gasoline, kerosene, jet fuel, etc.)	<2	<2	<2	5
Higher Boiling (ppm): (diesel, fuel oil, *motor oil, etc.)	<2	<2	<2	<2

*motor oil det. limit = : 25 ppm

COMMENTS:
:
:
:

LAB USE ONLY-----------
ANALYSTs: DM
PICKUP: N RUSH: N
TIME: MILES:
T: D:
I:

Reviewed and Approved

Name: Thomas A. Dean, Jr., Ph.D.
Title: Manager, Environmental Department

v11/90

"QUALITY SERVICE AT A FAIR PRICE"

Notice of Intent to Permanently Close Underground Storage Tank(s)

FOR TANKS IN NC

North Carolina - Department of Environment, Health, & Natural Resources
Division of Environmental Management - Groundwater Section - U.S.T.
P.O. Box 27687
Raleigh, NC 27611
(919)733-8303

347

State Use Only
I. D. Number ________
Date Received ________

INSTRUCTIONS

Please complete and return thirty (30) days prior to permanently closing tank(s).

I. OWNERSHIP OF TANK(S)

Tank Owner Name: A. B. Whitley Inc.
(Corporation, Individual, Public Agency, or Other Entry
Street Address: 1311 W. 14th Street
County: Pitt
City: Greenville State: NC Zip Code: 27834
Telephone Number (Area Code): (919) 752-7131

II. LOCATION OF TANK(S)

Facility Name or Company: A. B. Whitley, Inc.
Street Address or State Road: 1311 W. 14th Street
County: Pitt
City: Greenville State: NC Zip Code: 27834
Telephone Number (Area Code): (919) 752-7131

Contact Person

Name: Robert Whitley Job Title: President Telephone Number:(919) 752-7131

TANK REMOVAL OR CLOSURE IN PLACE

1. Contact Local Fire Marshall.
2. Plan the Closure Event.
3. Make Site Soil Assessments.
4. Remove Tanks or Close in Place in a Safe and Secure Manner Per API Pubs. "2015 Cleaning" and "1604 Removal & Disposal".
5. Provide a sketch Locating Tanks and Soil Tests.
6. Keep Records for 3 Years.

TANK(S) CLOSURE OPERATIONS TO BE PERFORMED BY:

(Contractor) Name: Daughtridge Oil of Greenville
Address: 2102 Dickinson Ave.-Greenville State NC Zip Code 27834
Contact: Bobby L. Tripp Phone: 919/756-1345

TANK(S) SCHEDULED FOR CLOSURE OR TO BE CLOSED

TANK NUMBER	TANK ID #	TANK CAPACITY	LAST CONTENTS	CLOSURE METHOD Remove	 Close in Ground
Tank 1	none		Varsol	☐	XXXX
Tank 2	none		Diesel	☐	XXXX
Tank 3				☐	☐
Tank 4				☐	☐
Tank 5				☐	☐
Tank 6				☐	☐
Tank 7				☐	☐
Tank 8				☐	☐
Tank 9				☐	☐

Name and Official title of Owner's Authorized Representative
Robert Whitley, President
*Scheduled Removal Date: ASAP
Signature:
Date Submitted: November 29, 1990

*If scheduled removal date changes, Forty-eight hours verbal notice of tank removal is required.

GW/UST-3

White Copy - Owner
Yellow Copy - Regional Office
Blue Copy - Central Office
Pink Copy - Central Files

U-3315
West 14th Street
Greenville, NC 27834

Inquiry Number: 3363129.2s
July 09, 2012

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

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

TABLE OF CONTENTS

SECTION **PAGE**

GEOCHECK ADDENDUM

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

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

WEST 14TH STREET
GREENVILLE, NC 27834

COORDINATES

Latitude (North):	35.6079000 - 35˚ 36' 28.44''
Longitude (West):	77.3854000 - 77˚ 23' 7.44''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	283925.0
UTM Y (Meters):	3942880.8
Elevation:	62 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	35077-E4 GREENVILLE SW, NC
Most Recent Revision:	2001
North Map:	35077-F4 GREENVILLE NW, NC
Most Recent Revision:	2001
East Map:	35077-E3 GREENVILLE SE, NC
Most Recent Revision:	2001

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	2009, 2010
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

EXECUTIVE SUMMARY

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR’s search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
NPL LIENS	Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL	National Priority List Deletions

Federal CERCLIS list

CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY	Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP	CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS	Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF	RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG	RCRA - Large Quantity Generators
RCRA-SQG	RCRA - Small Quantity Generators
RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls

Federal ERNS list

ERNS	Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF	List of Solid Waste Facilities

EXECUTIVE SUMMARY

OLI	Old Landfill Inventory

State and tribal leaking storage tank lists

INDIAN LUST	Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST	AST Database
INDIAN UST	Underground Storage Tanks on Indian Land
FEMA UST	Underground Storage Tank Listing

State and tribal institutional control / engineering control registries

INST CONTROL	No Further Action Sites With Land Use Restrictions Monitoring

State and tribal voluntary cleanup sites

VCP	Responsible Party Voluntary Action Sites
INDIAN VCP	Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
SWRCY	Recycling Center Listing
HIST LF	Solid Waste Facility Listing
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL	Clandestine Drug Labs
US HIST CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information
LUCIS	Land Use Control Information System

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System

Other Ascertainable Records

DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File

EXECUTIVE SUMMARY

TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
UIC	Underground Injection Wells Listing
DRYCLEANERS	Drycleaning Sites
NPDES	NPDES Facility Location Listing
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
FINANCIAL ASSURANCE	Financial Assurance Information Listing
COAL ASH	Coal Ash Disposal Sites
COAL ASH DOE	Sleam-Electric Plan Operation Data
2020 COR ACTION	2020 Corrective Action Program List
EPA WATCH LIST	EPA WATCH LIST
US FIN ASSUR	Financial Assurance Information
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent NPL

NC HSDS: The Hazardous Substance Disposal Sites list contains locations of uncontrolled and unregulated hazardous waste sites. The file contains sites on the national priority list as well as the state priority list. The data source is the North Carolina Center for Geographic Information and Analysis.

A review of the NC HSDS list, as provided by EDR, and dated 08/09/2011 has revealed that there is 1 NC HSDS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GREENVILLE COAL GAS PLANT		NE 1/2 - 1 (0.595 mi.)	0	7

EXECUTIVE SUMMARY

State- and tribal - equivalent CERCLIS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environment & Natural Resources' Inactive Hazardous Sites Program.

A review of the SHWS list, as provided by EDR, and dated 03/01/2012 has revealed that there is 1 SHWS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SOUTHERN STATES (FORMER)	***125 LINE AVE***	***W 1/8 - 1/4 (0.229 mi.)***	***H26***	***58***

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incidents Management Database contains an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environment, & Natural Resources' Incidents by Address.

A review of the LUST list, as provided by EDR, and dated 05/04/2012 has revealed that there are 45 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WILLIE SMALL PROPERTY *NRP* Incident Phase: Response	***1402 SPRUCE STREET***	***WSW 0 - 1/8 (0.014 mi.)***	***6***	***15***
EAST CAROLINA UNW-STEAM PLT. Incident Phase: Closed Out	***14TH ST.***	***NNW 0 - 1/8 (0.119 mi.)***	***10***	***22***
BUCK SUPPLY COMPANY Incident Phase: Closed Out	***201 GRAND AVENUE***	***E 1/8 - 1/4 (0.134 mi.)***	***B12***	***26***
FUSION SKATE PARK	***504 WEST TENTH STREET***	***S 1/8 - 1/4 (0.147 mi.)***	***C14***	***31***
AGNES FULLILOVE SCHOOL Incident Phase: Closed Out	***1615 HALIFAX STREET***	***WSW 1/8 - 1/4 (0.150 mi.)***	***D15***	***34***
OLD PONY EXPRESS Incident Phase: Closed Out	***DICKINSON AVE***	***S 1/8 - 1/4 (0.165 mi.)***	***C18***	***41***
NEW WAY/SHOP A LOT Incident Phase: Closed Out	***1006 BANCROFT AVENUE***	***WNW 1/8 - 1/4 (0.216 mi.)***	***G24***	***55***
SOUTHERN STATES (FORMER) Incident Phase: Closed Out	***125 LINE AVE***	***W 1/8 - 1/4 (0.229 mi.)***	***H26***	***58***
ANDERSON PROPERTY (DOROTHY) Incident Phase: Closed Out	***801 BANCROFT AVENUE***	***WNW 1/4 - 1/2 (0.253 mi.)***	***31***	***66***
STRINGFIELD PROPERTY (DELZORA)	703 MCDOWELL STREET	WNW 1/4 - 1/2 (0.277 mi.)	32	68
WILLIAMS RESIDENCE (JOCELYN) Incident Phase: Closed Out	***1611 LINCOLN DRIVE***	***NW 1/4 - 1/2 (0.308 mi.)***	***33***	***70***
SPUR STATION/FLORENCE BLOUNT E Incident Phase: Closed Out	***1025 DICKINSON AVE.***	***SSW 1/4 - 1/2 (0.327 mi.)***	***J35***	***76***
WOOTEN RESIDENCE (JOHNNY-FORME Incident Phase: Closed Out	***1818 BATTLE DRIVE***	***WNW 1/4 - 1/2 (0.336 mi.)***	***K37***	***80***
TUCKER, NINA RESIDENCE Incident Phase: Response	***1820 BATTLE DRIVE***	***WNW 1/4 - 1/2 (0.336 mi.)***	***K38***	***82***

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
STOKES, MARTHA PROPERTY Incident Phase: Closed Out	*1812 BATTLE AVENUE*	*WNW 1/4 - 1/2 (0.337 mi.)*	*K39*	*85*
ST. GABRIEL'S CATHOLIC CHURCH Incident Phase: Closed Out	*1101 WARD ST*	*N 1/4 - 1/2 (0.345 mi.)*	*L40*	*88*
ST GABRIELS WARD STREET SITE	*1100 WARD STREET*	*N 1/4 - 1/2 (0.346 mi.)*	*L41*	*90*
MARTIN PROPERTY (ANNIE) Incident Phase: Closed Out	*1509 E. FIFTH STREET*	*NNW 1/4 - 1/2 (0.360 mi.)*	*42*	*93*
W.L. ALLEN OIL-BULK PLANT UST Incident Phase: Closed Out	*120 SKINNER STREET*	*SSW 1/4 - 1/2 (0.368 mi.)*	*J47*	*103*
*AARON PENNY RESIDENCE *NRP** Incident Phase: Closed Out	*405 WEST VILLAGE DRIVE*	*W 1/4 - 1/2 (0.403 mi.)*	*50*	*110*
MOORE PROPERTY (AMY & KYLE) Incident Phase: Closed Out	*1712 WEST SIXTH STREET*	*WNW 1/4 - 1/2 (0.462 mi.)*	*60*	*140*

Lower Elevation	Address	Direction / Distance	Map ID	Page
FRANKLIN BAKING COMPANY, INC. Incident Phase: Closed Out	*1107 MYRTLE DRIVE*	*ENE 0 - 1/8 (0.005 mi.)*	*A5*	*12*
SADIE SAULTER SCHOOL Incident Phase: Closed Out	*1019 FLEMING STREET*	*NNE 0 - 1/8 (0.086 mi.)*	*8*	*19*
HERBERT COREY PROPERTY Incident Phase: Closed Out	*DICKINSON AV. AND GRAND*	*E 1/8 - 1/4 (0.167 mi.)*	*F19*	*44*
EATON'S SHELL Incident Phase: Closed Out	*601 ALBEMARLE STREET*	*ENE 1/8 - 1/4 (0.187 mi.)*	*E21*	*48*
CITY OF GREENVILLE PROPERTY Incident Phase: Closed Out	602 CONTENTNEA STREET	NE 1/8 - 1/4 (0.191 mi.)	22	51
THE GOODYEAR TIRE & RUBBER COM Incident Phase: Closed Out	*729 DICKINSON AVE*	*E 1/8 - 1/4 (0.207 mi.)*	*F23*	*52*
FAITH VENTURES, INC./ NO NAME Incident Phase: Response	*907 MARTIN LUTHER KING*	*NNE 1/8 - 1/4 (0.236 mi.)*	*28*	*61*
SAM POLLARD & SON, INC Incident Phase: Follow Up	*400 W 10TH STREET*	*ESE 1/4 - 1/2 (0.317 mi.)*	*34*	*73*
MAGNNLIA APARTMENTS Incident Phase: Closed Out	*418 WEST FIFTH STREET*	*ENE 1/4 - 1/2 (0.361 mi.)*	*M43*	*96*
NATHANIEL VILLAGE Incident Phase: Closed Out	*411 WEST FIFTH STREET*	*ENE 1/4 - 1/2 (0.363 mi.)*	*M45*	*99*
CAROLINA TELEPHONE Incident Phase: Closed Out	*401 WEST 5TH ST.*	*ENE 1/4 - 1/2 (0.367 mi.)*	*M46*	*101*
TAYLOR, OLA RESIDENCE Incident Phase: Closed Out	*1011 WEST THIRD STREET*	*NNE 1/4 - 1/2 (0.416 mi.)*	*51*	*113*
WILCAR EXECUTIVE CENTER Incident Phase: Response	*223 WEST TENTH STREET*	*ESE 1/4 - 1/2 (0.423 mi.)*	*52*	*115*
TYSON PROPERTY (BERVERLY) Incident Phase: Closed Out	*420 CADILLAC STREET*	*NNW 1/4 - 1/2 (0.424 mi.)*	*53*	*118*
SYCAMORE HILL BAPTIST CHURCH Incident Phase: Closed Out	*226 W. 8TH STREET*	*E 1/4 - 1/2 (0.432 mi.)*	*54*	*121*
CITY OF GREENVILLE TANS. GARAG Incident Phase: Closed Out Incident Phase: Closed Out	*1500 BEATTY ST.*	*SSE 1/4 - 1/2 (0.438 mi.)*	*N55*	*124*

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
PUGH'S SHELL STATION Incident Phase: Closed Out	***5TH & GREEN STREET***	***ENE 1/4 - 1/2 (0.448 mi.)***	***O57***	***134***
THE PANTRY #832 Incident Phase: Response	***501 SOUTH MEMORIAL DRIV***	***NW 1/4 - 1/2 (0.465 mi.)***	***P61***	***142***
FORBES RESIDENCE (SELENA) Incident Phase: Closed Out	***1407 WEST 4TH STREET***	***NNW 1/4 - 1/2 (0.465 mi.)***	***Q63***	***144***
FASTFARE NC 680-CROWN CENTRAL Incident Phase: Closed Out	***506 MEMORIAL DR.***	***NW 1/4 - 1/2 (0.469 mi.)***	***P64***	***147***
SUTTON'S SERVICE CENTER, INC. Incident Phase: Closed Out	***1105 DICKINSON AVE., PO***	***SSW 1/4 - 1/2 (0.470 mi.)***	***65***	***150***
CITY OF GREENVILLE PROPERTY-TA Incident Phase: Closed Out	527 DICKINSON AVENUE	ENE 1/4 - 1/2 (0.480 mi.)	66	155
UNIVERSITY AMOCO Incident Phase: Closed Out	***101 EAST 10TH STREET***	***ESE 1/4 - 1/2 (0.495 mi.)***	***R67***	***157***
DAUGHTRIDGE OIL-EVANS 76 Incident Phase: Closed Out	***10TH ST. & EVANS ST.***	***ESE 1/4 - 1/2 (0.497 mi.)***	***R68***	***160***

LUST TRUST: This database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

A review of the LUST TRUST list, as provided by EDR, and dated 04/11/2012 has revealed that there are 24 LUST TRUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WILLIE SMALL PROPERTY *NRP*	***1402 SPRUCE STREET***	***WSW 0 - 1/8 (0.014 mi.)***	***6***	***15***
NIMMO PROPERTY	1113 WEST 14TH STREET	SE 0 - 1/8 (0.122 mi.)	11	25
BUCK SUPPLY COMPANY	***201 GRAND AVENUE***	***E 1/8 - 1/4 (0.134 mi.)***	***B12***	***26***
FUSION SKATE PARK	***504 WEST TENTH STREET***	***S 1/8 - 1/4 (0.147 mi.)***	***C14***	***31***
AGNES FULLILOVE SCHOOL	***1615 HALIFAX STREET***	***WSW 1/8 - 1/4 (0.150 mi.)***	***D15***	***34***
ANDERSON PROPERTY (DOROTHY)	***801 BANCROFT AVENUE***	***WNW 1/4 - 1/2 (0.253 mi.)***	***31***	***66***
WILLIAMS RESIDENCE (JOCELYN)	***1611 LINCOLN DRIVE***	***NW 1/4 - 1/2 (0.308 mi.)***	***33***	***70***
WOOTEN RESIDENCE (JOHNNY-FORME	***1818 BATTLE DRIVE***	***WNW 1/4 - 1/2 (0.336 mi.)***	***K37***	***80***
TUCKER, NINA RESIDENCE	***1820 BATTLE DRIVE***	***WNW 1/4 - 1/2 (0.336 mi.)***	***K38***	***82***
STOKES, MARTHA PROPERTY	***1812 BATTLE AVENUE***	***WNW 1/4 - 1/2 (0.337 mi.)***	***K39***	***85***
ST. GABRIEL'S CATHOLIC CHURCH	***1101 WARD ST***	***N 1/4 - 1/2 (0.345 mi.)***	***L40***	***88***
ST GABRIELS WARD STREET SITE	***1100 WARD STREET***	***N 1/4 - 1/2 (0.346 mi.)***	***L41***	***90***
AARON PENNY RESIDENCE *NRP*	***405 WEST VILLAGE DRIVE***	***W 1/4 - 1/2 (0.403 mi.)***	***50***	***110***
MOORE PROPERTY (AMY & KYLE)	***1712 WEST SIXTH STREET***	***WNW 1/4 - 1/2 (0.462 mi.)***	***60***	***140***

Lower Elevation	Address	Direction / Distance	Map ID	Page
FRANKLIN BAKING COMPANY, INC.	***1107 MYRTLE DRIVE***	***ENE 0 - 1/8 (0.005 mi.)***	***A5***	***12***
FAITH VENTURES, INC./ NO NAME	***907 MARTIN LUTHER KING***	***NNE 1/8 - 1/4 (0.236 mi.)***	***28***	***61***
MAGNOLIA APARTMENTS	418 W. FIFTH STREET	ENE 1/4 - 1/2 (0.361 mi.)	M44	98
NATHANIEL VILLAGE	***411 WEST FIFTH STREET***	***ENE 1/4 - 1/2 (0.363 mi.)***	***M45***	***99***
WILCAR EXECUTIVE CENTER	***223 WEST TENTH STREET***	***ESE 1/4 - 1/2 (0.423 mi.)***	***52***	***115***
SYCAMORE HILL BAPTIST CHURCH	***226 W. 8TH STREET***	***E 1/4 - 1/2 (0.432 mi.)***	***54***	***121***
PUGH'S SHELL SERVICE	5TH & GREENE STREETS	ENE 1/4 - 1/2 (0.448 mi.)	O58	138
THE PANTRY #832	***501 SOUTH MEMORIAL DRIV***	***NW 1/4 - 1/2 (0.465 mi.)***	***P61***	***142***
SELINA FORBES PROPERTY	1407 W FOURTH ST	NNW 1/4 - 1/2 (0.465 mi.)	Q62	144
A & B AUTO SERVICE	103 WEST 9TH STREET	E 1/4 - 1/2 (0.499 mi.)	70	166

LAST: A listing of leaking aboveground storage tank site locations.

A review of the LAST list, as provided by EDR, and dated 05/10/2012 has revealed that there are 3 LAST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
1401 5TH STREET AST SPILL	1401 WEST 5TH STREET	NNW 1/4 - 1/2 (0.334 mi.)	36	79

Lower Elevation	Address	Direction / Distance	Map ID	Page
PITT COUNTY SCHOOLS MAINTENANC	CONTENTNEA ST. & THIRD	NNE 1/4 - 1/2 (0.401 mi.)	49	108
ECU/HAYNIE LAND	***10TH STREET***	***ESE 1/4 - 1/2 (0.498 mi.)***	***R69***	***163***

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environment & Natural Resources' Petroleum Underground Storage Tank Database.

A review of the UST list, as provided by EDR, and dated 05/04/2012 has revealed that there are 11 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A B WHITLEY INC	1311 WEST 14TH STREET	0 - 1/8 (0.000 mi.)	1	7
WAINWRIGHT'S AMOCO	***1201 W 14TH STREET***	***SE 0 - 1/8 (0.057 mi.)***	***7***	***18***
STEWART SANDWICHES INC.	821 DICKENSON AVENUE.	ESE 0 - 1/8 (0.108 mi.)	9	22
PONY EXPRESS (FORMER TENANT)	1202 DICKERSON AVE	S 1/8 - 1/4 (0.165 mi.)	C17	39
AGNES FULLILOVE SCHOOL	WATAUGA AVE	WSW 1/8 - 1/4 (0.181 mi.)	D20	46
SHOP A LOT	1006 BANCROFT AVENUE	WNW 1/8 - 1/4 (0.216 mi.)	G25	57

Lower Elevation	Address	Direction / Distance	Map ID	Page
MACHINE&WELDING(PREVIOUS RENTE	307 SPRUCE ST.	0 - 1/8 (0.000 mi.)	A2	9
FRANKLIN BAKING COMPANY, INC.	***1107 MYRTLE DRIVE***	***ENE 0 - 1/8 (0.005 mi.)***	***A5***	***12***
SADIE SAULTER SCHOOL	***1019 FLEMING STREET***	***NNE 0 - 1/8 (0.086 mi.)***	***8***	***19***
EATONS SHELL SERVICE	601 ALBEMARLE AVE	ENE 1/8 - 1/4 (0.164 mi.)	E16	37
THE GOODYEAR TIRE & RUBBER COM	***729 DICKINSON AVE***	***E 1/8 - 1/4 (0.207 mi.)***	***F23***	***52***

State and tribal Brownfields sites

BROWNFIELDS: A brownfield site is an abandoned, idled, or underused property where the threat of environmental contamination has hindered its redevelopment. All of the sites in the inventory are working toward a a brownfield agreement for cleanup and liabitliy control.

A review of the BROWNFIELDS list, as provided by EDR, and dated 09/30/2010 has revealed that there is 1 BROWNFIELDS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
IMPERIAL CAMPUS	701 ATLANTIC AVE.	ENE 1/8 - 1/4 (0.245 mi.)	I30	66

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA’s listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 06/27/2011 has revealed that there are 2 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER GREENVILLE PRODUCE PROP	310 W. 9TH STREET	E 1/4 - 1/2 (0.388 mi.)	48	106
SOUTHWEST REDEVELOPMENT SITE	523 S. PITT STREET	ENE 1/4 - 1/2 (0.453 mi.)	59	138

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA’s comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 03/15/2012 has revealed that there are 3 RCRA-NonGen sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
AMERICAN AUTO BODY	***302 SPRUCE ST***	***ENE 0 - 1/8 (0.004 mi.)***	***A3***	***9***
APPAREL IMPRESSIONS	***715 ALBEMARLE AVE***	***E 1/8 - 1/4 (0.138 mi.)***	***B13***	***29***
VAN WATERS & ROGERS INC	***715 ATLANTIC AVE***	***ENE 1/8 - 1/4 (0.239 mi.)***	***I29***	***64***

IMD: Incident Management Database.

A review of the IMD list, as provided by EDR, and dated 07/21/2006 has revealed that there are 35 IMD sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WILLIE SMALL PROPERTY *NRP*	***1402 SPRUCE STREET***	***WSW 0 - 1/8 (0.014 mi.)***	***6***	***15***
EAST CAROLINA UNW-STEAM PLT.	***14TH ST.***	***NNW 0 - 1/8 (0.119 mi.)***	***10***	***22***
BUCK SUPPLY COMPANY	***201 GRAND AVENUE***	***E 1/8 - 1/4 (0.134 mi.)***	***B12***	***26***
FUSION SKATE PARK	***504 WEST TENTH STREET***	***S 1/8 - 1/4 (0.147 mi.)***	***C14***	***31***
AGNES FULLILOVE SCHOOL	***1615 HALIFAX STREET***	***WSW 1/8 - 1/4 (0.150 mi.)***	***D15***	***34***
OLD PONY EXPRESS	***DICKINSON AVE***	***S 1/8 - 1/4 (0.165 mi.)***	***C18***	***41***
NEW WAY/SHOP A LOT	***1006 BANCROFT AVENUE***	***WNW 1/8 - 1/4 (0.216 mi.)***	***G24***	***55***
SOUTHERN FARM AND HOME/SOUTHER	125 LINE AVENUE	W 1/8 - 1/4 (0.229 mi.)	H27	60
WILLIAMS RESIDENCE (JOCELYN)	***1611 LINCOLN DRIVE***	***NW 1/4 - 1/2 (0.308 mi.)***	***33***	***70***
SPUR STATION/FLORENCE BLOUNT E	***1025 DICKINSON AVE.***	***SSW 1/4 - 1/2 (0.327 mi.)***	***J35***	***76***
TUCKER, NINA RESIDENCE	***1820 BATTLE DRIVE***	***WNW 1/4 - 1/2 (0.336 mi.)***	***K38***	***82***
STOKES, MARTHA PROPERTY	***1812 BATTLE AVENUE***	***WNW 1/4 - 1/2 (0.337 mi.)***	***K39***	***85***
ST GABRIELS WARD STREET SITE	***1100 WARD STREET***	***N 1/4 - 1/2 (0.346 mi.)***	***L41***	***90***
MARTIN PROPERTY (ANNIE)	***1509 E. FIFTH STREET***	***NNW 1/4 - 1/2 (0.360 mi.)***	***42***	***93***

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
W.L. ALLEN OIL-BULK PLANT UST	***120 SKINNER STREET***	***SSW 1/4 - 1/2 (0.368 mi.)***	***J47***	***103***
AARON PENNY RESIDENCE *NRP*	***405 WEST VILLAGE DRIVE***	***W 1/4 - 1/2 (0.403 mi.)***	***50***	***110***

Lower Elevation	Address	Direction / Distance	Map ID	Page
FRANKLIN BAKING CO. INC.	1107 MYRTLE AVENUE	ENE 0 - 1/8 (0.005 mi.)	A4	11
HERBERT COREY PROPERTY	***DICKINSON AV. AND GRAND***	***E 1/8 - 1/4 (0.167 mi.)***	***F19***	***44***
EATON'S SHELL	***601 ALBEMARLE STREET***	***ENE 1/8 - 1/4 (0.187 mi.)***	***E21***	***48***
FAITH VENTURES, INC./ NO NAME	***907 MARTIN LUTHER KING***	***NNE 1/8 - 1/4 (0.236 mi.)***	***28***	***61***
SAM POLLARD & SON, INC	***400 W 10TH STREET***	***ESE 1/4 - 1/2 (0.317 mi.)***	***34***	***73***
MAGNNLIA APARTMENTS	***418 WEST FIFTH STREET***	***ENE 1/4 - 1/2 (0.361 mi.)***	***M43***	***96***
CAROLINA TELEPHONE	***401 WEST 5TH ST.***	***ENE 1/4 - 1/2 (0.367 mi.)***	***M46***	***101***
TAYLOR, OLA RESIDENCE	***1011 WEST THIRD STREET***	***NNE 1/4 - 1/2 (0.416 mi.)***	***51***	***113***
WILCAR EXECUTIVE CENTER	***223 WEST TENTH STREET***	***ESE 1/4 - 1/2 (0.423 mi.)***	***52***	***115***
TYSON PROPERTY (BERVERLY)	***420 CADILLAC STREET***	***NNW 1/4 - 1/2 (0.424 mi.)***	***53***	***118***
SYCAMORE HILL BAPTIST CHURCH	***226 W. 8TH STREET***	***E 1/4 - 1/2 (0.432 mi.)***	***54***	***121***
GREENVILLE PUBLIC WKS GARAGE,	1500 BEATTY STREET	SSE 1/4 - 1/2 (0.438 mi.)	N56	132
PUGH'S SHELL STATION	***5TH & GREEN STREET***	***ENE 1/4 - 1/2 (0.448 mi.)***	***O57***	***134***
FORBES RESIDENCE (SELENA)	***1407 WEST 4TH STREET***	***NNW 1/4 - 1/2 (0.465 mi.)***	***Q63***	***144***
FASTFARE NC 680-CROWN CENTRAL	***506 MEMORIAL DR.***	***NW 1/4 - 1/2 (0.469 mi.)***	***P64***	***147***
SUTTON'S SERVICE CENTER, INC.	***1105 DICKINSON AVE., PO***	***SSW 1/4 - 1/2 (0.470 mi.)***	***65***	***150***
UNIVERSITY AMOCO	***101 EAST 10TH STREET***	***ESE 1/4 - 1/2 (0.495 mi.)***	***R67***	***157***
DAUGHTRIDGE OIL-EVANS 76	***10TH ST. & EVANS ST.***	***ESE 1/4 - 1/2 (0.497 mi.)***	***R68***	***160***
ECU/HAYNIE LAND	***10TH STREET***	***ESE 1/4 - 1/2 (0.498 mi.)***	***R69***	***163***

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the Manufactured Gas Plants list, as provided by EDR, has revealed that there is 1 Manufactured Gas Plants site within approximately 1 mile of the target property.

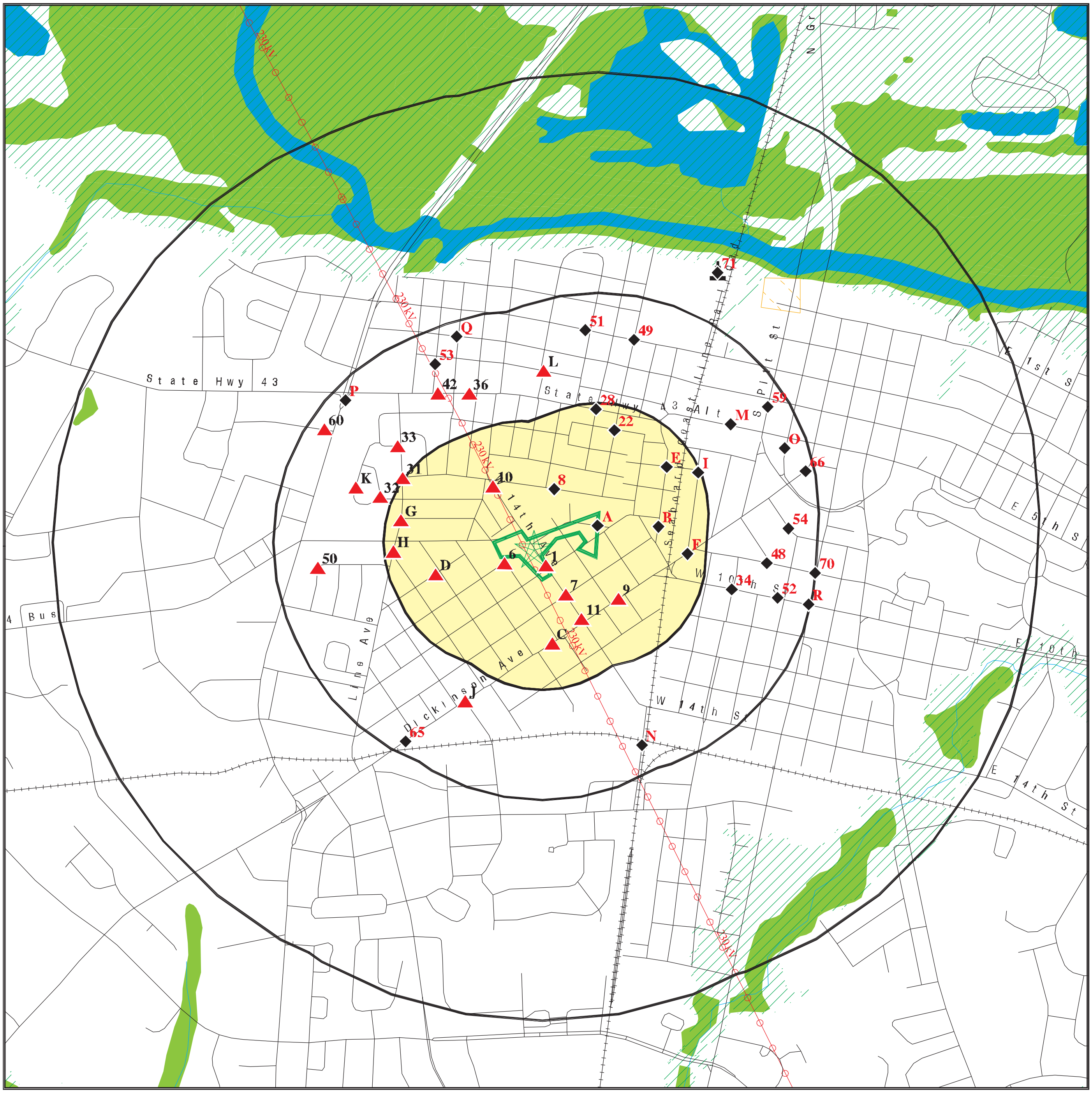
Lower Elevation	Address	Direction / Distance	Map ID	Page
GREENVILLE MGP	PLANT STREET	NNE 1/2 - 1 (0.609 mi.)	71	166

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 40 records.

Site Name	Database(s)
CHICOD CITGO	LAST
INFINGER TRANSPORT COMPANY	LAST
SMITHS FERTILIZER	UST,FINANCIAL ASSURANCE 1
TRADE-WILCO 1879	UST,FINANCIAL ASSURANCE 1
BELK GROUP OF GREENVILLE/CAROL	IMD,LUST
GOINS ESTATE (WILLIAM)	LUST TRUST,LUST,IMD
BRANCH’S STORE (HARDMAN’S GROC	IMD,LUST
JOYCE MCROY PROPERTY (QUICK FI	IMD,LUST
KASH & KARRY	LUST
SNYDER PROPERTY (KRISTINA)	LUST TRUST,LUST
BELVOIR HARDWARE	IMD,LUST
BARNHILL PROPERTY (NELL)	LUST TRUST,LUST
CONVENIENT WORLD #2	IMD,LUST
FORBES, DILLON RESIDENCE	IMD,LUST
ED WARREN ESTATE	LUST TRUST,LUST,IMD
HARDEE PROPERTY (ROY)	LUST TRUST,IMD,LUST
EIW EQUIPMENT, INC. HERTZ CORP	LUST
BELVOIR ELEMENTARY SCHOOL	LUST
MCNEILL RESIDENCE (JOHN)	LUST TRUST,LUST
FAST FARE NC 513	IMD,LUST
SAM’S CLUB GAS STATION	LUST
KASH-N-KARRY#9	LUST TRUST
FRANK D. DAIL	UST
LENNIE’S GROCERY	UST
CLARA E JONES SERVICE STATION	UST
MRS. FANNIE MAE HINES STORE	UST
NORTH PITT HIGH	UST
ROY’S MINI MART	UST
HARDMAN INC	UST
GREENVILLE PAVING & CONTRACTING	UST
FALKLAND SCHOOL	UST
WILBUR HARDEE	UST
MAYNARD SUMMERLIN	UST
TROPIGAS USA INC	UST
RED OAK CONVENIENT MART	UST
FORBES QUIK STEP	UST
D H CONLEY HIGH SCHOOL	UST
B & S COUNTRY STORE	UST
PITT COMMUNITY COLLEGE	IMD
PITT COMMUNITY COLLEGE (3000 G	IMD

OVERVIEW MAP - 3363129.2s



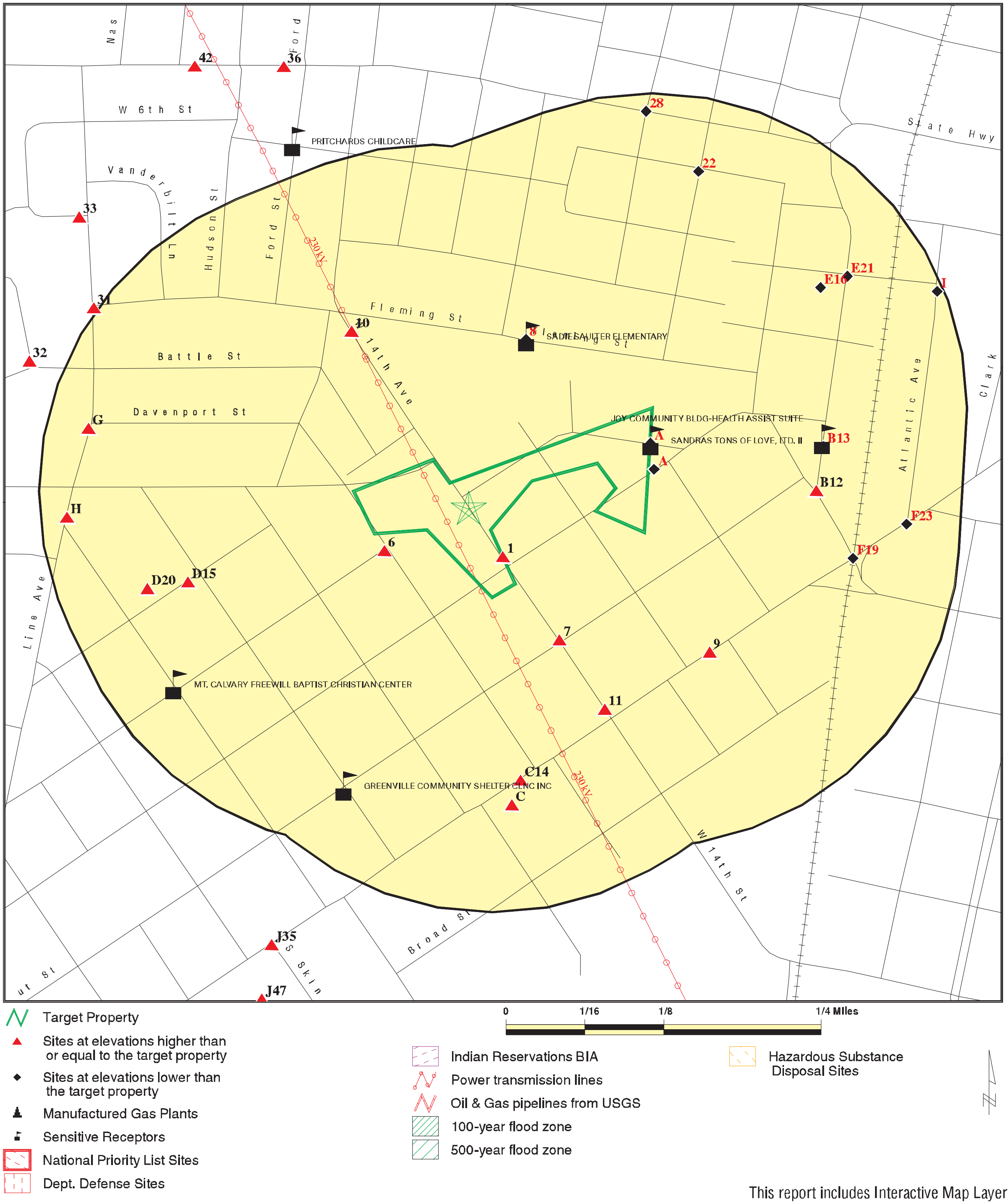
0 1/4 1/2 1 Miles

- Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines from USGS
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- 🟩 National Wetland Inventory
- State Wetlands
- Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	U-3315	CLIENT:	ATC Associates Inc. #45
ADDRESS:	West 14th Street Greenville NC 27834	CONTACT:	Jeff Corson
		INQUIRY #:	3363129.2s
LAT/LONG:	35.6079 / 77.3854	DATE:	July 09, 2012 6:13 pm

DETAIL MAP - 3363129.2s



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: U-3315
ADDRESS: West 14th Street
Greenville NC 27834
LAT/LONG: 35.6079 / 77.3854

CLIENT: ATC Associates Inc. #45
CONTACT: Jeff Corson
INQUIRY #: 3363129.2s
DATE: July 09, 2012 6:14 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	1.000		0	0	0	0	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
NC HSDS	1.000		0	0	0	1	NR	1
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	1	0	0	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
OLI	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		4	11	30	NR	NR	45

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LUST TRUST	0.500		3	4	17	NR	NR	24
LAST	0.500		0	0	3	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		6	5	NR	NR	NR	11
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	1	0	NR	NR	1
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	2	NR	NR	2
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HIST LF	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen	0.250		1	2	NR	NR	NR	3
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
IMD	0.500		3	9	23	NR	NR	35
UIC	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
FINANCIAL ASSURANCE	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	1.000		0	0	0	1	NR	1

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

HSDS
Region
NE
1/2-1
3140 ft.

GREENVILLE COAL GAS PLANT

, NC

NC HSDS

S102442530
N/A

HSDS:
Site Type: Federal
Superfund ID: 986 188 886
Lat/Long: 35 36 57.978380 77 22 32.694728
Total area in coverage units: 15827.6660156
Total perimeter in coverage units: 505.70578002
X-value coordinate in feet: 2482728.75
Y-value coordinate in feet: 683091.9375
Sites designated as superfund cleanup sites: 434
Length of feature in internal units: 505.705724829
Area of feature in internal units squared: 15827.6626249

1

< 1/8
1 ft.

A B WHITLEY INC
1311 WEST 14TH STREET
GREENVILLE, NC 27834

UST

U003563226
N/A

Relative:
Higher

Actual:
63 ft.

UST:
Contact: A B WHITLEY INC
Contact Address1: 1311 WEST 14TH STREET
Contact Address2: Not reported
Contact City/State/Zip: GREENVILLE, NC 27834
Installed Date: 09/24/1979
Root Tank Id: Not reported
Main Tank: 0
Compartment Tank: 0
Manifold Tank: Not reported
Product Name: Gasoline, Gas Mix
Tank Status: Removed
Tank Capacity: 1000
Perm Close Date: 12/13/1990
Commercial: Yes
Regulated: Yes
Product Key: 3
Tank Construction: Steel
Piping Construction: FRP
Piping System Key: 1
Other CP Tank: Not reported
FIPS County Desc: Pitt
Latitude: 0
Longitude: 0

Installed Date: 09/24/1979
Root Tank Id: Not reported
Main Tank: 0
Compartment Tank: 0
Manifold Tank: Not reported
Product Name: Diesel
Tank Status: Removed
Tank Capacity: 550
Perm Close Date: 12/13/1990
Commercial: Yes
Regulated: Yes
Product Key: 1

A B WHITLEY INC (Continued) **U003563226**

Tank Construction: Steel
Piping Construction: FRP
Piping System Key: 1
Other CP Tank: Not reported
FIPS County Desc: Pitt
Latitude: 0
Longitude: 0

Installed Date: 01/01/1964
Root Tank Id: Not reported
Main Tank: 0
Compartment Tank: 0
Manifold Tank: Not reported
Product Name: Unknown
Tank Status: Removed
Tank Capacity: 550
Perm Close Date: 07/19/1993
Commercial: No
Regulated: Yes
Product Key: 20
Tank Construction: Concrete
Piping Construction: Aluminum
Piping System Key: 1
Other CP Tank: Not reported
FIPS County Desc: Pitt
Latitude: 0
Longitude: 0

Installed Date: 09/24/1979
Root Tank Id: Not reported
Main Tank: 0
Compartment Tank: 0
Manifold Tank: Not reported
Product Name: Oil, New/Used/Mix
Tank Status: Removed
Tank Capacity: 550
Perm Close Date: 12/13/1990
Commercial: Yes
Regulated: Yes
Product Key: 14
Tank Construction: Steel
Piping Construction: FRP
Piping System Key: 1
Other CP Tank: Not reported
FIPS County Desc: Pitt
Latitude: 0
Longitude: 0

Installed Date: 09/27/1965
Root Tank Id: Not reported
Main Tank: 0
Compartment Tank: 0
Manifold Tank: Not reported
Product Name: Heating Oil/Fuel
Tank Status: Removed
Tank Capacity: 280
Perm Close Date: 05/24/1991

A B WHITLEY INC (Continued) **U003563226**

Commercial: No
Regulated: No
Product Key: 6
Tank Construction: Concrete
Piping Construction: FRP
Piping System Key: 1
Other CP Tank: Not reported
FIPS County Desc: Pitt
Latitude: 0
Longitude: 0

A2
< 1/8
0.000 mi.
2 ft.

Relative:
Lower

Actual:
59 ft.

MACHINE&WELDING(PREVIOUS RENTER)
307 SPRUCE ST.
GREENVILLE, NC 27834

Site 1 of 4 in cluster A

UST **U001197869**
N/A

UST:
Contact: UNKNOWN
Contact Address1: 307 SPRUCE STREET
Contact Address2: Not reported
Contact City/State/Zip: GREENVILLE, NC 27834
Installed Date: 05/04/1976
Root Tank Id: Not reported
Main Tank: 0
Compartment Tank: 0
Manifold Tank: Not reported
Product Name: Diesel
Tank Status: Removed
Tank Capacity: 1000
Perm Close Date: 12/31/1988
Commercial: Yes
Regulated: Yes
Product Key: 1
Tank Construction: Steel
Piping Construction: FRP
Piping System Key: 1
Other CP Tank: Not reported
FIPS County Desc: Pitt
Latitude: 0
Longitude: 0

A3
ENE
< 1/8
0.004 mi.
20 ft.

Relative:
Lower

Actual:
59 ft.

AMERICAN AUTO BODY
302 SPRUCE ST
GREENVILLE, NC 27834

Site 2 of 4 in cluster A

RCRA-NonGen **1004745458**
FINDS **NCD982122657**

RCRA-NonGen:
Date form received by agency: 06/27/1990
Facility name: AMERICAN AUTO BODY
Facility address: 302 SPRUCE ST
GREENVILLE, NC 27834
EPA ID: NCD982122657
Mailing address: SPRUCE ST
GREENVILLE, NC 27834

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

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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

INQUIRY #: 3363129.5

YEAR: 1961

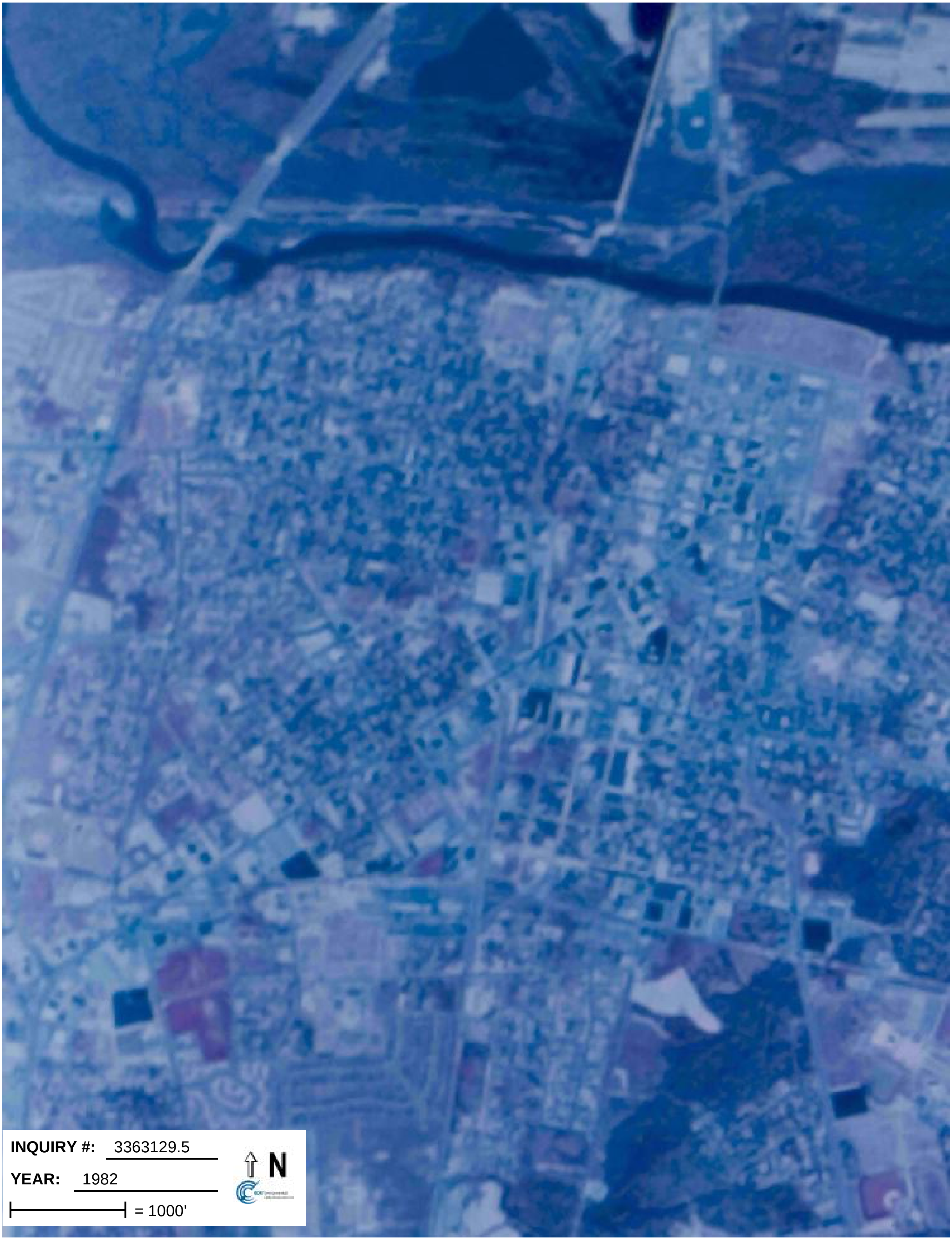
= 1000'


INQUIRY #: 3363129.5
YEAR: 1974
= 1000'
N

INQUIRY #: 3363129.5

YEAR: 1977

= 750'



INQUIRY #: 3363129.5

YEAR: 1982

= 1000'

INQUIRY #: 3363129.5

YEAR: 1993

= 500'

INQUIRY #: 3363129.5

YEAR: 1999

= 1000'


INQUIRY #: 3363129.5
YEAR: 2005
= 500'
N

INQUIRY #: 3363129.5

YEAR: 2006

= 500'

INQUIRY #: 3363129.5

YEAR: 2008

= 500'

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

EDR Inquiry # 3363129.3

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

Contact: Jeff Corson

EDR® Environmental Data Resources Inc

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

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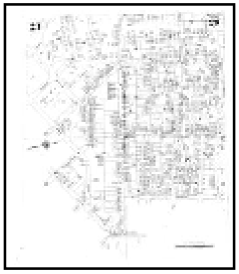
Sanborn Sheet Thumbnails

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

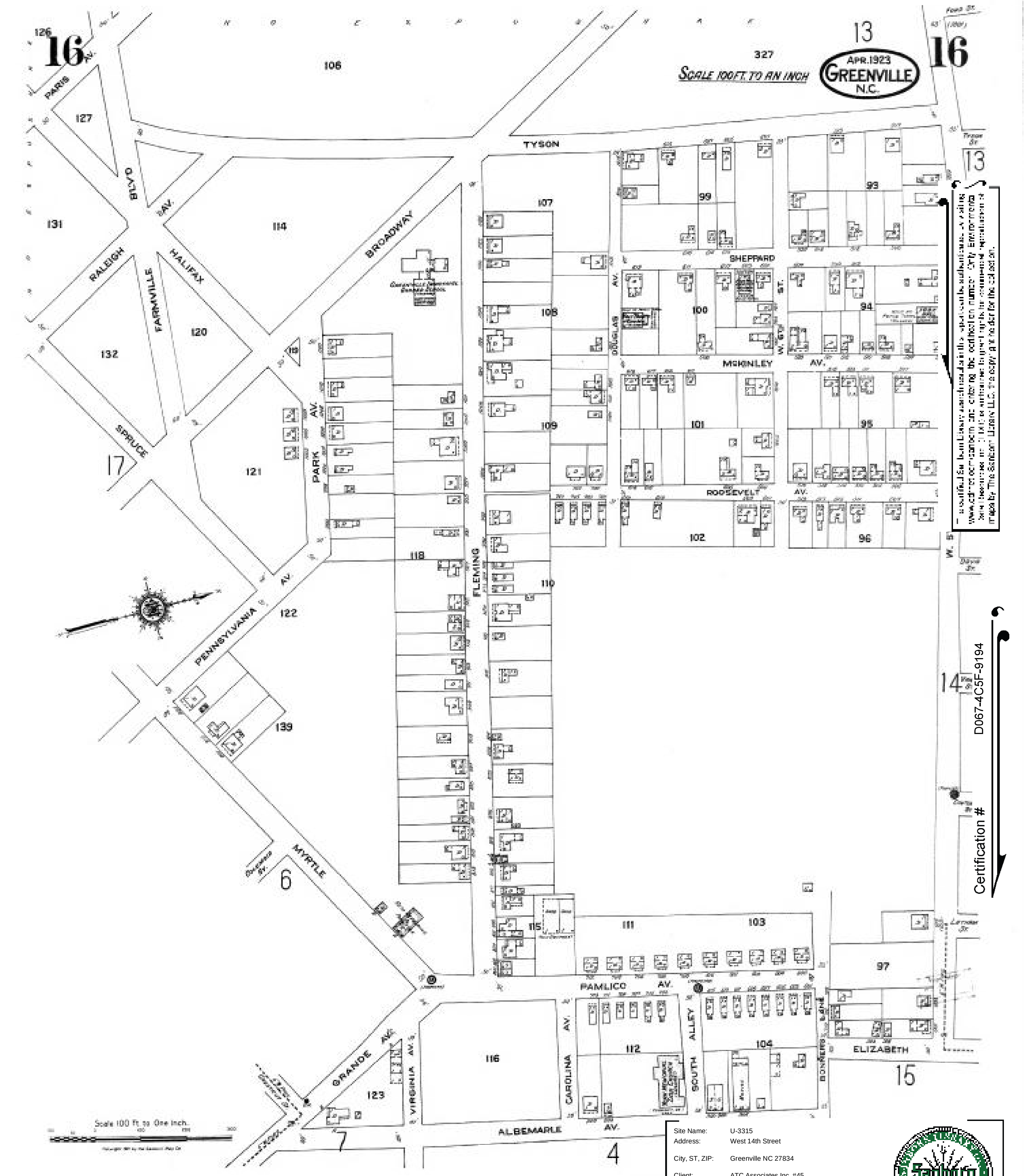
Volume 1, Sheet 25

1923 Source Sheets

Volume 1, Sheet 16

Volume 1, Sheet 17

1923 Certified Sanborn Map



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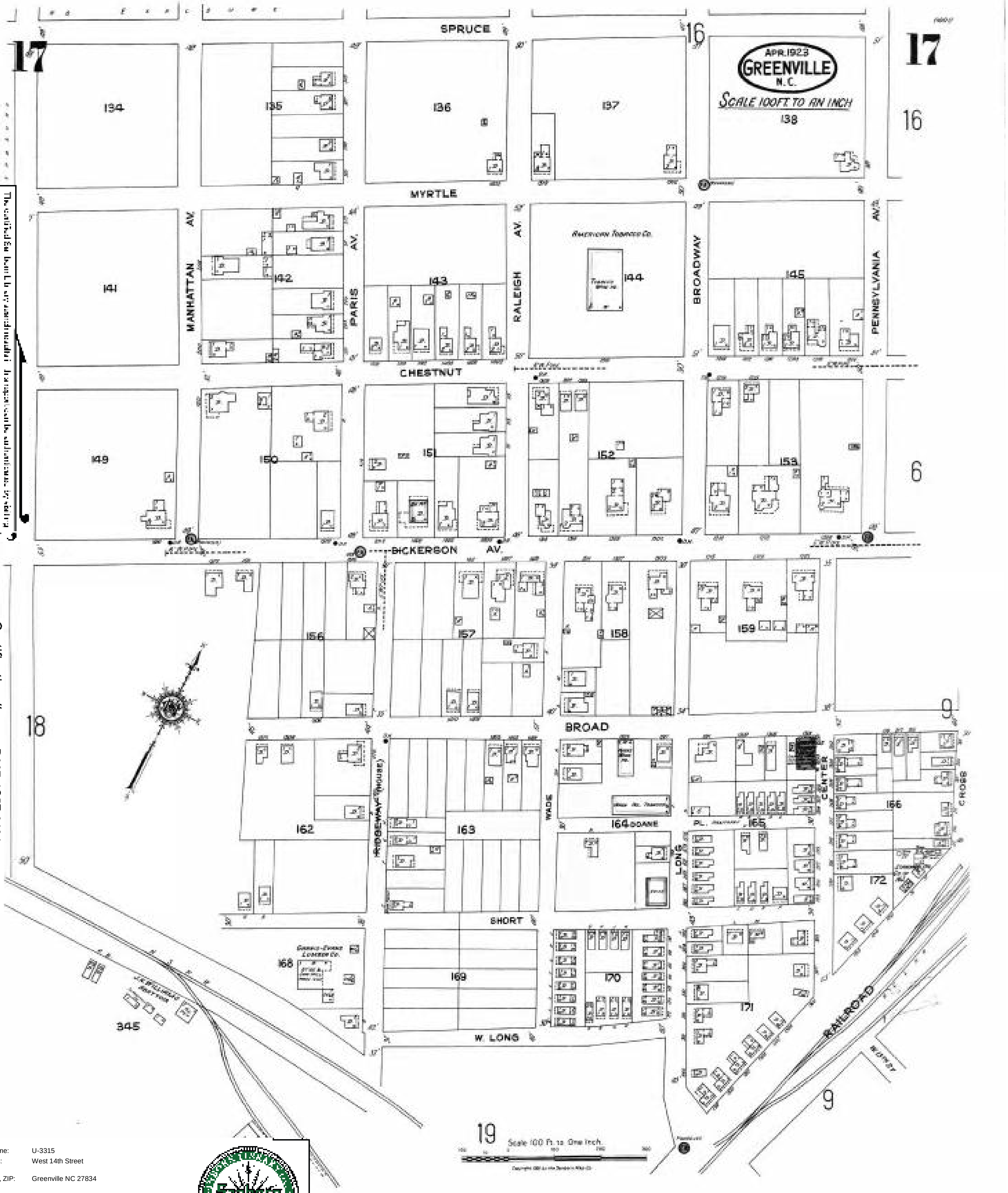
Certification # D067-4C5F-9194

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

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

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

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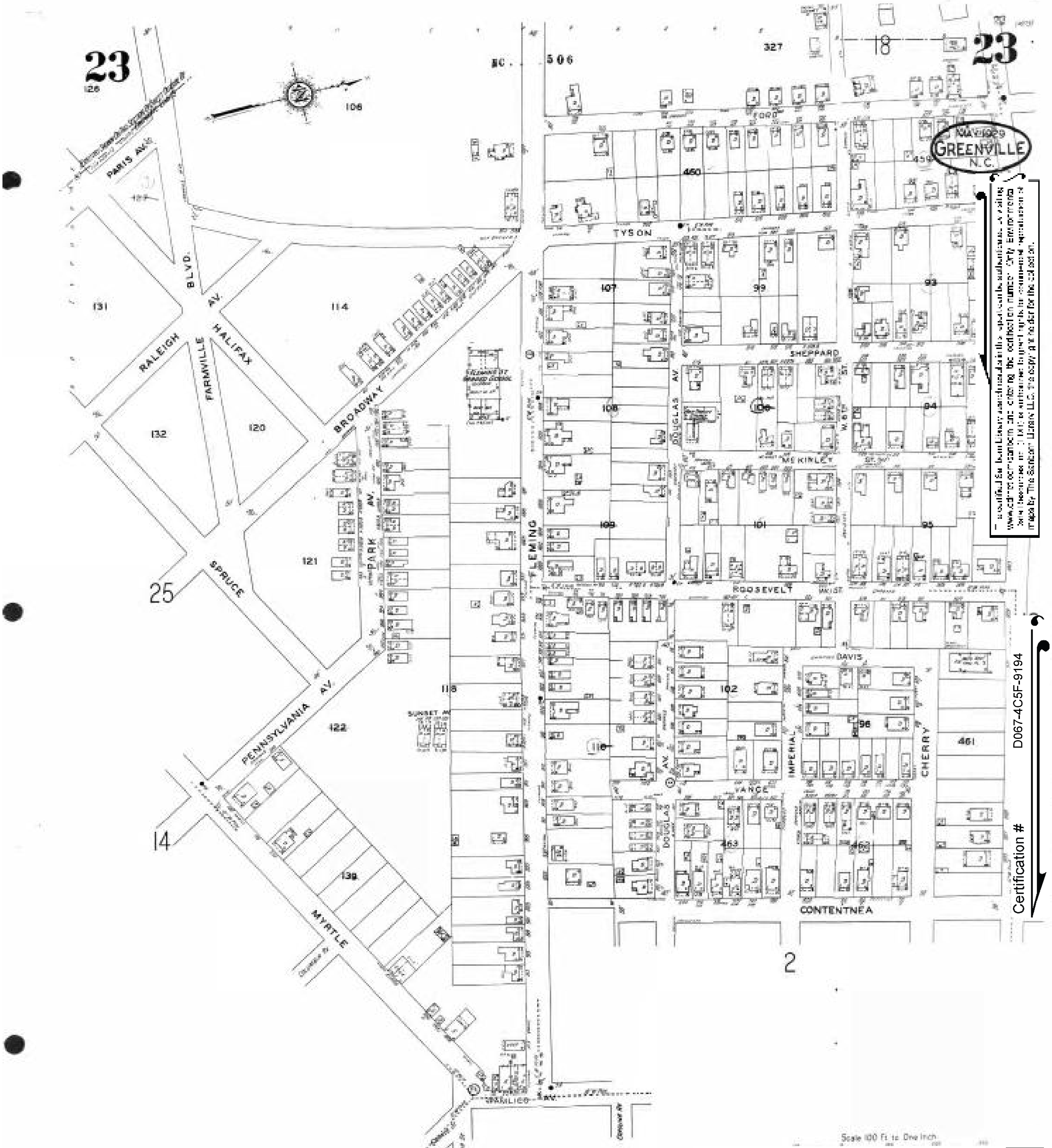
Certification # D067-4C5F-9194

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



D067-4C5F-9194

Certification #

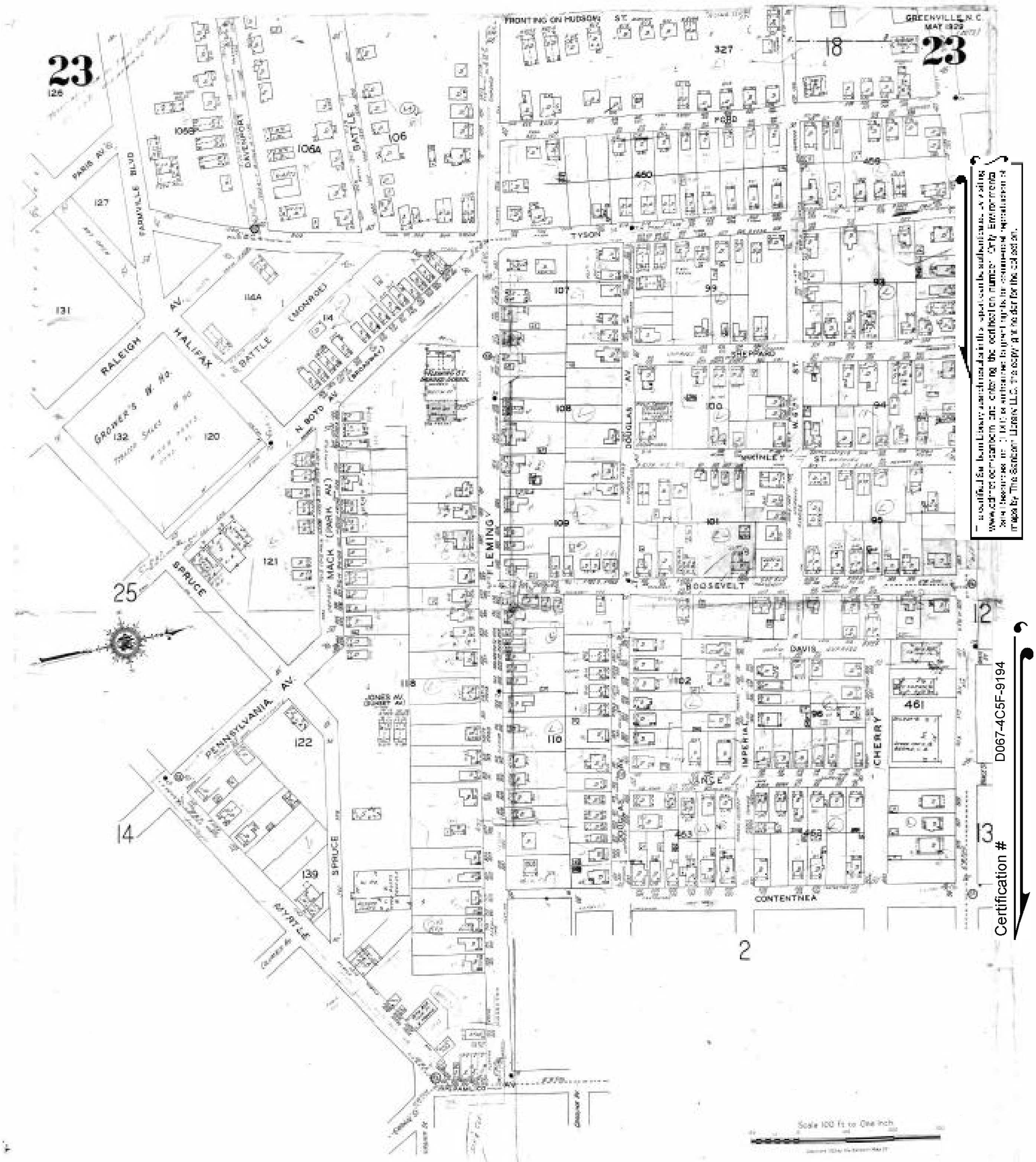
Site Name:	U-3315
Address:	West 14th Street
City, ST, ZIP:	Greenville NC 27834
Client:	ATC Associates Inc. #45
EDR Inquiry:	3363129.3
Order Date:	7/10/2012 9:52:03 AM
Certification #	D067-4C5F-9194
Copyright:	1946

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

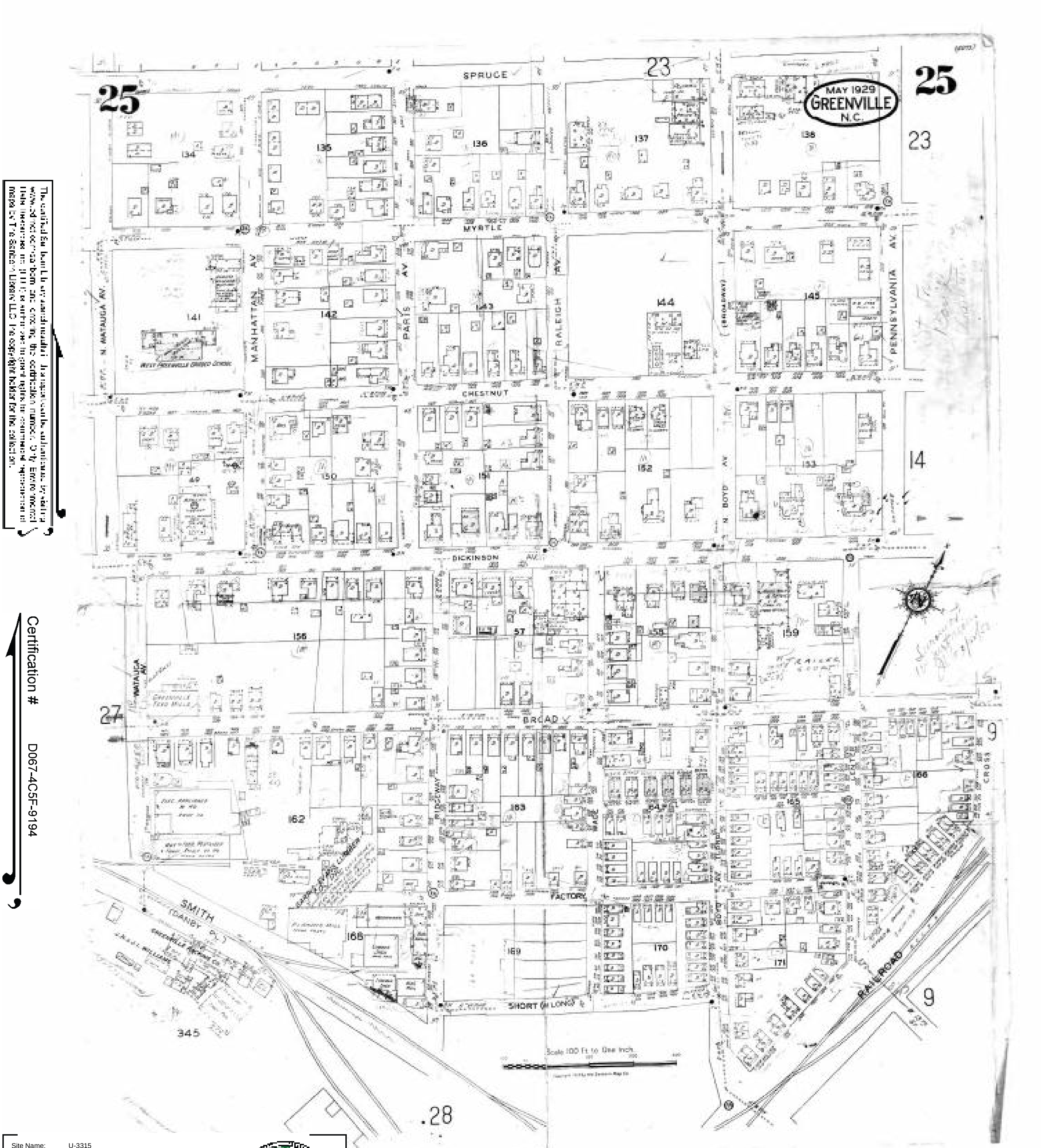
City, ST, ZIP: Greenville NC 27834

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*

Holloman, Oscar Property (Parcel 49)
1311 West 14th Street
Greenville, North Carolina

October 26, 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
Holloman, Oscar Property (Parcel 49)
1311 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 1311 West 14th Street in the city of Greenville, North Carolina and bordered on the north by Farmville Blvd, the west by Raleigh Street and the south by Spruce Street.

This site is currently a vacant lot that is partially fenced in with one building in the southwest region of the property. The building is one story and is open on one side. It is used as a storage shed at this time. Historically the site appeared to have operated as a repair shop or industrial site. According to NCDENR's UST Section Registry four (4) UST's were removed in 1990, 1991 and 1993. One (1) UST is reported as having been filled with concrete and not removed.

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 2012.

The purpose of this investigation was to:

- Survey for detectable structures (UST) and other subsurface anomalies.

The specified survey area was described as 1311 West 14th Street in the city of Greenville, North Carolina and bordered on the north by Farmville Blvd, the west by Raleigh Street and the east by West 14th Avenue.

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 EQUIPMENT

Ground Penetrating Radar (GPR)

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 EQUIPMENT

Electromagnetic (EM) and Magnetic Detection

The magnetic detection method is a LF (30 to 300 kHz) or VLF (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 - E: Five (5) areas approximately two (2) inches in diameter were noted. These discoveries were made using magnetics indicating metallic objects. Surface Ground Penetrating Radar data showed a metallic spike indicating shallow metal objects. A sketch of this area is included on page 13.

Target F -G: Two (2) areas approximately two (2) foot in diameter was noted. These discoveries were made using magnetics indicating metallic objects. Surface Ground Penetrating Radar data showed multiple metallic spikes indicating shallow metal objects. It is probable that trash with metal content was dumped in this area. A sketch of this area is included on page 13.

Target H: A four (4) inch square hollow metal pipe with two (2) inches of material above ground was noted. This discovery was made using magnetics indicating a metallic object(s). Surface Ground Penetrating Radar data was inconclusive. A sketch of this area is included on page 13.

Target I: An area approximately three (3) foot in diameter was noted. This discovery was made using magnetics indicating a metallic object(s). Surface Ground Penetrating Radar data was inconclusive. A sketch of this area is included on page 13.

Target J: An area approximately seven (7) foot by eight (8) foot in size was noted. This discovery was made using Surface Ground Penetrating Radar. No magnetic objects were detected here. Multiple hyperbolae were noted within the disturbed walls of earth strata. This may be indicative of trash dumped on a site and buried. A sketch of this area is included on page 13.

Target K: An area approximately seven and a half (7.5) foot by three and a half (3.5) foot in size was noted. This discovery was made using Surface Ground Penetrating Radar. No magnetic objects were detected here. Multiple hyperbolae were noted within the disturbed walls of earth strata. This may be indicative of trash dumped in a site and buried. A sketch of this area is included on page 13.

Target L: An area approximately three and a half (3.5) foot by four (4) foot in size was noted. This discovery was made using Surface Ground Penetrating Radar. No magnetic objects were detected here. Multiple hyperbolae were noted within the disturbed walls of earth strata. This may be indicative of trash dumped in a site and buried. A sketch of this area is included on page 13.

Target M: An area approximately three and a half (3.5) foot by five and a half (5.5) foot in size was noted. This discovery was made using Surface Ground Penetrating Radar. The radar data collected was not indicative as a solid object, but appeared to be more indicative as disturbed ground (subsurface). No magnetic objects were detected here. This is likely an area which may have contained a Possible UST. A sketch of this area is included on page 13.

Target N: An area approximately ten (10) foot by five (5) foot in size was noted. This discovery was made using Surface Ground Penetrating Radar. The radar data collected was not indicative as a solid object, but appeared to be more indicative as disturbed ground (subsurface). No magnetic objects were detected here. This is likely an area which may have contained a Possible UST. A sketch of this area is included on page 13.

Target O: An area approximately three (3) foot by four and a half (4.5) foot in size was noted. This discovery was made using Surface Ground Penetrating Radar. The radar data collected was not indicative as a solid object, but appeared to be more indicative as disturbed ground (subsurface). No magnetic objects were detected here. This is likely an area which may have contained a Possible UST. A sketch of this area is included on page 13.

Target P: An area approximately five and a half (5.5) foot by four and a half (4.5) foot in size was noted. This discovery was made using Surface Ground Penetrating Radar. The radar data collected was not indicative as a solid object, but appeared to be more indicative as disturbed ground (subsurface). No magnetic objects were detected here. This is likely an area which may have contained a Possible UST. A sketch of this area is included on page 13.

Target Q: An above ground steel barrel two (2) foot in diameter was noted. This discovery was visual and the barrel may be partially buried. Surface Ground Penetrating Radar data in the surrounding area was inconclusive. A sketch of this area is included on page 13.

Target R: A Known UST of approximately six (6) feet by six (6) feet was noted. There are two (2) small metal vent pipes approximately two (2) inches in diameter protruding from the delineated area of the Known 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 Surface 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 14.

1. The pole next to target N has a water pump spigot leaning against the pole. EM, Magnetic Detection and GPR were inconclusive in determining if additional water line traveled to or from spigot. A sketch of this area is included on page 13.
2. The back side of the building contained an above ground water spigot. EM, Magnetic Detection and GPR were inconclusive in determining if additional water line traveled to or from spigot. A sketch of this area is included on page 13.
3. Two (2) NCDOT Telephone fiber optic hand holes were discovered on the property. Fiber optic cables were detected using EM with frequencies of 512 Hz, 8 kHz and 33 kHz. A sketch of this area is included on page 13.
4. Traffic control loops were discovered leaving the traffic light pole at the corner of Farmville Blvd. and W 14th Ave. the lines were detected using EM with frequencies of 65 kHz and long wave radio. A sketch of this area is included on page 13.

5. Water pipes were discovered at the northwest corner of Spruce Street and West 14th Ave. from a fire hydrant going away from property and in street. The pipes were detected using EM with frequencies of 33 kHz, 65 kHz and 200 kHz. A sketch of this area is included on page 13.
6. Steel Gas lines were discovered at the edge of pavement/face of curb line along West 14th Ave. The lines were detected using EM with frequencies of 50/60 Hz, long wave radio, 8 kHz and 33 kHz. A sketch of this area is included on page 13.
7. A street light pole located on the south side of Farmville Blvd at approximately 100 feet east of Raleigh Street was discovered visually. EM, Magnetic Detection and GPR were inconclusive in determining direction of electric lines traveling to or from street light. A sketch of this area is included on page 13.
8. Two (2) parallel gas service lines were discovered along the southwest building face of Parcel 170 entering into the Parcel 49 limits from West 14th Ave to the north and traveling in the sidewalk and along the edge of the sidewalk to the gas meter located at the southern corner of the building and next building in rear of 170. A sketch of this area is included on page 14 and 15.

Further investigation with vacuum or other form of excavation may confirm and/or reveal more information. A sketch of this area is included on page 13.

As stated, this assessment 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.

Property shown from West 14th Ave. looking west

Property shown from Farmville Blvd looking west
Picture shows fiber optic cable delineated in orange

View of corner of property at W 14th and Farmville
Gas line delineated in yellow. Next to tree is NCDOT hand hole with fiber coming down pole.

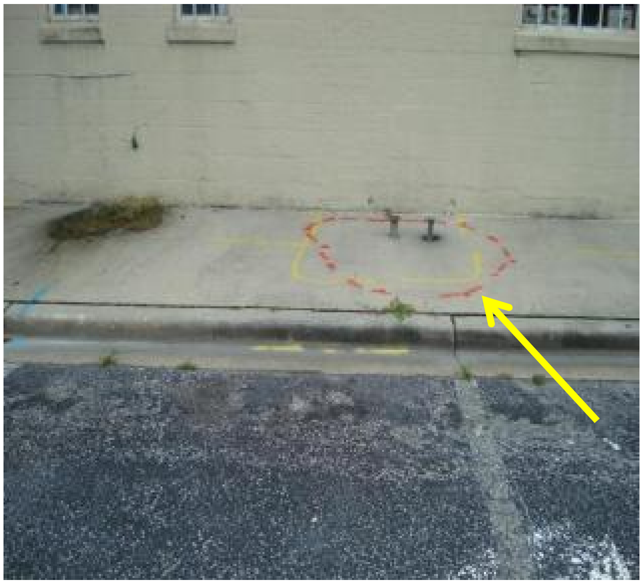
Target H

Target J

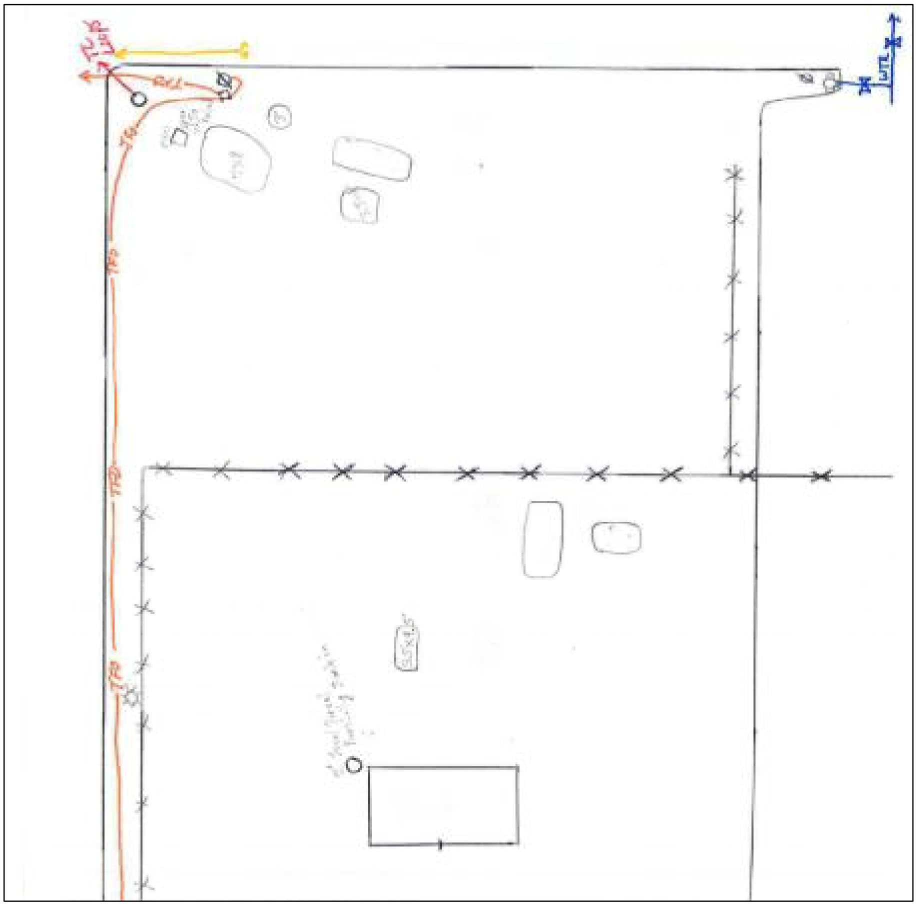
Target K

Target M

Target O

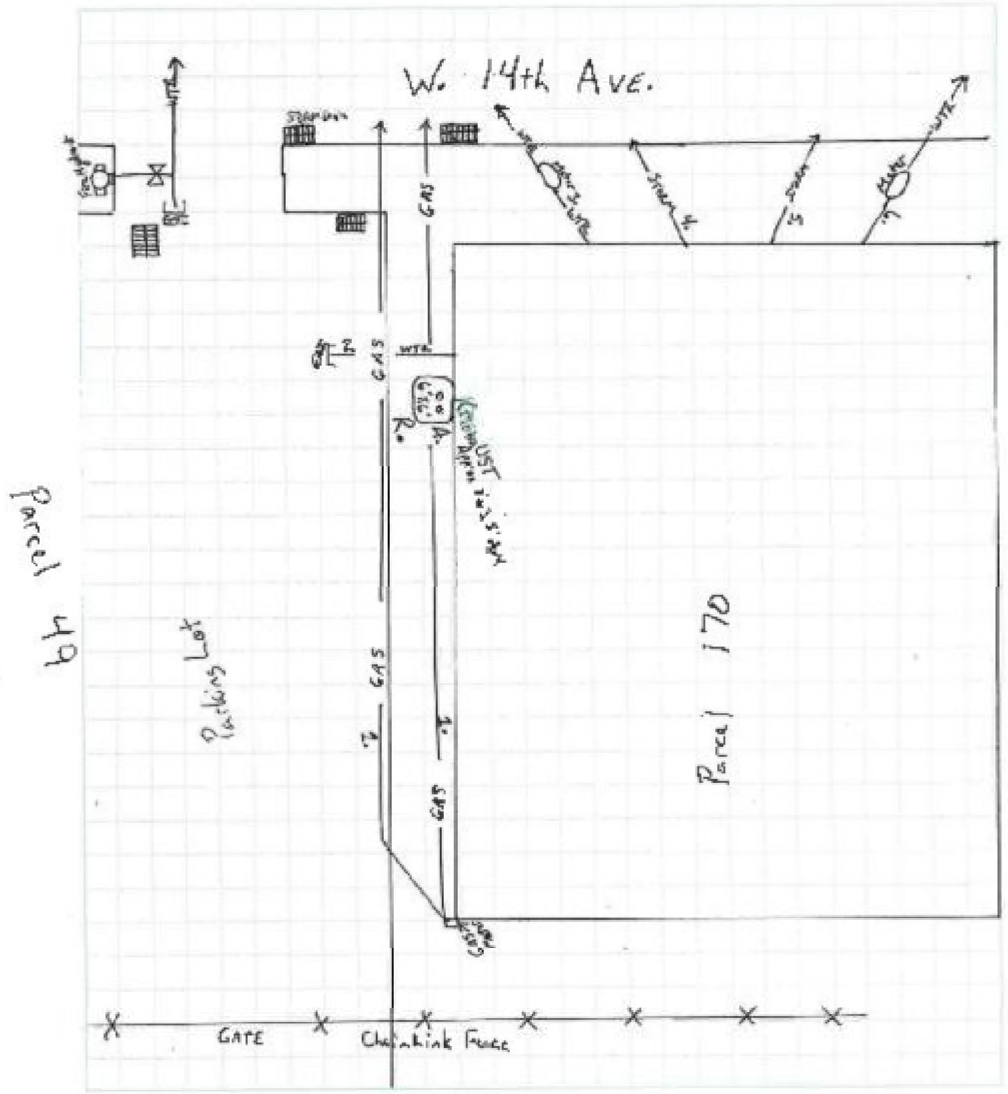


Target R also shown on Parcel 170 report



Field sketch delineating utilities and anomalies found at time of discoveries

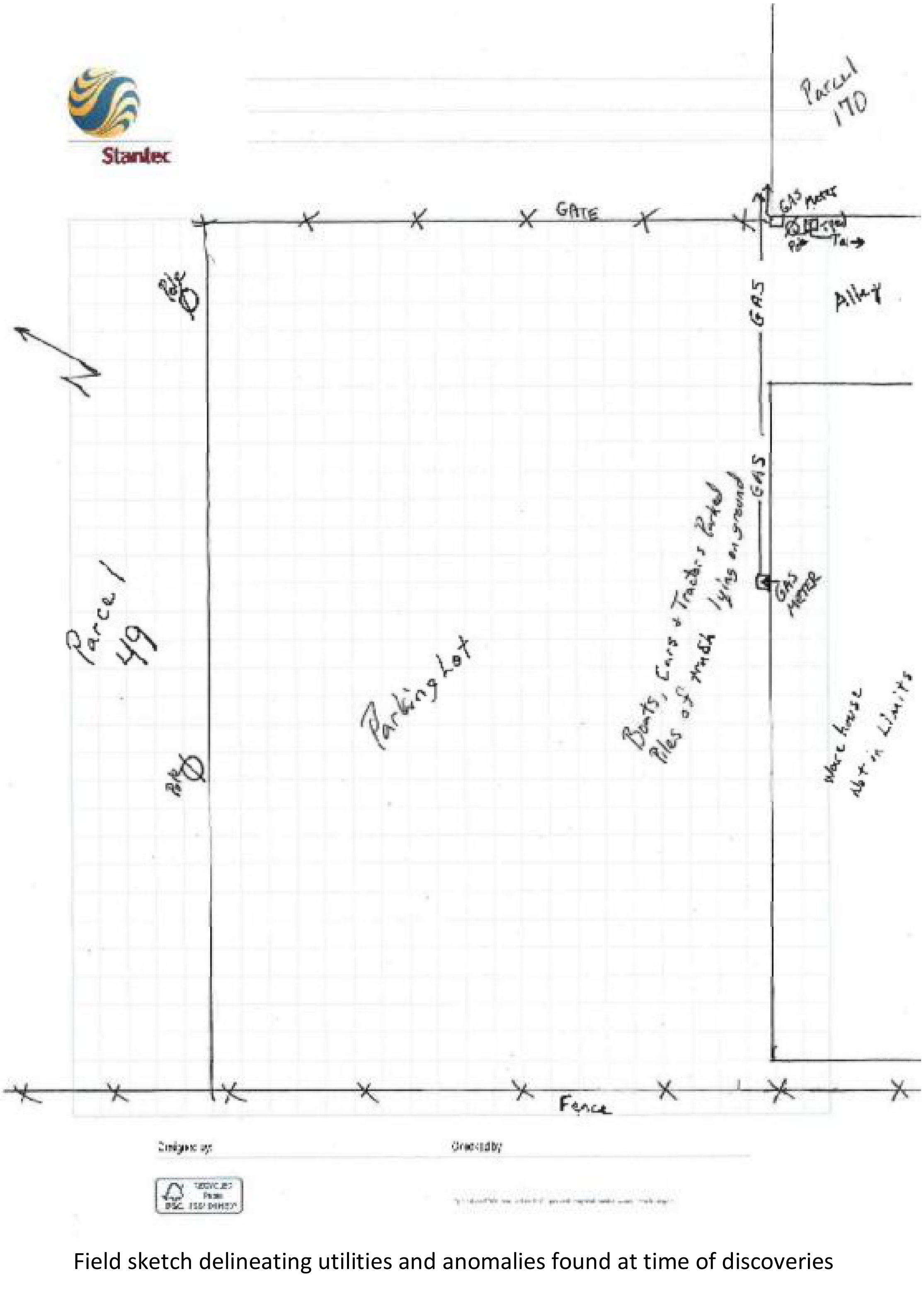
Stantec



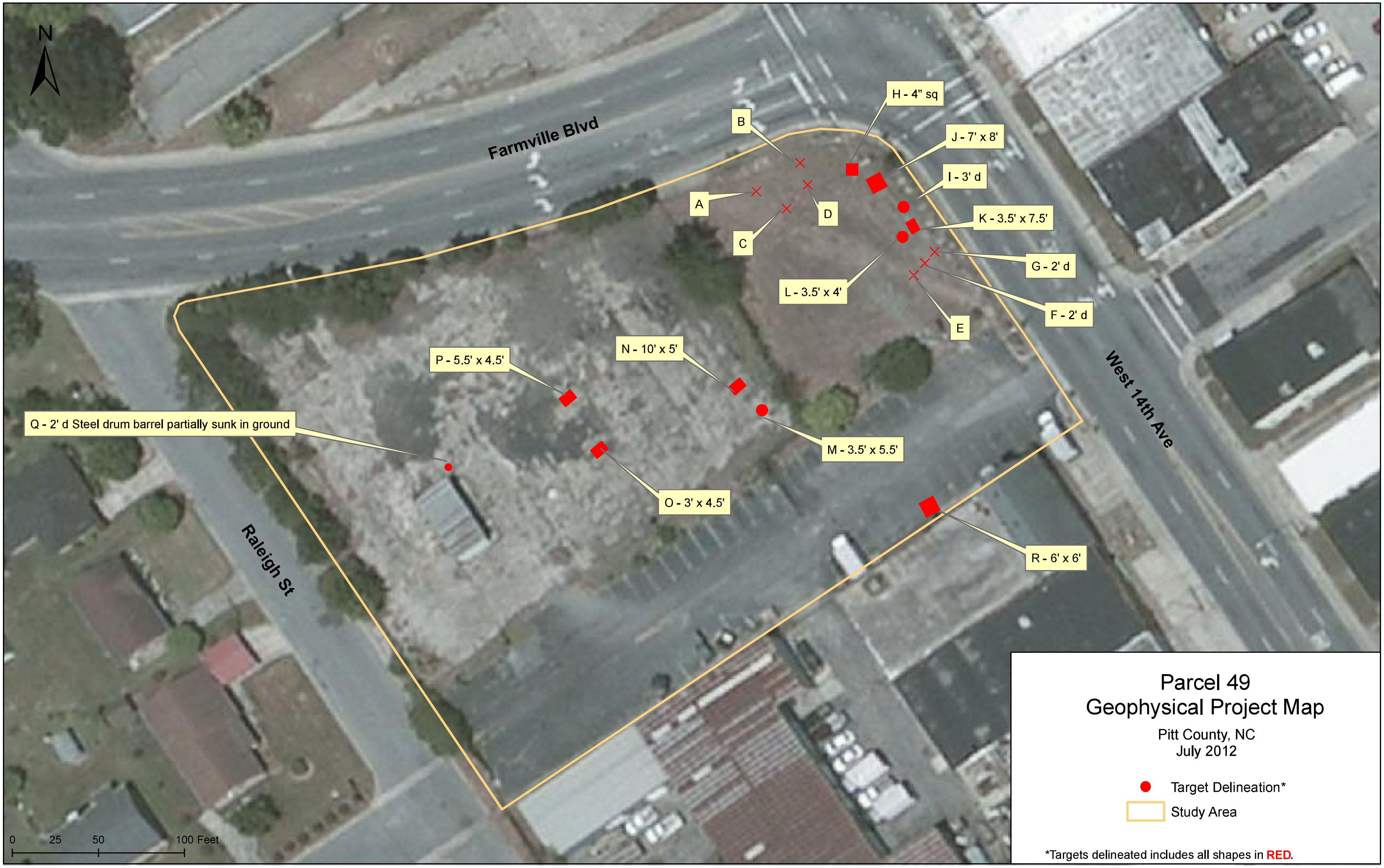
Designed by:

Checked by:

Field sketch delineating utilities and anomalies found at time of discoveries



Field sketch delineating utilities and anomalies found at time of discoveries



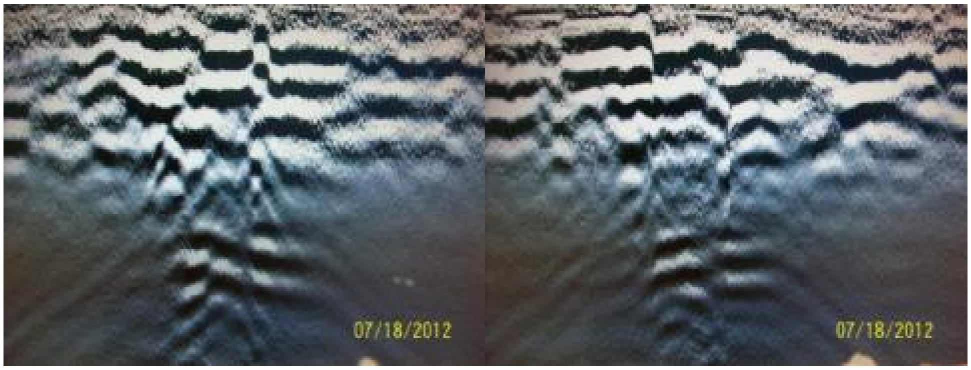
Parcel 49
Geophysical Project Map

Pitt County, NC
July 2012

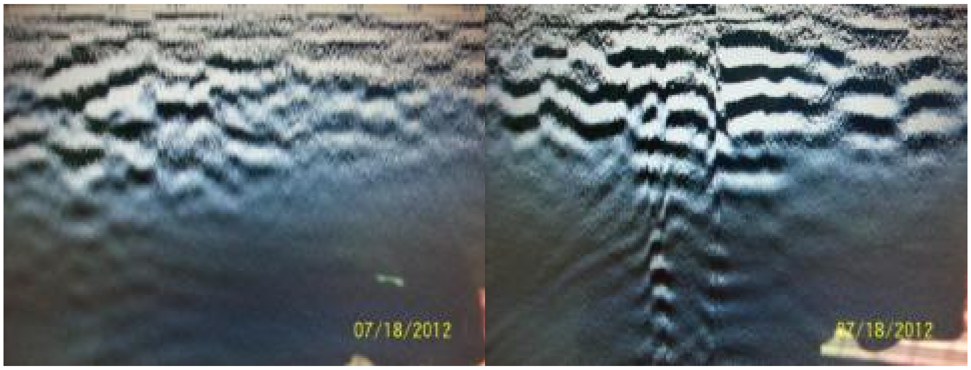
● Target Delineation*
▭ Study Area

*Targets delineated includes all shapes in RED.

GPR images obtained over targets J and K from orthogonal angles



GPR images from transect passes over targets M and L



GPR images from transect passes over and near targets N and P

APPENDIX C

BORING LOGS

BORING LOG: SB49-1

Client: NCDOT
Project U-3315 Parcel 49
Stantonburg - 10th Street Connector
Greenville, North Carolina

ATC Project No. 45.19873.0007

Date(s) Drilled : 7/25/2012
Driller : SAEDACCO
Drilling Method : Direct Push

Boring Diameter : 2.25 Inches
Sampling Method : Macrocore
Sampling Interval : Continuous

Logged By : Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sampled (ft. bgs)
0	AR		Concrete and Subbase		
	CL		Tan, red, and gray mottled silty sandy CLAY, dry		
1				0.0	
2					
3				0.0	x
4					
5			Boring terminated 5 feet below ground surface		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-2

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR		Concrete and Subbase		
1 2	SM		Tan, clayey, silty, fine-grained SAND, dry	0.0	
3 4 5	SM		Tan, silty, fine-grained sand, moist	0.0	x

Boring terminated 5 feet below ground surface

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-3

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR	☒	Concrete and Subbase		
1 2	SM	░	Tan, gray, clayey, silty, fine-grained SAND, moist	0.0	
3 4	CL	▨	Tan, red, and gray mottled, sandy, silty CLAY, moist.	0.0	x
5			Boring terminated 5 feet below ground surface		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-4

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR	☒	Concrete and Subbase		
	SM	░	Tan, sandy, silty CLAY, slightly moist		
1				0.0	
2					
3				0.0	x
4					
5			Boring terminated 5 feet below ground surface		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-5

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR	☒	Concrete and Subbase		
0.5–2.5	SM	░	Tan and gray, sandy, silty CLAY, slightly moist	0.0	
2.5–5	CL	▨	Tan and gray CLAY, dry	0.0	x
5			Boring terminated 5 feet below ground surface		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-6

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled : 7/25/2012
Driller : SAEDACCO
Drilling Method : Direct Push

Boring Diameter : 2.25 Inches
Sampling Method : Macrocore
Sampling Interval : Continuous

Logged By : Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample (ft. bgs)
0	AR	☒	Concrete and Subbase		
1 2	SM	░	Tan and gray, sandy, silty SAND, moist	0.0	
3 4	CL	▨	Tan and gray CLAY, dry	0.0	x
5			Boring terminated 5 feet below ground surface		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-7

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR		Concrete and Subbase		
1 2	SM		Grayish tan, silty SAND, dry	0.0	
3 4	SW		Gray medium grained SAND, moist	0.0	x
5			Boring terminated 5 feet below ground surface		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-8

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR	☒	Concrete and Subbase		
	SW	⁙	Tannish gray SAND, moist		
1				0.0	
2					
3					
				0.0	x
4					
5			Boring terminated 5 feet below ground surface		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-9

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR	▨	Concrete and Subbase		
	SW	⁘	Gray SAND, moist		
1				0.0	
2					
3				0.0	x
4					
5			Boring terminated 5 feet below ground surface		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-10

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR		Concrete and Subbase		
1	SW		Tan sandy CLAY	0.0	
2 3 4 5 6 7 8 9	SM		Gray silty SAND, moist	0.0 0.0 0.0 0.0 0.0	x
10 11 12	SM		Gray silty SAND, wet		

End of boring at 12' bgs

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-11

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR		Concrete and Subbase		
1 2	SW		Tan silty CLAY	0.0	
3 4	SM		Gray medium grained SAND, moist	0.0	x
5			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-12

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 PID (ppm)	Sample (ft. bgs)
0	AR	⊠	Concrete and Subbase		
1	SW	⁘	Tan silty CLAY	0.0	
2–3	SM	⁘	Grayish tan, silty medium grained SAND, moist	0.0	x
4–7	SW	⁘	Light tan, fine grained SAND, moist	0.0	
8–9	CL	▨	Gray and tan, sandy silty CLAY, moist	0.0	
10–11	SW	⁘	Tan, silty medium grained sand, wet		
12			End of boring at 12' bgs		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-13

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	Boring Diameter	: 2 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 (ft. bgs)
0	AR	▨	Concrete and Subbase	0.0	x
1 2	SW	░	Brown silty SAND, dry		
			End of boring at 2.5' bgs due to obstruction		

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

BORING LOG: SB49-14

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/25/2012	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 (ft. bgs)
0	AR	☒	Concrete and Subbase		
	CL	▨	Tan sandy CLAY		
1				0.0	
2	SM	▨	Gray silty SAND, moist		
3					
4				0.0	x
5					
6				0.0	
7					
8					
9				0.0	
10	SW	▨	Gray SAND, saturated		
	CL	▨	Gray CLAY, moist		
11					
12			End of boring at 12' bgs		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-15

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled : 7/25/2012
Driller : SAEDACCO
Drilling Method : Direct Push

Boring Diameter : 2.25 Inches
Sampling Method : Macrocore
Sampling Interval : Continuous

Logged By : Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample (ft. bgs)
0	CG		Concrete and Subbase		
1 2 3 4 5	SM		Brown and tan silty SAND, very moist	0.0 0.0	x
	SM		Brown and tan silty SAND, saturated		
6			End of boring at 6' bgs		

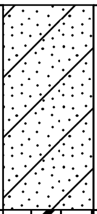
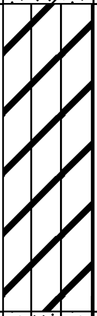
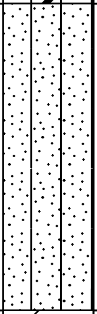
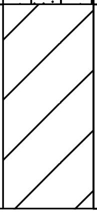
Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-16

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/26/2012	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 (ft. bgs)
0	SC		Tan and Brown, gravelly, clayey SAND, dry		
1 2	CL		Tan, silty CLAY, dry	0.0	
3	SM		Gray silty SAND, dry	0.0	x
4	CL		Gray and tan CLAY, dry		
5			End of boring at 5' bgs		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-17

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/26/2012	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 (ft. bgs)
0 1 2	SW		Grayish tan, medium grained SAND, moist	0.0	
3 4	SM		Tan and brown, silty, fine grained SAND, dry	0.4	x
5	SM		Gray, clayey, silty, fine grained SAND, moist		

End of boring at 5' bgs

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-18

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/26/2012	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 (ft. bgs)
0	SC		Tan and brown, clayey, gravelly SAND, dry		
1	SW		Tan, fine grained SAND, dry	0.0	
2	CL		Tan, sandy CLAY, dry		
	SM		Gray. silty SAND, moist		
3	SM		Brown silty SAND, moist	1.3	x
4	ML		Gray, sandy SILT, moist		
5			End of boring at 5' bgs.		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-19

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/26/2012	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 (ft. bgs)
0–1	SC	▨	Tan, clayey, silty SAND, dry		
1–2.5	SW	░	Tan, fine grained SAND, dry	4.3	
2.5–4	SW	░	Tan, silty, fine grained SAND, dry	5.8	x
4–5	SM	▥	Tan, sandy SILT, moist		
5			End of boring at 5' bgs.		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-20

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/26/2012	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 (ft. bgs)
0 1	SC		Tan, clayey, silty SAND, dry	1.5	
2	SW		Tan, silty SAND, dry		
3	SW		Brown, silty SAND, dry	1.7	x
4	SW		Brown, silty SAND, moist		
5			End of boring at 5' bgs.		

Soil sample was collected from 2.5'-5.0' bgs interval.

ATC

BORING LOG: SB49-21

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/26/2012	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 (ft. bgs)
0–1	SC	▨	Tan, clayey, silty SAND, dry		
1–2.5	SW	░	Tan, gravelly, silty SAND, dry	0.4	
2.5–5	SW	░	Brown, silty SAND, dry	2.0	x
5			End of boring at 5' bgs.		

Soil sample was collected from 2.5'-5.0' bgs interval.

BORING LOG: SB49-22

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/26/2012	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	DESCRIPTION	PID VOC (ppm)	Sample (ft. bgs)
0	SC	Tan, gravelly SAND, dry		
1	SW	Tan, gravelly, silty SAND, dry	0.0	
2				
3	SW	Gray, fine grained SAND, moist		
4			6.7	
5	SM	Gray and brown, clayey silty SAND, moist	0.0	
6		Tan and brown mottled, CLAY, moist		
7			20.7	
8				
9	SM		28.8	
10				
11			32.9	x
12		End of boring at 12' bgs		

Soil sample was collected from 10'-12' bgs interval.

BORING LOG: SB49-23

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/26/2012	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 (ft. bgs)
0–3	CL	▨	Brown, sandy CLAY, dry	1.3	
3–4	SW	⁙	Brownish gray, silty, medium grained SAND, moist	14.1	
4–5	SW	⁙	Tan, clayey, sandy SILT, moist		
5–6	SM	⁙	Gray and brown, clayey silty SAND, very moist	21.8	
6–12	CL	▨	Tan and brown, clayey silty SAND, very moist	43.5 25.5 Wet	x

End of boring at 12' bgs

Soil sample was collected from 6'-8' bgs interval.

BORING LOG: SB49-24

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled : 7/26/2012
Driller : SAEDACCO
Drilling Method : Direct Push

Boring Diameter : 2.25 Inches
Sampling Method : Macrocore
Sampling Interval : Continuous

Logged By : Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample (ft. bgs)
0	CL	▨	Tan, sandy CLAY, dry		
1				0.0	
2	SW	⋯	Gray, silty SAND, moist		
3	SW	⋯	Gray and tan, CLAY, dry		
4				5.6	
5				1.6	
6	SW	⋯	Gray and brown, clayey SAND, moist		
	SW	⋯	Gray SAND, wet		
7				10.2	
8	CL	▨	Gray and Red mottled, CLAY, moist		
9				11.2	
10					
11				70.8	x
12			No Recovery		
13					
14					
15					
16			End of boring at 16' bgs		

Soil sample was collected from 10'-12' bgs interval.

BORING LOG: SB49-25

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/26/2012	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 1	CL		Tan, sandy CLAY, dry	7.6	
2 3	SW		Gray, silty, fine grained SAND, moist	10.3	
4	SW		Gray, silty fine grained SAND, moist		
5	SM		Gray and brown, clayey, silty SAND, wet		
6 7 8 9 10 11 12	CL		Tan and brown mottled, CLAY, moist	20.5 37.1 55.6 Wet	 x

End of boring at 12' bgs

Soil sample was collected from 8'-10' bgs interval.

BORING LOG: SB49-26

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/27/2012	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	CG		Asphalt and subbase		
	SM		Dark gray, gravelly, silty SAND		
1	CL		Gray and brown, sandy CLAY, moist	0.0	
2					
3					
4				0.0	x
5					
				0.0	
6					
	SM		Gray, clayey, silty SAND, very moist		
7	SW		Tan, silty, coarse grained SAND, wet	0.0	
	CL		Soft, gray and tan, CLAY, moist		
8			No recovery, wet		
9				NA	
10					
11				NA	
12			End of boring at 12' bgs		

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

BORING LOG: SB49-27

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled : 7/27/2012
Driller : SAEDACCO
Drilling Method : Direct Push

Boring Diameter : 2.25 Inches
Sampling Method : Macrocore
Sampling Interval : Continuous

Logged By : Aaron Leff

Depth In Feet	USCS	GRAPHIC	DESCRIPTION	PID VOC (ppm)	Sample
0	CG		Asphalt and subbase		
1 2 3 4	SM		Gray, sandy CLAY, moist	0.0 0.0	x
5 6 7	CL		Gray, sandy CLAY, wet	wet wet	
8			End of boring at 8' bgs		

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

BORING LOG: SB49-28

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/27/2012	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	CG	░	Asphalt and subbase		
1 2 3 4	CL	▨	Tan and Gray, sandy CLAY, dry	0.0 0.0	x
5	CL	▨	Tan and gray mottled, sandy CLAY, moist		
6 7	CL	▨	Tan, silty, sandy CLAY, wet	0.0	
8			End of boring at 8' bgs		

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

BORING LOG: SB49-29

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/27/2012	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	CG	⁂	Asphalt and subbase		
	SM	⁚	Brown, silty SAND, dry		
1	CL	▨	Tan and gray mottled, sandy CLAY, moist	0.0	
2					
3					
				0.0	x
4					
	SM	⁚	Gray, clayey, silty SAND, wet		
5			End of boring at 5' bgs		

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

BORING LOG: SB49-30

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/27/2012	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	CG		Asphalt and subbase		
1	SM		Tan and gray, CLAY, moist	0.0	
2					
3					
4				0.0	x
	SM		Tan and gray, clayey, fine grained SAND, wet		
5			End of boring at 5' bgs		

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

BORING LOG: SB49-31

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/30/2012	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	CG		Asphalt and subbase		
1	SM		Gray, clayey, sandy SILT, wet	0.0	
2 3 4 5 6 7 8 9	SW		Tan, clayey SAND, moist	0.0 0.0 0.0 0.0	x
10 11 12	SW		Orangish tan, clayey SAND, wet	wet	

End of boring at 12' bgs

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

BORING LOG: SB49-32

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/30/2012	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	CG		Asphalt and subbase		
1–2	SM		Dark gray, silty SAND, moist	0.0	
3–5	CL		Tan, sandy CLAY, slightly moist	0.0 0.0	x
6	CL		Gray and red, silty CLAY, moist		
7	SW		Tan, clayey SAND, moist	0.0	
8–12	SW		Tan and reddish brown, coarse grained SAND, wet		

End of boring at 12' bgs

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

BORING LOG: SB49-33

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/31/2012	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	CG		Asphalt and subbase		
1	SW		Tan and gray, silty SAND, dry	0.0	
2 3 4 5	ML		Tan and red, clayey sandy SILT, dry	0.0 0.0	x
6 7	ML		Tan and gray, sandy, clayey SILT, dry	0.0	
8	ML		Tan and gray, sandy, clayey silt, moist		
9 10	SW		Tan, silty SAND, wet	wet	
11 12	ML		Soft, gray and tan, clayey SILT, wet	wet	

End of boring at 12' bgs

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

BORING LOG: SB49-34

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/31/2012	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	CG		Asphalt and subbase		
	SM		Tan and gray, silty SAND		
3	CL		Gray and red, sandy, silty CLAY		
	SM		Tan, silty SAND, moist		
7	SW		Tan, coarse grained SAND, wet		
8			End of boring at 8' bgs.		

SB49-35 not sampled due to obstruction at ~1' bgs.

BORING LOG: SB49-35

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/31/2012	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	CG		Asphalt and subbase		
1			End of boring at 1' bgs		

SB49-35 not sampled due to obstruction at ~1' bgs.

BORING LOG: SB49-36

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/31/2012	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	CG		Asphalt and subbase		
1 2	SM		Gray and tan, silty SAND, dry	0.0	
3 4 5 6	SW		Tan, clayey SAND, moist	0.0 0.0	x
7	SW		Tan, clayey SAND, wet		
8			End of boring at 8' bgs		

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

BORING LOG: SB49-37

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35781.1.2

ATC Project No. 45.19873.0007

Date(s) Drilled	: 7/31/2012	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	CG	▨	Asphalt and subbase		
	SM	⁚	Grayish tan, silty SAND, dry	0.0	
	ML	‖	Gray and tan mottled, sandy SILT, moist	0.0 0.0 0.0 0.0	 x
8	SW	⁚	Grayish tan, coarse grained SAND, wet	wet	
11	CL	▨	Soft, tan, silty CLAY, moist	wet	
12			End of boring at 12' bgs		

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

ATC ASSOCIATES INC.

WELL LOG: TW49-1

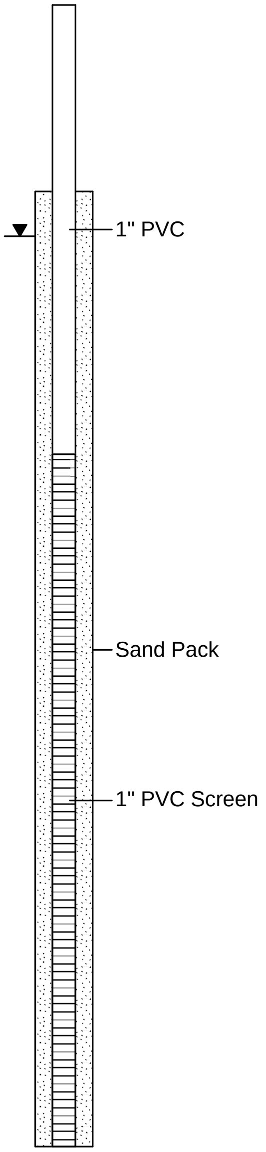
(Page 1 of 1)

Client: NCDOT
Project: U-3315 Parcel 49
Greenville, Pitt County, North Carolina
WBS Element 35784.1.1.2
ATC Project No. 45.19873.0007

Date Drilled	: 8/1/2012
Drilling Company	: SAEDACCO
Drilling Method	: Direct-Push
Boring Diameter	: 2.25 inches
Sampling Method	: Macrocore
Sampling Interval	: Continuous
Logged By	: Aaron Leff

DEPTH	USCS	GRAPHIC	DESCRIPTION	PID (ppm)
0	AR		Asphalt and subbase	
1	SW		Gray, silty SAND, dry	0.0
2	CL		Gray and brown, silty CLAY, moist	0.0
5	ML		Gray, clayey, silty SAND, moist with few gravels	
6	ML		Gray, clayey, silty SAND, wet with few gravels	0.0
7	CL		Light brown, silty CLAY, moist	
8			No Recovery, very wet	0.0
12			End of sampling at 12'	
16			Temporary well TW49-1 set at 15.8' bgs	

Well: TW49-1
Top of Casing: Not Surveyed



Temporary well TW49-1 set at 15.8 feet bgs and screened from 5.8-15.8 feet bgs.
Temporary well TW49-1 pulled up to 11 feet bgs (bottom of well) prior to sampling due to water level.
Soil sample taken at 2.5-5 feet bgs.
Depth to water approximately 3.65 feet from top of casing (TOC).
TOC is approximately 1 foot above ground surface.

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: **31202416**

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: 2012.08.08 09:51:46 -04'00'

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

Print Date: 08/08/2012 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
SB49-1 (2.5-5.0)	31202416001	07/25/2012 08:50	07/31/2012 15:30	Soil-Solid as dry weight
SB49-2 (2.5-5.0)	31202416002	07/25/2012 09:10	07/31/2012 15:30	Soil-Solid as dry weight
SB49-3 (2.5-5.0)	31202416003	07/25/2012 09:20	07/31/2012 15:30	Soil-Solid as dry weight
SB49-4 (2.5-5.0)	31202416004	07/25/2012 09:45	07/31/2012 15:30	Soil-Solid as dry weight
SB49-5 (2.5-5.0)	31202416005	07/25/2012 10:15	07/31/2012 15:30	Soil-Solid as dry weight
SB49-6 (2.5-5.0)	31202416006	07/25/2012 10:45	07/31/2012 15:30	Soil-Solid as dry weight
SB49-7 (2.5-5.0)	31202416007	07/25/2012 11:10	07/31/2012 15:30	Soil-Solid as dry weight
SB49-8 (2.5-5.0)	31202416008	07/25/2012 11:25	07/31/2012 15:30	Soil-Solid as dry weight
SB49-9 (2.5-5.0)	31202416009	07/25/2012 12:40	07/31/2012 15:30	Soil-Solid as dry weight
SB49-10 (2.5-5.0)	31202416010	07/25/2012 13:00	07/31/2012 15:30	Soil-Solid as dry weight
SB49-11 (2.5-5.0)	31202416011	07/25/2012 13:30	07/31/2012 15:30	Soil-Solid as dry weight
SB-49-12 (2.5-5.0)	31202416012	07/25/2012 13:55	07/31/2012 15:30	Soil-Solid as dry weight
SB49-13 (0-2.5)	31202416013	07/25/2012 15:20	07/31/2012 15:30	Soil-Solid as dry weight
SB49-14 (2.5-5.0)	31202416014	07/25/2012 16:30	07/31/2012 15:30	Soil-Solid as dry weight
SB49-15 (2.5-5.0)	31202416015	07/25/2012 16:50	07/31/2012 15:30	Soil-Solid as dry weight
SB49-16 (2.5-5.0)	31202416016	07/26/2012 09:20	07/31/2012 15:30	Soil-Solid as dry weight
SB49-17 (2.5-5.0)	31202416017	07/26/2012 09:40	07/31/2012 15:30	Soil-Solid as dry weight
SB49-18 (2.5-5.0)	31202416018	07/26/2012 09:50	07/31/2012 15:30	Soil-Solid as dry weight
SB49-19 (2.5-5.0)	31202416019	07/26/2012 10:05	07/31/2012 15:30	Soil-Solid as dry weight
SB49-20 (2.5-5.0)	31202416020	07/26/2012 10:25	07/31/2012 15:30	Soil-Solid as dry weight
SB49-21 (2.5-5.0)	31202416021	07/26/2012 10:35	07/31/2012 15:30	Soil-Solid as dry weight
SB49-22 (10-12)	31202416022	07/26/2012 14:45	07/31/2012 15:30	Soil-Solid as dry weight
SB49-23 (6-8)	31202416023	07/26/2012 14:35	07/31/2012 15:30	Soil-Solid as dry weight
SB49-24 (10-12)	31202416024	07/26/2012 14:00	07/31/2012 15:30	Soil-Solid as dry weight
SB49-25 (8-10)	31202416025	07/26/2012 14:15	07/31/2012 15:30	Soil-Solid as dry weight

Results of **SB49-1 (2.5-5.0)**

Client Sample ID: **SB49-1 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416001-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 08:50
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 82.10

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	**11.7**		3.81	mg/kg	1	08/1/2012 15:34
Surrogates						
4-Bromofluorobenzene	113		70.0-130	%	1	08/1/2012 15:34

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 15:34**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:27**
Prep Initial Wt./Vol.: **6.394 g**
Prep Extract Vol: **5 mL**

Results of **SB49-1 (2.5-5.0)**

Client Sample ID: **SB49-1 (2.5-5.0)**	Collection Date: 07/25/2012 08:50
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416001-C	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 82.10

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.51	mg/kg	1	08/1/2012 22:30
Surrogates						
o-Terphenyl	96.8		40.0-140	%	1	08/1/2012 22:30

Batch Information

Analytical Batch: **XGC2415**	Prep Batch: **XXX2877**
Analytical Method: **SW-846 8015C DRO**	Prep Method: **SW-846 3541**
Instrument: **GC6**	Prep Date/Time: **08/01/2012 11:09**
Analyst: **DTF**	Prep Initial Wt./Vol.: **32.44 g**
Analytical Date/Time: **08/01/2012 22:30**	Prep Extract Vol: **10 mL**

Results of **SB49-2 (2.5-5.0)**

Client Sample ID: **SB49-2 (2.5-5.0)**	Collection Date: 07/25/2012 09:10
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416002-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 86.10

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.64	mg/kg	1	08/1/2012 15:59
Surrogates						
4-Bromofluorobenzene	114		70.0-130	%	1	08/1/2012 15:59

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 15:59**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:27**
Prep Initial Wt./Vol.: **6.374 g**
Prep Extract Vol: **5 mL**

Results of **SB49-2 (2.5-5.0)**

Client Sample ID: **SB49-2 (2.5-5.0)**	Collection Date: 07/25/2012 09:10
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416002-C	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 86.10

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.16	mg/kg	1	08/1/2012 22:59
Surrogates						
o-Terphenyl	96.5		40.0-140	%	1	08/1/2012 22:59

Batch Information

Analytical Batch: **XGC2415**	Prep Batch: **XXX2877**
Analytical Method: **SW-846 8015C DRO**	Prep Method: **SW-846 3541**
Instrument: **GC6**	Prep Date/Time: **08/01/2012 11:09**
Analyst: **DTF**	Prep Initial Wt./Vol.: **32.44 g**
Analytical Date/Time: **08/01/2012 22:59**	Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-3 (2.5-5.0)**

Client Sample ID: **SB49-3 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416003-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 09:20
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 84.80

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	**4.13**		3.33	mg/kg	1	08/1/2012 16:24
Surrogates						
4-Bromofluorobenzene	114		70.0-130	%	1	08/1/2012 16:24

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 16:24**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:28**
Prep Initial Wt./Vol.: **7.073 g**
Prep Extract Vol: **5 mL**

Results of **SB49-3 (2.5-5.0)**

Client Sample ID: **SB49-3 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416003-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 09:20
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 84.80

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.95	mg/kg	1	08/1/2012 23:27
Surrogates						
o-Terphenyl	85.6		40.0-140	%	1	08/1/2012 23:27

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/01/2012 23:27**

Prep Batch: **XXX2877**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:09**
Prep Initial Wt./Vol.: **33.92 g**
Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-4 (2.5-5.0)**

Client Sample ID: **SB49-4 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416004-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 09:45
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 84.50

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.66	mg/kg	1	08/1/2012 16:50
Surrogates						
4-Bromofluorobenzene	112		70.0-130	%	1	08/1/2012 16:50

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 16:50**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:29**
Prep Initial Wt./Vol.: **6.458 g**
Prep Extract Vol: **5 mL**

Results of **SB49-4 (2.5-5.0)**

Client Sample ID: **SB49-4 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416004-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 09:45
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 84.50

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.09	mg/kg	1	08/1/2012 23:55
Surrogates						
o-Terphenyl	94.2		40.0-140	%	1	08/1/2012 23:55

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/01/2012 23:55**

Prep Batch: **XXX2877**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:09**
Prep Initial Wt./Vol.: **33.38 g**
Prep Extract Vol: **10 mL**

Results of **SB49-5 (2.5-5.0)**

Client Sample ID: **SB49-5 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416005-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 10:15
Received Date: 07/31/2012 15:30
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		4.21	mg/kg	1	08/1/2012 17:15
Surrogates						
4-Bromofluorobenzene	113		70.0-130	%	1	08/1/2012 17:15

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 17:15**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:32**
Prep Initial Wt./Vol.: **5.847 g**
Prep Extract Vol: **5 mL**

Results of **SB49-5 (2.5-5.0)**

Client Sample ID: **SB49-5 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416005-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 10:15
Received Date: 07/31/2012 15:30
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		7.84	mg/kg	1	08/2/2012 0:23
Surrogates						
o-Terphenyl	91.7		40.0-140	%	1	08/2/2012 0:23

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 00:23**

Prep Batch: **XXX2877**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:09**
Prep Initial Wt./Vol.: **31.42 g**
Prep Extract Vol: **10 mL**

Results of **SB49-6 (2.5-5.0)**

Client Sample ID: **SB49-6 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416006-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 10:45
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 76.40

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		4.03	mg/kg	1	08/1/2012 17:40
Surrogates						
4-Bromofluorobenzene	113		70.0-130	%	1	08/1/2012 17:40

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 17:40**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:33**
Prep Initial Wt./Vol.: **6.488 g**
Prep Extract Vol: **5 mL**

Results of **SB49-6 (2.5-5.0)**

Client Sample ID: **SB49-6 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416006-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 10:45
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 76.40

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.98	mg/kg	1	08/2/2012 0:51
Surrogates						
o-Terphenyl	87.1		40.0-140	%	1	08/2/2012 0:51

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 00:51**

Prep Batch: **XXX2877**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:09**
Prep Initial Wt./Vol.: **32.79 g**
Prep Extract Vol: **10 mL**

Results of **SB49-7 (2.5-5.0)**

Client Sample ID: **SB49-7 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416007-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 11:10
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 92.10

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.98	mg/kg	1	08/1/2012 18:05
Surrogates						
4-Bromofluorobenzene	114		70.0-130	%	1	08/1/2012 18:05

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 18:05**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:34**
Prep Initial Wt./Vol.: **5.461 g**
Prep Extract Vol: **5 mL**

Results of **SB49-7 (2.5-5.0)**

Client Sample ID: **SB49-7 (2.5-5.0)**	Collection Date: 07/25/2012 11:10
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416007-C	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 92.10

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.86	mg/kg	1	08/2/2012 1:20
Surrogates						
o-Terphenyl	98.4		40.0-140	%	1	08/2/2012 1:20

Batch Information

Analytical Batch: **XGC2415**	Prep Batch: **XXX2877**
Analytical Method: **SW-846 8015C DRO**	Prep Method: **SW-846 3541**
Instrument: **GC6**	Prep Date/Time: **08/01/2012 11:09**
Analyst: **DTF**	Prep Initial Wt./Vol.: **31.67 g**
Analytical Date/Time: **08/02/2012 01:20**	Prep Extract Vol: **10 mL**

Results of **SB49-8 (2.5-5.0)**

Client Sample ID: **SB49-8 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416008-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 11:25
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 81.40

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	**4.82**		4.48	mg/kg	1	08/1/2012 18:31
Surrogates						
4-Bromofluorobenzene	109		70.0-130	%	1	08/1/2012 18:31

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 18:31**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:35**
Prep Initial Wt./Vol.: **5.482 g**
Prep Extract Vol: **5 mL**

Results of **SB49-8 (2.5-5.0)**

Client Sample ID: **SB49-8 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416008-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 11:25
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 81.40

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.59	mg/kg	1	08/2/2012 1:48
Surrogates						
o-Terphenyl	71.5		40.0-140	%	1	08/2/2012 1:48

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 01:48**

Prep Batch: **XXX2877**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:09**
Prep Initial Wt./Vol.: **32.36 g**
Prep Extract Vol: **10 mL**

Results of **SB49-9 (2.5-5.0)**

Client Sample ID: **SB49-9 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416009-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 12:40
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 90.00

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.71	mg/kg	1	08/1/2012 18:56
Surrogates						
4-Bromofluorobenzene	114		70.0-130	%	1	08/1/2012 18:56

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 18:56**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:36**
Prep Initial Wt./Vol.: **5.984 g**
Prep Extract Vol: **5 mL**

Results of **SB49-9 (2.5-5.0)**

Client Sample ID: **SB49-9 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416009-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 12:40
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 90.00

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.05	mg/kg	1	08/2/2012 2:16
Surrogates						
o-Terphenyl	99.8		40.0-140	%	1	08/2/2012 2:16

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 02:16**

Prep Batch: **XXX2877**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:09**
Prep Initial Wt./Vol.: **31.51 g**
Prep Extract Vol: **10 mL**

Results of **SB49-10 (2.5-5.0)**

Client Sample ID: **SB49-10 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416010-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 13:00
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 87.60

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.20	mg/kg	1	08/1/2012 19:21
Surrogates						
4-Bromofluorobenzene	113		70.0-130	%	1	08/1/2012 19:21

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 19:21**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:36**
Prep Initial Wt./Vol.: **7.128 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-10 (2.5-5.0)**

Client Sample ID: **SB49-10 (2.5-5.0)**	Collection Date: 07/25/2012 13:00
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416010-C	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 87.60

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.19	mg/kg	1	08/2/2012 2:44
Surrogates						
o-Terphenyl	99.1		40.0-140	%	1	08/2/2012 2:44

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 02:44**

Prep Batch: **XXX2877**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:09**
Prep Initial Wt./Vol.: **31.73 g**
Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-11 (2.5-5.0)**

Client Sample ID: **SB49-11 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416011-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 13:30
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 87.30

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.46	mg/kg	1	08/1/2012 20:37
Surrogates						
4-Bromofluorobenzene	113		70.0-130	%	1	08/1/2012 20:37

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 20:37**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:37**
Prep Initial Wt./Vol.: **6.627 g**
Prep Extract Vol: **5 mL**

Results of **SB49-11 (2.5-5.0)**

Client Sample ID: **SB49-11 (2.5-5.0)**	Collection Date: 07/25/2012 13:30
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416011-C	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 87.30

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.27	mg/kg	1	08/2/2012 3:12
Surrogates						
o-Terphenyl	102		40.0-140	%	1	08/2/2012 3:12

Batch Information

Analytical Batch: **XGC2415**	Prep Batch: **XXX2877**
Analytical Method: **SW-846 8015C DRO**	Prep Method: **SW-846 3541**
Instrument: **GC6**	Prep Date/Time: **08/01/2012 11:09**
Analyst: **DTF**	Prep Initial Wt./Vol.: **36.5 g**
Analytical Date/Time: **08/02/2012 03:12**	Prep Extract Vol: **10 mL**

Results of **SB-49-12 (2.5-5.0)**

Client Sample ID: **SB-49-12 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416012-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 13:55
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 91.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.81	mg/kg	1	08/1/2012 21:02
Surrogates						
4-Bromofluorobenzene	112		70.0-130	%	1	08/1/2012 21:02

Batch Information

Analytical Batch: **VGC2049**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/01/2012 21:02**

Prep Batch: **VXX3746**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:38**
Prep Initial Wt./Vol.: **5.756 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB-49-12 (2.5-5.0)**

Client Sample ID: **SB-49-12 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416012-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 13:55
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 91.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.75	mg/kg	1	08/2/2012 3:40
Surrogates						
o-Terphenyl	99.0		40.0-140	%	1	08/2/2012 3:40

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 03:40**

Prep Batch: **XXX2877**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:09**
Prep Initial Wt./Vol.: **32.51 g**
Prep Extract Vol: **10 mL**

Results of **SB49-13 (0-2.5)**

Client Sample ID: **SB49-13 (0-2.5)**	Collection Date: 07/25/2012 15:20
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416013-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 89.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.39	mg/kg	1	08/2/2012 0:23
Surrogates						
4-Bromofluorobenzene	111		70.0-130	%	1	08/2/2012 0:23

Batch Information

Analytical Batch: **VGC2050**	Prep Batch: **VXX3750**
Analytical Method: **SW-846 8015C GRO**	Prep Method: **SW-846 5035**
Instrument: **GC7**	Prep Date/Time: **08/01/2012 10:39**
Analyst: **MDY**	Prep Initial Wt./Vol.: **6.62 g**
Analytical Date/Time: **08/02/2012 00:23**	Prep Extract Vol: **5 mL**

Results of **SB49-13 (0-2.5)**

Client Sample ID: **SB49-13 (0-2.5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416013-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 15:20
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 89.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**7.38**		7.25	mg/kg	1	08/2/2012 4:09
Surrogates						
o-Terphenyl	100		40.0-140	%	1	08/2/2012 4:09

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 04:09**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **30.9 g**
Prep Extract Vol: **10 mL**

Results of **SB49-14 (2.5-5.0)**

Client Sample ID: **SB49-14 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416014-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 16:30
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 89.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		4.01	mg/kg	1	08/2/2012 0:48
Surrogates						
4-Bromofluorobenzene	113		70.0-130	%	1	08/2/2012 0:48

Batch Information

Analytical Batch: **VGC2050**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 00:48**

Prep Batch: **VXX3750**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:40**
Prep Initial Wt./Vol.: **5.586 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-14 (2.5-5.0)**

Client Sample ID: **SB49-14 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416014-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 16:30
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 89.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.19	mg/kg	1	08/2/2012 5:33
Surrogates						
o-Terphenyl	96.3		40.0-140	%	1	08/2/2012 5:33

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 05:33**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **31.17 g**
Prep Extract Vol: **10 mL**

Results of **SB49-15 (2.5-5.0)**

Client Sample ID: **SB49-15 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416015-A
Lab Project ID: 31202416

Collection Date: 07/25/2012 16:50
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 85.30

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	08/2/2012 1:13
Surrogates						
4-Bromofluorobenzene	112		70.0-130	%	1	08/2/2012 1:13

Batch Information

Analytical Batch: **VGC2050**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 01:13**

Prep Batch: **VXX3750**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:41**
Prep Initial Wt./Vol.: **6.793 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-15 (2.5-5.0)**

Client Sample ID: **SB49-15 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416015-C
Lab Project ID: 31202416

Collection Date: 07/25/2012 16:50
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 85.30

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.10	mg/kg	1	08/2/2012 6:01
Surrogates						
o-Terphenyl	101		40.0-140	%	1	08/2/2012 6:01

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 06:01**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **33.03 g**
Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-16 (2.5-5.0)**

Client Sample ID: **SB49-16 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416016-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 09:20
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 85.50

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		2.68	mg/kg	1	08/2/2012 1:39
Surrogates						
4-Bromofluorobenzene	111		70.0-130	%	1	08/2/2012 1:39

Batch Information

Analytical Batch: **VGC2050**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 01:39**

Prep Batch: **VXX3750**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:42**
Prep Initial Wt./Vol.: **8.741 g**
Prep Extract Vol: **5 mL**

Results of **SB49-16 (2.5-5.0)**

Client Sample ID: **SB49-16 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416016-C
Lab Project ID: 31202416

Collection Date: 07/26/2012 09:20
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 85.50

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.18	mg/kg	1	08/2/2012 6:29
Surrogates						
o-Terphenyl	99.0		40.0-140	%	1	08/2/2012 6:29

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 06:29**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **32.57 g**
Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-17 (2.5-5.0)**

Client Sample ID: **SB49-17 (2.5-5.0)**	Collection Date: 07/26/2012 09:40
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416017-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 82.40

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.16	mg/kg	1	08/2/2012 2:04
Surrogates						
4-Bromofluorobenzene	110		70.0-130	%	1	08/2/2012 2:04

Batch Information

Analytical Batch: **VGC2050**	Prep Batch: **VXX3750**
Analytical Method: **SW-846 8015C GRO**	Prep Method: **SW-846 5035**
Instrument: **GC7**	Prep Date/Time: **08/01/2012 10:44**
Analyst: **MDY**	Prep Initial Wt./Vol.: **7.691 g**
Analytical Date/Time: **08/02/2012 02:04**	Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-17 (2.5-5.0)**

Client Sample ID: **SB49-17 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416017-C
Lab Project ID: 31202416

Collection Date: 07/26/2012 09:40
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 82.40

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	08/2/2012 6:57
Surrogates						
o-Terphenyl	106		40.0-140	%	1	08/2/2012 6:57

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 06:57**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **31.17 g**
Prep Extract Vol: **10 mL**

Results of **SB49-18 (2.5-5.0)**

Client Sample ID: **SB49-18 (2.5-5.0)**	Collection Date: 07/26/2012 09:50
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416018-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 87.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.19	mg/kg	1	08/2/2012 2:29
Surrogates						
4-Bromofluorobenzene	114		70.0-130	%	1	08/2/2012 2:29

Batch Information

Analytical Batch: **VGC2050**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 02:29**

Prep Batch: **VXX3750**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:44**
Prep Initial Wt./Vol.: **7.196 g**
Prep Extract Vol: **5 mL**

Results of **SB49-18 (2.5-5.0)**

Client Sample ID: **SB49-18 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416018-C
Lab Project ID: 31202416

Collection Date: 07/26/2012 09:50
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 87.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.95	mg/kg	1	08/2/2012 7:26
Surrogates						
o-Terphenyl	87.0		40.0-140	%	1	08/2/2012 7:26

Batch Information

Analytical Batch: **XGC2415**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 07:26**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **32.99 g**
Prep Extract Vol: **10 mL**

Results of **SB49-19 (2.5-5.0)**

Client Sample ID: **SB49-19 (2.5-5.0)**	Collection Date: 07/26/2012 10:05
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416019-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 84.40

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.49	mg/kg	1	08/2/2012 2:54
Surrogates						
4-Bromofluorobenzene	114		70.0-130	%	1	08/2/2012 2:54

Batch Information

Analytical Batch: **VGC2050**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 02:54**

Prep Batch: **VXX3750**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:45**
Prep Initial Wt./Vol.: **6.784 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-19 (2.5-5.0)**

Client Sample ID: **SB49-19 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416019-C
Lab Project ID: 31202416

Collection Date: 07/26/2012 10:05
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 84.40

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.88	mg/kg	1	08/2/2012 17:02
Surrogates						
o-Terphenyl	95.2		40.0-140	%	1	08/2/2012 17:02

Batch Information

Analytical Batch: **XGC2416**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 17:02**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **34.45 g**
Prep Extract Vol: **10 mL**

Results of **SB49-20 (2.5-5.0)**

Client Sample ID: **SB49-20 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416020-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 10:25
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 91.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.99	mg/kg	1	08/2/2012 3:19
Surrogates						
4-Bromofluorobenzene	113		70.0-130	%	1	08/2/2012 3:19

Batch Information

Analytical Batch: **VGC2050**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 03:19**

Prep Batch: **VXX3750**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:46**
Prep Initial Wt./Vol.: **5.496 g**
Prep Extract Vol: **5 mL**

Results of **SB49-20 (2.5-5.0)**

Client Sample ID: **SB49-20 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416020-C
Lab Project ID: 31202416

Collection Date: 07/26/2012 10:25
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 91.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.04	mg/kg	1	08/2/2012 17:30
Surrogates						
o-Terphenyl	91.5		40.0-140	%	1	08/2/2012 17:30

Batch Information

Analytical Batch: **XGC2416**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 17:30**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **31.17 g**
Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-21 (2.5-5.0)**

Client Sample ID: **SB49-21 (2.5-5.0)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416021-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 10:35
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 83.70

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.12	mg/kg	1	08/2/2012 3:45
Surrogates						
4-Bromofluorobenzene	115		70.0-130	%	1	08/2/2012 3:45

Batch Information

Analytical Batch: **VGC2050**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 03:45**

Prep Batch: **VXX3750**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 10:47**
Prep Initial Wt./Vol.: **7.662 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-21 (2.5-5.0)**

Client Sample ID: **SB49-21 (2.5-5.0)**	Collection Date: 07/26/2012 10:35
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416021-C	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 83.70

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.07	mg/kg	1	08/2/2012 21:44
Surrogates						
o-Terphenyl	78.8		40.0-140	%	1	08/2/2012 21:44

Batch Information

Analytical Batch: **XGC2416**	Prep Batch: **XXX2878**
Analytical Method: **SW-846 8015C DRO**	Prep Method: **SW-846 3541**
Instrument: **GC6**	Prep Date/Time: **08/01/2012 11:26**
Analyst: **DTF**	Prep Initial Wt./Vol.: **33.8 g**
Analytical Date/Time: **08/02/2012 21:44**	Prep Extract Vol: **10 mL**

Results of **SB49-22 (10-12)**

Client Sample ID: **SB49-22 (10-12)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416022-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:45
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 66.80

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,1,1-Trichloroethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,1,2,2-Tetrachloroethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,1,2-Trichloroethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,1-Dichloroethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,1-Dichloroethene	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,1-Dichloropropene	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,2,3-Trichlorobenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,2,3-Trichloropropane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,2,4-Trichlorobenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,2,4-Trimethylbenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,2-Dibromo-3-chloropropane	ND		37.6	ug/Kg	1	08/1/2012 16:19
1,2-Dibromoethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,2-Dichlorobenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,2-Dichloroethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,2-Dichloropropane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,3,5-Trimethylbenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,3-Dichlorobenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,3-Dichloropropane	ND		6.26	ug/Kg	1	08/1/2012 16:19
1,4-Dichlorobenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
2,2-Dichloropropane	ND		6.26	ug/Kg	1	08/1/2012 16:19
2-Butanone	ND		31.3	ug/Kg	1	08/1/2012 16:19
2-Chlorotoluene	ND		6.26	ug/Kg	1	08/1/2012 16:19
2-Hexanone	ND		15.6	ug/Kg	1	08/1/2012 16:19
4-Chlorotoluene	ND		6.26	ug/Kg	1	08/1/2012 16:19
4-Isopropyltoluene	ND		6.26	ug/Kg	1	08/1/2012 16:19
4-Methyl-2-pentanone	ND		15.6	ug/Kg	1	08/1/2012 16:19
Acetone	ND		62.6	ug/Kg	1	08/1/2012 16:19
Benzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Bromobenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Bromochloromethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
Bromodichloromethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
Bromoform	ND		6.26	ug/Kg	1	08/1/2012 16:19
Bromomethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
n-Butylbenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Carbon disulfide	ND		6.26	ug/Kg	1	08/1/2012 16:19
Carbon tetrachloride	ND		6.26	ug/Kg	1	08/1/2012 16:19
Chlorobenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Chloroethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
Chloroform	ND		6.26	ug/Kg	1	08/1/2012 16:19
Chloromethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
Dibromochloromethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
Dibromomethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
Dichlorodifluoromethane	ND		6.26	ug/Kg	1	08/1/2012 16:19

Results of **SB49-22 (10-12)**

Client Sample ID: **SB49-22 (10-12)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416022-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:45
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 66.80

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		6.26	ug/Kg	1	08/1/2012 16:19
trans-1,3-Dichloropropene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Diisopropyl Ether	ND		6.26	ug/Kg	1	08/1/2012 16:19
Ethyl Benzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Hexachlorobutadiene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Isopropylbenzene (Cumene)	ND		6.26	ug/Kg	1	08/1/2012 16:19
Methyl iodide	ND		6.26	ug/Kg	1	08/1/2012 16:19
Methylene chloride	ND		25.0	ug/Kg	1	08/1/2012 16:19
Naphthalene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Styrene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Tetrachloroethene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Toluene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Trichloroethene	ND		6.26	ug/Kg	1	08/1/2012 16:19
Trichlorofluoromethane	ND		6.26	ug/Kg	1	08/1/2012 16:19
Vinyl chloride	ND		6.26	ug/Kg	1	08/1/2012 16:19
Xylene (total)	ND		12.5	ug/Kg	1	08/1/2012 16:19
cis-1,2-Dichloroethene	ND		6.26	ug/Kg	1	08/1/2012 16:19
m,p-Xylene	ND		12.5	ug/Kg	1	08/1/2012 16:19
n-Propylbenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
o-Xylene	ND		6.26	ug/Kg	1	08/1/2012 16:19
sec-Butylbenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
tert-Butyl methyl ether (MTBE)	ND		6.26	ug/Kg	1	08/1/2012 16:19
tert-Butylbenzene	ND		6.26	ug/Kg	1	08/1/2012 16:19
trans-1,2-Dichloroethene	ND		6.26	ug/Kg	1	08/1/2012 16:19
trans-1,4-Dichloro-2-butene	ND		31.3	ug/Kg	1	08/1/2012 16:19
Surrogates						
1,2-Dichloroethane-d4	117		55.0-173	%	1	08/1/2012 16:19
4-Bromofluorobenzene	101		23.0-141	%	1	08/1/2012 16:19
Toluene d8	104		57.0-134	%	1	08/1/2012 16:19

Batch Information

Analytical Batch: **VMS2435**
Analytical Method: **SW-846 8260B**
Instrument: **MSD2**
Analyst: **DVO**
Analytical Date/Time: **08/01/2012 16:19**

Prep Batch: **VXX3747**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **08/01/2012 10:49**
Prep Initial Wt./Vol.: **5.98 g**
Prep Extract Vol: **5 mL**

Results of **SB49-22 (10-12)**

Client Sample ID: **SB49-22 (10-12)**	Collection Date: 07/26/2012 14:45
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416022-E	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 66.80

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		5.85	mg/kg	1	08/2/2012 4:10
Surrogates						
4-Bromofluorobenzene	111		70.0-130	%	1	08/2/2012 4:10

Batch Information

Analytical Batch: **VGC2050**	Prep Batch: **VXX3750**
Analytical Method: **SW-846 8015C GRO**	Prep Method: **SW-846 5035**
Instrument: **GC7**	Prep Date/Time: **08/01/2012 10:49**
Analyst: **MDY**	Prep Initial Wt./Vol.: **5.121 g**
Analytical Date/Time: **08/02/2012 04:10**	Prep Extract Vol: **5 mL**

Results of **SB49-22 (10-12)**

Client Sample ID: **SB49-22 (10-12)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416022-G
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:45
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 66.80

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		490	ug/Kg	1	08/3/2012 19:34
1,2-Dichlorobenzene	ND		490	ug/Kg	1	08/3/2012 19:34
1,3-Dichlorobenzene	ND		490	ug/Kg	1	08/3/2012 19:34
1,4-Dichlorobenzene	ND		490	ug/Kg	1	08/3/2012 19:34
2,4,5-Trichlorophenol	ND		490	ug/Kg	1	08/3/2012 19:34
2,4,6-Trichlorophenol	ND		490	ug/Kg	1	08/3/2012 19:34
2,4-Dichlorophenol	ND		490	ug/Kg	1	08/3/2012 19:34
2,4-Dinitrophenol	ND		978	ug/Kg	1	08/3/2012 19:34
2,4-Dinitrotoluene	ND		490	ug/Kg	1	08/3/2012 19:34
2,6-Dinitrotoluene	ND		490	ug/Kg	1	08/3/2012 19:34
2-Chloronaphthalene	ND		490	ug/Kg	1	08/3/2012 19:34
2-Chlorophenol	ND		490	ug/Kg	1	08/3/2012 19:34
2-Methylnaphthalene	ND		490	ug/Kg	1	08/3/2012 19:34
2-Methylphenol	ND		490	ug/Kg	1	08/3/2012 19:34
2-Nitroaniline	ND		490	ug/Kg	1	08/3/2012 19:34
2-Nitrophenol	ND		490	ug/Kg	1	08/3/2012 19:34
3 and/or 4-Methylphenol	ND		490	ug/Kg	1	08/3/2012 19:34
3,3'-Dichlorobenzidine	ND		490	ug/Kg	1	08/3/2012 19:34
3-Nitroaniline	ND		490	ug/Kg	1	08/3/2012 19:34
4,6-Dinitro-2-methylphenol	ND		490	ug/Kg	1	08/3/2012 19:34
4-Chloro-3-methylphenol	ND		490	ug/Kg	1	08/3/2012 19:34
4-Chloroaniline	ND		490	ug/Kg	1	08/3/2012 19:34
4-Chlorophenyl phenyl ether	ND		490	ug/Kg	1	08/3/2012 19:34
Acenaphthene	ND		490	ug/Kg	1	08/3/2012 19:34
Acenaphthylene	ND		490	ug/Kg	1	08/3/2012 19:34
Anthracene	ND		490	ug/Kg	1	08/3/2012 19:34
Benzo(a)anthracene	ND		490	ug/Kg	1	08/3/2012 19:34
Benzo(a)pyrene	ND		490	ug/Kg	1	08/3/2012 19:34
Benzo(b)fluoranthene	ND		490	ug/Kg	1	08/3/2012 19:34
Benzo(g,h,i)perylene	ND		490	ug/Kg	1	08/3/2012 19:34
Benzo(k)fluoranthene	ND		490	ug/Kg	1	08/3/2012 19:34
Benzoic acid	ND		490	ug/Kg	1	08/3/2012 19:34
Bis(2-Chloroethoxy)methane	ND		490	ug/Kg	1	08/3/2012 19:34
Bis(2-Chloroethyl)ether	ND		490	ug/Kg	1	08/3/2012 19:34
Bis(2-Chloroisopropyl)ether	ND		490	ug/Kg	1	08/3/2012 19:34
Bis(2-Ethylhexyl)phthalate	ND		490	ug/Kg	1	08/3/2012 19:34
4-Bromophenyl phenyl ether	ND		490	ug/Kg	1	08/3/2012 19:34
Butyl benzyl phthalate	ND		490	ug/Kg	1	08/3/2012 19:34
Chrysene	ND		490	ug/Kg	1	08/3/2012 19:34
Di-n-butyl phthalate	ND		490	ug/Kg	1	08/3/2012 19:34
Di-n-octyl phthalate	ND		490	ug/Kg	1	08/3/2012 19:34
Dibenz(a,h)anthracene	ND		490	ug/Kg	1	08/3/2012 19:34
Dibenzofuran	ND		490	ug/Kg	1	08/3/2012 19:34
Diethyl phthalate	ND		490	ug/Kg	1	08/3/2012 19:34

Results of **SB49-22 (10-12)**

Client Sample ID: **SB49-22 (10-12)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416022-G
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:45
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 66.80

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		490	ug/Kg	1	08/3/2012 19:34
2,4-Dimethylphenol	ND		490	ug/Kg	1	08/3/2012 19:34
Diphenylamine	ND		490	ug/Kg	1	08/3/2012 19:34
Fluoranthene	ND		490	ug/Kg	1	08/3/2012 19:34
Fluorene	ND		490	ug/Kg	1	08/3/2012 19:34
Hexachlorobenzene	ND		490	ug/Kg	1	08/3/2012 19:34
Hexachlorobutadiene	ND		490	ug/Kg	1	08/3/2012 19:34
Hexachlorocyclopentadiene	ND		490	ug/Kg	1	08/3/2012 19:34
Hexachloroethane	ND		490	ug/Kg	1	08/3/2012 19:34
Indeno(1,2,3-cd)pyrene	ND		490	ug/Kg	1	08/3/2012 19:34
Isophorone	ND		490	ug/Kg	1	08/3/2012 19:34
Naphthalene	ND		490	ug/Kg	1	08/3/2012 19:34
4-Nitroaniline	ND		490	ug/Kg	1	08/3/2012 19:34
Nitrobenzene	ND		490	ug/Kg	1	08/3/2012 19:34
4-Nitrophenol	ND		490	ug/Kg	1	08/3/2012 19:34
Pentachlorophenol	ND		490	ug/Kg	1	08/3/2012 19:34
Phenanthrene	ND		490	ug/Kg	1	08/3/2012 19:34
Phenol	ND		490	ug/Kg	1	08/3/2012 19:34
Pyrene	ND		490	ug/Kg	1	08/3/2012 19:34
n-Nitrosodi-n-propylamine	ND		490	ug/Kg	1	08/3/2012 19:34
Surrogates						
2,4,6-Tribromophenol	73.0		41.0-129	%	1	08/3/2012 19:34
2-Fluorobiphenyl	77.0		48.0-123	%	1	08/3/2012 19:34
2-Fluorophenol	83.0		42.0-123	%	1	08/3/2012 19:34
Nitrobenzene-d5	92.0		46.0-117	%	1	08/3/2012 19:34
Phenol-d6	96.0		48.0-125	%	1	08/3/2012 19:34
Terphenyl-d14	85.0		44.0-140	%	1	08/3/2012 19:34

Batch Information

Analytical Batch: **XMS1622**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/03/2012 19:34**

Prep Batch: **XXX2884**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/03/2012 10:19**
Prep Initial Wt./Vol.: **30.63 g**
Prep Extract Vol: **10 mL**

Results of **SB49-22 (10-12)**

Client Sample ID: **SB49-22 (10-12)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416022-G
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:45
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 66.80

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		9.42	mg/kg	1	08/2/2012 22:13
Surrogates						
o-Terphenyl	69.8		40.0-140	%	1	08/2/2012 22:13

Batch Information

Analytical Batch: **XGC2416**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 22:13**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **31.78 g**
Prep Extract Vol: **10 mL**

Results of **SB49-23 (6-8)**

Client Sample ID: **SB49-23 (6-8)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416023-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:35
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 72.20

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,1,1-Trichloroethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,1,2,2-Tetrachloroethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,1,2-Trichloroethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,1-Dichloroethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,1-Dichloroethene	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,1-Dichloropropene	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,2,3-Trichlorobenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,2,3-Trichloropropane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,2,4-Trichlorobenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,2,4-Trimethylbenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,2-Dibromo-3-chloropropane	ND		30.2	ug/Kg	1	08/1/2012 16:43
1,2-Dibromoethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,2-Dichlorobenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,2-Dichloroethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,2-Dichloropropane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,3,5-Trimethylbenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,3-Dichlorobenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,3-Dichloropropane	ND		5.03	ug/Kg	1	08/1/2012 16:43
1,4-Dichlorobenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
2,2-Dichloropropane	ND		5.03	ug/Kg	1	08/1/2012 16:43
2-Butanone	ND		25.2	ug/Kg	1	08/1/2012 16:43
2-Chlorotoluene	ND		5.03	ug/Kg	1	08/1/2012 16:43
2-Hexanone	ND		12.6	ug/Kg	1	08/1/2012 16:43
4-Chlorotoluene	ND		5.03	ug/Kg	1	08/1/2012 16:43
4-Isopropyltoluene	ND		5.03	ug/Kg	1	08/1/2012 16:43
4-Methyl-2-pentanone	ND		12.6	ug/Kg	1	08/1/2012 16:43
Acetone	ND		50.3	ug/Kg	1	08/1/2012 16:43
Benzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Bromobenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Bromochloromethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
Bromodichloromethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
Bromoform	ND		5.03	ug/Kg	1	08/1/2012 16:43
Bromomethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
n-Butylbenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Carbon disulfide	ND		5.03	ug/Kg	1	08/1/2012 16:43
Carbon tetrachloride	ND		5.03	ug/Kg	1	08/1/2012 16:43
Chlorobenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Chloroethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
Chloroform	ND		5.03	ug/Kg	1	08/1/2012 16:43
Chloromethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
Dibromochloromethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
Dibromomethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
Dichlorodifluoromethane	ND		5.03	ug/Kg	1	08/1/2012 16:43

Results of **SB49-23 (6-8)**

Client Sample ID: **SB49-23 (6-8)**	Collection Date: 07/26/2012 14:35
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416023-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 72.20

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		5.03	ug/Kg	1	08/1/2012 16:43
trans-1,3-Dichloropropene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Diisopropyl Ether	ND		5.03	ug/Kg	1	08/1/2012 16:43
Ethyl Benzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Hexachlorobutadiene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Isopropylbenzene (Cumene)	ND		5.03	ug/Kg	1	08/1/2012 16:43
Methyl iodide	ND		5.03	ug/Kg	1	08/1/2012 16:43
Methylene chloride	ND		20.1	ug/Kg	1	08/1/2012 16:43
Naphthalene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Styrene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Tetrachloroethene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Toluene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Trichloroethene	ND		5.03	ug/Kg	1	08/1/2012 16:43
Trichlorofluoromethane	ND		5.03	ug/Kg	1	08/1/2012 16:43
Vinyl chloride	ND		5.03	ug/Kg	1	08/1/2012 16:43
Xylene (total)	ND		10.1	ug/Kg	1	08/1/2012 16:43
cis-1,2-Dichloroethene	ND		5.03	ug/Kg	1	08/1/2012 16:43
m,p-Xylene	ND		10.1	ug/Kg	1	08/1/2012 16:43
n-Propylbenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
o-Xylene	ND		5.03	ug/Kg	1	08/1/2012 16:43
sec-Butylbenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
tert-Butyl methyl ether (MTBE)	ND		5.03	ug/Kg	1	08/1/2012 16:43
tert-Butylbenzene	ND		5.03	ug/Kg	1	08/1/2012 16:43
trans-1,2-Dichloroethene	ND		5.03	ug/Kg	1	08/1/2012 16:43
trans-1,4-Dichloro-2-butene	ND		25.2	ug/Kg	1	08/1/2012 16:43
Surrogates						
1,2-Dichloroethane-d4	119		55.0-173	%	1	08/1/2012 16:43
4-Bromofluorobenzene	105		23.0-141	%	1	08/1/2012 16:43
Toluene d8	102		57.0-134	%	1	08/1/2012 16:43

Batch Information

Analytical Batch: **VMS2435**	Prep Batch: **VXX3747**
Analytical Method: **SW-846 8260B**	Prep Method: **SW-846 5035 SL**
Instrument: **MSD2**	Prep Date/Time: **08/01/2012 11:05**
Analyst: **DVO**	Prep Initial Wt./Vol.: **6.88 g**
Analytical Date/Time: **08/01/2012 16:43**	Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-23 (6-8)**

Client Sample ID: **SB49-23 (6-8)**	Collection Date: 07/26/2012 14:35
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416023-E	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 72.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.80	mg/kg	1	08/2/2012 4:35
Surrogates						
4-Bromofluorobenzene	115		70.0-130	%	1	08/2/2012 4:35

Batch Information

Analytical Batch: **VGC2050**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 04:35**

Prep Batch: **VXX3750**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 11:05**
Prep Initial Wt./Vol.: **7.291 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-23 (6-8)**

Client Sample ID: **SB49-23 (6-8)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416023-G
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:35
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 72.20

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		442	ug/Kg	1	08/3/2012 19:57
1,2-Dichlorobenzene	ND		442	ug/Kg	1	08/3/2012 19:57
1,3-Dichlorobenzene	ND		442	ug/Kg	1	08/3/2012 19:57
1,4-Dichlorobenzene	ND		442	ug/Kg	1	08/3/2012 19:57
2,4,5-Trichlorophenol	ND		442	ug/Kg	1	08/3/2012 19:57
2,4,6-Trichlorophenol	ND		442	ug/Kg	1	08/3/2012 19:57
2,4-Dichlorophenol	ND		442	ug/Kg	1	08/3/2012 19:57
2,4-Dinitrophenol	ND		883	ug/Kg	1	08/3/2012 19:57
2,4-Dinitrotoluene	ND		442	ug/Kg	1	08/3/2012 19:57
2,6-Dinitrotoluene	ND		442	ug/Kg	1	08/3/2012 19:57
2-Chloronaphthalene	ND		442	ug/Kg	1	08/3/2012 19:57
2-Chlorophenol	ND		442	ug/Kg	1	08/3/2012 19:57
2-Methylnaphthalene	ND		442	ug/Kg	1	08/3/2012 19:57
2-Methylphenol	ND		442	ug/Kg	1	08/3/2012 19:57
2-Nitroaniline	ND		442	ug/Kg	1	08/3/2012 19:57
2-Nitrophenol	ND		442	ug/Kg	1	08/3/2012 19:57
3 and/or 4-Methylphenol	ND		442	ug/Kg	1	08/3/2012 19:57
3,3'-Dichlorobenzidine	ND		442	ug/Kg	1	08/3/2012 19:57
3-Nitroaniline	ND		442	ug/Kg	1	08/3/2012 19:57
4,6-Dinitro-2-methylphenol	ND		442	ug/Kg	1	08/3/2012 19:57
4-Chloro-3-methylphenol	ND		442	ug/Kg	1	08/3/2012 19:57
4-Chloroaniline	ND		442	ug/Kg	1	08/3/2012 19:57
4-Chlorophenyl phenyl ether	ND		442	ug/Kg	1	08/3/2012 19:57
Acenaphthene	ND		442	ug/Kg	1	08/3/2012 19:57
Acenaphthylene	ND		442	ug/Kg	1	08/3/2012 19:57
Anthracene	ND		442	ug/Kg	1	08/3/2012 19:57
Benzo(a)anthracene	ND		442	ug/Kg	1	08/3/2012 19:57
Benzo(a)pyrene	ND		442	ug/Kg	1	08/3/2012 19:57
Benzo(b)fluoranthene	ND		442	ug/Kg	1	08/3/2012 19:57
Benzo(g,h,i)perylene	ND		442	ug/Kg	1	08/3/2012 19:57
Benzo(k)fluoranthene	ND		442	ug/Kg	1	08/3/2012 19:57
Benzoic acid	ND		442	ug/Kg	1	08/3/2012 19:57
Bis(2-Chloroethoxy)methane	ND		442	ug/Kg	1	08/3/2012 19:57
Bis(2-Chloroethyl)ether	ND		442	ug/Kg	1	08/3/2012 19:57
Bis(2-Chloroisopropyl)ether	ND		442	ug/Kg	1	08/3/2012 19:57
Bis(2-Ethylhexyl)phthalate	ND		442	ug/Kg	1	08/3/2012 19:57
4-Bromophenyl phenyl ether	ND		442	ug/Kg	1	08/3/2012 19:57
Butyl benzyl phthalate	ND		442	ug/Kg	1	08/3/2012 19:57
Chrysene	ND		442	ug/Kg	1	08/3/2012 19:57
Di-n-butyl phthalate	ND		442	ug/Kg	1	08/3/2012 19:57
Di-n-octyl phthalate	ND		442	ug/Kg	1	08/3/2012 19:57
Dibenz(a,h)anthracene	ND		442	ug/Kg	1	08/3/2012 19:57
Dibenzofuran	ND		442	ug/Kg	1	08/3/2012 19:57
Diethyl phthalate	ND		442	ug/Kg	1	08/3/2012 19:57

Results of **SB49-23 (6-8)**

Client Sample ID: **SB49-23 (6-8)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416023-G
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:35
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 72.20

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		442	ug/Kg	1	08/3/2012 19:57
2,4-Dimethylphenol	ND		442	ug/Kg	1	08/3/2012 19:57
Diphenylamine	ND		442	ug/Kg	1	08/3/2012 19:57
Fluoranthene	ND		442	ug/Kg	1	08/3/2012 19:57
Fluorene	ND		442	ug/Kg	1	08/3/2012 19:57
Hexachlorobenzene	ND		442	ug/Kg	1	08/3/2012 19:57
Hexachlorobutadiene	ND		442	ug/Kg	1	08/3/2012 19:57
Hexachlorocyclopentadiene	ND		442	ug/Kg	1	08/3/2012 19:57
Hexachloroethane	ND		442	ug/Kg	1	08/3/2012 19:57
Indeno(1,2,3-cd)pyrene	ND		442	ug/Kg	1	08/3/2012 19:57
Isophorone	ND		442	ug/Kg	1	08/3/2012 19:57
Naphthalene	ND		442	ug/Kg	1	08/3/2012 19:57
4-Nitroaniline	ND		442	ug/Kg	1	08/3/2012 19:57
Nitrobenzene	ND		442	ug/Kg	1	08/3/2012 19:57
4-Nitrophenol	ND		442	ug/Kg	1	08/3/2012 19:57
Pentachlorophenol	ND		442	ug/Kg	1	08/3/2012 19:57
Phenanthrene	ND		442	ug/Kg	1	08/3/2012 19:57
Phenol	ND		442	ug/Kg	1	08/3/2012 19:57
Pyrene	ND		442	ug/Kg	1	08/3/2012 19:57
n-Nitrosodi-n-propylamine	ND		442	ug/Kg	1	08/3/2012 19:57
Surrogates						
2,4,6-Tribromophenol	76.0		41.0-129	%	1	08/3/2012 19:57
2-Fluorobiphenyl	86.0		48.0-123	%	1	08/3/2012 19:57
2-Fluorophenol	87.0		42.0-123	%	1	08/3/2012 19:57
Nitrobenzene-d5	95.0		46.0-117	%	1	08/3/2012 19:57
Phenol-d6	100		48.0-125	%	1	08/3/2012 19:57
Terphenyl-d14	96.0		44.0-140	%	1	08/3/2012 19:57

Batch Information

Analytical Batch: **XMS1622**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/03/2012 19:57**

Prep Batch: **XXX2884**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/03/2012 10:19**
Prep Initial Wt./Vol.: **31.37 g**
Prep Extract Vol: **10 mL**

Results of **SB49-23 (6-8)**

Client Sample ID: **SB49-23 (6-8)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416023-G
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:35
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 72.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		8.71	mg/kg	1	08/3/2012 18:03
Surrogates						
o-Terphenyl	63.4		40.0-140	%	1	08/3/2012 18:03

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 18:03**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **31.79 g**
Prep Extract Vol: **10 mL**

Results of **SB49-24 (10-12)**

Client Sample ID: **SB49-24 (10-12)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416024-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:00
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 66.00

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,1,1-Trichloroethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,1,2,2-Tetrachloroethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,1,2-Trichloroethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,1-Dichloroethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,1-Dichloroethene	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,1-Dichloropropene	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,2,3-Trichlorobenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,2,3-Trichloropropane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,2,4-Trichlorobenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,2,4-Trimethylbenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,2-Dibromo-3-chloropropane	ND		38.3	ug/Kg	1	08/1/2012 17:06
1,2-Dibromoethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,2-Dichlorobenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,2-Dichloroethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,2-Dichloropropane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,3,5-Trimethylbenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,3-Dichlorobenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,3-Dichloropropane	ND		6.39	ug/Kg	1	08/1/2012 17:06
1,4-Dichlorobenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
2,2-Dichloropropane	ND		6.39	ug/Kg	1	08/1/2012 17:06
2-Butanone	ND		31.9	ug/Kg	1	08/1/2012 17:06
2-Chlorotoluene	ND		6.39	ug/Kg	1	08/1/2012 17:06
2-Hexanone	ND		16.0	ug/Kg	1	08/1/2012 17:06
4-Chlorotoluene	ND		6.39	ug/Kg	1	08/1/2012 17:06
4-Isopropyltoluene	ND		6.39	ug/Kg	1	08/1/2012 17:06
4-Methyl-2-pentanone	ND		16.0	ug/Kg	1	08/1/2012 17:06
Acetone	ND		63.9	ug/Kg	1	08/1/2012 17:06
Benzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Bromobenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Bromochloromethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
Bromodichloromethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
Bromoform	ND		6.39	ug/Kg	1	08/1/2012 17:06
Bromomethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
n-Butylbenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Carbon disulfide	ND		6.39	ug/Kg	1	08/1/2012 17:06
Carbon tetrachloride	ND		6.39	ug/Kg	1	08/1/2012 17:06
Chlorobenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Chloroethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
Chloroform	ND		6.39	ug/Kg	1	08/1/2012 17:06
Chloromethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
Dibromochloromethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
Dibromomethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
Dichlorodifluoromethane	ND		6.39	ug/Kg	1	08/1/2012 17:06

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-24 (10-12)**

Client Sample ID: **SB49-24 (10-12)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416024-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:00
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 66.00

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		6.39	ug/Kg	1	08/1/2012 17:06
trans-1,3-Dichloropropene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Diisopropyl Ether	ND		6.39	ug/Kg	1	08/1/2012 17:06
Ethyl Benzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Hexachlorobutadiene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Isopropylbenzene (Cumene)	ND		6.39	ug/Kg	1	08/1/2012 17:06
Methyl iodide	ND		6.39	ug/Kg	1	08/1/2012 17:06
Methylene chloride	ND		25.5	ug/Kg	1	08/1/2012 17:06
Naphthalene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Styrene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Tetrachloroethene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Toluene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Trichloroethene	ND		6.39	ug/Kg	1	08/1/2012 17:06
Trichlorofluoromethane	ND		6.39	ug/Kg	1	08/1/2012 17:06
Vinyl chloride	ND		6.39	ug/Kg	1	08/1/2012 17:06
Xylene (total)	ND		12.8	ug/Kg	1	08/1/2012 17:06
cis-1,2-Dichloroethene	ND		6.39	ug/Kg	1	08/1/2012 17:06
m,p-Xylene	ND		12.8	ug/Kg	1	08/1/2012 17:06
n-Propylbenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
o-Xylene	ND		6.39	ug/Kg	1	08/1/2012 17:06
sec-Butylbenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
tert-Butyl methyl ether (MTBE)	ND		6.39	ug/Kg	1	08/1/2012 17:06
tert-Butylbenzene	ND		6.39	ug/Kg	1	08/1/2012 17:06
trans-1,2-Dichloroethene	ND		6.39	ug/Kg	1	08/1/2012 17:06
trans-1,4-Dichloro-2-butene	ND		31.9	ug/Kg	1	08/1/2012 17:06
Surrogates						
1,2-Dichloroethane-d4	118		55.0-173	%	1	08/1/2012 17:06
4-Bromofluorobenzene	104		23.0-141	%	1	08/1/2012 17:06
Toluene d8	105		57.0-134	%	1	08/1/2012 17:06

Batch Information

Analytical Batch: **VMS2435**
Analytical Method: **SW-846 8260B**
Instrument: **MSD2**
Analyst: **DVO**
Analytical Date/Time: **08/01/2012 17:06**

Prep Batch: **VXX3747**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **08/01/2012 11:09**
Prep Initial Wt./Vol.: **5.93 g**
Prep Extract Vol: **5 mL**

Results of **SB49-24 (10-12)**

Client Sample ID: **SB49-24 (10-12)**	Collection Date: 07/26/2012 14:00
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416024-E	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 66.00

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		5.48	mg/kg	1	08/2/2012 11:51
Surrogates						
4-Bromofluorobenzene	117		70.0-130	%	1	08/2/2012 11:51

Batch Information

Analytical Batch: **VGC2051**	Prep Batch: **VXX3755**
Analytical Method: **SW-846 8015C GRO**	Prep Method: **SW-846 5035**
Instrument: **GC7**	Prep Date/Time: **08/01/2012 11:09**
Analyst: **MDY**	Prep Initial Wt./Vol.: **5.528 g**
Analytical Date/Time: **08/02/2012 11:51**	Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-24 (10-12)**

Client Sample ID: **SB49-24 (10-12)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416024-G
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:00
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 66.00

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		468	ug/Kg	1	08/3/2012 20:19
1,2-Dichlorobenzene	ND		468	ug/Kg	1	08/3/2012 20:19
1,3-Dichlorobenzene	ND		468	ug/Kg	1	08/3/2012 20:19
1,4-Dichlorobenzene	ND		468	ug/Kg	1	08/3/2012 20:19
2,4,5-Trichlorophenol	ND		468	ug/Kg	1	08/3/2012 20:19
2,4,6-Trichlorophenol	ND		468	ug/Kg	1	08/3/2012 20:19
2,4-Dichlorophenol	ND		468	ug/Kg	1	08/3/2012 20:19
2,4-Dinitrophenol	ND		935	ug/Kg	1	08/3/2012 20:19
2,4-Dinitrotoluene	ND		468	ug/Kg	1	08/3/2012 20:19
2,6-Dinitrotoluene	ND		468	ug/Kg	1	08/3/2012 20:19
2-Chloronaphthalene	ND		468	ug/Kg	1	08/3/2012 20:19
2-Chlorophenol	ND		468	ug/Kg	1	08/3/2012 20:19
2-Methylnaphthalene	ND		468	ug/Kg	1	08/3/2012 20:19
2-Methylphenol	ND		468	ug/Kg	1	08/3/2012 20:19
2-Nitroaniline	ND		468	ug/Kg	1	08/3/2012 20:19
2-Nitrophenol	ND		468	ug/Kg	1	08/3/2012 20:19
3 and/or 4-Methylphenol	ND		468	ug/Kg	1	08/3/2012 20:19
3,3'-Dichlorobenzidine	ND		468	ug/Kg	1	08/3/2012 20:19
3-Nitroaniline	ND		468	ug/Kg	1	08/3/2012 20:19
4,6-Dinitro-2-methylphenol	ND		468	ug/Kg	1	08/3/2012 20:19
4-Chloro-3-methylphenol	ND		468	ug/Kg	1	08/3/2012 20:19
4-Chloroaniline	ND		468	ug/Kg	1	08/3/2012 20:19
4-Chlorophenyl phenyl ether	ND		468	ug/Kg	1	08/3/2012 20:19
Acenaphthene	ND		468	ug/Kg	1	08/3/2012 20:19
Acenaphthylene	ND		468	ug/Kg	1	08/3/2012 20:19
Anthracene	ND		468	ug/Kg	1	08/3/2012 20:19
Benzo(a)anthracene	ND		468	ug/Kg	1	08/3/2012 20:19
Benzo(a)pyrene	ND		468	ug/Kg	1	08/3/2012 20:19
Benzo(b)fluoranthene	ND		468	ug/Kg	1	08/3/2012 20:19
Benzo(g,h,i)perylene	ND		468	ug/Kg	1	08/3/2012 20:19
Benzo(k)fluoranthene	ND		468	ug/Kg	1	08/3/2012 20:19
Benzoic acid	ND		468	ug/Kg	1	08/3/2012 20:19
Bis(2-Chloroethoxy)methane	ND		468	ug/Kg	1	08/3/2012 20:19
Bis(2-Chloroethyl)ether	ND		468	ug/Kg	1	08/3/2012 20:19
Bis(2-Chloroisopropyl)ether	ND		468	ug/Kg	1	08/3/2012 20:19
Bis(2-Ethylhexyl)phthalate	ND		468	ug/Kg	1	08/3/2012 20:19
4-Bromophenyl phenyl ether	ND		468	ug/Kg	1	08/3/2012 20:19
Butyl benzyl phthalate	ND		468	ug/Kg	1	08/3/2012 20:19
Chrysene	ND		468	ug/Kg	1	08/3/2012 20:19
Di-n-butyl phthalate	ND		468	ug/Kg	1	08/3/2012 20:19
Di-n-octyl phthalate	ND		468	ug/Kg	1	08/3/2012 20:19
Dibenz(a,h)anthracene	ND		468	ug/Kg	1	08/3/2012 20:19
Dibenzofuran	ND		468	ug/Kg	1	08/3/2012 20:19
Diethyl phthalate	ND		468	ug/Kg	1	08/3/2012 20:19

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-24 (10-12)**

Client Sample ID: **SB49-24 (10-12)**	Collection Date: 07/26/2012 14:00
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416024-G	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 66.00

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		468	ug/Kg	1	08/3/2012 20:19
2,4-Dimethylphenol	ND		468	ug/Kg	1	08/3/2012 20:19
Diphenylamine	ND		468	ug/Kg	1	08/3/2012 20:19
Fluoranthene	ND		468	ug/Kg	1	08/3/2012 20:19
Fluorene	ND		468	ug/Kg	1	08/3/2012 20:19
Hexachlorobenzene	ND		468	ug/Kg	1	08/3/2012 20:19
Hexachlorobutadiene	ND		468	ug/Kg	1	08/3/2012 20:19
Hexachlorocyclopentadiene	ND		468	ug/Kg	1	08/3/2012 20:19
Hexachloroethane	ND		468	ug/Kg	1	08/3/2012 20:19
Indeno(1,2,3-cd)pyrene	ND		468	ug/Kg	1	08/3/2012 20:19
Isophorone	ND		468	ug/Kg	1	08/3/2012 20:19
Naphthalene	ND		468	ug/Kg	1	08/3/2012 20:19
4-Nitroaniline	ND		468	ug/Kg	1	08/3/2012 20:19
Nitrobenzene	ND		468	ug/Kg	1	08/3/2012 20:19
4-Nitrophenol	ND		468	ug/Kg	1	08/3/2012 20:19
Pentachlorophenol	ND		468	ug/Kg	1	08/3/2012 20:19
Phenanthrene	ND		468	ug/Kg	1	08/3/2012 20:19
Phenol	ND		468	ug/Kg	1	08/3/2012 20:19
Pyrene	ND		468	ug/Kg	1	08/3/2012 20:19
n-Nitrosodi-n-propylamine	ND		468	ug/Kg	1	08/3/2012 20:19
Surrogates						
2,4,6-Tribromophenol	71.0		41.0-129	%	1	08/3/2012 20:19
2-Fluorobiphenyl	83.0		48.0-123	%	1	08/3/2012 20:19
2-Fluorophenol	86.0		42.0-123	%	1	08/3/2012 20:19
Nitrobenzene-d5	93.0		46.0-117	%	1	08/3/2012 20:19
Phenol-d6	98.0		48.0-125	%	1	08/3/2012 20:19
Terphenyl-d14	94.0		44.0-140	%	1	08/3/2012 20:19

Batch Information

Analytical Batch: **XMS1622**	Prep Batch: **XXX2884**
Analytical Method: **SW-846 8270D**	Prep Method: **SW-846 3541**
Instrument: **MSD10**	Prep Date/Time: **08/03/2012 10:19**
Analyst: **CMP**	Prep Initial Wt./Vol.: **32.39 g**
Analytical Date/Time: **08/03/2012 20:19**	Prep Extract Vol: **10 mL**

Results of **SB49-24 (10-12)**

Client Sample ID: **SB49-24 (10-12)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416024-G
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:00
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 66.00

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		8.95	mg/kg	1	08/2/2012 23:09
Surrogates						
o-Terphenyl	76.3		40.0-140	%	1	08/2/2012 23:09

Batch Information

Analytical Batch: **XGC2416**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 23:09**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 11:26**
Prep Initial Wt./Vol.: **33.87 g**
Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-25 (8-10)**

Client Sample ID: **SB49-25 (8-10)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416025-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:15
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 75.00

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,1,1-Trichloroethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,1,2,2-Tetrachloroethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,1,2-Trichloroethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,1-Dichloroethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,1-Dichloroethene	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,1-Dichloropropene	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,2,3-Trichlorobenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,2,3-Trichloropropane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,2,4-Trichlorobenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,2,4-Trimethylbenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,2-Dibromo-3-chloropropane	ND		32.7	ug/Kg	1	08/1/2012 17:29
1,2-Dibromoethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,2-Dichlorobenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,2-Dichloroethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,2-Dichloropropane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,3,5-Trimethylbenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,3-Dichlorobenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,3-Dichloropropane	ND		5.45	ug/Kg	1	08/1/2012 17:29
1,4-Dichlorobenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
2,2-Dichloropropane	ND		5.45	ug/Kg	1	08/1/2012 17:29
2-Butanone	ND		27.3	ug/Kg	1	08/1/2012 17:29
2-Chlorotoluene	ND		5.45	ug/Kg	1	08/1/2012 17:29
2-Hexanone	ND		13.6	ug/Kg	1	08/1/2012 17:29
4-Chlorotoluene	ND		5.45	ug/Kg	1	08/1/2012 17:29
4-Isopropyltoluene	ND		5.45	ug/Kg	1	08/1/2012 17:29
4-Methyl-2-pentanone	ND		13.6	ug/Kg	1	08/1/2012 17:29
Acetone	ND		54.5	ug/Kg	1	08/1/2012 17:29
Benzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Bromobenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Bromochloromethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
Bromodichloromethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
Bromoform	ND		5.45	ug/Kg	1	08/1/2012 17:29
Bromomethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
n-Butylbenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Carbon disulfide	ND		5.45	ug/Kg	1	08/1/2012 17:29
Carbon tetrachloride	ND		5.45	ug/Kg	1	08/1/2012 17:29
Chlorobenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Chloroethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
Chloroform	ND		5.45	ug/Kg	1	08/1/2012 17:29
Chloromethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
Dibromochloromethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
Dibromomethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
Dichlorodifluoromethane	ND		5.45	ug/Kg	1	08/1/2012 17:29

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-25 (8-10)**

Client Sample ID: **SB49-25 (8-10)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416025-A
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:15
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 75.00

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		5.45	ug/Kg	1	08/1/2012 17:29
trans-1,3-Dichloropropene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Diisopropyl Ether	ND		5.45	ug/Kg	1	08/1/2012 17:29
Ethyl Benzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Hexachlorobutadiene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Isopropylbenzene (Cumene)	ND		5.45	ug/Kg	1	08/1/2012 17:29
Methyl iodide	ND		5.45	ug/Kg	1	08/1/2012 17:29
Methylene chloride	ND		21.8	ug/Kg	1	08/1/2012 17:29
Naphthalene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Styrene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Tetrachloroethene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Toluene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Trichloroethene	ND		5.45	ug/Kg	1	08/1/2012 17:29
Trichlorofluoromethane	ND		5.45	ug/Kg	1	08/1/2012 17:29
Vinyl chloride	ND		5.45	ug/Kg	1	08/1/2012 17:29
Xylene (total)	ND		10.9	ug/Kg	1	08/1/2012 17:29
cis-1,2-Dichloroethene	ND		5.45	ug/Kg	1	08/1/2012 17:29
m,p-Xylene	ND		10.9	ug/Kg	1	08/1/2012 17:29
n-Propylbenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
o-Xylene	ND		5.45	ug/Kg	1	08/1/2012 17:29
sec-Butylbenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
tert-Butyl methyl ether (MTBE)	ND		5.45	ug/Kg	1	08/1/2012 17:29
tert-Butylbenzene	ND		5.45	ug/Kg	1	08/1/2012 17:29
trans-1,2-Dichloroethene	ND		5.45	ug/Kg	1	08/1/2012 17:29
trans-1,4-Dichloro-2-butene	ND		27.3	ug/Kg	1	08/1/2012 17:29
Surrogates						
1,2-Dichloroethane-d4	118		55.0-173	%	1	08/1/2012 17:29
4-Bromofluorobenzene	102		23.0-141	%	1	08/1/2012 17:29
Toluene d8	103		57.0-134	%	1	08/1/2012 17:29

Batch Information

Analytical Batch: **VMS2435**
Analytical Method: **SW-846 8260B**
Instrument: **MSD2**
Analyst: **DVO**
Analytical Date/Time: **08/01/2012 17:29**

Prep Batch: **VXX3747**
Prep Method: **SW-846 5035 SL**
Prep Date/Time: **08/01/2012 11:11**
Prep Initial Wt./Vol.: **6.11 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-25 (8-10)**

Client Sample ID: **SB49-25 (8-10)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416025-E
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:15
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 75.00

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		4.69	mg/kg	1	08/2/2012 12:16
Surrogates						
4-Bromofluorobenzene	115		70.0-130	%	1	08/2/2012 12:16

Batch Information

Analytical Batch: **VGC2051**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 12:16**

Prep Batch: **VXX3755**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 11:11**
Prep Initial Wt./Vol.: **5.683 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-25 (8-10)**

Client Sample ID: **SB49-25 (8-10)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202416025-G
Lab Project ID: 31202416

Collection Date: 07/26/2012 14:15
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 75.00

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		431	ug/Kg	1	08/3/2012 20:42
1,2-Dichlorobenzene	ND		431	ug/Kg	1	08/3/2012 20:42
1,3-Dichlorobenzene	ND		431	ug/Kg	1	08/3/2012 20:42
1,4-Dichlorobenzene	ND		431	ug/Kg	1	08/3/2012 20:42
2,4,5-Trichlorophenol	ND		431	ug/Kg	1	08/3/2012 20:42
2,4,6-Trichlorophenol	ND		431	ug/Kg	1	08/3/2012 20:42
2,4-Dichlorophenol	ND		431	ug/Kg	1	08/3/2012 20:42
2,4-Dinitrophenol	ND		860	ug/Kg	1	08/3/2012 20:42
2,4-Dinitrotoluene	ND		431	ug/Kg	1	08/3/2012 20:42
2,6-Dinitrotoluene	ND		431	ug/Kg	1	08/3/2012 20:42
2-Chloronaphthalene	ND		431	ug/Kg	1	08/3/2012 20:42
2-Chlorophenol	ND		431	ug/Kg	1	08/3/2012 20:42
2-Methylnaphthalene	ND		431	ug/Kg	1	08/3/2012 20:42
2-Methylphenol	ND		431	ug/Kg	1	08/3/2012 20:42
2-Nitroaniline	ND		431	ug/Kg	1	08/3/2012 20:42
2-Nitrophenol	ND		431	ug/Kg	1	08/3/2012 20:42
3 and/or 4-Methylphenol	ND		431	ug/Kg	1	08/3/2012 20:42
3,3'-Dichlorobenzidine	ND		431	ug/Kg	1	08/3/2012 20:42
3-Nitroaniline	ND		431	ug/Kg	1	08/3/2012 20:42
4,6-Dinitro-2-methylphenol	ND		431	ug/Kg	1	08/3/2012 20:42
4-Chloro-3-methylphenol	ND		431	ug/Kg	1	08/3/2012 20:42
4-Chloroaniline	ND		431	ug/Kg	1	08/3/2012 20:42
4-Chlorophenyl phenyl ether	ND		431	ug/Kg	1	08/3/2012 20:42
Acenaphthene	ND		431	ug/Kg	1	08/3/2012 20:42
Acenaphthylene	ND		431	ug/Kg	1	08/3/2012 20:42
Anthracene	ND		431	ug/Kg	1	08/3/2012 20:42
Benzo(a)anthracene	ND		431	ug/Kg	1	08/3/2012 20:42
Benzo(a)pyrene	ND		431	ug/Kg	1	08/3/2012 20:42
Benzo(b)fluoranthene	ND		431	ug/Kg	1	08/3/2012 20:42
Benzo(g,h,i)perylene	ND		431	ug/Kg	1	08/3/2012 20:42
Benzo(k)fluoranthene	ND		431	ug/Kg	1	08/3/2012 20:42
Benzoic acid	ND		431	ug/Kg	1	08/3/2012 20:42
Bis(2-Chloroethoxy)methane	ND		431	ug/Kg	1	08/3/2012 20:42
Bis(2-Chloroethyl)ether	ND		431	ug/Kg	1	08/3/2012 20:42
Bis(2-Chloroisopropyl)ether	ND		431	ug/Kg	1	08/3/2012 20:42
Bis(2-Ethylhexyl)phthalate	ND		431	ug/Kg	1	08/3/2012 20:42
4-Bromophenyl phenyl ether	ND		431	ug/Kg	1	08/3/2012 20:42
Butyl benzyl phthalate	ND		431	ug/Kg	1	08/3/2012 20:42
Chrysene	ND		431	ug/Kg	1	08/3/2012 20:42
Di-n-butyl phthalate	ND		431	ug/Kg	1	08/3/2012 20:42
Di-n-octyl phthalate	ND		431	ug/Kg	1	08/3/2012 20:42
Dibenz(a,h)anthracene	ND		431	ug/Kg	1	08/3/2012 20:42
Dibenzofuran	ND		431	ug/Kg	1	08/3/2012 20:42
Diethyl phthalate	ND		431	ug/Kg	1	08/3/2012 20:42

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-25 (8-10)**

Client Sample ID: **SB49-25 (8-10)**	Collection Date: 07/26/2012 14:15
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416025-G	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 75.00

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		431	ug/Kg	1	08/3/2012 20:42
2,4-Dimethylphenol	ND		431	ug/Kg	1	08/3/2012 20:42
Diphenylamine	ND		431	ug/Kg	1	08/3/2012 20:42
Fluoranthene	ND		431	ug/Kg	1	08/3/2012 20:42
Fluorene	ND		431	ug/Kg	1	08/3/2012 20:42
Hexachlorobenzene	ND		431	ug/Kg	1	08/3/2012 20:42
Hexachlorobutadiene	ND		431	ug/Kg	1	08/3/2012 20:42
Hexachlorocyclopentadiene	ND		431	ug/Kg	1	08/3/2012 20:42
Hexachloroethane	ND		431	ug/Kg	1	08/3/2012 20:42
Indeno(1,2,3-cd)pyrene	ND		431	ug/Kg	1	08/3/2012 20:42
Isophorone	ND		431	ug/Kg	1	08/3/2012 20:42
Naphthalene	ND		431	ug/Kg	1	08/3/2012 20:42
4-Nitroaniline	ND		431	ug/Kg	1	08/3/2012 20:42
Nitrobenzene	ND		431	ug/Kg	1	08/3/2012 20:42
4-Nitrophenol	ND		431	ug/Kg	1	08/3/2012 20:42
Pentachlorophenol	ND		431	ug/Kg	1	08/3/2012 20:42
Phenanthrene	ND		431	ug/Kg	1	08/3/2012 20:42
Phenol	ND		431	ug/Kg	1	08/3/2012 20:42
Pyrene	ND		431	ug/Kg	1	08/3/2012 20:42
n-Nitrosodi-n-propylamine	ND		431	ug/Kg	1	08/3/2012 20:42
Surrogates						
2,4,6-Tribromophenol	80.0		41.0-129	%	1	08/3/2012 20:42
2-Fluorobiphenyl	97.0		48.0-123	%	1	08/3/2012 20:42
2-Fluorophenol	92.0		42.0-123	%	1	08/3/2012 20:42
Nitrobenzene-d5	102		46.0-117	%	1	08/3/2012 20:42
Phenol-d6	105		48.0-125	%	1	08/3/2012 20:42
Terphenyl-d14	105		44.0-140	%	1	08/3/2012 20:42

Batch Information

Analytical Batch: **XMS1622**	Prep Batch: **XXX2884**
Analytical Method: **SW-846 8270D**	Prep Method: **SW-846 3541**
Instrument: **MSD10**	Prep Date/Time: **08/03/2012 10:19**
Analyst: **CMP**	Prep Initial Wt./Vol.: **30.99 g**
Analytical Date/Time: **08/03/2012 20:42**	Prep Extract Vol: **10 mL**

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

Results of **SB49-25 (8-10)**

Client Sample ID: **SB49-25 (8-10)**	Collection Date: 07/26/2012 14:15
Client Project ID: **NCDOT U-3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202416025-G	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202416	Solids (%): 75.00

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		8.43	mg/kg	1	08/2/2012 17:58
Surrogates						
o-Terphenyl	99.4		40.0-140	%	1	08/2/2012 17:58

Batch Information

Analytical Batch: **XGC2416**	Prep Batch: **XXX2878**
Analytical Method: **SW-846 8015C DRO**	Prep Method: **SW-846 3541**
Instrument: **GC6**	Prep Date/Time: **08/01/2012 11:26**
Analyst: **DTF**	Prep Initial Wt./Vol.: **31.61 g**
Analytical Date/Time: **08/02/2012 17:58**	Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

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①

CLIENT: ATC ASSOCIATES

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

PROJECT: NCDOT U-3315 SITE/PWSID#: 35781.1.2

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

INVOICE TO: NCDOT QUOTE #:

P.O. NUMBER:

SGS Reference: 31202416

PAGE 1 OF 3

②

							Preservatives Used	NA	MeOH							
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	Analysis Required ③	DRO	GRO							REMARKS
	SB49-1 (2.5-5.0)	7/25/12	8:50	Soil	3	G		X	X							
	SB49-2 (2.5-5.0)		9:10													
	SB49-3 (2.5-5.0)		9:20													
	SB49-4 (2.5-5.0)		9:45													
	SB49-5 (2.5-5.0)		10:15													
	SB49-6 (2.5-5.0)		10:45													
	SB49-7 (2.5-5.0)		11:10													
	SB49-8 (2.5-5.0)		11:25													
	SB49-9 (2.5-5.0)		12:40													
	SB49-10 (2.5-5.0)	↓	13:00	↓	↓	↓		↓	↓							

⑤

Collected/Relinquished By:(1)	Date 7/27/12	Time 1600	Received By:
Relinquished By: (2)	Date 7/31/12	Time 1130	Received By: 7/31/12 12:00
Relinquished By: (3)	Date 7/31/12	Time 1430	Received By:
Relinquished By: (4)	Date 7/31/12	Time 1530	Received By:

④

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) [✓ YES] NO

Temperature°C: 5.6, 5.6°C

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

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① CLIENT: ATC ASSOCIATES

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

PROJECT: NCDOT SITE/PWSID#: U-3315

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

INVOICE TO: QUOTE #:

P.O. NUMBER:

SGS Reference: 3120246

PAGE 2 OF 3

Preservatives Used: NA, MeOH

③ Analysis Required: DRO, GRO

②

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	DRO	GRO	REMARKS
	SB49-11 (2.5-5.0)	7/25/12	13:30	SOIL	3	G	X	X	
	SB49-12 (2.5-5.0)	7/25/12	13:55	↓	↓	↓	↓	↓	
	SB49-13 (0-2.5)	7/25/12	15:20	↓	↓	↓	↓	↓	
	SB49-14 (2.5-5.0)	7/25/12	16:30	↓	↓	↓	↓	↓	
	SB49-15 (2.5-5.0)	7/25/12	16:50	↓	↓	↓	↓	↓	
	SB49-16 (2.5-5.0)	7/26/12	9:20	↓	↓	↓	↓	↓	
	SB49-17 (2.5-5.0)	7/26/12	9:40	↓	↓	↓	↓	↓	
	SB49-18 (2.5-5.0)	7/26/12	9:50	↓	↓	↓	↓	↓	
	SB49-19 (2.5-5.0)	7/26/12	10:05	↓	↓	↓	↓	↓	
	SB49-20 (2.5-5.0)	7/26/12	10:25	↓	↓	↓	↓	↓	

⑤

	Date	Time	Received By:
Collected/Relinquished By: (1)	7/27/12	1600	7/31/12 1200
Relinquished By: (2)	7/31/12	1420	
Relinquished By: (3)	7/31/12	1530	
Relinquished By: (4)			

④

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) [✓ YES] NO

Temperature °C: 3.6, 5.6°C

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

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① CLIENT: ATC ASSOCIATES

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

PROJECT: NCDOT SITE/PWSID#: U-3315

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

INVOICE TO: QUOTE #:

P.O. NUMBER:

SGS Reference: 3120246

PAGE 3 OF 3

②

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	DRO	GRO	8260	8270							REMARKS
Preservatives Used							NA	MeOH	NaHSO4	NA							
	SB49-21(2.5-5.0)	7/26/12	10:35	SOIL	3	G	X	X									
	SB49-22(10-12)	↓	14:45	↓	8	↓	X	X	X	X							
	SB49-23(6-8)	↓	14:35	↓	↓	↓	↓	↓	↓	↓							
	SB49-24(10-12)	↓	14:00	↓	↓	↓	↓	↓	↓	↓							
	SB49-25(8-10)	↓	14:15	↓	↓	↓	↓	↓	↓	↓							

③ Analysis Required

⑤

	Date	Time	
Collected/Relinquished By:(1)	7/27/12	1600	Received By: 7/31/12 12:00
Relinquished By: (2)	7/31/12	1430	Received By:
Relinquished By: (3)	7/31/12	1530	Received By:
Relinquished By: (4)			Received By:

④ Shipping Carrier:

Shipping Ticket No:

Special Deliverable Requirements:

Samples Received Cold? (Circle) [✓ YES] NO

Temperature°C: 5.6, 5.6°C

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.: **31202416**

Notes:

1. ___ Shipped
   X Hand Delivered

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: 5.6, 5.6
   ___ 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. ___ No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Comments:

Inspected and Logged in by: JJ
Date: Tue-7/31/12 00:00

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

Laboratory Report of Analysis

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

Report Number: **31202420**

Client Project: **NCDOT U3315**

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: 2012.08.08 09:54:01 -04'00'

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

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

ANALYTICAL PERSPECTIVES IS NOW PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

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
SB49-26 (2.5-5.0)	31202420001	07/27/2012 06:55	07/31/2012 15:30	Soil-Solid as dry weight
SB49-27 (2.5-5.0)	31202420002	07/27/2012 07:25	07/31/2012 15:30	Soil-Solid as dry weight
SB49-28 (2.5-5.0)	31202420003	07/27/2012 07:35	07/31/2012 15:30	Soil-Solid as dry weight
SB49-29 (2.5-5.0)	31202420004	07/27/2012 08:35	07/31/2012 15:30	Soil-Solid as dry weight
SB49-30 (2.5-5.0)	31202420005	07/27/2012 09:00	07/31/2012 15:30	Soil-Solid as dry weight

Results of **SB49-26 (2.5-5.0)**

Client Sample ID: **SB49-26 (2.5-5.0)**
Client Project ID: **NCDOT U3315**
Lab Sample ID: 31202420001-A
Lab Project ID: 31202420

Collection Date: 07/27/2012 06:55
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 83.00

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	08/2/2012 12:41
Surrogates						
4-Bromofluorobenzene	116		70.0-130	%	1	08/2/2012 12:41

Batch Information

Analytical Batch: **VGC2051**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 12:41**

Prep Batch: **VXX3755**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 11:13**
Prep Initial Wt./Vol.: **6.944 g**
Prep Extract Vol: **5 mL**

Results of **SB49-26 (2.5-5.0)**

Client Sample ID: **SB49-26 (2.5-5.0)**
Client Project ID: **NCDOT U3315**
Lab Sample ID: 31202420001-C
Lab Project ID: 31202420

Collection Date: 07/27/2012 06:55
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 83.00

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.85	mg/kg	1	08/2/2012 23:37
Surrogates						
o-Terphenyl	88.2		40.0-140	%	1	08/2/2012 23:37

Batch Information

Analytical Batch: **XGC2416**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/02/2012 23:37**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 14:22**
Prep Initial Wt./Vol.: **35.21 g**
Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-27 (2.5-5.0)**

Client Sample ID: **SB49-27 (2.5-5.0)**
Client Project ID: **NCDOT U3315**
Lab Sample ID: 31202420002-A
Lab Project ID: 31202420

Collection Date: 07/27/2012 07:25
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 80.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.50	mg/kg	1	08/2/2012 13:07
Surrogates						
4-Bromofluorobenzene	112		70.0-130	%	1	08/2/2012 13:07

Batch Information

Analytical Batch: **VGC2051**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 13:07**

Prep Batch: **VXX3755**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 11:14**
Prep Initial Wt./Vol.: **7.132 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

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Results of **SB49-27 (2.5-5.0)**

Client Sample ID: **SB49-27 (2.5-5.0)**	Collection Date: 07/27/2012 07:25
Client Project ID: **NCDOT U3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202420002-C	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202420	Solids (%): 80.20

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.87	mg/kg	1	08/3/2012 0:06
Surrogates						
o-Terphenyl	93.4		40.0-140	%	1	08/3/2012 0:06

Batch Information

Analytical Batch: **XGC2416**	Prep Batch: **XXX2878**
Analytical Method: **SW-846 8015C DRO**	Prep Method: **SW-846 3541**
Instrument: **GC6**	Prep Date/Time: **08/01/2012 14:22**
Analyst: **DTF**	Prep Initial Wt./Vol.: **31.67 g**
Analytical Date/Time: **08/03/2012 00:06**	Prep Extract Vol: **10 mL**

Results of **SB49-28 (2.5-5.0)**

Client Sample ID: **SB49-28 (2.5-5.0)**	Collection Date: 07/27/2012 07:35
Client Project ID: **NCDOT U3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202420003-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202420	Solids (%): 83.30

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.39	mg/kg	1	08/2/2012 13:32
Surrogates						
4-Bromofluorobenzene	117		70.0-130	%	1	08/2/2012 13:32

Batch Information

Analytical Batch: **VGC2051**	Prep Batch: **VXX3755**
Analytical Method: **SW-846 8015C GRO**	Prep Method: **SW-846 5035**
Instrument: **GC7**	Prep Date/Time: **08/01/2012 11:15**
Analyst: **MDY**	Prep Initial Wt./Vol.: **7.076 g**
Analytical Date/Time: **08/02/2012 13:32**	Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

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Results of **SB49-28 (2.5-5.0)**

Client Sample ID: **SB49-28 (2.5-5.0)**
Client Project ID: **NCDOT U3315**
Lab Sample ID: 31202420003-C
Lab Project ID: 31202420

Collection Date: 07/27/2012 07:35
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 83.30

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**12.1**		7.12	mg/kg	1	08/3/2012 0:34
Surrogates						
o-Terphenyl	105		40.0-140	%	1	08/3/2012 0:34

Batch Information

Analytical Batch: **XGC2416**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 00:34**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 14:22**
Prep Initial Wt./Vol.: **33.74 g**
Prep Extract Vol: **10 mL**

Print Date: 08/08/2012

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Results of **SB49-29 (2.5-5.0)**

Client Sample ID: **SB49-29 (2.5-5.0)**	Collection Date: 07/27/2012 08:35
Client Project ID: **NCDOT U3315**	Received Date: 07/31/2012 15:30
Lab Sample ID: 31202420004-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202420	Solids (%): 82.90

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.18	mg/kg	1	08/2/2012 13:57
Surrogates						
4-Bromofluorobenzene	114		70.0-130	%	1	08/2/2012 13:57

Batch Information

Analytical Batch: **VGC2051**	Prep Batch: **VXX3755**
Analytical Method: **SW-846 8015C GRO**	Prep Method: **SW-846 5035**
Instrument: **GC7**	Prep Date/Time: **08/01/2012 11:17**
Analyst: **MDY**	Prep Initial Wt./Vol.: **7.595 g**
Analytical Date/Time: **08/02/2012 13:57**	Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-29 (2.5-5.0)**

Client Sample ID: **SB49-29 (2.5-5.0)**
Client Project ID: **NCDOT U3315**
Lab Sample ID: 31202420004-C
Lab Project ID: 31202420

Collection Date: 07/27/2012 08:35
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 82.90

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.66	mg/kg	1	08/3/2012 1:02
Surrogates						
o-Terphenyl	97.1		40.0-140	%	1	08/3/2012 1:02

Batch Information

Analytical Batch: **XGC2416**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 01:02**

Prep Batch: **XXX2878**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/01/2012 14:22**
Prep Initial Wt./Vol.: **31.52 g**
Prep Extract Vol: **10 mL**

Results of SB49-30 (2.5-5.0)

Client Sample ID: **SB49-30 (2.5-5.0)**
Client Project ID: **NCDOT U3315**
Lab Sample ID: 31202420005-A
Lab Project ID: 31202420

Collection Date: 07/27/2012 09:00
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 79.30

Results by SW-846 8015C GRO

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.94	mg/kg	1	08/2/2012 14:22
Surrogates						
4-Bromofluorobenzene	117		70.0-130	%	1	08/2/2012 14:22

Batch Information

Analytical Batch: **VGC2051**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 14:22**

Prep Batch: **VXX3755**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/01/2012 11:18**
Prep Initial Wt./Vol.: **6.403 g**
Prep Extract Vol: **5 mL**

Print Date: 08/08/2012

N.C. Certification # 481

Results of **SB49-30 (2.5-5.0)**

Client Sample ID: **SB49-30 (2.5-5.0)**
Client Project ID: **NCDOT U3315**
Lab Sample ID: 31202420005-C
Lab Project ID: 31202420

Collection Date: 07/27/2012 09:00
Received Date: 07/31/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 79.30

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**8.41**		7.92	mg/kg	1	08/3/2012 19:27
Surrogates						
o-Terphenyl	78.0		40.0-140	%	1	08/3/2012 19:27

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 19:27**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **31.82 g**
Prep Extract Vol: **10 mL**

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- Maryland
- New York
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104615

① CLIENT: ATC ASSOCIATES

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

PROJECT: NCDOT SITE/PWSID#: U-3315

REPORTS TO: 35781.1.2 (WBS)

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

INVOICE TO: NCDOT QUOTE #:

P.O. NUMBER:

SGS Reference: 3120242O

PAGE 1 OF 1

③ Preservatives Used: NA | MeOH

② LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	DRO	GRO								REMARKS
	SB49-26 (2.5-5.0)	7/27/12	0655	↓	3	G	X	X								
	SB49-27 (2.5-5.0)	↓	0725		↓	↓	↓	↓								
	SB49-28 (2.5-5.0)		0735													
	SB49-29 (2.5-5.0)		0835													
	SB49-30 (2.5-5.0)	↓	0900	↓	↓	↓	↓	↓								

⑤

Collected/Relinquished By:(1)	Date 7/27/12	Time 1600	Received By:
Relinquished By: (2)	Date 7/31/12	Time 1130	Received By: 7/31/12 1200
Relinquished By: (3)	Date 7/31/12	Time 1430	Received By:
Relinquished By: (4)	Date 7/31/12	Time 1530	Received By:

④

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) [✓ YES] NO

Temperature°C: 5.6°C.

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.: **31202420**

Notes:

1. ___ Shipped
   _X_ Hand Delivered

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: 5.6
   ___ Ambient on Receipt
   _X_ 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. ___ No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Comments:

Inspected and Logged in by: JJ
Date: Wed-8/1/12 00:00

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

Laboratory Report of Analysis

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

Report Number: **31202431**

Client Project: **NCDOT**

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 15:11:27 -04'00'

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

Print Date: 08/09/2012 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
SB49-31 (2.5-5)	31202431001	07/30/2012 16:35	08/01/2012 16:55	Soil-Solid as dry weight
SB49-32 (2.5-5)	31202431002	07/30/2012 17:45	08/01/2012 16:55	Soil-Solid as dry weight
SB49-36 (2.5-5)	31202431003	07/31/2012 06:50	08/01/2012 16:55	Soil-Solid as dry weight
SB49-34 (2.5-5)	31202431004	07/31/2012 07:50	08/01/2012 16:55	Soil-Solid as dry weight
SB49-33 (2.5-5)	31202431005	07/31/2012 08:20	08/01/2012 16:55	Soil-Solid as dry weight
SB49-37 (2.5-5)	31202431006	07/31/2012 09:35	08/01/2012 16:55	Soil-Solid as dry weight
SB49-38 (2.5-5)	31202431007	07/31/2012 10:30	08/01/2012 16:55	Soil-Solid as dry weight

Results of **SB49-31 (2.5-5)**

Client Sample ID: **SB49-31 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431001-A
Lab Project ID: 31202431

Collection Date: 07/30/2012 16:35
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 82.10

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.72	mg/kg	1	08/2/2012 16:29
Surrogates						
4-Bromofluorobenzene	117		70.0-130	%	1	08/2/2012 16:29

Batch Information

Analytical Batch: **VGC2051**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 16:29**

Prep Batch: **VXX3755**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:22**
Prep Initial Wt./Vol.: **6.553 g**
Prep Extract Vol: **5 mL**

Results of **SB49-31 (2.5-5)**

Client Sample ID: **SB49-31 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431001-C
Lab Project ID: 31202431

Collection Date: 07/30/2012 16:35
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 82.10

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.10	mg/kg	1	08/3/2012 21:20
Surrogates						
o-Terphenyl	91.6		40.0-140	%	1	08/3/2012 21:20

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 21:20**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **34.31 g**
Prep Extract Vol: **10 mL**

Results of **SB49-32 (2.5-5)**

Client Sample ID: **SB49-32 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431002-A
Lab Project ID: 31202431

Collection Date: 07/30/2012 17:45
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 84.40

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	08/2/2012 16:54
Surrogates						
4-Bromofluorobenzene	114		70.0-130	%	1	08/2/2012 16:54

Batch Information

Analytical Batch: **VGC2051**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 16:54**

Prep Batch: **VXX3755**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:23**
Prep Initial Wt./Vol.: **6.723 g**
Prep Extract Vol: **5 mL**

Results of **SB49-32 (2.5-5)**

Client Sample ID: **SB49-32 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431002-C
Lab Project ID: 31202431

Collection Date: 07/30/2012 17:45
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 84.40

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**9.80**		7.14	mg/kg	1	08/3/2012 21:48
Surrogates						
o-Terphenyl	90.6		40.0-140	%	1	08/3/2012 21:48

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 21:48**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **33.18 g**
Prep Extract Vol: **10 mL**

Print Date: 08/09/2012

N.C. Certification # 481

Results of **SB49-36 (2.5-5)**

Client Sample ID: **SB49-36 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431003-A
Lab Project ID: 31202431

Collection Date: 07/31/2012 06:50
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 86.80

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.23	mg/kg	1	08/2/2012 17:19
Surrogates						
4-Bromofluorobenzene	113		70.0-130	%	1	08/2/2012 17:19

Batch Information

Analytical Batch: **VGC2051**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 17:19**

Prep Batch: **VXX3755**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:24**
Prep Initial Wt./Vol.: **7.143 g**
Prep Extract Vol: **5 mL**

Results of **SB49-36 (2.5-5)**

Client Sample ID: **SB49-36 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431003-C
Lab Project ID: 31202431

Collection Date: 07/31/2012 06:50
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 86.80

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.78	mg/kg	1	08/3/2012 22:16
Surrogates						
o-Terphenyl	90.9		40.0-140	%	1	08/3/2012 22:16

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 22:16**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **33.96 g**
Prep Extract Vol: **10 mL**

Results of **SB49-34 (2.5-5)**

Client Sample ID: **SB49-34 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431004-A
Lab Project ID: 31202431

Collection Date: 07/31/2012 07:50
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 82.40

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	08/2/2012 17:45
Surrogates						
4-Bromofluorobenzene	116		70.0-130	%	1	08/2/2012 17:45

Batch Information

Analytical Batch: **VGC2051**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 17:45**

Prep Batch: **VXX3755**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:25**
Prep Initial Wt./Vol.: **7.03 g**
Prep Extract Vol: **5 mL**

Results of **SB49-34 (2.5-5)**

Client Sample ID:	**SB49-34 (2.5-5)**	Collection Date:	07/31/2012 07:50
Client Project ID:	**NCDOT**	Received Date:	08/01/2012 16:55
Lab Sample ID:	31202431004-C	Matrix:	Soil-Solid as dry weight
Lab Project ID:	31202431	Solids (%):	82.40

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		6.96	mg/kg	1	08/3/2012 22:44
Surrogates						
o-Terphenyl	82.8		40.0-140	%	1	08/3/2012 22:44

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 22:44**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **34.88 g**
Prep Extract Vol: **10 mL**

Results of **SB49-33 (2.5-5)**

Client Sample ID: **SB49-33 (2.5-5)**	Collection Date: 07/31/2012 08:20
Client Project ID: **NCDOT**	Received Date: 08/01/2012 16:55
Lab Sample ID: 31202431005-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202431	Solids (%): 86.30

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.80	mg/kg	1	08/2/2012 18:10
Surrogates						
4-Bromofluorobenzene	116		70.0-130	%	1	08/2/2012 18:10

Batch Information

Analytical Batch: **VGC2051**	Prep Batch: **VXX3755**
Analytical Method: **SW-846 8015C GRO**	Prep Method: **SW-846 5035**
Instrument: **GC7**	Prep Date/Time: **08/02/2012 13:26**
Analyst: **MDY**	Prep Initial Wt./Vol.: **6.091 g**
Analytical Date/Time: **08/02/2012 18:10**	Prep Extract Vol: **5 mL**

Results of **SB49-33 (2.5-5)**

Client Sample ID: **SB49-33 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431005-C
Lab Project ID: 31202431

Collection Date: 07/31/2012 08:20
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 86.30

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.01	mg/kg	1	08/3/2012 23:12
Surrogates						
o-Terphenyl	90.1		40.0-140	%	1	08/3/2012 23:12

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 23:12**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **33.04 g**
Prep Extract Vol: **10 mL**

Results of **SB49-37 (2.5-5)**

Client Sample ID: **SB49-37 (2.5-5)**	Collection Date: 07/31/2012 09:35
Client Project ID: **NCDOT**	Received Date: 08/01/2012 16:55
Lab Sample ID: 31202431006-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202431	Solids (%): 87.10

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	08/2/2012 18:35
Surrogates						
4-Bromofluorobenzene	113		70.0-130	%	1	08/2/2012 18:35

Batch Information

Analytical Batch: **VGC2051**	Prep Batch: **VXX3755**
Analytical Method: **SW-846 8015C GRO**	Prep Method: **SW-846 5035**
Instrument: **GC7**	Prep Date/Time: **08/02/2012 13:27**
Analyst: **MDY**	Prep Initial Wt./Vol.: **6.621 g**
Analytical Date/Time: **08/02/2012 18:35**	Prep Extract Vol: **5 mL**

Results of **SB49-37 (2.5-5)**

Client Sample ID: **SB49-37 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431006-C
Lab Project ID: 31202431

Collection Date: 07/31/2012 09:35
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 87.10

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**8.88**		6.45	mg/kg	1	08/3/2012 23:40
Surrogates						
o-Terphenyl	89.2		40.0-140	%	1	08/3/2012 23:40

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/03/2012 23:40**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **35.6 g**
Prep Extract Vol: **10 mL**

Results of **SB49-38 (2.5-5)**

Client Sample ID: **SB49-38 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431007-A
Lab Project ID: 31202431

Collection Date: 07/31/2012 10:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 83.90

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND		3.46	mg/kg	1	08/2/2012 19:00
Surrogates						
4-Bromofluorobenzene	115		70.0-130	%	1	08/2/2012 19:00

Batch Information

Analytical Batch: **VGC2051**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/02/2012 19:00**

Prep Batch: **VXX3755**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:28**
Prep Initial Wt./Vol.: **6.877 g**
Prep Extract Vol: **5 mL**

Print Date: 08/09/2012

N.C. Certification # 481

Results of **SB49-38 (2.5-5)**

Client Sample ID: **SB49-38 (2.5-5)**
Client Project ID: **NCDOT**
Lab Sample ID: 31202431007-C
Lab Project ID: 31202431

Collection Date: 07/31/2012 10:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 83.90

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.52	mg/kg	1	08/4/2012 0:09
Surrogates						
o-Terphenyl	87.9		40.0-140	%	1	08/4/2012 0:09

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/04/2012 00:09**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **31.7 g**
Prep Extract Vol: **10 mL**

Print Date: 08/09/2012

N.C. Certification # 481

SGS

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SGS North America Inc.

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

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① CLIENT: ATC ASSOCIATES

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

PROJECT: NCDOT SITE/PWSID#: U-3315

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

INVOICE TO: QUOTE #:

P.O. NUMBER:

SGS Reference: 3120243

PAGE 1 OF 2

② ③

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	GRO	DRO	8260							REMARKS
Preservatives Used																
1 unlabeled (SSB33	SB49-31 (2.5-5)	7/30/12	1635	SOIL	3	G	X	X								
	SB49-32 (2.5-5)	↓	1745	↓	↓	↓	↓	↓								
	SB49-36 (2.5-5)	7/31/12	0650													
	SB49-34 (2.5-5)	↓	0750													
	SB49-33 (2.5-5)		0820													
	SB49-37 (2.5-5)		0935													
	SB49-38 (2.5-5)		1030													
	SB170-1 (6-8)		1110		7				X							
	SB170-2 (6-8)		1130		↓				↓							
	SB170-3 (0-2.5)		1320													

⑤

Collected/Relinquished By:(1)	Date	Time	Received By:
	8/1/12	1430	
Relinquished By: (2)	Date	Time	Received By:
	8/1/12	1655	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

④

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) [✓ YES] NO

Temperature°C: 0.8

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
- New Jersey
- North Carolina
- Maryland
- New York
- Ohio

www.us.sgs.com

104617

①
CLIENT: ATC ASSOCIATES
CONTACT: JUSTIN BALLARD   PHONE NO: (919) 871-0999
PROJECT: NCDOT   SITE/PWSID#: U-3315
REPORTS TO: JUSTIN BALLARD   FAX NO.: (919) 871-0335
INVOICE TO: QUOTE #:
P.O. NUMBER:

SGS Reference: 31202431
PAGE 2 OF 2

②

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	③ Analysis Required: GRO	DRO	8260								REMARKS
						Preservatives Used											
As labeled Megh	SB172-1 (6-8)	7/31/12	1350	Soil	7	G	X	X	X								
	SB173-2(2.5-5.0)	↓	1450	↓	3	↓	X	X									
	SB173-3(5-6)		1525		↓		X	X									
	SB173-4(6-8)	↓	1545	↓	↓	↓	X	X									
		1430 AV 8/1/12															

⑤

Collected/Relinquished By:(1)	Date	Time	Received By:
Claire P.	8/1/12	~~1400~~	Ali V
Relinquished By: (2) Ali V	Date 8/1/12	Time 1655	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

④
Shipping Carrier:
Shipping Ticket No:
Special Deliverable Requirements:
Special Instructions:
Requested Turnaround Time:
☐ RUSH ______ Date Needed   ☐ STD

Samples Received Cold? (Circle) [✓ YES] NO
Temperature°C: 0.8
Chain of Custody Seal: (Circle)
INTACT BROKEN [✓ ABSENT]

❑ 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.: **31202431**

Notes:

1. ___ Shipped
   X Hand Delivered

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: 0.8
   ___ 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. ___ No Discrepancies Noted
   X Discrepancies Noted
   ___ NCDENR notified of Discrepancies*

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

Comments: One SB49-31 (2.5-5) vial was mislabeled as Sb49-33 (2.5-5), but was identified by its collection date and time. The Methanol vials for the SB172-1 (6-8) samples were not labeled, but were in the same vial foam block as the rest of that sample.

Inspected and Logged in by: AV
Date: Thu-8/2/12 00:00

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

Laboratory Report of Analysis

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

Report Number: **31202495**

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 15:38:38 -04'00'

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

Print Date: 08/20/2012

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
TW-49-1 (2.5-5)	31202495004	08/01/2012 07:35	08/06/2012 15:30	Soil-Solid as dry weight
TW49-1	31202495006	08/01/2012 14:30	08/06/2012 15:30	Water

Results of **TW-49-1 (2.5-5)**

Client Sample ID: **TW-49-1 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202495004-A
Lab Project ID: 31202495

Collection Date: 08/01/2012 07:35
Received Date: 08/06/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 82.90

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,1,1-Trichloroethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,1,2,2-Tetrachloroethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,1,2-Trichloroethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,1-Dichloroethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,1-Dichloroethene	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,1-Dichloropropene	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,2,3-Trichlorobenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,2,3-Trichloropropane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,2,4-Trichlorobenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,2,4-Trimethylbenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,2-Dibromo-3-chloropropane	ND		24.7	ug/Kg	1	08/9/2012 15:37
1,2-Dibromoethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,2-Dichlorobenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,2-Dichloroethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,2-Dichloropropane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,3,5-Trimethylbenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,3-Dichlorobenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,3-Dichloropropane	ND		4.11	ug/Kg	1	08/9/2012 15:37
1,4-Dichlorobenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
2,2-Dichloropropane	ND		4.11	ug/Kg	1	08/9/2012 15:37
2-Butanone	ND		20.6	ug/Kg	1	08/9/2012 15:37
2-Chlorotoluene	ND		4.11	ug/Kg	1	08/9/2012 15:37
2-Hexanone	ND		10.3	ug/Kg	1	08/9/2012 15:37
4-Chlorotoluene	ND		4.11	ug/Kg	1	08/9/2012 15:37
4-Isopropyltoluene	ND		4.11	ug/Kg	1	08/9/2012 15:37
4-Methyl-2-pentanone	ND		10.3	ug/Kg	1	08/9/2012 15:37
Acetone	**99.3**		41.1	ug/Kg	1	08/9/2012 15:37
Benzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Bromobenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Bromochloromethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
Bromodichloromethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
Bromoform	ND		4.11	ug/Kg	1	08/9/2012 15:37
Bromomethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
n-Butylbenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Carbon disulfide	ND		4.11	ug/Kg	1	08/9/2012 15:37
Carbon tetrachloride	ND		4.11	ug/Kg	1	08/9/2012 15:37
Chlorobenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Chloroethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
Chloroform	ND		4.11	ug/Kg	1	08/9/2012 15:37
Chloromethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
Dibromochloromethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
Dibromomethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
Dichlorodifluoromethane	ND		4.11	ug/Kg	1	08/9/2012 15:37

Print Date: 08/20/2012

N.C. Certification # 481

Results of **TW-49-1 (2.5-5)**

Client Sample ID: **TW-49-1 (2.5-5)**	Collection Date: 08/01/2012 07:35
Client Project ID: **NCDOT U-3315**	Received Date: 08/06/2012 15:30
Lab Sample ID: 31202495004-A	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202495	Solids (%): 82.90

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		4.11	ug/Kg	1	08/9/2012 15:37
trans-1,3-Dichloropropene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Diisopropyl Ether	ND		4.11	ug/Kg	1	08/9/2012 15:37
Ethyl Benzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Hexachlorobutadiene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Isopropylbenzene (Cumene)	ND		4.11	ug/Kg	1	08/9/2012 15:37
Methyl iodide	ND		4.11	ug/Kg	1	08/9/2012 15:37
Methylene chloride	ND		16.5	ug/Kg	1	08/9/2012 15:37
Naphthalene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Styrene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Tetrachloroethene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Toluene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Trichloroethene	ND		4.11	ug/Kg	1	08/9/2012 15:37
Trichlorofluoromethane	ND		4.11	ug/Kg	1	08/9/2012 15:37
Vinyl chloride	ND		4.11	ug/Kg	1	08/9/2012 15:37
Xylene (total)	ND		8.23	ug/Kg	1	08/9/2012 15:37
cis-1,2-Dichloroethene	ND		4.11	ug/Kg	1	08/9/2012 15:37
m,p-Xylene	ND		8.23	ug/Kg	1	08/9/2012 15:37
n-Propylbenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
o-Xylene	ND		4.11	ug/Kg	1	08/9/2012 15:37
sec-Butylbenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
tert-Butyl methyl ether (MTBE)	ND		4.11	ug/Kg	1	08/9/2012 15:37
tert-Butylbenzene	ND		4.11	ug/Kg	1	08/9/2012 15:37
trans-1,2-Dichloroethene	ND		4.11	ug/Kg	1	08/9/2012 15:37
trans-1,4-Dichloro-2-butene	ND		20.6	ug/Kg	1	08/9/2012 15:37
Surrogates						
1,2-Dichloroethane-d4	119		55.0-173	%	1	08/9/2012 15:37
4-Bromofluorobenzene	98.0		23.0-141	%	1	08/9/2012 15:37
Toluene d8	103		57.0-134	%	1	08/9/2012 15:37

Batch Information

Analytical Batch: **VMS2459**	Prep Batch: **VXX3787**
Analytical Method: **SW-846 8260B**	Prep Method: **SW-846 5035 SL**
Instrument: **MSD9**	Prep Date/Time: **08/07/2012 11:24**
Analyst: **DVO**	Prep Initial Wt./Vol.: **7.33 g**
Analytical Date/Time: **08/09/2012 15:37**	Prep Extract Vol: **5 mL**

Print Date: 08/20/2012

N.C. Certification # 481

Results of **TW-49-1 (2.5-5)**

Client Sample ID: **TW-49-1 (2.5-5)**	Collection Date: 08/01/2012 07:35
Client Project ID: **NCDOT U-3315**	Received Date: 08/06/2012 15:30
Lab Sample ID: 31202495004-E	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202495	Solids (%): 82.90

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	08/14/2012 20:42
Surrogates						
4-Bromofluorobenzene	107		70.0-130	%	1	08/14/2012 20:42

Batch Information

Analytical Batch: **VGC2067**	Prep Batch: **VXX3822**
Analytical Method: **SW-846 8015C GRO**	Prep Method: **SW-846 5035**
Instrument: **GC7**	Prep Date/Time: **08/07/2012 11:24**
Analyst: **MDY**	Prep Initial Wt./Vol.: **6.557 g**
Analytical Date/Time: **08/14/2012 20:42**	Prep Extract Vol: **5 mL**

Results of **TW-49-1 (2.5-5)**

Client Sample ID: **TW-49-1 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202495004-G
Lab Project ID: 31202495

Collection Date: 08/01/2012 07:35
Received Date: 08/06/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 82.90

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND		382	ug/Kg	1	08/17/2012 23:34
1,2-Dichlorobenzene	ND		382	ug/Kg	1	08/17/2012 23:34
1,3-Dichlorobenzene	ND		382	ug/Kg	1	08/17/2012 23:34
1,4-Dichlorobenzene	ND		382	ug/Kg	1	08/17/2012 23:34
2,4,5-Trichlorophenol	ND		382	ug/Kg	1	08/17/2012 23:34
2,4,6-Trichlorophenol	ND		382	ug/Kg	1	08/17/2012 23:34
2,4-Dichlorophenol	ND		382	ug/Kg	1	08/17/2012 23:34
2,4-Dinitrophenol	ND		762	ug/Kg	1	08/17/2012 23:34
2,4-Dinitrotoluene	ND		382	ug/Kg	1	08/17/2012 23:34
2,6-Dinitrotoluene	ND		382	ug/Kg	1	08/17/2012 23:34
2-Chloronaphthalene	ND		382	ug/Kg	1	08/17/2012 23:34
2-Chlorophenol	ND		382	ug/Kg	1	08/17/2012 23:34
2-Methylnaphthalene	ND		382	ug/Kg	1	08/17/2012 23:34
2-Methylphenol	ND		382	ug/Kg	1	08/17/2012 23:34
2-Nitroaniline	ND		382	ug/Kg	1	08/17/2012 23:34
2-Nitrophenol	ND		382	ug/Kg	1	08/17/2012 23:34
3 and/or 4-Methylphenol	ND		382	ug/Kg	1	08/17/2012 23:34
3,3'-Dichlorobenzidine	ND		382	ug/Kg	1	08/17/2012 23:34
3-Nitroaniline	ND		382	ug/Kg	1	08/17/2012 23:34
4,6-Dinitro-2-methylphenol	ND		382	ug/Kg	1	08/17/2012 23:34
4-Chloro-3-methylphenol	ND		382	ug/Kg	1	08/17/2012 23:34
4-Chloroaniline	ND		382	ug/Kg	1	08/17/2012 23:34
4-Chlorophenyl phenyl ether	ND		382	ug/Kg	1	08/17/2012 23:34
Acenaphthene	ND		382	ug/Kg	1	08/17/2012 23:34
Acenaphthylene	ND		382	ug/Kg	1	08/17/2012 23:34
Anthracene	ND		382	ug/Kg	1	08/17/2012 23:34
Benzo(a)anthracene	ND		382	ug/Kg	1	08/17/2012 23:34
Benzo(a)pyrene	ND		382	ug/Kg	1	08/17/2012 23:34
Benzo(b)fluoranthene	ND		382	ug/Kg	1	08/17/2012 23:34
Benzo(g,h,i)perylene	ND		382	ug/Kg	1	08/17/2012 23:34
Benzo(k)fluoranthene	ND		382	ug/Kg	1	08/17/2012 23:34
Benzoic acid	ND		382	ug/Kg	1	08/17/2012 23:34
Bis(2-Chloroethoxy)methane	ND		382	ug/Kg	1	08/17/2012 23:34
Bis(2-Chloroethyl)ether	ND		382	ug/Kg	1	08/17/2012 23:34
Bis(2-Chloroisopropyl)ether	ND		382	ug/Kg	1	08/17/2012 23:34
Bis(2-Ethylhexyl)phthalate	ND		382	ug/Kg	1	08/17/2012 23:34
4-Bromophenyl phenyl ether	ND		382	ug/Kg	1	08/17/2012 23:34
Butyl benzyl phthalate	ND		382	ug/Kg	1	08/17/2012 23:34
Chrysene	ND		382	ug/Kg	1	08/17/2012 23:34
Di-n-butyl phthalate	ND		382	ug/Kg	1	08/17/2012 23:34
Di-n-octyl phthalate	ND		382	ug/Kg	1	08/17/2012 23:34
Dibenz(a,h)anthracene	ND		382	ug/Kg	1	08/17/2012 23:34
Dibenzofuran	ND		382	ug/Kg	1	08/17/2012 23:34
Diethyl phthalate	ND		382	ug/Kg	1	08/17/2012 23:34

Results of **TW-49-1 (2.5-5)**

Client Sample ID: **TW-49-1 (2.5-5)**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202495004-G
Lab Project ID: 31202495

Collection Date: 08/01/2012 07:35
Received Date: 08/06/2012 15:30
Matrix: Soil-Solid as dry weight
Solids (%): 82.90

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		382	ug/Kg	1	08/17/2012 23:34
2,4-Dimethylphenol	ND		382	ug/Kg	1	08/17/2012 23:34
Diphenylamine	ND		382	ug/Kg	1	08/17/2012 23:34
Fluoranthene	ND		382	ug/Kg	1	08/17/2012 23:34
Fluorene	ND		382	ug/Kg	1	08/17/2012 23:34
Hexachlorobenzene	ND		382	ug/Kg	1	08/17/2012 23:34
Hexachlorobutadiene	ND		382	ug/Kg	1	08/17/2012 23:34
Hexachlorocyclopentadiene	ND		382	ug/Kg	1	08/17/2012 23:34
Hexachloroethane	ND		382	ug/Kg	1	08/17/2012 23:34
Indeno(1,2,3-cd)pyrene	ND		382	ug/Kg	1	08/17/2012 23:34
Isophorone	ND		382	ug/Kg	1	08/17/2012 23:34
Naphthalene	ND		382	ug/Kg	1	08/17/2012 23:34
4-Nitroaniline	ND		382	ug/Kg	1	08/17/2012 23:34
Nitrobenzene	ND		382	ug/Kg	1	08/17/2012 23:34
4-Nitrophenol	ND		382	ug/Kg	1	08/17/2012 23:34
Pentachlorophenol	ND		382	ug/Kg	1	08/17/2012 23:34
Phenanthrene	ND		382	ug/Kg	1	08/17/2012 23:34
Phenol	ND		382	ug/Kg	1	08/17/2012 23:34
Pyrene	ND		382	ug/Kg	1	08/17/2012 23:34
n-Nitrosodi-n-propylamine	ND		382	ug/Kg	1	08/17/2012 23:34
Surrogates						
2,4,6-Tribromophenol	94.0		41.0-129	%	1	08/17/2012 23:34
2-Fluorobiphenyl	96.0		48.0-123	%	1	08/17/2012 23:34
2-Fluorophenol	81.0		42.0-123	%	1	08/17/2012 23:34
Nitrobenzene-d5	79.0		46.0-117	%	1	08/17/2012 23:34
Phenol-d6	95.0		48.0-125	%	1	08/17/2012 23:34
Terphenyl-d14	97.0		44.0-140	%	1	08/17/2012 23:34

Batch Information

Analytical Batch: **XMS1641**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/17/2012 23:34**

Prep Batch: **XXX2906**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/09/2012 14:27**
Prep Initial Wt./Vol.: **31.66 g**
Prep Extract Vol: **10 mL**

Results of **TW-49-1 (2.5-5)**

Client Sample ID: **TW-49-1 (2.5-5)**	Collection Date: 08/01/2012 07:35
Client Project ID: **NCDOT U-3315**	Received Date: 08/06/2012 15:30
Lab Sample ID: 31202495004-G	Matrix: Soil-Solid as dry weight
Lab Project ID: 31202495	Solids (%): 82.90

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

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND		7.48	mg/kg	1	08/14/2012 0:44
Surrogates						
o-Terphenyl	91.3		40.0-140	%	1	08/14/2012 0:44

Batch Information

Analytical Batch: **XGC2443**	Prep Batch: **XXX2914**
Analytical Method: **SW-846 8015C DRO**	Prep Method: **SW-846 3541**
Instrument: **GC6**	Prep Date/Time: **08/13/2012 10:02**
Analyst: **DTF**	Prep Initial Wt./Vol.: **32.25 g**
Analytical Date/Time: **08/14/2012 00:44**	Prep Extract Vol: **10 mL**

Print Date: 08/20/2012

N.C. Certification # 481

Results of **TW49-1**

Client Sample ID: **TW49-1**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202495006-B
Lab Project ID: 31202495

Collection Date: 08/01/2012 14:30
Received Date: 08/06/2012 15:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND		1.00	ug/L	1	08/9/2012 18:59
1,1,1-Trichloroethane	ND		1.00	ug/L	1	08/9/2012 18:59
1,1,2,2-Tetrachloroethane	ND		1.00	ug/L	1	08/9/2012 18:59
1,1,2-Trichloroethane	ND		1.00	ug/L	1	08/9/2012 18:59
1,1-Dichloroethane	ND		1.00	ug/L	1	08/9/2012 18:59
1,1-Dichloroethene	ND		1.00	ug/L	1	08/9/2012 18:59
1,1-Dichloropropene	ND		1.00	ug/L	1	08/9/2012 18:59
1,2,3-Trichlorobenzene	ND		1.00	ug/L	1	08/9/2012 18:59
1,2,3-Trichloropropane	ND		1.00	ug/L	1	08/9/2012 18:59
1,2,4-Trichlorobenzene	ND		1.00	ug/L	1	08/9/2012 18:59
1,2,4-Trimethylbenzene	ND		1.00	ug/L	1	08/9/2012 18:59
1,2-Dibromo-3-chloropropane	ND		5.00	ug/L	1	08/9/2012 18:59
1,2-Dibromoethane	ND		1.00	ug/L	1	08/9/2012 18:59
1,2-Dichlorobenzene	ND		1.00	ug/L	1	08/9/2012 18:59
1,2-Dichloroethane	ND		1.00	ug/L	1	08/9/2012 18:59
1,2-Dichloropropane	ND		1.00	ug/L	1	08/9/2012 18:59
1,3,5-Trimethylbenzene	ND		1.00	ug/L	1	08/9/2012 18:59
1,3-Dichlorobenzene	ND		1.00	ug/L	1	08/9/2012 18:59
1,3-Dichloropropane	ND		1.00	ug/L	1	08/9/2012 18:59
1,4-Dichlorobenzene	ND		1.00	ug/L	1	08/9/2012 18:59
2,2-Dichloropropane	ND		1.00	ug/L	1	08/9/2012 18:59
2-Butanone	ND		25.0	ug/L	1	08/9/2012 18:59
2-Chlorotoluene	ND		1.00	ug/L	1	08/9/2012 18:59
2-Hexanone	ND		5.00	ug/L	1	08/9/2012 18:59
4-Chlorotoluene	ND		1.00	ug/L	1	08/9/2012 18:59
4-Isopropyltoluene	ND		1.00	ug/L	1	08/9/2012 18:59
4-Methyl-2-pentanone	ND		5.00	ug/L	1	08/9/2012 18:59
Acetone	ND		25.0	ug/L	1	08/9/2012 18:59
Benzene	ND		1.00	ug/L	1	08/9/2012 18:59
Bromobenzene	ND		1.00	ug/L	1	08/9/2012 18:59
Bromochloromethane	ND		1.00	ug/L	1	08/9/2012 18:59
Bromodichloromethane	ND		1.00	ug/L	1	08/9/2012 18:59
Bromoform	ND		1.00	ug/L	1	08/9/2012 18:59
Bromomethane	ND		1.00	ug/L	1	08/9/2012 18:59
n-Butylbenzene	ND		1.00	ug/L	1	08/9/2012 18:59
Carbon disulfide	ND		1.00	ug/L	1	08/9/2012 18:59
Carbon tetrachloride	ND		1.00	ug/L	1	08/9/2012 18:59
Chlorobenzene	ND		1.00	ug/L	1	08/9/2012 18:59
Chloroethane	ND		1.00	ug/L	1	08/9/2012 18:59
Chloroform	ND		1.00	ug/L	1	08/9/2012 18:59
Chloromethane	**1.05**		1.00	ug/L	1	08/9/2012 18:59
Dibromochloromethane	ND		1.00	ug/L	1	08/9/2012 18:59
Dibromomethane	ND		1.00	ug/L	1	08/9/2012 18:59
Dichlorodifluoromethane	ND		5.00	ug/L	1	08/9/2012 18:59

Results of **TW49-1**

Client Sample ID: **TW49-1**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202495006-B
Lab Project ID: 31202495

Collection Date: 08/01/2012 14:30
Received Date: 08/06/2012 15:30
Matrix: Water

Results by **SW-846 8260B**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
cis-1,3-Dichloropropene	ND		1.00	ug/L	1	08/9/2012 18:59
trans-1,3-Dichloropropene	ND		1.00	ug/L	1	08/9/2012 18:59
Diisopropyl Ether	ND		1.00	ug/L	1	08/9/2012 18:59
Ethyl Benzene	ND		1.00	ug/L	1	08/9/2012 18:59
Hexachlorobutadiene	ND		1.00	ug/L	1	08/9/2012 18:59
Isopropylbenzene (Cumene)	ND		1.00	ug/L	1	08/9/2012 18:59
Methyl iodide	ND		1.00	ug/L	1	08/9/2012 18:59
Methylene chloride	ND		5.00	ug/L	1	08/9/2012 18:59
Naphthalene	ND		1.00	ug/L	1	08/9/2012 18:59
Styrene	ND		1.00	ug/L	1	08/9/2012 18:59
Tetrachloroethene	ND		1.00	ug/L	1	08/9/2012 18:59
Toluene	ND		1.00	ug/L	1	08/9/2012 18:59
Trichloroethene	ND		1.00	ug/L	1	08/9/2012 18:59
Trichlorofluoromethane	ND		1.00	ug/L	1	08/9/2012 18:59
Vinyl chloride	ND		1.00	ug/L	1	08/9/2012 18:59
Xylene (total)	ND		2.00	ug/L	1	08/9/2012 18:59
cis-1,2-Dichloroethene	ND		1.00	ug/L	1	08/9/2012 18:59
m,p-Xylene	ND		2.00	ug/L	1	08/9/2012 18:59
n-Propylbenzene	ND		1.00	ug/L	1	08/9/2012 18:59
o-Xylene	ND		1.00	ug/L	1	08/9/2012 18:59
sec-Butylbenzene	ND		1.00	ug/L	1	08/9/2012 18:59
tert-Butyl methyl ether (MTBE)	ND		1.00	ug/L	1	08/9/2012 18:59
tert-Butylbenzene	ND		1.00	ug/L	1	08/9/2012 18:59
trans-1,2-Dichloroethene	ND		1.00	ug/L	1	08/9/2012 18:59
trans-1,4-Dichloro-2-butene	ND		5.00	ug/L	1	08/9/2012 18:59
Surrogates						
1,2-Dichloroethane-d4	101		64.0-140	%	1	08/9/2012 18:59
4-Bromofluorobenzene	101		85.0-115	%	1	08/9/2012 18:59
Toluene d8	105		82.0-117	%	1	08/9/2012 18:59

Batch Information

Analytical Batch: **VMS2461**
Analytical Method: **SW-846 8260B**
Instrument: **MSD3**
Analyst: **BWS**
Analytical Date/Time: **08/09/2012 18:59**

Prep Batch: **VXX3789**
Prep Method: **SW-846 5030B**
Prep Date/Time: **08/09/2012 16:33**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Results of **TW49-1**

Client Sample ID: **TW49-1**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202495006-D
Lab Project ID: 31202495

Collection Date: 08/01/2012 14:30
Received Date: 08/06/2012 15:30
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	08/9/2012 21:17
1,2-Dichlorobenzene	ND		5.08	ug/L	1	08/9/2012 21:17
1,3-Dichlorobenzene	ND		5.08	ug/L	1	08/9/2012 21:17
1,4-Dichlorobenzene	ND		5.08	ug/L	1	08/9/2012 21:17
2,4,5-Trichlorophenol	ND		5.08	ug/L	1	08/9/2012 21:17
2,4,6-Trichlorophenol	ND		5.08	ug/L	1	08/9/2012 21:17
2,4-Dichlorophenol	ND		5.08	ug/L	1	08/9/2012 21:17
2,4-Dinitrophenol	ND		25.4	ug/L	1	08/9/2012 21:17
2,4-Dinitrotoluene	ND		5.08	ug/L	1	08/9/2012 21:17
2,6-Dinitrotoluene	ND		5.08	ug/L	1	08/9/2012 21:17
2-Chloronaphthalene	ND		5.08	ug/L	1	08/9/2012 21:17
2-Chlorophenol	ND		5.08	ug/L	1	08/9/2012 21:17
2-Methylnaphthalene	ND		5.08	ug/L	1	08/9/2012 21:17
2-Methylphenol	ND		5.08	ug/L	1	08/9/2012 21:17
2-Nitroaniline	ND		5.08	ug/L	1	08/9/2012 21:17
2-Nitrophenol	ND		5.08	ug/L	1	08/9/2012 21:17
3 and/or 4-Methylphenol	ND		5.08	ug/L	1	08/9/2012 21:17
3,3'-Dichlorobenzidine	ND		10.2	ug/L	1	08/9/2012 21:17
3-Nitroaniline	ND		25.4	ug/L	1	08/9/2012 21:17
4,6-Dinitro-2-methylphenol	ND		25.4	ug/L	1	08/9/2012 21:17
4-Chloro-3-methylphenol	ND		5.08	ug/L	1	08/9/2012 21:17
4-Chloroaniline	ND		25.4	ug/L	1	08/9/2012 21:17
4-Chlorophenyl phenyl ether	ND		5.08	ug/L	1	08/9/2012 21:17
Acenaphthene	ND		5.08	ug/L	1	08/9/2012 21:17
Acenaphthylene	ND		5.08	ug/L	1	08/9/2012 21:17
Anthracene	ND		5.08	ug/L	1	08/9/2012 21:17
Benzo(a)anthracene	ND		5.08	ug/L	1	08/9/2012 21:17
Benzo(a)pyrene	ND		5.08	ug/L	1	08/9/2012 21:17
Benzo(b)fluoranthene	ND		5.08	ug/L	1	08/9/2012 21:17
Benzo(g,h,i)perylene	ND		5.08	ug/L	1	08/9/2012 21:17
Benzo(k)fluoranthene	ND		5.08	ug/L	1	08/9/2012 21:17
Benzoic acid	ND		5.08	ug/L	1	08/9/2012 21:17
Bis(2-Chloroethoxy)methane	ND		5.08	ug/L	1	08/9/2012 21:17
Bis(2-Chloroethyl)ether	ND		5.08	ug/L	1	08/9/2012 21:17
Bis(2-Chloroisopropyl)ether	ND		5.08	ug/L	1	08/9/2012 21:17
Bis(2-Ethylhexyl)phthalate	ND		5.08	ug/L	1	08/9/2012 21:17
4-Bromophenyl phenyl ether	ND		5.08	ug/L	1	08/9/2012 21:17
Butyl benzyl phthalate	ND		5.08	ug/L	1	08/9/2012 21:17
Chrysene	ND		5.08	ug/L	1	08/9/2012 21:17
Di-n-butyl phthalate	ND		5.08	ug/L	1	08/9/2012 21:17
Di-n-octyl phthalate	ND		5.08	ug/L	1	08/9/2012 21:17
Dibenz(a,h)anthracene	ND		5.08	ug/L	1	08/9/2012 21:17
Dibenzofuran	ND		5.08	ug/L	1	08/9/2012 21:17
Diethyl phthalate	ND		5.08	ug/L	1	08/9/2012 21:17

Print Date: 08/20/2012 N.C. Certification # 481

Results of **TW49-1**

Client Sample ID: **TW49-1**
Client Project ID: **NCDOT U-3315**
Lab Sample ID: 31202495006-D
Lab Project ID: 31202495

Collection Date: 08/01/2012 14:30
Received Date: 08/06/2012 15:30
Matrix: Water

Results by **SW-846 8270D**

Parameter	Result	Qual	LOQ/CL	Units	DF	Date Analyzed
Dimethyl phthalate	ND		5.08	ug/L	1	08/9/2012 21:17
2,4-Dimethylphenol	ND		5.08	ug/L	1	08/9/2012 21:17
Diphenylamine	ND		5.08	ug/L	1	08/9/2012 21:17
Fluoranthene	ND		5.08	ug/L	1	08/9/2012 21:17
Fluorene	ND		5.08	ug/L	1	08/9/2012 21:17
Hexachlorobenzene	ND		5.08	ug/L	1	08/9/2012 21:17
Hexachlorobutadiene	ND		5.08	ug/L	1	08/9/2012 21:17
Hexachlorocyclopentadiene	ND		10.2	ug/L	1	08/9/2012 21:17
Hexachloroethane	ND		5.08	ug/L	1	08/9/2012 21:17
Indeno(1,2,3-cd)pyrene	ND		5.08	ug/L	1	08/9/2012 21:17
Isophorone	ND		5.08	ug/L	1	08/9/2012 21:17
Naphthalene	ND		5.08	ug/L	1	08/9/2012 21:17
4-Nitroaniline	ND		25.4	ug/L	1	08/9/2012 21:17
Nitrobenzene	ND		5.08	ug/L	1	08/9/2012 21:17
4-Nitrophenol	ND		25.4	ug/L	1	08/9/2012 21:17
Pentachlorophenol	ND		25.4	ug/L	1	08/9/2012 21:17
Phenanthrene	ND		5.08	ug/L	1	08/9/2012 21:17
Phenol	ND		5.08	ug/L	1	08/9/2012 21:17
Pyrene	ND		5.08	ug/L	1	08/9/2012 21:17
n-Nitrosodi-n-propylamine	ND		5.08	ug/L	1	08/9/2012 21:17
Surrogates						
2,4,6-Tribromophenol	112		29.3-152	%	1	08/9/2012 21:17
2-Fluorobiphenyl	86.0		50.0-107	%	1	08/9/2012 21:17
2-Fluorophenol	78.0		33.1-118	%	1	08/9/2012 21:17
Nitrobenzene-d5	88.0		46.0-118	%	1	08/9/2012 21:17
Phenol-d6	92.0		49.0-120	%	1	08/9/2012 21:17
Terphenyl-d14	73.0		22.1-142	%	1	08/9/2012 21:17

Batch Information

Analytical Batch: **XMS1630**
Analytical Method: **SW-846 8270D**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/09/2012 21:17**

Prep Batch: **XXX2897**
Prep Method: **SW-846 3520C**
Prep Date/Time: **08/07/2012 16:58**
Prep Initial Wt./Vol.: **985 mL**
Prep Extract Vol: **5 mL**

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
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- North Carolina
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- New York
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104638

① CLIENT: ATC ASSOCIATES

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

PROJECT: NCDOT U-3715 SITE/PWSID#: ~~U-3715~~ 35781.2

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

INVOICE TO: NCDOT QUOTE #:

P.O. NUMBER:

SGS Reference: 3202495

PAGE 1 OF 1

Preservatives Used

② ③

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	Analysis Required: GRO	DRO	~~8260~~ cp 8/7/12	8270						REMARKS
	TW172-1 (6-8)	8/1/12	1045	S	7	G	X	X	~~X~~							
	TW173-1 (6-8)		1125	S	3		X	X								
	TW170-1 (6-8)		0930	S	7		X	X	X							
	TW49-1 (2.5-5)		0735	S	8		X	X	X	X						
	TW174-1 (6-8)		1255	S	3		X	X								
	TW49-1		1430	GW	5				X	X						
	TW170-1		1445	GW	3				X							
	TW172-1		1500	GW	3				X							
	TW173-1		1515	GW	3				X							
	TW174-1		1530	GW	3				X							

⑤

Collected/Relinquished By:(1)	Date 8/6/12	Time 1030	Received By:
Relinquished By: (2)	Date 8/6/12	Time 1230	Received By:
Relinquished By: (3)	Date 8/6/12	Time 1530	Received By:
Relinquished By: (4)	Date	Time	Received By:

④ Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (Circle) [✓ YES] NO

Temperature°C: 0.7 . 4.2

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

CHAIN OF CUSTODY RECORD
SGS North America Inc.

Locations Nationwide
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- New York
- Ohio

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104618

① CLIENT: ATC Associates

CONTACT: Justin Ballard PHONE NO: (919) 871-0999

PROJECT: NCDOT U3315 SITE/PWSID#: 35781.1.2

REPORTS TO: Justin Ballard FAX NO.: (919) 871-0335

INVOICE TO: NCDOT QUOTE #:

P.O. NUMBER:

SGS Reference: 31202495

PAGE 1 OF 1

③ Preservatives Used / Analysis Required

②

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	GRO	DRO	REMARKS
	SB173-1 (6-8)	8/2/12	0715	S	3	G	X	X	
	SB173-5 (2.5-5.0)	↓	0745	↓	↓	↓	↓	↓	
	SB173-6 (6-8)		0805						
	SB173-7 (6-8)		0905						
	SB174-2 (0-2.5)		1020						
	SB174-1 (5-6)		1040						
	SB174-3 (6-8)		1110						
	SB174-4 (5-6)		1140						
	SB174-5 (0-2.5)		1300						
	SB174-6 (5-6)		1450						

⑤

	Date	Time	
Collected/Relinquished By: (1)	8/6/12	1030	Received By:
Relinquished By: (2)	8/6/12	1200	Received By:
Relinquished By: (3)	8/6/12	1530	Received By:
Relinquished By: (4)	Date	Time	Received By:

④ Shipping Carrier:

Shipping Ticket No:

Special Deliverable Requirements:

Special Instructions:

Requested Turnaround Time:

☐ RUSH ______ Date Needed ☒ STD

Samples Received Cold? (Circle) [✓ YES] NO

Temperature°C: 0.7 . 4.2

Chain of Custody Seal: (Circle)

INTACT BROKEN [✓ ABSENT]

☐ 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
- New Jersey
- North Carolina
- Maryland
- New York
- Ohio

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104619

① CLIENT: ATC ASSOCIATES

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

PROJECT: NCDOT U-3315 SITE/PWSID#: 35781.1.2

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

INVOICE TO: NCDOT QUOTE #:

P.O. NUMBER:

SGS Reference: 3120249S

PAGE 1 OF 1

Preservatives Used

③ Analysis Required

② LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	GRO	DRO	REMARKS
	SB171-1 (0-2.5)	8/3/12	0730	S	3	G	X	X	
	SB171-2 (0-2.5)	↓	0750	↓	↓	↓	↓	↓	
	SB171-3 (0-2.5)	↓	0810	↓	↓	↓	↓	↓	
	SB171-4 (0-2.5)	↓	0900	↓	↓	↓	↓	↓	
	SB171-5 (0-2.5)	↓	0920	↓	↓	↓	↓	↓	
	SB171-6 (0-2.5)	↓	0940	↓	↓	↓	↓	↓	

⑤

	Date	Time	Received By:
Collected/Relinquished By:(1)	8/6/12	1030	
Relinquished By: (2)	8/6/12	1200	
Relinquished By: (3)	8/6/12	1530	
Relinquished By: (4)			

④ Shipping Carrier:

Shipping Ticket No:

Special Deliverable Requirements:

Special Instructions:

Samples Received Cold? (Circle) [✓ YES] NO

Temperature°C: 0.7 4.2

Chain of Custody Seal: (Circle)

INTACT BROKEN [✓ ABSENT]

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.: **31202495**

1. ___ Shipped　　Notes:
   X Hand Delivered

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: 0.7, 4.2
   ___ Ambient on Receipt
   X 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. ___ No Discrepancies Noted
   X Discrepancies Noted
   ___ NCDENR notified of Discrepancies*

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

Comments: Received two MEOH vials with no sample id or label.

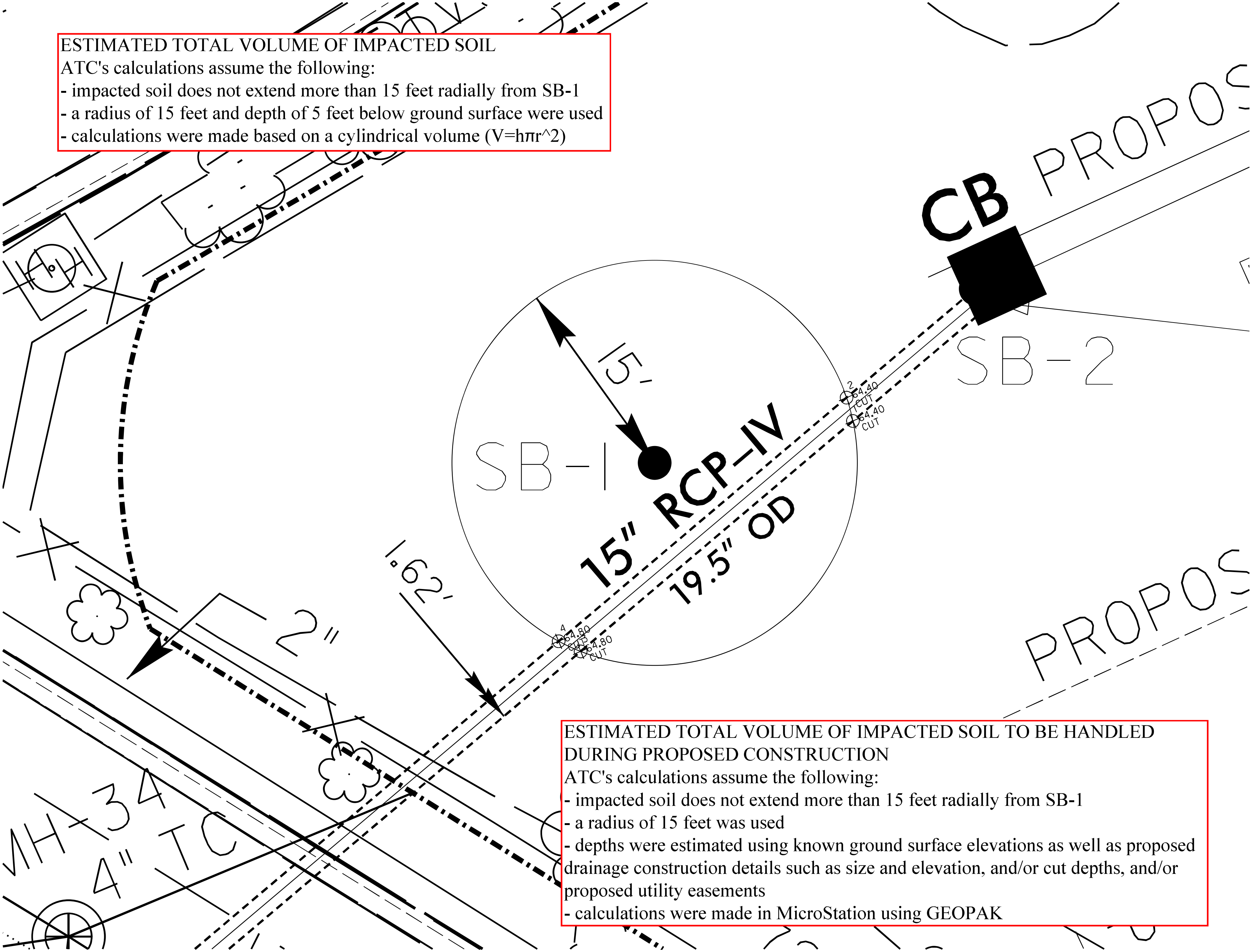
Did not received vials for TW172-1 (6-8), only one 4oz amber jar.

Inspected and Logged in by: JJ
Date: Mon-8/6/12 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 more than 15 feet radially from SB-1
- a radius of 15 feet and depth of 5 feet below ground surface were used
- calculations were made based on a cylindrical volume (V=hπr^2)

ESTIMATED TOTAL VOLUME OF IMPACTED SOIL TO BE HANDLED DURING PROPOSED CONSTRUCTION
ATC's calculations assume the following:
- impacted soil does not extend more than 15 feet radially from SB-1
- a radius of 15 feet was used
- 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
- calculations were made in MicroStation using GEOPAK

SB49-1 Volume Calculations

Parcel 49 - SB49-1

```
*******************************************************************
** SB49-1  15" RCP  (OD = 19.5")
**                                                               **
** TIN to TIN Volume Report -- Tue Sep 18 09:24:47 2012
**                                                               **
** From TIN <V:\1784\active\ATC - U3315\gpk\SB49-1-top.tin>
** to TIN <V:\1784\active\ATC - U3315\gpk\SB49-1-bottom.tin>
**                                                               **
** Prismoidal Volume
**                                                               **
**                                                               **
*******************************************************************
**                                                               **
**  Total Cut =         5.843 Cubic Yards
**  Total Fill =        0.000 Cubic Yards
**  Area =              4.903 Sq Yards
**  Balance =           5.843 Cubic Yards
**                                                               **
*******************************************************************
```

Average cut for construction at SB49-1 = 1.5'
15' radius of contaminated soil

(3.1416)x(15')x(15')x(1.5')= 1060.29 C.Ft. = 39.27 Cubic Yards

****

Cut of 5' for 15' radius of contaminated soil

(3.1416)x(15')x(15')x(5')= 3534.29 C.Ft. = 130.90 Cubic Yards

****

Cut for pipe included in the contruction cut that should be
subtracted from the total cut and pipe cut.

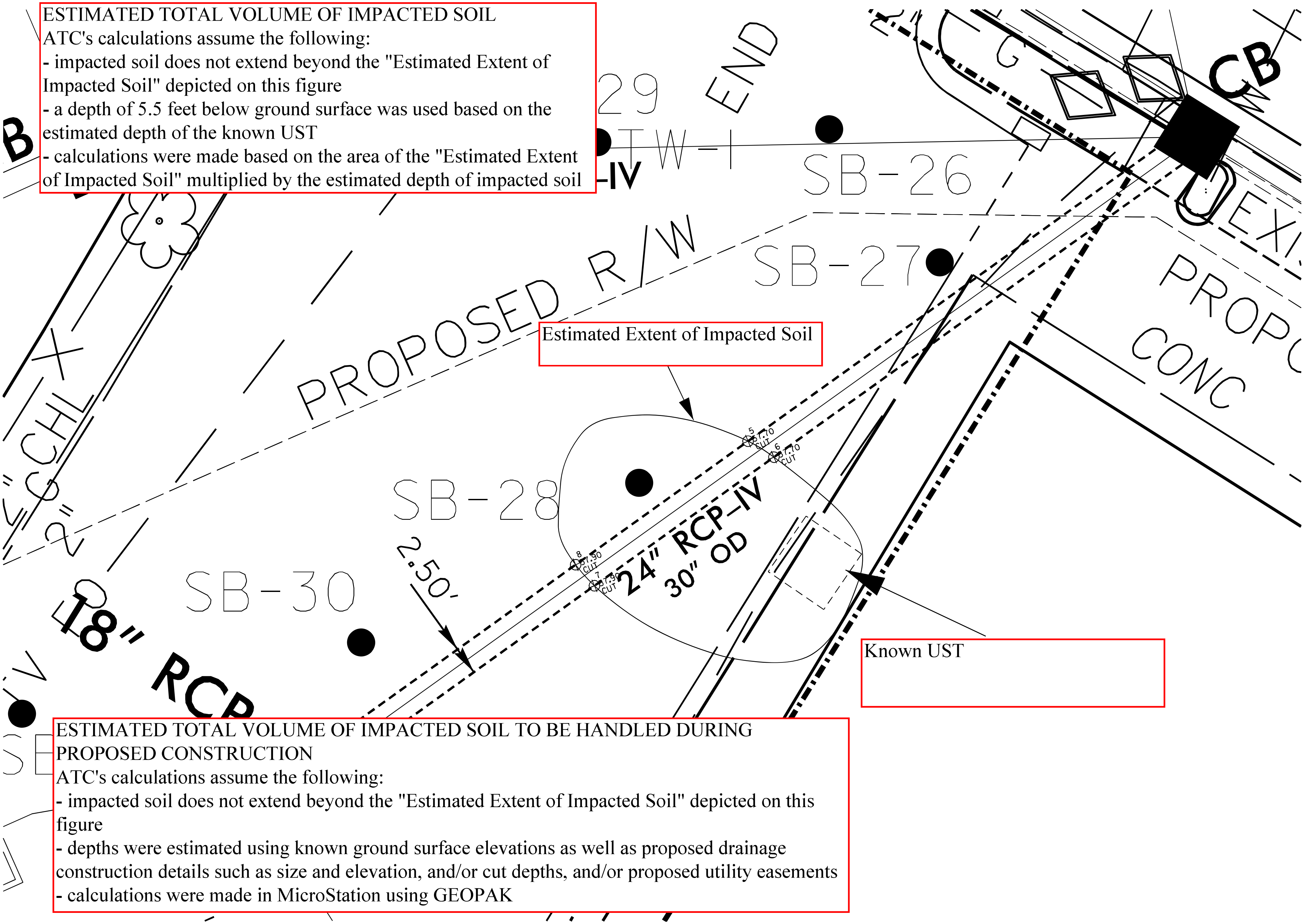
(4.903 Sq.yds.)x[(1.5')/3] = 2.452 Cubic Yards

****

Total cut for construction and pipe

39.27 + 5.843 - 2.452 = 42.661 Cubic Yards

****



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 5.5 feet below ground surface was used based on the estimated depth of the known UST
- calculations were made based on the area of the "Estimated Extent of Impacted Soil" multiplied by the estimated depth of impacted soil

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 Soil" 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
- calculations were made in MicroStation using GEOPAK

SB49-28 Volume Calculations

```
*******************************************************************
** SB49-28  24" RCP  (OD = 30")
**                                                               **
** TIN to TIN Volume Report -- Thu Oct 25 15:04:21 2012
**                                                               **
** From TIN <V:\1784\active\ATC - U3315\gpk\SB49-28-top.tin>
** to TIN <V:\1784\active\ATC - U3315\gpk\SB49-28-bottom.tin>
**                                                               **
** Prismoidal Volume
**                                                               **
**                                                               **
*******************************************************************
**                                                               **
**  Total Pipe Cut =    8.496 Cubic Yards
**  Total Fill =        0.000 Cubic Yards
**  Area =              5.363 Sq Yards
**  Balance =           8.496 Cubic Yards
**                                                               **
*******************************************************************
```

Average cut for road construction at SB49-28 = 0'

0 Cubic Yards

****

Cut of 5.5' for contaminated soil outline
Soil Outline = 437.5 Sq.Ft.

(437.5 Sq.Ft.)x(5.5 Ft.)= 2406.25 C.Ft. = 89.12 Cubic Yards

Minus out underground tank volume of 2.52 Cubic Yards

Total Contaminated Soil = 86.60 Cubic Yards

****