PRELIMINARY SITE ASSESSMENT
FOR
PARCEL 101, WALTER WILLIAMS – VACANT LOT
204 W. 10TH STREET
GREENVILLE, NORTH CAROLINA

STATE PROJECT: U-3315
WBS ELEMENT: 35781.1.2

PREPARED FOR:

NCDOT GEOTECHNICAL ENGINEERING UNIT
GEOENVIRONMENTAL SECTION
1589 MSC
RALEIGH, NORTH CAROLINA 27699-1589

SEPTEMBER 12, 2012
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PREPARED BY:

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CATLIN PROJECT NO. 212077

CORPORATE GEOLOGY LICENSE CERTIFICATION NO. C-118
CORPORATE LICENSURE NO. FOR ENGINEERING SERVICES C-0585

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September 12, 2012
Revised November 30, 2012

1.0 PURPOSE OF INVESTIGATION AND DESCRIPTION

CATLIN Engineers and Scientists (CATLIN) was retained by the North Carolina Department of Transportation (NCDOT) Geotechnical Engineering Unit to provide a field investigation concluding with a Preliminary Site Assessment (PSA) for the above site. In response to a June 19, 2012 Request for Proposal (RFP) (Updated June 29, 2012) and subsequent work scope clarifications with Mr. Gordon Box, LG and Mr. Cyrus Parker, PE, LG, CATLIN submitted a proposal for conducting an investigation at the Parcel 101, Walter Williams property (vacant lot). The parcel/property is located at 204 W. 10th Street along the NCDOT Project "*Stantonsburg Road/Tenth Street Connector from Memorial Drive (US 13) to Evans Street*" in Greenville, North Carolina. Sheet 1 illustrates the general location.

The following specific parcel information was provided by NCDOT:

> *This site is currently a vacant lot. The site is located on the northwest quadrant of the intersection of West 10th Street and South Washington Street. What appears to be a former pump island was observed adjacent to West 10th Street. According to NCDENR's UST Section Registry there are no known facility IDs or groundwater incidents associated with this property.*

According to NCDOT acquisition of the right of way (ROW) is necessary for roadway construction (State Project U-3315) and specifically at the above referenced parcel (Parcel 101). A site investigation is requested before ROW acquisition and roadway construction. Suspected underground storage tanks (USTs) and/or associated piping have been identified in the proposed ROW and/or easement(s).

The work scope as requested includes:

- Communicate progress reports to the GeoEnvironmental Section.
- Determine if contaminated soils or USTs are present within the NCDOT ROW, controlled access boundary (CA), or easement with particular emphasis on the vicinity of proposed excavations for drainage, utilities, and slope stake cuts.
- Estimate the quantity of impacted soils. Estimate the volume of impacted soils across the study area and the volume that will require excavation during construction. Indicate the approximate area of soil contamination on a site map and CADD file.
- Research the site for past uses and possible releases and include findings in final report.
- Report the depth to groundwater and obtain one groundwater sample from each site with emphasis on the vicinity of proposed drainage features. Test groundwater sample for contaminants relevant to the site's past use and/or possible releases.
- Provide a MicroStation file with the boring locations and estimated extent of impacted soils (if any).
- Prepare a report including field activities, findings, and recommendations and submit in triplicate and electronically to the NCDOT GeoEnvironmental Section.

This report documents our activities and findings at Parcel 101, Walter Williams property (vacant lot), 204 W. 10th Street, Greenville, North Carolina. The site is illustrated on Sheet 2.

2.0 METHODS

Approximate proposed boring locations were discussed with NCDOT personnel before final Workplan submittal. A slope stake cut was identified on the cross-section provided by NCDOT within the subject site along Alignment -L- near Station 79. Per NCDOT request, borings (soil samples) were located near known or suspect UST systems and proposed drainage features (as indicated on NCDOT provided plan sheets). The NCDOT Conventional Plan Sheet Symbols are provided on Sheet 1A. Accessible proposed drainage features at the site include drainage piping and catch basin number 1005.

North Carolina Department of Environment and Natural Resources (NCDENR) UST Section personnel were interviewed and the NCDENR UST database was reviewed.

CATLIN coordinated geophysical activities concurrently with soil boring and sampling. The geophysical investigation methods are detailed in the SCHNABEL ENGINEERING SOUTH, PC (Schnabel) geophysical report

provided in Appendix A. Final boring/sample locations were determined based on proposed drainage feature locations and elevations, geophysical results, file review information, field observations, and discussion with NCDOT personnel. CATLIN's field activities at the site began and concluded on August 1, 2012.

2.1 FIELD METHODS

All field work was conducted in general accordance with state and federal guidelines and industry standards.

Underground utility locating was coordinated by CATLIN personnel. The North Carolina One Call Center (NC-1-Call) was contacted for underground utility location. The areas around the proposed boring locations were checked and underground utilities were indicated by NC-1-Call personnel.

CATLIN personnel gathered subsurface soil data at the site by Direct Push Technology (DPT) boring advancement using an AMS PowerProbe™ 9600D (PowerProbe). Borings were identified by the parcel number 101 followed by "DPT" and consecutive numbers starting with "01" (example: 101DPT-01). Borings were located at proposed catch basin number 1005, along the proposed drainage line, and around the suspect USTs. The borings were advanced to depth by static force and a 90-pound hydraulic percussion hammer. Two and one-quarter inch diameter by four-foot length steel is used as casing. Soil samples were continuously collected in four-foot long and one and one-half inch diameter clear liners. Liners are removed from the casing and then cut in half longitudinally to allow for visual/manual classification utilizing the Unified Soil Classification System (USCS). Soils were collected continuously from near the surface to boring termination. Borings for soil sample collection were terminated near the approximate proposed drainage feature installation elevation or eight (8) feet below land surface (BLS). Half of the soils from the liners were removed in two-foot intervals and placed in sealable polyethylene bags for organic vapor analysis (OVA) headspace screening utilizing a photo ionization detector (PID). The USCS, OVA/PID reading, and any indication of petroleum impact were recorded on field logs and have been transferred to the Boring Logs provided in Appendix B. As illustrated on Sheet 2, 14 PowerProbe borings were advanced for soil sample collection.

Soil samples for laboratory analysis were collected from the sample interval above the water table with the highest OVA/PID reading and/or the sample interval near the bottom of the proposed drainage feature installation elevation. The sample interval was included with the boring

identification as part of the soil sample identification [example: 101DPT-01(5-5.5 ft)].

A hand auger boring was also advanced to four (4) feet BLS for soil sample collection adjacent to the probable UST number 1 location. Soils were collected directly from the hand auger bucket after boring termination at four (4) feet BLS and packed directly into the appropriate laboratory provided glassware.

The sample identifications are included on the Boring Logs in Appendix B and the laboratory analytical Chain of Custody in Appendix C. A total of 15 soil samples were submitted for laboratory analysis.

Thirteen of the 14 PowerProbe borings were terminated at approximately eight (8) feet BLS. The 101DPT-01 boring was terminated at 19 feet BLS for approximate depth to water (DTW) determination and groundwater sample collection. Following removal of the PowerProbe tooling, groundwater was pumped directly into the appropriate laboratory provided glassware utilizing new polypropylene tubing and a peristaltic pump.

New disposable nitrile gloves were worn during sampling activities. All samples were placed into laboratory provided glassware and packed on ice in an insulated cooler for transportation to the laboratory. Sample integrity was maintained by following proper Chain of Custody procedures. A copy of the Chain of Custody is provided following the analytical report in Appendix C.

Boreholes were abandoned to just below the surface using three-eighth inch bentonite chips. Bentonite and water were poured into the borehole simultaneously to facilitate hydration. Borings located in asphalt were topped with asphalt cold patch. Final borehole and sample locations were surveyed utilizing a Trimble® GPS survey instrument.

2.2 LABORATORY TESTING

Following boring advancement, selected soils were placed in the appropriately labeled glassware. In an attempt to provide information regarding possible petroleum and/or dry cleaning/solvent compound impact(s) to soils and/or groundwater with reasonable analytical expense, soil samples were analyzed for total petroleum hydrocarbon (TPH) diesel and gasoline range organics (DRO and GRO) by Environmental Protection Agency (EPA) Method 8015 and the groundwater sample was analyzed for volatile and semi-volatile organics per Standard Method (SM) 6200B and EPA Method 625 Base

Neutral (BN).

A total of 15 soil samples and one (1) groundwater sample were submitted to SGS Analytical Perspectives (NC Certification #481). Chain of Custody documentation is included in Appendix C.

2.3 CONTAMINATED SOIL VOLUME

Four (4) soil volume calculations are provided as requested, the total contaminated soil volume across the site, the contaminated soil volume to be excavated for drainage feature installation, the contaminated soil volume to be excavated for water line and gas line installation, and the contaminated soil volume in the cut section. The calculated contaminated soil volumes are generally based on one (1) discrete sample depth per boring. The total volume calculation assumes the contamination extends vertically from the surface to the water table. The volume calculation for drainage feature installation assumes a vertical walled excavation two (2) feet wider than the drainage pipe width to one (1) foot below the final drainage feature installation invert elevation. The volume calculation for water line and gas line installation assumes an excavation 10 feet wide by five (5) feet deep as indicated by NCDOT. The cut soil volume is calculated using the average end-area method based on the estimated contaminated soil area within the cut area identified in the cross-section. Where the excavation areas for utility and/or drainage features may be in a cut section area, no consideration is taken to allow for overlapping soil volume calculations.

An Action Level of 10 milligrams per kilogram (mg/kg) TPH is utilized for contaminated soil determination. Sample results greater than 10 mg/kg TPH are considered "dirty". Contaminated soil volume is estimated from the midpoint distance between a "clean" sample location and "dirty" sample location or to the property line or ROW/easement. As requested by NCDOT, the volume estimate will only include soils within parcel property limits, NCDOT ROW, and/or easement. Where soil samples are collected at, near, or below the water table and contaminant concentrations are revealed, contamination may not exist above the seasonal high water table capillary fringe and near the surface. The installation/construction contractor may be able to reduce the soil volume requiring disposal by screening soils during excavation.

3.0 RESULTS

NCDENR Interview and File Review

NCDENR Washington Regional Office personnel were not aware of any releases on record for the site. The NCDENR UST database does not list any tanks registered at the site.

Geophysical Investigation

The complete geophysical investigation report by Schnabel is included in Appendix A and indicates the presence of a probable UST within the right-of-way/easement. Probable UST No. 1 is about 1000-gallon capacity, is buried about 2.5 to 3.5 feet below ground surface, and is partially under West 10th Street. Photographs of the probable UST are included in the Schnabel report provided in Appendix A.

Site Reconnaissance

CATLIN personnel interviewed Mr. Walter Williams at the site. Mr. Williams was not aware of any releases at the site and identified two (2) additional USTs filled with concrete under the rebar reinforced concrete pad. Mr. Williams also stated he was not aware of any other tanks. Based on the former UST features visible at the surface and filled with concrete, it is assumed the eastern UST is 26 feet by 4 feet (approximately 2,500 gallons) and the western UST is 22 feet by 4 feet (approximately 2,100 gallons). Photographs of the site are provided in Appendix D. Additional photographs are included in the Schnabel report provided in Appendix A.

Soil and Groundwater

Sandy clay / clayey sand soils with varying amounts of silt and clean sands were encountered across the project site. Generally, clay content increased with depth. Petroleum/hydrocarbon odor was noted in borings 101DPT-01, -02, -03, -07, and -08. The OVA/PID headspace screening/readings ranged from 0 to over 1,000 parts per million. Moist soils were noted approximately four (4) feet deep. Complete boring logs including OVA/PID results are provided in Appendix B.

Summarized soil sample analytical results are provided on Table 1. Soil sample locations and summarized soil analytical results are illustrated on Sheet 2. As indicated on Table 1 and Sheet 2, TPH concentrations were reported above 10 mg/kg in samples collected around the identified USTs filled with concrete including the sample from the boring along the proposed drainage feature (101DPT-03) that runs through the USTs.`

Summarized groundwater sample analytical results are provided on Table 2 and Sheet 2. A number of volatile compounds per SM 6200B were revealed in the 101DPT-01 boring (at proposed catch basin number 1005) groundwater sample above the corresponding 2L GWQS. Naphthalene concentrations per EPA Method 625 BN were also revealed above the corresponding 2L GWQS in the 101DPT-01 groundwater sample above the corresponding 2L GWQS. Depth to groundwater was measured at approximately 6.3 feet BLS. The complete laboratory analytical report is provided in Appendix C.

Contaminated Soil Volume

In the event a cut is required for roadway construction or utility installation, any soil samples revealing detectable TPH concentrations will be considered petroleum impacted for handling and disposal purposes. However, the estimated extent of contaminated soil greater than the Action Level of 10 mg/kg is illustrated on Sheet 2 within the red dashed line and skull symbols. The extent of potentially impacted soil beyond the proposed ROW and/or easement and property line(s) is not considered for volume estimating purposes. While discreet soil samples were collected from soils that may be below the seasonal high water table, soil volume estimate is based on the assumption that impacted soils exist from just below the surface to the assumed water table at a depth of six (6) feet BLS.

The area illustrated with a red dashed line and skull symbols on Sheet 2 is roughly 1,205 square feet. If all soils within this area were excavated to six (6) deep, the volume would be approximately 268 cubic yards. However, it should be noted that generally across the site there were no contaminated soil indications (visual, hydrocarbon odor, or elevated OVA/PID readings) from above four (4) feet BLS.

The estimated contaminated soil volume to be removed for installation of the proposed drainage line is based on an assumed excavation width of 3.5 feet for installation of an 18 inch wide pipe. Also, it is assumed, (based on information provided by NCDOT) that the current surface elevation along the proposed drainage line location is approximately 45 feet and the bottom of the excavation necessary for proposed drainage feature construction will be approximately 39.20 feet. Therefore, an excavation for drainage feature installation from the estimated extent of the contaminated soil (just west of proposed catch basin 1005 to 20 feet west of proposed catch basin 1005) will be approximately 20 linear feet long, by 3.5 feet wide, and 5.8 feet deep, which equals roughly 15 cubic yards.

It should be noted that the soil sample [101DPT-01 (5-5.5ft)] collected from the proposed excavation elevation of catch basin 1005 (39.20 feet as provided by NCDOT) is above the depth to water measured at 101DPT-01. The 101DPT-01 (5-5.5ft) soil sample did not reveal detectable TPH

concentrations but the soils collected from six (6) to eight (8) feet BLS had an OVA/PID screening result greater than 1,000 PPM. The groundwater sample collected from the boring (101DPT-01) did reveal petroleum constituents/contaminants above the 2L GWQS. If at the time of catch basin 1005 construction/installation wet soils are encountered they should be considered petroleum impacted.

The estimated contaminated soil volume to be removed for gas line and water line installation includes approximately 37 linear feet within the estimated extent of contamination around the UST locations. Therefore, an excavation from west of the USTs to northeast of the USTs, 10 feet wide by five (5) feet deep equals roughly 68 cubic yards.

The proposed cut section near Alignment -L- Station 79 that is within the estimated extent of contaminated soil is approximately 6.1 cubic yards.

4.0 SUMMARY AND RECOMMENDATIONS

A preliminary site assessment was conducted at the subject site as requested by NCDOT. NCDOT is planning roadway construction including utility installation and ROW acquisition at the site.

Impacted soils and groundwater were revealed in samples collected from within the proposed ROW and easement. A rough volume estimate of the contaminated soil volume is 268 cubic yards. The approximate contaminated soil volume to be removed for drainage feature installation within the property west of the proposed catch basin 1005 is 15 cubic yards. The approximate contaminated soil volume to be removed for gas line and water line installation is 68 cubic yards. The cut section within the estimated extent of contaminated soil is roughly 6.1 cubic yards. These volume estimates include soil near the surface that did have contamination indications. Additionally, where groundwater contamination is known or suspected and excavation is necessary into the water table, those excavated soils should be handled and disposed of as impacted waste. Subsequent sampling may be necessary for waste disposal determination.

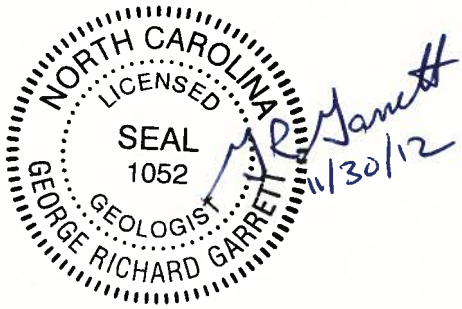
Based on site reconnaissance and NCDENR file review information, there are two abandoned USTs filled with concrete in the proposed ROW and a probable 1,000 gallon UST that is partially under West 10th Street. The USTs filled with concrete are assumed to be approximately 26 feet by 4 feet (approximately 2,500 gallons) and 22 feet by 4 feet (approximately 2,100 gallons).

5.0 LIMITATIONS

This report is based on the agreed work scope and a review of available data from limited sampling. It is possible that this investigation may have failed to reveal the presence of contamination in the project area where such contamination may exist. Although CATLIN has used accepted methods appropriate for soil and groundwater sampling, CATLIN cannot guarantee that additional soil and/or groundwater contamination does not exist.

6.0 SIGNATURES

Benjamin J. Ashba, P.G.
Project Manager



G. Richard Garrett, P.G.
Senior Project Manager

TABLES

TABLE 1
SUMMARY OF SOIL LABORATORY RESULTS - TPH DRO AND GRO

Parcel 101, Walter Williams – Vacant Lot
204 W. 10th Street

Sample ID	Contaminant of Concern →		Diesel Range Organics (DRO)	Gasoline Range Organics (GRO)
	Date Collected	Location		
101 HA-01 (4ft)	8/1/12	Near probale UST at edge of pavement and western driveway entrance	<6.29	<3.32
101 DPT-01 (5-5.5ft)	8/1/12	@ CB 1005	<7.82	<4.01
101 DPT-02 (6-7ft)	8/1/12	South of DPT-01 near edge of pavement	**167**	**1,530**
101 DPT-03 (4.5-5ft)	8/1/12	Center of concrete pad along proposed draiange ≈ 15 west of DPT-01	8.96	**25.5**
101 DPT-04 (6-7ft)	8/1/12	Southwest corner of concrete pad	<8.13	8.35
101 DPT-05 (4.5-5ft)	8/1/12	Western edge of concrete pad along proposed drainage ≈ 15 west of DPT-03	<8.25	<3.86
101 DPT-06 (6-7ft)	8/1/12	Northwest corner of concrete pad	<8.09	<4.26
101 DPT-07 (6-7ft)	8/1/12	Northern edge of concrete	**199**	**591**
101 DPT-08 (6-7ft)	8/1/12	Northeast corner of concrete pad	**37.5**	**31.1**
101 DPT-09 (4.5-5ft)	8/1/12	≈ 25 feet west of DPT-05 along proposed drainage and ≈ 65 feet east of 99DPT-14	<7.87	<3.84
101 DPT-10 (6-7ft)	8/1/12	≈ 25 feet west of DPT-06 along proposed right of way	<7.71	<4.77
101 DPT-11 (6-7ft)	8/1/12	≈ 25 feet north of DPT-06 along proposed easement	<8.29	<4.15
101 DPT-12 (6-7ft)	8/1/12	≈ 25 feet north of DPT-08 and 25 feet east of DPT-11 along proposed easement	<8.34	<4.50
101DPT-13 (6-7ft)	8/1/12	≈ 25 feet east of DPT-08	<8.87	<4.63
101DPT-14 (4.5-5ft)	8/1/12	≈ 22 feet east of CB 1005 and DPT-01 along proposed drainage	<8.58	<4.67
		State Action Level (mg/kg)	**10**	**10**

TPH = Total Petroleum Hydrocarbon
All results in milligrams per kilogram (mg/kg).
Sample depth below land surface provided in parenthesis as part of the sample identification.
BMDL = Below Method Detection Limit
ft. BLS = Feet Below Land Surface
CB = Proposed Catch Basin
Bold results exceed the State Action Level of 10 mg/kg.

TABLE 2
SUMMARY OF GROUNDWATER LABORATORY RESULTS - EPA METHODS 625 BASE NEUTRAL AND SM 6200B

Parcel 101, Walter Williams – Vacant Lot
204 W. 10th Street

Sample ID	Method →		EPA Method 625 Base Neutral		Standard Method (SM) 6200B												
	Contaminant of Concern →		Naphthalene	All other EPA Method 625 Base Neutral Parameters	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	4-Isopropyltoluene	Benzene	Ethyl Benzene	Isopropylbenzene (Cumene)	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	Toluene	Xylene (total)	All other SM 6200B Parameters
	Date Collected	Location															
101 DPT-01	8/1/12	@ CB 1005	**2,420**	BMDL	**490**	309	**59.7**	**2.8**	**2,490**	**318**	**2,260**	**389**	**1,150**	**156**	2.42	225	BMDL
2L GWQS (ug/L)			6	Varies	400	400	25	1	600	70	6	70	70	70	600	500	Varies

All results in micrograms per liter (ug/L).

BMDL = Below Method Detection Limit

Refer to analytical report for a complete list of parameters and detection limits.

J = Estimated Concentration

< = Less than method detection limit

CB = Proposed Catch Basin

Bold results indicate concentrations above the NCAC T15A:02L Groundwater Quality Standards (2L GWQS).

SHEETS

PROJECT REFERENCE NO.	SHEET
35781.1.2 (U-3315)	1

GeoEnvironmental

0 2,000 4,000

FEET

PARCEL 101

PROJECT REFERENCE NO.	SHEET NO.
U-[illegible]	1-A

Note: Not to Scale

**S.U.E. = Subsurface Utility Engineering*

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin
- Property Corner
- Property Monument
- Parcel/Sequence Number
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary
- Proposed Wetland Boundary
- Existing Endangered Animal Boundary
- Existing Endangered Plant Boundary
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign
- Well
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line
- Proposed Right of Way Line with Iron Pin and Cap Marker
- Proposed Right of Way Line with Concrete or Granite Marker
- Existing Control of Access
- Proposed Control of Access
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Curb Cut Future Ramp — CCR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line

- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- Recorded U/G Power Line
- Designated U/G Power Line (S.U.E.*)

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole
- Recorded U/G Telephone Cable
- Designated U/G Telephone Cable (S.U.E.*)
- Recorded U/G Telephone Conduit
- Designated U/G Telephone Conduit (S.U.E.*)
- Recorded U/G Fiber Optics Cable — FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — FO

WATER:

- Water Manhole
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line
- Designated U/G Water Line (S.U.E.*)
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal
- TV Tower
- U/G TV Cable Hand Hole
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FM
- Designated SS Forced Main Line (S.U.E.*) — FM

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — TS
- Utility Unknown U/G Line — ?UNK
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET
35781.1.2 (U-3315)	2

GeoEnvironmental

0 20 40
FEET

SUMMARY OF SOIL LABORATORY RESULTS - TPH DRO AND GRO

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101 DPT-06 (6-7ft)	8/1/12	Northwest corner of concrete pad	<8.09	<4.26
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101 DPT-09 (4.5-5ft)	8/1/12	≈ 25 feet west of DPT-05 along proposed drainage and ≈ 65 feet east of 99DPT-14	<7.87	<3.84
101 DPT-10 (6-7ft)	8/1/12	≈ 25 feet west of DPT-06 along proposed right of way	<7.71	<4.77
101 DPT-11 (6-7ft)	8/1/12	≈ 25 feet north of DPT-06 along proposed easement	<8.29	<4.15
101 DPT-12 (6-7ft)	8/1/12	≈ 25 feet north of DPT-08 and 25 feet east of DPT-11 along proposed easement	<8.34	<4.50
101DPT-13 (6-7ft)	8/1/12	≈ 25 feet east of DPT-08	<8.87	<4.63
101DPT-14 (4.5-5ft)	8/1/12	≈ 22 feet east of CB 1005 and DPT-01 along proposed drainage	<8.58	<4.67
		State Action Level (mg/kg)	**10**	**10**

TPH = Total Petroleum Hydrocarbon
All results in milligrams per kilogram (mg/kg).
Sample depth below land surface provided in parenthesis as part of the sample identification.
BMDL = Below Method Detection Limit
ft. BLS = Feet Below Land Surface
CB = Proposed Catch Basin
Bold results exceed the State Action Level of 10 mg/kg.

SUMMARY OF GROUNDWATER LABORATORY RESULTS - EPA METHODS 625 BASE NEUTRAL AND SM 6200B

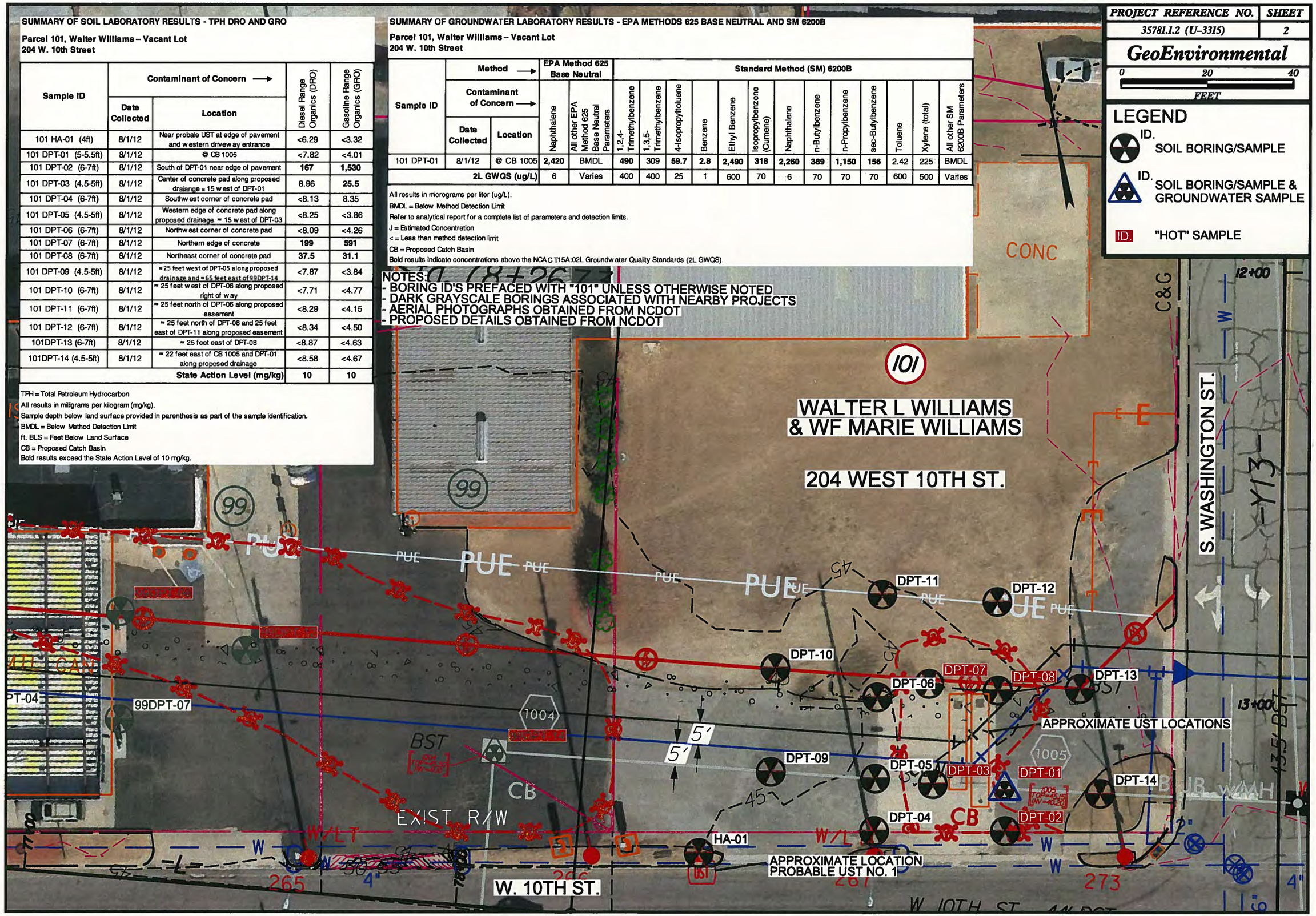
Parcel 101, Walter Williams – Vacant Lot
204 W. 10th Street

Sample ID	Method → / Contaminant of Concern → / Date Collected	Location	EPA Method 625 Base Neutral: Naphthalene	EPA Method 625 Base Neutral: All other EPA Method 625 Base Neutral Parameters	SM 6200B: 1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	4-Isopropyltoluene	Benzene	Ethyl Benzene	Isopropylbenzene (Cumene)	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	Toluene	Xylene (total)	SM 6200B: All other SM 6200B Parameters
101 DPT-01	8/1/12	@ CB 1005	**2,420**	BMDL	**490**	309	**59.7**	**2.8**	**2,490**	**318**	**2,260**	**389**	**1,150**	**156**	2.42	225	BMDL
2L GWQS (ug/L)			6	Varies	400	400	25	1	600	70	6	70	70	70	600	500	Varies

All results in micrograms per liter (ug/L).
BMDL = Below Method Detection Limit
Refer to analytical report for a complete list of parameters and detection limits.
J = Estimated Concentration
< = Less than method detection limit
CB = Proposed Catch Basin
Bold results indicate concentrations above the NCAC T15A:02L Groundwater Quality Standards (2L GWQS).

NOTES:
- BORING ID'S PREFACED WITH "101" UNLESS OTHERWISE NOTED
- DARK GRAYSCALE BORINGS ASSOCIATED WITH NEARBY PROJECTS
- AERIAL PHOTOGRAPHS OBTAINED FROM NCDOT
- PROPOSED DETAILS OBTAINED FROM NCDOT

LEGEND
- ID. SOIL BORING/SAMPLE
- ID. SOIL BORING/SAMPLE & GROUNDWATER SAMPLE
- ID. "HOT" SAMPLE



APPENDICES

APPENDIX A
SCHNABEL GEOPHYSICAL REPORT

Schnabel
ENGINEERING

August 15, 2012

Mr. Richard Garrett, LG, Project Manager
Catlin Engineers and Scientists, Inc.
P.O. Box 10279
Wilmington, NC 28404-0279

RE:
State Project: U-3315
WBS Element: 35781.1.2
County: Pitt
Description: Stantonsburg Road/Tenth Street Connector from Memorial Drive (US 13) to Evans Street

Subject: **Project 11821014.17, Report on Geophysical Surveys**
Parcel 101, Walter L. Williams Property, Greenville, North Carolina

Dear Mr. Garrett:

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

INTRODUCTION

The work described in this report was performed on July 10 and 25, 2012, by Schnabel under our 2011 contract with the NCDOT. The surveys were performed over the accessible areas of the property as indicated by the NCDOT to support their environmental assessment of the subject property. Photographs of the property are included on Figure 1. The property is located on the northwest quadrant of W 10th Street and S Washington Street in Greenville, NC. The purpose of the geophysical surveys was to investigate the presence of metal underground storage tanks (USTs) in the accessible areas of the right-of-way and/or easement.

The geophysical surveys consisted of an electromagnetic (EM) induction survey and a ground penetrating radar (GPR) survey. The EM survey was performed using a Geonics EM61-MK2 instrument. The EM61 is a time domain metal detector that is used to locate metal objects buried up to about eight feet below ground surface. When collecting EM61 data, three or four time gates are recorded of the response decay rate. The GPR survey was performed over selected EM61 anomalies, including areas of reinforced

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11A Oak Branch Drive / Greensboro, NC / 27407

concrete, using a Geophysical Survey Systems SIR-3000 system equipped with a 400 MHz antenna. Photographs of the equipment used are shown on Figure 2.

FIELD METHODOLOGY

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

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

DISCUSSION OF RESULTS

The contoured EM61 data collected over Parcel 101 are shown on Figures 3 and 4. The EM61 early time gate data are plotted on Figure 3. The early time gate data provide a more sensitive detection of metal objects than the later time gate data. Figure 4 shows the differential response between the top and bottom coils of the EM61 instrument. The differential response data filters out the effect of surface and very shallowly buried metallic objects. Typically, the differential response emphasizes anomalies from deeper and larger objects such as USTs.

The early time gate and differential results show anomalies of unknown cause, in addition to those apparently caused by known site features (Figures 3 and 4). The GPR data indicate that the EM anomalies of unknown cause are probably caused by reinforced concrete and buried utilities. The GPR data collected near the southwest corner of the parcel indicate the presence of a probable UST beneath the northern edge of W 10th Street, as shown on Figures 3 and 4. Example GPR images showing the reflections from the probable UST are shown on Figures 3 and 4. The GPR data indicate that probable UST No. 1 is buried approximately 2.5 to 3.5 feet below ground surface, and is about 5.3 feet in diameter and about 6 feet long, equivalent to a capacity of about 1000 gallons. Photographs of the approximate location of the probable UST that was marked in the field are included on Figure 5.

CONCLUSIONS

Our evaluation of the geophysical data collected on the subject property on Project U-3315 in Greenville, NC indicates the following:

The geophysical data indicate the presence of a probable UST within the right-of-way/easement on Parcel 101. Probable UST No. 1 is about 1000-gallon capacity and is buried about 2.5 to 3.5 feet below ground surface.

LIMITATIONS

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

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

Sincerely,

SCHNABEL ENGINEERING SOUTH, PC

James W. Whitt, LG
Senior Staff Geophysicist

Jeremy S. Strohmeyer, LG
Project Manager

JW:JS
Attachments: Figures (5)
CC: NCDOT, Gordon Box
FILE: G:\2011-SDE-JOBS\11821014_00_NCDOT_2011_GEOTECHNICAL_UNIT_SERVICES\11821014_17_U-3315_PITT_COUNTY\REPORT\PARCEL 101\SCHNABEL GEOPHYSICAL REPORT ON PARCEL 101 (U-3315).DOCX

Parcel 101 (Walter L. Williams Property), looking north

Parcel 101 (Walter L. Williams Property), looking northeast

Schnabel ENGINEERING

STATE PROJECT U-3315
NC DEPT. OF TRANSPORTATION
PITT COUNTY, NORTH CAROLINA
PROJECT NO. 11821014.17

PARCEL 101
SITE PHOTOS

FIGURE 1

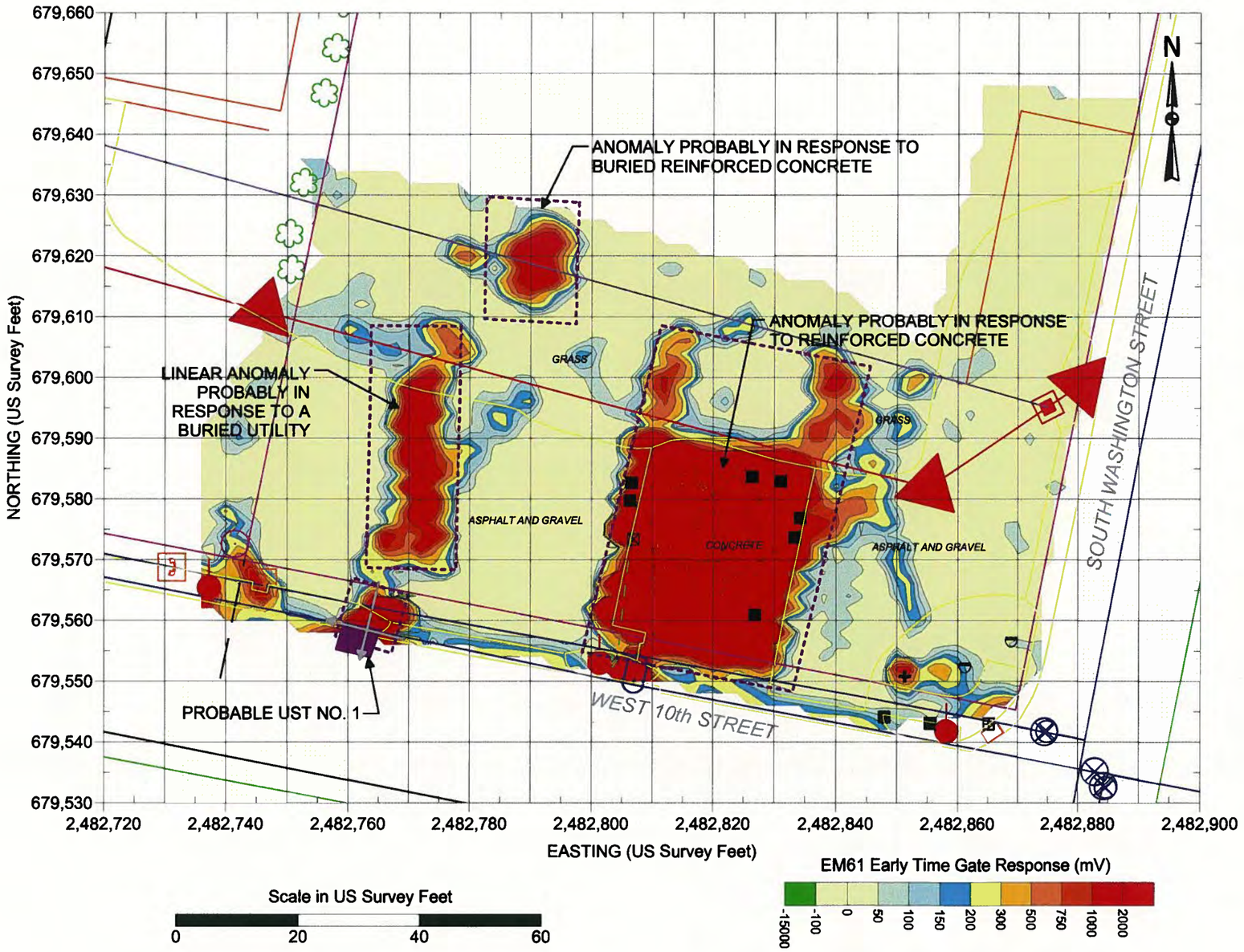
Geonics EM61-MK2 Metal Detector with Trimble DGPS Unit

GSSI SIR-3000 Ground-Penetrating Radar with 400 MHz Antenna

Note: Stock photographs – not taken on site.

Schnabel ENGINEERING	STATE PROJECT U-3315 NC DEPT. OF TRANSPORTATION PITT COUNTY, NORTH CAROLINA PROJECT NO. 11821014.17	PHOTOS OF GEOPHYSICAL EQUIPMENT USED FIGURE 2

PARCEL 101

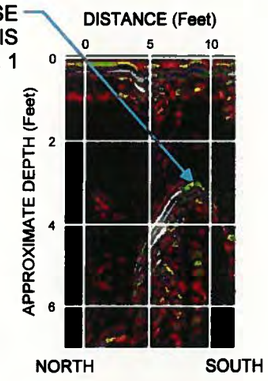


EXPLANATION

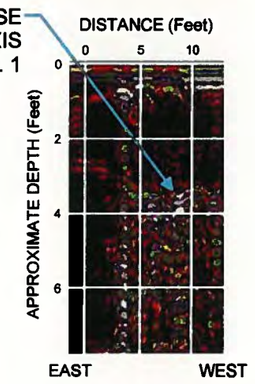
- SIGN
- MISCELLANEOUS METALLIC OBJECT
- UTILITY MANHOLE, METER, BOX, ETC.
- STORMSEWER INLET
- GUY WIRE
- EDGE OF NCDOT PROPOSED R/W
- PROPERTY LINE
- EXAMPLE GPR LINE LOCATION
- GPR SURVEY AREA
- LOCATION OF KNOWN OR SUSPECT USTS MARKED ON SITE

REF.: NCDOT FILE: u3315_rdy_psh10.dgn
(FOR SOME SITE FEATURES)

EXAMPLE GPR RESPONSE FROM THE SHORT AXIS OF PROBABLE UST NO. 1



EXAMPLE GPR RESPONSE FROM THE LONG AXIS OF PROBABLE UST NO. 1



Scale in US Survey Feet

0 20 40 60

EM61 Early Time Gate Response (mV)

-15000 -100 0 50 100 150 200 300 500 750 1000 2000

Note: The contour plot shows the earliest and more sensitive time gate of the EM61 bottom coil/channel in millivolts (mV). The EM data were collected on July 10, 2012, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina Zone 3200, using the NAD 1983 datum. GPR data were acquired on July 25, 2012, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.

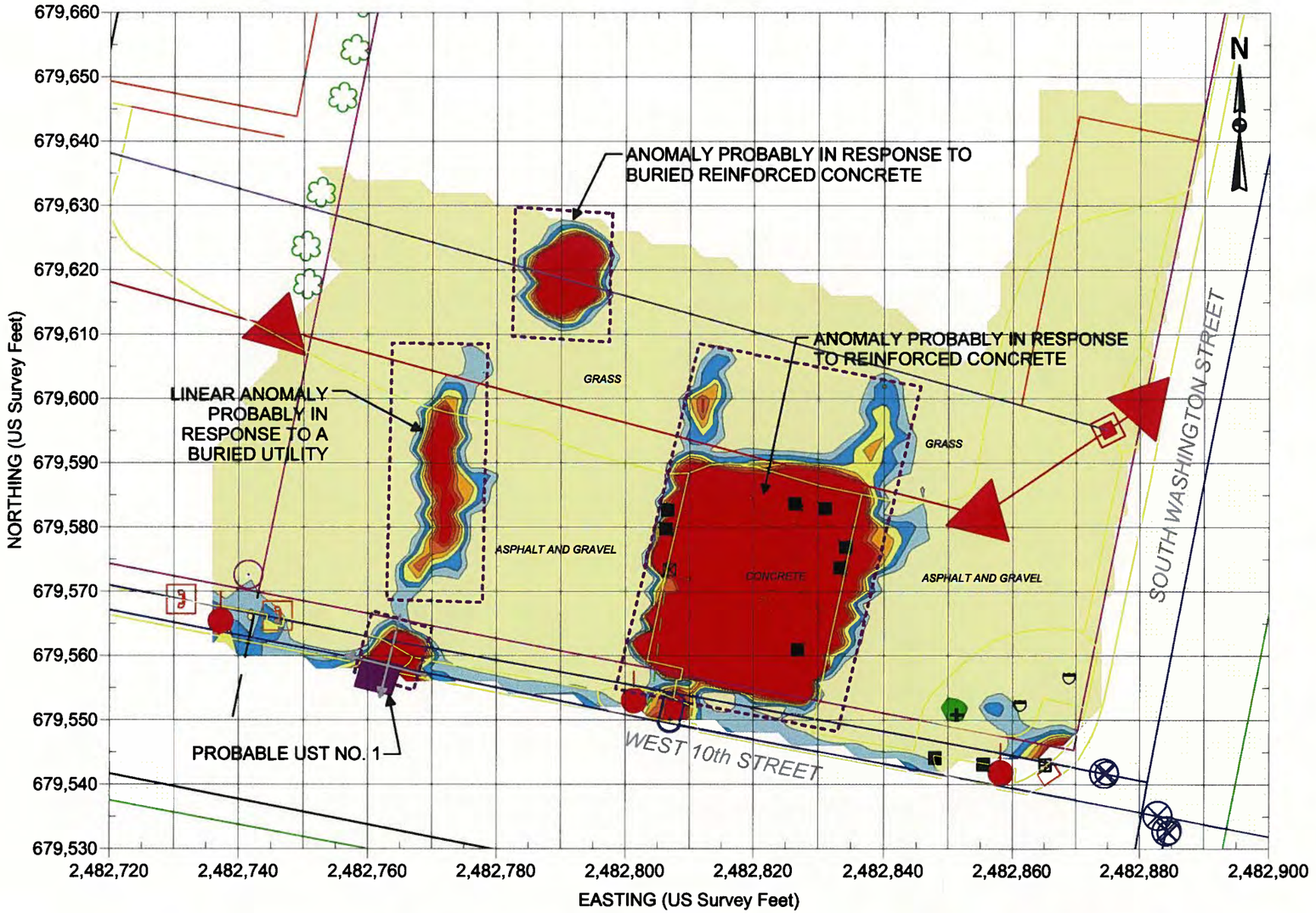
Schnabel ENGINEERING

STATE PROJECT U-3315
NC DEPARTMENT OF TRANSPORTATION
PITT COUNTY, NORTH CAROLINA
PROJECT NO. 11821014.17

EM61
EARLY TIME GATE
RESPONSE

FIGURE 3

PARCEL 101

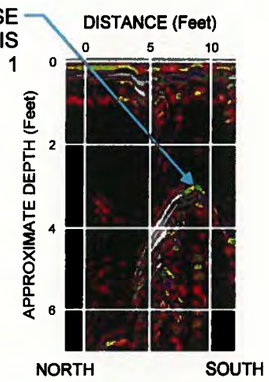


EXPLANATION

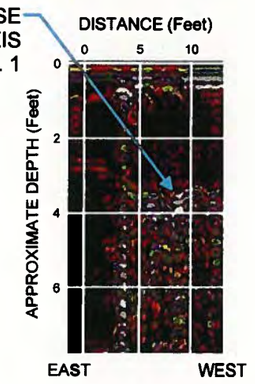
- SIGN
- MISCELLANEOUS METALLIC OBJECT
- UTILITY MANHOLE, METER, BOX, ETC.
- STORMSEWER INLET
- GUY WIRE
- EDGE OF NCDOT PROPOSED R/W
- PROPERTY LINE
- EXAMPLE GPR LINE LOCATION
- GPR SURVEY AREA
- LOCATION OF KNOWN OR SUSPECT USTS MARKED ON SITE

REF.: NCDOT FILE: u3315_rdy_psh10.dgn
(FOR SOME SITE FEATURES)

EXAMPLE GPR RESPONSE FROM THE SHORT AXIS OF PROBABLE UST NO. 1



EXAMPLE GPR RESPONSE FROM THE LONG AXIS OF PROBABLE UST NO. 1



Scale in US Survey Feet

0 20 40 60

EM61 Differential Response (mV)

-20000 -100 0 40 60 80 100 120 140 160 200

Note: The contour plot shows the difference, in millivolts (mV), between the readings from the top and bottom coils of the EM61. The difference is taken to reduce the effect of shallow metal objects and emphasize anomalies caused by deeper metallic objects, such as drums and tanks. The EM data were collected on July 10, 2012, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 1983 datum. GPR data were acquired on July 25, 2012, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.

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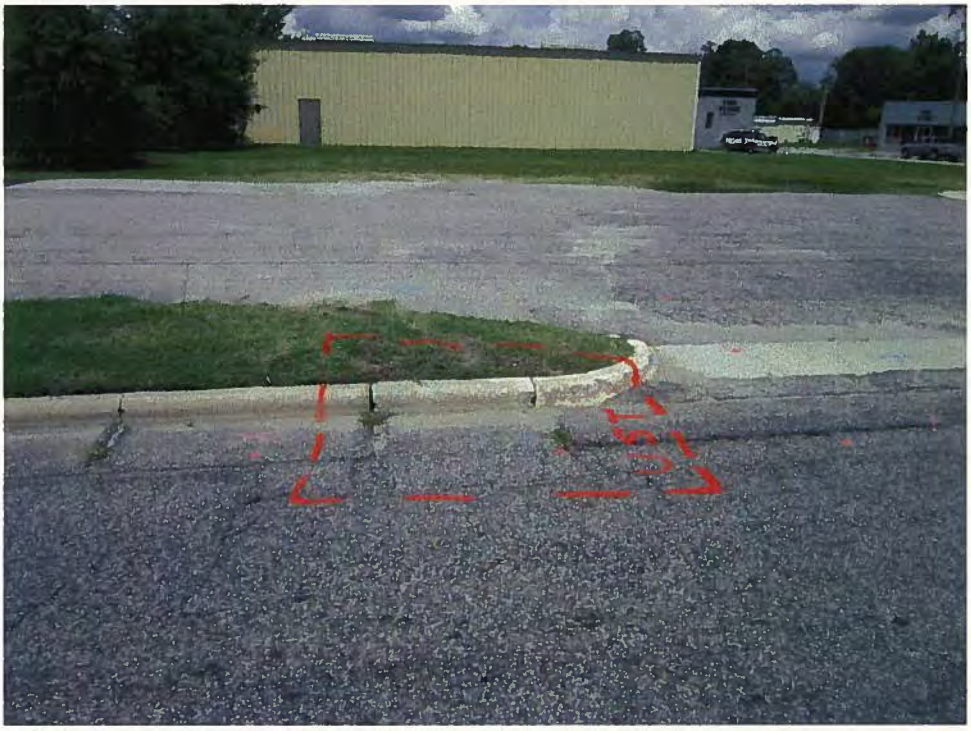
STATE PROJECT U-3315
NC DEPARTMENT OF TRANSPORTATION
PITT COUNTY, NORTH CAROLINA
PROJECT NO. 11821014.17

EM61
DIFFERENTIAL
RESPONSE

FIGURE 4

Parcel 101 (Walter L. Williams Property), looking west. Photo shows approximate marked location of probable UST No. 1 near the southwest corner of the parcel.



Parcel 101 (Walter L. Williams Property), looking north. Photo shows approximate marked location of probable UST No. 1 near the southwest corner of the parcel.

Schnabel ENGINEERING	STATE PROJECT U-3315 NC DEPT. OF TRANSPORTATION PITT COUNTY, NORTH CAROLINA PROJECT NO. 11821014.17	PHOTOS OF UST LOCATIONS FIGURE 5

APPENDIX B
BORING LOGS

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC

WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.:	212077	**STATE:**	NC	**COUNTY:**	Pitt	**LOCATION:**	Greenville
PROJECT NAME:	Parcel 101 - Walter Williams - Vacant Lot			**LOGGED BY:**	Ben Ashba	**BORING ID:**	101HA-01
				DRILLER:	William J. Miller		
NORTHING:	679,563.00	**EASTING:**	2,482,763.00	**CREW:**			
SYSTEM:	NCSP NAD 83 (USft)	**BORING LOCATION:**	W of Western drive @ Probable UST #1			**LAND ELEV.:**	NM
DRILL MACHINE:	Hand Auger	**METHOD:**	Hand Auger	**0 HOUR DTW:**	N/A	**BORING DEPTH:**	4.0
START DATE:	8/1/12	**FINISH DATE:**	8/1/12	**24 HOUR DTW:**	N/A	**ROCK DEPTH:**	--

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	DEPTH	ELEVATION
							LAND SURFACE	0.0	
0.0			▲0	HA-01 (4')	SP/SM		Tan, f. SAND w/tr. silt increasing w/depth.		
4.0							Boring Terminated at Depth 4.0 ft	4.0	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO_LOG_212077_GREENVILLE-PSAS_U3315.GPJ_CATLIN.GDT_9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.:	212077	STATE:	NC	COUNTY:	Pitt	LOCATION:	Greenville
PROJECT NAME:	Parcel 101 - Walter Williams - Vacant Lot			LOGGED BY:	Ben Ashba	BORING ID:	101DPT-01
				DRILLER:	William J. Miller		
NORTHING:	679,562.00	EASTING:	2,482,834.00	CREW:	Corey Futral		
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:	@ CB 1005			LAND ELEV.:	NM
DRILL MACHINE:	Power Probe	METHOD:	CPT / DPT	0 HOUR DTW:	6.3	BORING DEPTH:	19.0
START DATE:	8/1/12	FINISH DATE:	8/1/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	DEPTH	ELEVATION
							LAND SURFACE	0.0	
0.0					GW		ASPHALT.	0.5	
			▲1		SP		Tan, med. SAND.	2.5	
2.0			▲1		SC/CL		Dk brown, Clayey SAND grading to med brown, Sandy CLAY. Orange mottling.	5.0	
4.0			▲1						
5.0			▲1	DPT- 01 (5-5.5')					
5.5			▲1						
6.0			1,000+▲	▽	CH		Lt gray grading to dk gray, CLAY.	8.0	
8.0							Blind Point to 19' BLS. Strong HCO on H2O in glassware.	19.0	
19.0							Boring Terminated at Depth 19.0 ft		

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO.LOG 212077 GREENVILLE-PSAS_U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt		LOCATION: Greenville	
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot		LOGGED BY: Ben Ashba		BORING ID: 101DPT-02	
		DRILLER: William J. Miller			
NORTHING: 679,553.00	EASTING: 2,482,832.00	CREW: Corey Futral			
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: S of DPT-01 @ edge of concrete and asphalt			LAND ELEV.: NM	
DRILL MACHINE: Power Probe	METHOD: CPT / DPT		0 HOUR DTW: N/A	BORING DEPTH: 8.0	
START DATE: 8/1/12	FINISH DATE: 8/1/12		24 HOUR DTW: N/A	ROCK DEPTH: --	

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0					GW			ASPHALT and GRAVEL fill.	
			▲2				1.0		
2.0					CL			Lt brown and gray, Sandy CLAY. Slight HCO ~ 2.5' BLS.	
			▲7						
4.0							4.5		
			▲12		CH			Gray, CLAY w/tr. sand. Increasing HCO w/depth.	
6.0									
			1,000+▲	DPT- 02 (6-7')					
7.0									
			1,000+▲						
8.0							8.0	Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO LOG 212077 GBEENVILLE-PSAS U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt		LOCATION: Greenville	
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot		LOGGED BY: Ben Ashba		BORING ID: 101DPT-03	
		DRILLER: William J. Miller			
NORTHING: 679,567.00	EASTING: 2,482,818.00	CREW: Corey Futral			
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: Along drainage @ former dispenser			LAND ELEV.: NM	
DRILL MACHINE: Power Probe	METHOD: CPT / DPT		0 HOUR DTW: N/A	BORING DEPTH: 8.0	
START DATE: 8/1/12	FINISH DATE: 8/1/12		24 HOUR DTW: N/A	ROCK DEPTH: --	

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION DEPTH	ELEVATION
							0.0	LAND SURFACE
0.0					GW		CONCRETE and GRAVEL fill.	
			▲0				1.0	
2.0								
			▲0		CL		Lt to med. gray, Sandy CLAY. Orange mottling ~4' BLS. Slight HCO ~4.5' BLS.	
4.0								
			▲0					
4.5				DPT- 03 (4.5-5')				
			▲0					
5.0								
			▲0					
6.0							6.0	
					CH		Gray, CLAY. Slight HCO.	
			▲781					
8.0							8.0	
							Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO.LOG 212077 GREENVILLE-PSAS U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt	LOCATION: Greenville
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot		LOGGED BY: Ben Ashba	BORING ID: 101DPT-04
		DRILLER: William J. Miller	
NORTHING: 679,559.00	EASTING: 2,482,802.00	CREW: Corey Futral	
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: SW corner of concrete		LAND ELEV.: NM
DRILL MACHINE: Power Probe	METHOD: CPT / DPT	0 HOUR DTW: N/A	BORING DEPTH: 8.0
START DATE: 8/1/12	FINISH DATE: 8/1/12	24 HOUR DTW: N/A	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0			▲0		GW		1.0	ASPHALT.	
					SC		2.0	Lt gray, Clayey SAND.	
2.0			▲0		CL		4.0	Lt brown grading to med brown, Sandy CLAY.	
4.0					CL		4.5	Dk gray, CLAY w/tr. f. sand.	
			▲0						
6.0			▲0	DPT- 04 (6-7')	CH			Dk gray, CLAY.	
7.0			▲0						
8.0							8.0	Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO.LOG 212077 GREENVILLE-PSAS_U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt		LOCATION: Greenville	
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot		LOGGED BY: Ben Ashba		BORING ID: 101DPT-05	
		DRILLER: William J. Miller			
NORTHING: 679,571.00	EASTING: 2,482,805.00	CREW: Corey Futral			
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: W of 101DPT-01			LAND ELEV.: NM	
DRILL MACHINE: Power Probe	METHOD: CPT / DPT		0 HOUR DTW: N/A	BORING DEPTH: 8.0	
START DATE: 8/1/12	FINISH DATE: 8/1/12		24 HOUR DTW: N/A	ROCK DEPTH: --	

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0					GW		0.5	ASPHALT.	
			▲0		SP/SM			Black to dk brown, f. SAND w/tr. silt. Grades to dk gray, f. SAND w/tr. silt and clay. Moist ~2.5' BLS.	
2.0							2.5		
			▲0		CL			Brown, Sandy CLAY grading to CLAY w/tr. sand. Tr. mottling.	
4.0			▲0						
4.5			▲0	DPT-04 (4.5-5')			5.0		
5.0			▲0		CH			Gray w/orange mottling, CLAY.	
6.0			▲381				7.0		
					CL			Lt gray, Sandy CLAY.	
8.0							8.0		
								Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt	LOCATION: Greenville
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot		LOGGED BY: Ben Ashba	BORING ID: 101DPT-06
		DRILLER: William J. Miller	
NORTHING: 679,589.00	EASTING: 2,482,809.00	CREW: Corey Futral	
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: NW corner of concrete		LAND ELEV.: NM
DRILL MACHINE: Power Probe	METHOD: CPT / DPT	0 HOUR DTW: N/A	BORING DEPTH: 8.0
START DATE: 8/1/12	FINISH DATE: 8/1/12	24 HOUR DTW: N/A	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0					GW		0.5	ASPHALT.	
			▲0		GW		1.0	GRAVEL fill.	
2.0									
			▲1		CL			Dk brown and gray, Sandy CLAY decreasing sand w/depth.	
4.0									
			▲1						
6.0							6.0		
			▲13	DPT-06 (6-7')					
7.0					CH			Gray, CLAY. Orange mottling.	
			▲13						
8.0							8.0		
								Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO.LOG 212077 GREENVILLE-PSAS U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt	LOCATION: Greenville
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot	LOGGED BY: Ben Ashba		BORING ID: 101DPT-07
	DRILLER: William J. Miller		
NORTHING: 679,590.00	EASTING: 2,482,821.00	CREW: Corey Futral	
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: Northern mid concrete pad		LAND ELEV.: NM
DRILL MACHINE: Power Probe	METHOD: CPT / DPT	0 HOUR DTW: N/A	BORING DEPTH: 8.0
START DATE: 8/1/12	FINISH DATE: 8/1/12	24 HOUR DTW: N/A	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0					GW		0.5	TOPSOIL and GRAVEL fill.	
			▲0						
2.0					SM			Dk brown, Silty f. SAND. Lighter color w/depth.	
			▲0				4.0		
4.0					SC/ CL			Lt brown, Sandy CLAY to Clayey SAND.	
			▲0				6.0		
6.0			1,000+▲	DPT-07 (6-7')	CH			Lt brown to dk gray, CLAY. Orange mottling. HCO ~6' BLS.	
7.0									
			1,000+▲				8.0		
8.0								Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC

WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt		LOCATION: Greenville	
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot		LOGGED BY: Ben Ashba		BORING ID: 101DPT-08	
		DRILLER: William J. Miller			
NORTHING: 679,585.00	EASTING: 2,482,837.00	CREW: Corey Futral			
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: NE corner of concrete pad			LAND ELEV.: NM	
DRILL MACHINE: Power Probe	METHOD: CPT / DPT		0 HOUR DTW: N/A	BORING DEPTH: 8.0	
START DATE: 8/1/12	FINISH DATE: 8/1/12		24 HOUR DTW: N/A	ROCK DEPTH: --	

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0					GW		0.5	TOPSOIL and GRAVEL fill.	
			▲0						
2.0									
			▲1		CL			Brown to gray, Sandy CLAY. Decreasing sand w/depth.	
4.0									
			▲72						
6.0							6.0		
			▲202	DPT-08 (6-7')					
7.0					CH			Black gray to dk gray, CLAY. Strong HCO.	
			▲202						
8.0							8.0		
								Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO LOG 212077 GREENVILLE-PSAS U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC

WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.:	212077	STATE:	NC	COUNTY:	Pitt	LOCATION:	Greenville
PROJECT NAME:	Parcel 101 - Walter Williams - Vacant Lot			LOGGED BY:	Ben Ashba	BORING ID:	101DPT-09
				DRILLER:	William J. Miller		
NORTHING:	679,577.00	EASTING:	2,482,782.00	CREW:	Corey Futral		
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:	25' W of 101DPT-05			LAND ELEV.:	NM
DRILL MACHINE:	Power Probe	METHOD:	CPT / DPT	0 HOUR DTW:	N/A	BORING DEPTH:	8.0
START DATE:	8/1/12	FINISH DATE:	8/1/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0					GW		0.5	ASPHALT and GRAVEL fill.	
			▲0		SM			Dk gray to tan, Silty SAND.	
2.0							3.0		
			▲0						
4.0			▲0		SC/CL			Tan w/orange and gray, Sandy CLAY to Clayey SAND.	
4.5			▲0	DPT-09 (4.5-5')					
5.0			▲0						
6.0					CH		6.0	Lt gray, CLAY.	
			▲0						
8.0							8.0	Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO_LOG 212077 GREENVILLE-PSAS_U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC

WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.:	212077	STATE: NC	COUNTY:	Pitt	LOCATION:	Greenville	
PROJECT NAME:	Parcel 101 - Walter Williams - Vacant Lot		LOGGED BY:	Ben Ashba	BORING ID:	101DPT-10	
			DRILLER:	William J. Miller			
NORTHING:	679,600.00	EASTING: 2,482,787.00	CREW:	Corey Futral			
SYSTEM: NCSP NAD 83 (USft)		BORING LOCATION: 25' N of -09, 25' W of -06			LAND ELEV.:	NM	
DRILL MACHINE:	Power Probe	METHOD:	CPT / DPT	0 HOUR DTW:	N/A	BORING DEPTH:	8.0
START DATE:	8/1/12	FINISH DATE:	8/1/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0			▲0		GW		1.0	Black, GRAVEL fill w/lt brown, Silty SAND.	
2.0			▲0		SM		3.0	Tan, Silty SAND.	
4.0			▲0		CL		6.5	Brown, Sandy CLAY grading to CLAY w/depth.	
6.0			▲0	DPT-10 (6-7')					
7.0			▲0		CH		8.0	Lt gray, CLAY.	
8.0								Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO LOG 212077 GREENVILLE-PSAS U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.:	212077	STATE:	NC	COUNTY:	Pitt	LOCATION:	Greenville
PROJECT NAME:	Parcel 101 - Walter Williams - Vacant Lot			LOGGED BY:	Ben Ashba	BORING ID:	101DPT-11
				DRILLER:	William J. Miller		
NORTHING:	679,612.00	EASTING:	2,482,814.00	CREW:	Corey Futral		
SYSTEM:	NCSP NAD 83 (USft)	BORING LOCATION:	25' N of 101DPT-06			LAND ELEV.:	NM
DRILL MACHINE:	Power Probe	METHOD:	CPT / DPT	0 HOUR DTW:	N/A	BORING DEPTH:	8.0
START DATE:	8/1/12	FINISH DATE:	8/1/12	24 HOUR DTW:	N/A	ROCK DEPTH:	--

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0					SM		0.5	TOPSOIL.	
			0		SW		1.0	TOPSOIL w/tr. black gravel.	
2.0			0		SM		3.0	Tan grading to brown w/tr. orange mottling, Silty SAND.	
4.0			0		SC		4.5	Brown w/orange mottling, Clayey SAND.	
			0		CL		6.5	Lt gray, Sandy CLAY.	
6.0			0	DPT-11 (6-7')					
7.0			0		CH		8.0	Lt gray, CLAY.	
8.0								Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO LOG 212077 GREENVILLE-PSAS_U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt		LOCATION: Greenville	
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot		LOGGED BY: Ben Ashba		BORING ID: 101DPT-12	
		DRILLER: William J. Miller			
NORTHING: 679,605.00	EASTING: 2,482,840.00	CREW: Corey Futral			
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: 25' N of 101DPT-08			LAND ELEV.: NM	
DRILL MACHINE: Power Probe	METHOD: CPT / DPT		0 HOUR DTW: N/A	BORING DEPTH: 8.0	
START DATE: 8/1/12	FINISH DATE: 8/1/12		24 HOUR DTW: N/A	ROCK DEPTH: --	

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0			▲0		SP		1.0	Brown, f. SAND grading to black to lt tan.	
2.0			▲0		SM		3.0	Tan, Silty SAND.	
4.0			▲0		CL		4.5	Brown w/orange, Sandy CLAY.	
6.0			▲0	DPT-12 (6-7')	CH		8.0	Lt brown grading to lt gray, CLAY. Grades to dk gray ~7.5-8' BLS w/slight HCO.	
7.0			▲0						
8.0								Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC
WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt	LOCATION: Greenville
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot	LOGGED BY: Ben Ashba	DRILLER: William J. Miller	BORING ID: 101DPT-13
NORTHING: 679,582.00	EASTING: 2,482,855.00	CREW: Corey Futral	
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: 25' E of 101DPT-08		LAND ELEV.: NM
DRILL MACHINE: Power Probe	METHOD: CPT / DPT	0 HOUR DTW: N/A	BORING DEPTH: 8.0
START DATE: 8/1/12	FINISH DATE: 8/1/12	24 HOUR DTW: N/A	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
							0.0	LAND SURFACE	
0.0					GW		0.5	ASPHALT.	
			▲0		SM		1.5	Tan, Silty SAND.	
2.0					CL		3.0	Lt brown, Sandy CLAY. Red and orange staining.	
			▲0						
4.0									
			▲0		CH			Lt gray w/red and orange staining/mottling, CLAY. Grades to dk gray ~7' BLS.	
6.0				DPT-13 (6-7')					
			▲0						
7.0									
			▲0						
8.0							8.0	Boring Terminated at Depth 8.0 ft	

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO.LOG 212077_GREENVILLE-PSAS_U3315.GPJ CATLIN.GDT 9/4/12

BORING LOG

CATLIN Engineers and Scientists
Wilmington, NC

WBS Element: 35781.1.2
State Project: U-3315

PROJECT NO.: 212077	STATE: NC	COUNTY: Pitt	LOCATION: Greenville
PROJECT NAME: Parcel 101 - Walter Williams - Vacant Lot		LOGGED BY: Ben Ashba	BORING ID: 101DPT-14
		DRILLER: William J. Miller	
NORTHING: 679,557.00	EASTING: 2,482,855.00	CREW: Corey Futral	
SYSTEM: NCSP NAD 83 (USft)	BORING LOCATION: 25' E of 101DPT-01		LAND ELEV.: NM
DRILL MACHINE: Power Probe	METHOD: CPT / DPT	0 HOUR DTW: N/A	BORING DEPTH: 6.5
START DATE: 8/1/12	FINISH DATE: 8/1/12	24 HOUR DTW: N/A	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	PID RESULTS (ppm) 0 250 500 750 1,000	LAB.	USCS	LOG	SOIL AND ROCK DESCRIPTION	DEPTH	ELEVATION
							LAND SURFACE	0.0	
0.0					SM		TOPSOIL.	0.5	
			▲0		SM		Dk tan grading to lt tan, Silty SAND.	2.5	
2.0									
			▲0		CL		Lt tan grading to lt brown, Sandy CLAY. Red and orange staining/mottling.	5.0	
4.0			▲0						
4.5			▲0	DPT- 14 (4.5-5')					
5.0			▲0		CH		Lt gray, CLAY. More orange present.	6.5	
6.0									
6.5							Boring Terminated at Depth 6.5 ft		

▽ = 0hr. DTW ▼ = 24hr. DTW

CATLIN ENVIRO_LOG_212077_GREENVILLE-PSAS_U3315.GPJ_CATLIN.GDT_9/5/12

APPENDIX C

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD

Laboratory Report of Analysis

To: Ben Ashba
RICHARD CATLIN & ASSOCIATES
P.O. Box 10279
Wilmington, NC 28404

Report Number: **31202432**

Client Project: **NCDOT Parcel 101**

Dear Ben Ashba,

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 Barbara A. Hager at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

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

Sincerely,
SGS North America Inc.

Digitally signed by: Michael Page
Date: 2012.08.15 09:16:38 -04'00'

Barbara A. Hager — Date
Project Manager
barbara.hager@sgs.com

Print Date: 08/15/2012

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
101 HA-01 (4ft)	31202432001	08/01/2012 11:50	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-01	31202432002	08/01/2012 09:40	08/01/2012 16:55	Water
101 DPT-01 (5-5.5FT)	31202432004	08/01/2012 08:00	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-02 (6-7ft)	31202432005	08/01/2012 08:30	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-03 (4.5-5ft)	31202432006	08/01/2012 08:40	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-04 (6-7ft)	31202432007	08/01/2012 09:30	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-05 (4.5-5ft)	31202432008	08/01/2012 10:00	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-06 (6-7ft)	31202432009	08/01/2012 10:30	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-07 (6-7ft)	31202432010	08/01/2012 10:40	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-08 (6-7ft)	31202432011	08/01/2012 11:00	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-09 (4.5-5ft)	31202432012	08/01/2012 11:10	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-10 (6-7ft)	31202432013	08/01/2012 11:20	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-11 (6-7ft)	31202432014	08/01/2012 11:30	08/01/2012 16:55	Soil-Solid as dry weight
101 DPT-12 (6-7ft)	31202432015	08/01/2012 11:40	08/01/2012 16:55	Soil-Solid as dry weight
Trip Blanks (Not on COC)	31202432016	08/01/2012 00:00	08/01/2012 16:55	Water

Print Date: 08/15/2012

N.C. Certification # 481

Detectable Results Summary

Client Sample ID: **101 DPT-01**
Lab Sample ID: 31202432002-D
EPA 625
SM 6200-B

Parameter	Result	Units	
Naphthalene	2420	ug/L	
1,2,4-Trimethylbenzene	490	ug/L	
1,3,5-Trimethylbenzene	309	ug/L	
4-Isopropyltoluene	59.7	ug/L	
Benzene	2.80	ug/L	
n-Butylbenzene	389	ug/L	
Ethyl Benzene	2490	ug/L	
Isopropylbenzene (Cumene)	318	ug/L	
Naphthalene	2260	ug/L	
Toluene	2.42	ug/L	
Xylene (total)	225	ug/L	
m,p-Xylene	225	ug/L	
n-Propylbenzene	1150	ug/L	
sec-Butylbenzene	156	ug/L	

Client Sample ID: **101 DPT-02 (6-7ft)**
Lab Sample ID: 31202432005-C
SW-846 8015C DRO
SW-846 8015C GRO

Parameter	Result	Units
Diesel Range Organics (DRO)	167	mg/kg
Gasoline Range Organics (GRO)	1530	mg/kg

Client Sample ID: **101 DPT-03 (4.5-5ft)**
Lab Sample ID: 31202432006-C
SW-846 8015C DRO
SW-846 8015C GRO

Parameter	Result	Units
Diesel Range Organics (DRO)	8.96	mg/kg
Gasoline Range Organics (GRO)	25.5	mg/kg

Client Sample ID: **101 DPT-04 (6-7ft)**
Lab Sample ID: 31202432007-A
SW-846 8015C GRO

Parameter	Result	Units
Gasoline Range Organics (GRO)	8.35	mg/kg

Client Sample ID: **101 DPT-07 (6-7ft)**
Lab Sample ID: 31202432010-C
SW-846 8015C DRO
SW-846 8015C GRO

Parameter	Result	Units
Diesel Range Organics (DRO)	199	mg/kg
Gasoline Range Organics (GRO)	591	mg/kg

Client Sample ID: **101 DPT-08 (6-7ft)**
Lab Sample ID: 31202432011-C
SW-846 8015C DRO
SW-846 8015C GRO

Parameter	Result	Units
Diesel Range Organics (DRO)	37.5	mg/kg
Gasoline Range Organics (GRO)	31.1	mg/kg

Client Sample ID: **Trip Blanks (Not on COC)**
Lab Sample ID: 31202432016-A
SM 6200-B

Parameter	Result	Units	
Methylene chloride	0.330	ug/L	J

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 HA-01 (4ft)

Client Sample ID: **101 HA-01 (4ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432001-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:50
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 88.60

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.32	3.32	mg/kg	1	08/7/2012 19:22
Surrogates							
4-Bromofluorobenzene	107			70.0-130	%	1	08/7/2012 19:22

Batch Information

Analytical Batch: **VGC2052**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/07/2012 19:22**

Prep Batch: **VXX3772**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:48**
Prep Initial Wt./Vol.: **6.79 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 HA-01 (4ft)

Client Sample ID: **101 HA-01 (4ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432001-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:50
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 88.60

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	6.29	6.29	mg/kg	1	08/4/2012 4:49
Surrogates							
o-Terphenyl	86.7			40.0-140	%	1	08/4/2012 4:49

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/04/2012 04:49**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **35.9 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

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SGS ANALYTICAL PERSPECTIVES

Results of 101 DPT-01

Client Sample ID: **101 DPT-01**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432002-B
Lab Project ID: 31202432

Collection Date: 08/01/2012 09:40
Received Date: 08/01/2012 16:55
Matrix: Water

Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.208	1.00	ug/L	2	08/7/2012 20:00
1,1,1-Trichloroethane	ND	U	0.246	1.00	ug/L	2	08/7/2012 20:00
1,1,2,2-Tetrachloroethane	ND	U	0.312	1.00	ug/L	2	08/7/2012 20:00
1,1,2-Trichloroethane	ND	U	0.252	1.00	ug/L	2	08/7/2012 20:00
1,1-Dichloroethane	ND	U	0.330	1.00	ug/L	2	08/7/2012 20:00
1,1-Dichloroethene	ND	U	0.424	1.00	ug/L	2	08/7/2012 20:00
1,1-Dichloropropene	ND	U	0.224	1.00	ug/L	2	08/7/2012 20:00
1,2,3-Trichlorobenzene	ND	U	0.220	1.00	ug/L	2	08/7/2012 20:00
1,2,3-Trichloropropane	ND	U	0.424	1.00	ug/L	2	08/7/2012 20:00
1,2,4-Trichlorobenzene	ND	U	0.183	1.00	ug/L	2	08/7/2012 20:00
1,2,4-Trimethylbenzene	**490**		15.4	80.0	ug/L	160	08/6/2012 21:04
1,2-Dibromo-3-chloropropane	ND	U	1.50	10.0	ug/L	2	08/7/2012 20:00
1,2-Dibromoethane	ND	U	0.240	1.00	ug/L	2	08/7/2012 20:00
1,2-Dichlorobenzene	ND	U	0.274	1.00	ug/L	2	08/7/2012 20:00
1,2-Dichloroethane	ND	U	0.334	1.00	ug/L	2	08/7/2012 20:00
1,2-Dichloropropane	ND	U	0.326	1.00	ug/L	2	08/7/2012 20:00
1,3,5-Trimethylbenzene	**309**		18.1	80.0	ug/L	160	08/6/2012 21:04
1,3-Dichlorobenzene	ND	U	0.206	1.00	ug/L	2	08/7/2012 20:00
1,3-Dichloropropane	ND	U	0.378	1.00	ug/L	2	08/7/2012 20:00
1,4-Dichlorobenzene	ND	U	0.260	1.00	ug/L	2	08/7/2012 20:00
2,2-Dichloropropane	ND	U	0.786	1.00	ug/L	2	08/7/2012 20:00
2-Chlorotoluene	ND	U	0.226	1.00	ug/L	2	08/7/2012 20:00
4-Chlorotoluene	ND	U	0.250	1.00	ug/L	2	08/7/2012 20:00
4-Isopropyltoluene	**59.7**		0.154	1.00	ug/L	2	08/7/2012 20:00
Benzene	**2.80**		0.226	1.00	ug/L	2	08/7/2012 20:00
Bromobenzene	ND	U	0.220	1.00	ug/L	2	08/7/2012 20:00
Bromochloromethane	ND	U	0.422	1.00	ug/L	2	08/7/2012 20:00
Bromodichloromethane	ND	U	0.220	1.00	ug/L	2	08/7/2012 20:00
Bromoform	ND	U	0.195	1.00	ug/L	2	08/7/2012 20:00
Bromomethane	ND	U	0.474	1.00	ug/L	2	08/7/2012 20:00
n-Butylbenzene	**389**		0.154	1.00	ug/L	2	08/7/2012 20:00
Carbon tetrachloride	ND	U	0.202	1.00	ug/L	2	08/7/2012 20:00
Chlorobenzene	ND	U	0.232	1.00	ug/L	2	08/7/2012 20:00
Chloroethane	ND	U	0.622	1.00	ug/L	2	08/7/2012 20:00
Chloroform	ND	U	0.278	1.00	ug/L	2	08/7/2012 20:00
Chloromethane	ND	U	0.896	1.00	ug/L	2	08/7/2012 20:00
Dibromochloromethane	ND	U	0.268	1.00	ug/L	2	08/7/2012 20:00
Dibromomethane	ND	U	0.336	1.00	ug/L	2	08/7/2012 20:00
Dichlorodifluoromethane	ND	U	0.342	10.0	ug/L	2	08/7/2012 20:00
cis-1,3-Dichloropropene	ND	U	0.153	1.00	ug/L	2	08/7/2012 20:00
trans-1,3-Dichloropropene	ND	U	0.172	1.00	ug/L	2	08/7/2012 20:00
Diisopropyl Ether	ND	U	0.310	1.00	ug/L	2	08/7/2012 20:00
Ethyl Benzene	**2490**		14.0	80.0	ug/L	160	08/6/2012 21:04
Hexachlorobutadiene	ND	U	0.158	1.00	ug/L	2	08/7/2012 20:00

Print Date: 08/15/2012

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Results of 101 DPT-01

Client Sample ID: **101 DPT-01**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432002-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 09:40
Received Date: 08/01/2012 16:55
Matrix: Water

Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Isopropylbenzene (Cumene)	**318**		13.9	80.0	ug/L	160	08/6/2012 21:04
Methylene chloride	ND	U	0.304	10.0	ug/L	2	08/7/2012 20:00
Naphthalene	**2260**		13.7	80.0	ug/L	160	08/6/2012 21:04
Styrene	ND	U	0.204	1.00	ug/L	2	08/7/2012 20:00
Tetrachloroethene	ND	U	0.310	1.00	ug/L	2	08/7/2012 20:00
Toluene	**2.42**		0.266	1.00	ug/L	2	08/7/2012 20:00
Trichloroethene	ND	U	0.250	1.00	ug/L	2	08/7/2012 20:00
Trichlorofluoromethane	ND	U	0.274	1.00	ug/L	2	08/7/2012 20:00
Vinyl chloride	ND	U	0.248	1.00	ug/L	2	08/7/2012 20:00
Xylene (total)	**225**		0.538	3.00	ug/L	2	08/7/2012 20:00
cis-1,2-Dichloroethene	ND	U	0.272	1.00	ug/L	2	08/7/2012 20:00
m,p-Xylene	**225**		0.364	2.00	ug/L	2	08/7/2012 20:00
n-Propylbenzene	**1150**		18.1	80.0	ug/L	160	08/6/2012 21:04
o-Xylene	ND	U	0.175	1.00	ug/L	2	08/7/2012 20:00
sec-Butylbenzene	**156**		0.224	1.00	ug/L	2	08/7/2012 20:00
tert-Butyl methyl ether (MTBE)	ND	U	0.288	1.00	ug/L	2	08/7/2012 20:00
tert-Butylbenzene	ND	U	0.171	1.00	ug/L	2	08/7/2012 20:00
trans-1,2-Dichloroethene	ND	U	0.446	1.00	ug/L	2	08/7/2012 20:00
Surrogates							
1,2-Dichloroethane-d4	102			64.0-140	%	2	08/7/2012 20:00
4-Bromofluorobenzene	91.7			85.0-115	%	2	08/7/2012 20:00
Toluene d8	107			82.0-117	%	2	08/7/2012 20:00

Batch Information

Analytical Batch: **VMS2448**
Analytical Method: **SM 6200-B**
Instrument: **MSD3**
Analyst: **BWS**
Analytical Date/Time: **08/06/2012 21:04**

Prep Batch: **VXX3765**
Prep Method: **SM 6200-B Prep**
Prep Date/Time: **08/06/2012 10:18**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Analytical Batch: **VMS2453**
Analytical Method: **SM 6200-B**
Instrument: **MSD3**
Analyst: **BWS**
Analytical Date/Time: **08/07/2012 20:00**

Prep Batch: **VXX3771**
Prep Method: **SM 6200-B Prep**
Prep Date/Time: **08/07/2012 15:02**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 08/15/2012

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SGS ANALYTICAL PERSPECTIVES

Results of 101 DPT-01

Client Sample ID: **101 DPT-01**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432002-D
Lab Project ID: 31202432

Collection Date: 08/01/2012 09:40
Received Date: 08/01/2012 16:55
Matrix: Water

Results by EPA 625

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,2,4-Trichlorobenzene	ND	U	35.6	103	ug/L	20	08/6/2012 18:44
2,4-Dinitrotoluene	ND	U	37.8	103	ug/L	20	08/6/2012 18:44
2,6-Dinitrotoluene	ND	U	38.6	103	ug/L	20	08/6/2012 18:44
2-Chloronaphthalene	ND	U	41.1	103	ug/L	20	08/6/2012 18:44
3,3'-Dichlorobenzidine	ND	U	36.0	206	ug/L	20	08/6/2012 18:44
4-Chlorophenyl phenyl ether	ND	U	50.6	103	ug/L	20	08/6/2012 18:44
Acenaphthene	ND	U	42.3	103	ug/L	20	08/6/2012 18:44
Acenaphthylene	ND	U	41.1	103	ug/L	20	08/6/2012 18:44
Anthracene	ND	U	39.7	103	ug/L	20	08/6/2012 18:44
Benzo(a)anthracene	ND	U	40.3	103	ug/L	20	08/6/2012 18:44
Benzo(a)pyrene	ND	U	38.2	103	ug/L	20	08/6/2012 18:44
Benzo(b)fluoranthene	ND	U	40.3	103	ug/L	20	08/6/2012 18:44
Benzo(g,h,i)perylene	ND	U	44.2	103	ug/L	20	08/6/2012 18:44
Benzo(k)fluoranthene	ND	U	47.5	103	ug/L	20	08/6/2012 18:44
Bis(2-Chloroethoxy)methane	ND	U	43.6	103	ug/L	20	08/6/2012 18:44
Bis(2-Chloroethyl)ether	ND	U	45.4	103	ug/L	20	08/6/2012 18:44
Bis(2-Chloroisopropyl)ether	ND	U	41.9	103	ug/L	20	08/6/2012 18:44
Bis(2-Ethylhexyl)phthalate	ND	U	40.1	103	ug/L	20	08/6/2012 18:44
4-Bromophenyl phenyl ether	ND	U	41.9	103	ug/L	20	08/6/2012 18:44
Butyl benzyl phthalate	ND	U	38.8	103	ug/L	20	08/6/2012 18:44
Chrysene	ND	U	45.2	103	ug/L	20	08/6/2012 18:44
Di-n-butyl phthalate	ND	U	39.3	103	ug/L	20	08/6/2012 18:44
Di-n-octyl phthalate	ND	U	30.0	103	ug/L	20	08/6/2012 18:44
Dibenz(a,h)anthracene	ND	U	41.5	103	ug/L	20	08/6/2012 18:44
Diethyl phthalate	ND	U	43.2	103	ug/L	20	08/6/2012 18:44
Dimethyl phthalate	ND	U	44.0	103	ug/L	20	08/6/2012 18:44
Diphenylamine	ND	U	41.5	103	ug/L	20	08/6/2012 18:44
Fluoranthene	ND	U	41.5	103	ug/L	20	08/6/2012 18:44
Fluorene	ND	U	50.2	103	ug/L	20	08/6/2012 18:44
Hexachlorobenzene	ND	U	39.7	103	ug/L	20	08/6/2012 18:44
Hexachlorobutadiene	ND	U	31.2	103	ug/L	20	08/6/2012 18:44
Hexachlorocyclopentadiene	ND	U	16.2	206	ug/L	20	08/6/2012 18:44
Hexachloroethane	ND	U	28.8	103	ug/L	20	08/6/2012 18:44
Indeno(1,2,3-cd)pyrene	ND	U	41.5	103	ug/L	20	08/6/2012 18:44
Isophorone	ND	U	43.0	103	ug/L	20	08/6/2012 18:44
Naphthalene	**2420**		39.9	103	ug/L	20	08/6/2012 18:44
Nitrobenzene	ND	U	45.0	103	ug/L	20	08/6/2012 18:44
Phenanthrene	ND	U	40.9	103	ug/L	20	08/6/2012 18:44
Pyrene	ND	U	41.3	103	ug/L	20	08/6/2012 18:44
n-Nitrosodi-n-propylamine	ND	U	45.8	103	ug/L	20	08/6/2012 18:44
Surrogates							
2-Fluorobiphenyl	NA	D		50.0-107	%	20	08/6/2012 18:44
Nitrobenzene-d5	NA	D		46.0-118	%	20	08/6/2012 18:44

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-01

Client Sample ID: **101 DPT-01**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432002-D
Lab Project ID: 31202432

Collection Date: 08/01/2012 09:40
Received Date: 08/01/2012 16:55
Matrix: Water

Results by EPA 625

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Terphenyl-d14	NA	D		22.1-142	%	20	08/6/2012 18:44

Batch Information

Analytical Batch: **XMS1626**
Analytical Method: **EPA 625**
Instrument: **MSD10**
Analyst: **CMP**
Analytical Date/Time: **08/06/2012 18:44**

Prep Batch: **XXX2882**
Prep Method: **EPA 625**
Prep Date/Time: **08/02/2012 15:33**
Prep Initial Wt./Vol.: **973 mL**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-01 (5-5.5FT)

Client Sample ID: **101 DPT-01 (5-5.5FT)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432004-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 08:00
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 79.60

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	4.01	4.01	mg/kg	1	08/7/2012 19:47
Surrogates							
4-Bromofluorobenzene	107			70.0-130	%	1	08/7/2012 19:47

Batch Information

Analytical Batch: **VGC2052**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/07/2012 19:47**

Prep Batch: **VXX3772**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:49**
Prep Initial Wt./Vol.: **6.26 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-01 (5-5.5FT)

Client Sample ID: **101 DPT-01 (5-5.5FT)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432004-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 08:00
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 79.60

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	7.82	7.82	mg/kg	1	08/4/2012 5:17
Surrogates							
o-Terphenyl	84.5			40.0-140	%	1	08/4/2012 5:17

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/04/2012 05:17**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **32.13 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Results of 101 DPT-02 (6-7ft)

Client Sample ID: **101 DPT-02 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432005-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 08:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 72.90

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	**1530**		173	173	mg/kg	40	08/8/2012 19:38
Surrogates							
4-Bromofluorobenzene	105			70.0-130	%	40	08/8/2012 19:38

Batch Information

Analytical Batch: **VGC2056**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/08/2012 19:38**

Prep Batch: **VXX3782**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:51**
Prep Initial Wt./Vol.: **6.34 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-02 (6-7ft)

Client Sample ID: **101 DPT-02 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432005-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 08:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 72.90

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	167		8.61	8.61	mg/kg	1	08/4/2012 5:45
Surrogates							
o-Terphenyl	84.2			40.0-140	%	1	08/4/2012 5:45

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/04/2012 05:45**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **31.87 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-03 (4.5-5ft)

Client Sample ID: **101 DPT-03 (4.5-5ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432006-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 08:40
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 82.70

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	**25.5**		3.64	3.64	mg/kg	1	08/8/2012 19:13
Surrogates							
4-Bromofluorobenzene	112			70.0-130	%	1	08/8/2012 19:13

Batch Information

Analytical Batch: **VGC2056**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/08/2012 19:13**

Prep Batch: **VXX3782**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:52**
Prep Initial Wt./Vol.: **6.64 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-03 (4.5-5ft)

Client Sample ID: **101 DPT-03 (4.5-5ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432006-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 08:40
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 82.70

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	**8.96**		7.13	7.13	mg/kg	1	08/4/2012 6:13
Surrogates							
o-Terphenyl	89.1			40.0-140	%	1	08/4/2012 6:13

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/04/2012 06:13**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Prep Initial Wt./Vol.: **33.93 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-04 (6-7ft)

Client Sample ID: **101 DPT-04 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432007-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 09:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 77.30

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	**8.35**		4.13	4.13	mg/kg	1	08/9/2012 18:08
Surrogates							
4-Bromofluorobenzene	113			70.0-130	%	1	08/9/2012 18:08

Batch Information

Analytical Batch: **VGC2061**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/09/2012 18:08**

Prep Batch: **VXX3793**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:53**
Prep Initial Wt./Vol.: **6.27 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-04 (6-7ft)

Client Sample ID: **101 DPT-04 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432007-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 09:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 77.30

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	8.13	8.13	mg/kg	1	08/8/2012 15:15
Surrogates							
o-Terphenyl	67.7			40.0-140	%	1	08/8/2012 15:15

Batch Information

Analytical Batch: **XGC2429**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/08/2012 15:15**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Prep Initial Wt./Vol.: **31.83 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Results of 101 DPT-05 (4.5-5ft)

Client Sample ID: **101 DPT-05 (4.5-5ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432008-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 10:00
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 78.10

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.86	3.86	mg/kg	1	08/8/2012 20:29
Surrogates							
4-Bromofluorobenzene	107			70.0-130	%	1	08/8/2012 20:29

Batch Information

Analytical Batch: **VGC2056**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/08/2012 20:29**

Prep Batch: **VXX3782**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:54**
Prep Initial Wt./Vol.: **6.64 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-05 (4.5-5ft)

Client Sample ID: **101 DPT-05 (4.5-5ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432008-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 10:00
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 78.10

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	8.25	8.25	mg/kg	1	08/8/2012 15:43
Surrogates							
o-Terphenyl	69.0			40.0-140	%	1	08/8/2012 15:43

Batch Information

Analytical Batch: **XGC2429**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/08/2012 15:43**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Prep Initial Wt./Vol.: **31.04 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-06 (6-7ft)

Client Sample ID: **101 DPT-06 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432009-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 10:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 75.30

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	4.26	4.26	mg/kg	1	08/9/2012 18:34
Surrogates							
4-Bromofluorobenzene	107			70.0-130	%	1	08/9/2012 18:34

Batch Information

Analytical Batch: **VGC2061**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/09/2012 18:34**

Prep Batch: **VXX3793**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:55**
Prep Initial Wt./Vol.: **6.23 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-06 (6-7ft)

Client Sample ID: **101 DPT-06 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432009-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 10:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 75.30

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	8.09	8.09	mg/kg	1	08/7/2012 15:38
Surrogates							
o-Terphenyl	65.4			40.0-140	%	1	08/7/2012 15:38

Batch Information

Analytical Batch: **XGC2425**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/07/2012 15:38**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Prep Initial Wt./Vol.: **32.83 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Results of 101 DPT-07 (6-7ft)

Client Sample ID: **101 DPT-07 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432010-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 10:40
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 71.10

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	**591**		177	177	mg/kg	40	08/10/2012 14:19
Surrogates							
4-Bromofluorobenzene	104			70.0-130	%	40	08/10/2012 14:19

Batch Information

Analytical Batch: **VGC2064**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/10/2012 14:19**

Prep Batch: **VXX3800**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:56**
Prep Initial Wt./Vol.: **6.34 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-07 (6-7ft)

Client Sample ID: **101 DPT-07 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432010-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 10:40
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 71.10

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	199		7.94	7.94	mg/kg	1	08/7/2012 16:06
Surrogates							
o-Terphenyl	87.3			40.0-140	%	1	08/7/2012 16:06

Batch Information

Analytical Batch: **XGC2425**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/07/2012 16:06**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Prep Initial Wt./Vol.: **35.4 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-08 (6-7ft)

Client Sample ID: **101 DPT-08 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432011-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:00
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 73.80

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	**31.1**		3.84	3.84	mg/kg	1	08/10/2012 14:44
Surrogates							
4-Bromofluorobenzene	116			70.0-130	%	1	08/10/2012 14:44

Batch Information

Analytical Batch: **VGC2064**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/10/2012 14:44**

Prep Batch: **VXX3800**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 13:57**
Prep Initial Wt./Vol.: **7.06 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-08 (6-7ft)

Client Sample ID: **101 DPT-08 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432011-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:00
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 73.80

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	37.5		8.03	8.03	mg/kg	1	08/8/2012 14:47
Surrogates							
o-Terphenyl	75.3			40.0-140	%	1	08/8/2012 14:47

Batch Information

Analytical Batch: **XGC2429**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/08/2012 14:47**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Prep Initial Wt./Vol.: **33.75 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-09 (4.5-5ft)

Client Sample ID: **101 DPT-09 (4.5-5ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432012-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:10
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 79.60

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	3.84	3.84	mg/kg	1	08/9/2012 19:50
Surrogates							
4-Bromofluorobenzene	110			70.0-130	%	1	08/9/2012 19:50

Batch Information

Analytical Batch: **VGC2061**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/09/2012 19:50**

Prep Batch: **VXX3793**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 14:00**
Prep Initial Wt./Vol.: **6.54 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-09 (4.5-5ft)

Client Sample ID: **101 DPT-09 (4.5-5ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432012-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:10
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 79.60

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	7.87	7.87	mg/kg	1	08/7/2012 17:02
Surrogates							
o-Terphenyl	77.6			40.0-140	%	1	08/7/2012 17:02

Batch Information

Analytical Batch: **XGC2425**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/07/2012 17:02**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Prep Initial Wt./Vol.: **31.93 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Results of 101 DPT-10 (6-7ft)

Client Sample ID: **101 DPT-10 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432013-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:20
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 76.70

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	4.77	4.77	mg/kg	1	08/9/2012 20:15
Surrogates							
4-Bromofluorobenzene	112			70.0-130	%	1	08/9/2012 20:15

Batch Information

Analytical Batch: **VGC2061**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/09/2012 20:15**

Prep Batch: **VXX3793**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 14:01**
Prep Initial Wt./Vol.: **5.46 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Results of 101 DPT-10 (6-7ft)

Client Sample ID: **101 DPT-10 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432013-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:20
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 76.70

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	7.71	7.71	mg/kg	1	08/7/2012 17:30
Surrogates							
o-Terphenyl	81.1			40.0-140	%	1	08/7/2012 17:30

Batch Information

Analytical Batch: **XGC2425**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/07/2012 17:30**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Prep Initial Wt./Vol.: **33.83 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-11 (6-7ft)

Client Sample ID: **101 DPT-11 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432014-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 76.30

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	4.15	4.15	mg/kg	1	08/9/2012 20:40
Surrogates							
4-Bromofluorobenzene	108			70.0-130	%	1	08/9/2012 20:40

Batch Information

Analytical Batch: **VGC2061**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/09/2012 20:40**

Prep Batch: **VXX3793**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 14:02**
Prep Initial Wt./Vol.: **6.31 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Results of 101 DPT-11 (6-7ft)

Client Sample ID: **101 DPT-11 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432014-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:30
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 76.30

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	8.29	8.29	mg/kg	1	08/7/2012 17:58
Surrogates							
o-Terphenyl	84.7			40.0-140	%	1	08/7/2012 17:58

Batch Information

Analytical Batch: **XGC2425**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/07/2012 17:58**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Prep Initial Wt./Vol.: **31.64 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-12 (6-7ft)

Client Sample ID: **101 DPT-12 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432015-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:40
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 69.60

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	4.50	4.50	mg/kg	1	08/9/2012 21:06
Surrogates							
4-Bromofluorobenzene	108			70.0-130	%	1	08/9/2012 21:06

Batch Information

Analytical Batch: **VGC2061**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/09/2012 21:06**

Prep Batch: **VXX3793**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/02/2012 14:03**
Prep Initial Wt./Vol.: **6.38 g**
Prep Extract Vol: **5 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Results of 101 DPT-12 (6-7ft)

Client Sample ID: **101 DPT-12 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432015-C
Lab Project ID: 31202432

Collection Date: 08/01/2012 11:40
Received Date: 08/01/2012 16:55
Matrix: Soil-Solid as dry weight
Solids (%): 69.60

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	8.34	8.34	mg/kg	1	08/7/2012 18:27
Surrogates							
o-Terphenyl	75.8			40.0-140	%	1	08/7/2012 18:27

Batch Information

Analytical Batch: **XGC2425**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/07/2012 18:27**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Prep Initial Wt./Vol.: **34.47 g**
Prep Extract Vol: **10 mL**

Print Date: 08/15/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Results of Trip Blanks (Not on COC)

Client Sample ID: **Trip Blanks (Not on COC)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432016-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 00:00
Received Date: 08/01/2012 16:55
Matrix: Water

Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1	08/6/2012 13:58
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1	08/6/2012 13:58
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1	08/6/2012 13:58
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1	08/6/2012 13:58
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1	08/6/2012 13:58
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1	08/6/2012 13:58
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1	08/6/2012 13:58
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1	08/6/2012 13:58
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1	08/6/2012 13:58
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1	08/6/2012 13:58
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1	08/6/2012 13:58
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1	08/6/2012 13:58
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1	08/6/2012 13:58
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1	08/6/2012 13:58
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1	08/6/2012 13:58
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1	08/6/2012 13:58
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1	08/6/2012 13:58
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1	08/6/2012 13:58
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1	08/6/2012 13:58
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1	08/6/2012 13:58
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1	08/6/2012 13:58
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1	08/6/2012 13:58
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1	08/6/2012 13:58
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1	08/6/2012 13:58
Benzene	ND	U	0.113	0.500	ug/L	1	08/6/2012 13:58
Bromobenzene	ND	U	0.110	0.500	ug/L	1	08/6/2012 13:58
Bromochloromethane	ND	U	0.211	0.500	ug/L	1	08/6/2012 13:58
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1	08/6/2012 13:58
Bromoform	ND	U	0.0974	0.500	ug/L	1	08/6/2012 13:58
Bromomethane	ND	U	0.237	0.500	ug/L	1	08/6/2012 13:58
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1	08/6/2012 13:58
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1	08/6/2012 13:58
Chlorobenzene	ND	U	0.116	0.500	ug/L	1	08/6/2012 13:58
Chloroethane	ND	U	0.311	0.500	ug/L	1	08/6/2012 13:58
Chloroform	ND	U	0.139	0.500	ug/L	1	08/6/2012 13:58
Chloromethane	ND	U	0.448	0.500	ug/L	1	08/6/2012 13:58
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1	08/6/2012 13:58
Dibromomethane	ND	U	0.168	0.500	ug/L	1	08/6/2012 13:58
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1	08/6/2012 13:58
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1	08/6/2012 13:58
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1	08/6/2012 13:58
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1	08/6/2012 13:58
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1	08/6/2012 13:58
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1	08/6/2012 13:58

Print Date: 08/15/2012

N.C. Certification # 481

Results of Trip Blanks (Not on COC)

Client Sample ID: **Trip Blanks (Not on COC)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202432016-A
Lab Project ID: 31202432

Collection Date: 08/01/2012 00:00
Received Date: 08/01/2012 16:55
Matrix: Water

Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1	08/6/2012 13:58
Methylene chloride	**0.330**	J	0.152	5.00	ug/L	1	08/6/2012 13:58
Naphthalene	ND	U	0.0855	0.500	ug/L	1	08/6/2012 13:58
Styrene	ND	U	0.102	0.500	ug/L	1	08/6/2012 13:58
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1	08/6/2012 13:58
Toluene	ND	U	0.133	0.500	ug/L	1	08/6/2012 13:58
Trichloroethene	ND	U	0.125	0.500	ug/L	1	08/6/2012 13:58
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1	08/6/2012 13:58
Vinyl chloride	ND	U	0.124	0.500	ug/L	1	08/6/2012 13:58
Xylene (total)	ND	U	0.269	1.50	ug/L	1	08/6/2012 13:58
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1	08/6/2012 13:58
m,p-Xylene	ND	U	0.182	1.00	ug/L	1	08/6/2012 13:58
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1	08/6/2012 13:58
o-Xylene	ND	U	0.0874	0.500	ug/L	1	08/6/2012 13:58
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1	08/6/2012 13:58
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1	08/6/2012 13:58
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1	08/6/2012 13:58
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1	08/6/2012 13:58
Surrogates							
1,2-Dichloroethane-d4	100			64.0-140	%	1	08/6/2012 13:58
4-Bromofluorobenzene	98.5			85.0-115	%	1	08/6/2012 13:58
Toluene d8	102			82.0-117	%	1	08/6/2012 13:58

Batch Information

Analytical Batch: **VMS2448**
Analytical Method: **SM 6200-B**
Instrument: **MSD3**
Analyst: **BWS**
Analytical Date/Time: **08/06/2012 13:58**

Prep Batch: **VXX3765**
Prep Method: **SM 6200-B Prep**
Prep Date/Time: **08/06/2012 10:18**
Prep Initial Wt./Vol.: **40 mL**
Prep Extract Vol: **40 mL**

Print Date: 08/15/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SM 6200-B

Prep Method: SW-846 5030B
Prep Batch: VXX3765
Prep Date: 08/06/2012 08:36

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 26750 [VXX/3765]	83752	08/06/2012 11:53	VMS2448	MSD3	BWS
LCSD for HBN 26750 [VXX/3765]	83753	08/06/2012 12:18	VMS2448	MSD3	BWS
MB for HBN 26750 [VXX/3765]	83754	08/06/2012 13:08	VMS2448	MSD3	BWS
Trip Blanks (Not on COC)	31202432016	08/06/2012 13:58	VMS2448	MSD3	BWS
101 DPT-01	31202432002	08/06/2012 21:04	VMS2448	MSD3	BWS
USTHPFFC-MW19(83118MS)	84137	08/06/2012 21:54	VMS2448	MSD3	BWS
USTHPFFC-MW19(83118MSD)	84138	08/06/2012 22:19	VMS2448	MSD3	BWS

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26750 [VXX/3765]
Blank Lab ID: 83754
QC for Samples:
31202432002, 31202432016

Matrix: Water

Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1
Chloromethane	ND	U	0.448	0.500	ug/L	1
Vinyl chloride	ND	U	0.124	0.500	ug/L	1
Bromomethane	ND	U	0.237	0.500	ug/L	1
Chloroethane	ND	U	0.311	0.500	ug/L	1
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1
Bromochloromethane	ND	U	0.211	0.500	ug/L	1
Chloroform	ND	U	0.139	0.500	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1
Benzene	ND	U	0.113	0.500	ug/L	1
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1
Trichloroethene	ND	U	0.125	0.500	ug/L	1
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1
Dibromomethane	ND	U	0.168	0.500	ug/L	1
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1
Toluene	ND	U	0.133	0.500	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1
Chlorobenzene	ND	U	0.116	0.500	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1
Bromoform	ND	U	0.0974	0.500	ug/L	1
Bromobenzene	ND	U	0.110	0.500	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1
Ethyl Benzene	ND	U	0.0877	0.500	ug/L	1
m,p-Xylene	ND	U	0.182	1.00	ug/L	1
Styrene	ND	U	0.102	0.500	ug/L	1

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26750 [VXX/3765]
Blank Lab ID: 83754
QC for Samples:
31202432002, 31202432016

Matrix: Water

Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
o-Xylene	ND	U	0.0874	0.500	ug/L	1
Xylene (total)	ND	U	0.269	1.50	ug/L	1
Isopropylbenzene (Cumene)	ND	U	0.0869	0.500	ug/L	1
n-Propylbenzene	ND	U	0.113	0.500	ug/L	1
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1
1,3,5-Trimethylbenzene	ND	U	0.113	0.500	ug/L	1
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1
1,2,4-Trimethylbenzene	ND	U	0.0961	0.500	ug/L	1
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1
Naphthalene	ND	U	0.0855	0.500	ug/L	1
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1
Surrogates						
1,2-Dichloroethane-d4	102			64.0-140	%	1
Toluene d8	103			82.0-117	%	1
4-Bromofluorobenzene	97.8			85.0-115	%	1

Batch Information

Analytical Batch: VMS2448
Analytical Method: SM 6200-B
Instrument: MSD3
Analyst: BWS
Analytical Date/Time: 8/6/2012 1:08:00PM

Prep Batch: VXX3765
Prep Method: SW-846 5030B
Prep Date/Time: 8/6/2012 8:36:53AM
Prep Initial Wt./Vol.: 40 mL
Prep Extract Vol: 40 mL

Print Date: 08/15/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26750 [VXX/3765]
Blank Spike Lab ID: 83752
Date Analyzed: 08/06/2012 11:53

Spike Duplicate ID: LCSD for HBN 26750 [VXX/3765]
Spike Duplicate Lab ID: 83753
Date Analyzed: 08/06/2012 12:18
Matrix: Water

QC for Samples: 31202432002, 31202432016

Results by SM 6200-B

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Dichlorodifluoromethane	5.00	4.00	80	5.00	3.56	71	33.0-170	12	30.00
Chloromethane	5.00	4.24	85	5.00	3.79	76	57.0-132	11	30.00
Vinyl chloride	5.00	4.25	85	5.00	3.67	73	59.0-138	15	30.00
Bromomethane	5.00	8.30	166*	5.00	4.84	97	51.0-134	53*	30.00
Chloroethane	5.00	4.27	85	5.00	4.08	82	64.0-145	4.6	30.00
Trichlorofluoromethane	5.00	4.62	92	5.00	3.98	80	64.0-133	15	30.00
1,1-Dichloroethene	5.00	4.64	93	5.00	4.67	93	71.0-128	0.64	30.00
Methylene chloride	5.00	3.81	76	5.00	4.57	91	70.0-113	18	30.00
trans-1,2-Dichloroethene	5.00	4.66	93	5.00	4.62	92	57.0-138	0.86	30.00
tert-Butyl methyl ether (MTBE)	5.00	4.23	85	5.00	4.63	93	47.0-142	9.0	30.00
1,1-Dichloroethane	5.00	4.29	86	5.00	4.84	97	68.0-133	12	30.00
Diisopropyl Ether	5.00	4.35	87	5.00	4.75	95	66.0-132	8.8	30.00
2,2-Dichloropropane	5.00	4.59	92	5.00	4.92	98	74.0-125	6.9	30.00
cis-1,2-Dichloroethene	5.00	4.49	90	5.00	4.80	96	73.0-128	6.7	30.00
Bromochloromethane	5.00	4.50	90	5.00	4.82	96	73.0-128	6.9	30.00
Chloroform	5.00	4.31	86	5.00	4.87	97	74.0-124	12	30.00
1,1,1-Trichloroethane	5.00	4.51	90	5.00	4.72	94	76.0-119	4.6	30.00
Carbon tetrachloride	5.00	4.48	90	5.00	4.65	93	75.0-120	3.7	30.00
1,1-Dichloropropene	5.00	4.53	91	5.00	4.71	94	76.0-124	3.9	30.00
Benzene	5.00	4.32	86	5.00	4.62	92	76.0-124	6.7	30.00
1,2-Dichloroethane	5.00	4.40	88	5.00	4.95	99	76.0-119	12	30.00
Trichloroethene	5.00	4.27	85	5.00	4.64	93	74.0-121	8.3	30.00
1,2-Dichloropropane	5.00	4.53	91	5.00	4.67	93	74.0-124	3.0	30.00
Dibromomethane	5.00	4.52	90	5.00	5.17	103	71.0-128	13	30.00
Bromodichloromethane	5.00	4.15	83	5.00	4.63	93	72.0-120	11	30.00
cis-1,3-Dichloropropene	5.00	4.16	83	5.00	4.45	89	73.0-122	6.7	30.00
Toluene	5.00	4.40	88	5.00	4.92	98	75.0-123	11	30.00
trans-1,3-Dichloropropene	5.00	4.66	93	5.00	5.10	102	70.0-125	9.0	30.00
1,1,2-Trichloroethane	5.00	4.70	94	5.00	4.63	93	76.0-121	1.5	30.00
Tetrachloroethene	5.00	4.32	86	5.00	4.47	89	59.0-112	3.4	30.00
1,3-Dichloropropane	5.00	4.42	88	5.00	4.77	95	74.0-120	7.6	30.00
Dibromochloromethane	5.00	4.30	86	5.00	4.57	91	67.0-122	6.1	30.00
1,2-Dibromoethane	5.00	4.14	83	5.00	4.90	98	74.0-119	17	30.00
Chlorobenzene	5.00	4.29	86	5.00	4.73	95	74.0-120	9.8	30.00

Blank Spike Summary

Blank Spike ID: LCS for HBN 26750 [VXX/3765]
Blank Spike Lab ID: 83752
Date Analyzed: 08/06/2012 11:53

Spike Duplicate ID: LCSD for HBN 26750 [VXX/3765]
Spike Duplicate Lab ID: 83753
Date Analyzed: 08/06/2012 12:18
Matrix: Water

QC for Samples: 31202432002, 31202432016

Results by SM 6200-B

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	5.00	4.27	85	5.00	4.99	100	73.0-119	16	30.00
Bromoform	5.00	4.44	89	5.00	4.91	98	62.0-127	10	30.00
Bromobenzene	5.00	4.34	87	5.00	4.89	98	75.0-120	12	30.00
1,1,2,2-Tetrachloroethane	5.00	4.32	86	5.00	4.90	98	68.0-129	13	30.00
1,2,3-Trichloropropane	5.00	4.50	90	5.00	4.83	97	67.0-126	7.1	30.00
Ethyl Benzene	5.00	4.28	86	5.00	4.54	91	76.0-123	5.9	30.00
m,p-Xylene	10.0	8.58	86	10.0	9.01	90	76.0-124	4.9	30.00
Styrene	5.00	4.23	85	5.00	4.59	92	76.0-121	8.2	30.00
o-Xylene	5.00	4.52	90	5.00	4.76	95	75.0-124	5.2	30.00
Isopropylbenzene (Cumene)	5.00	4.38	88	5.00	4.59	92	77.0-120	4.7	30.00
n-Propylbenzene	5.00	4.29	86	5.00	4.54	91	77.0-123	5.7	30.00
2-Chlorotoluene	5.00	4.50	90	5.00	4.48	90	74.0-127	0.45	30.00
4-Chlorotoluene	5.00	4.24	85	5.00	4.43	89	77.0-123	4.4	30.00
1,3,5-Trimethylbenzene	5.00	4.46	89	5.00	4.59	92	76.0-122	2.9	30.00
tert-Butylbenzene	5.00	4.21	84	5.00	4.48	90	67.0-122	6.2	30.00
1,2,4-Trimethylbenzene	5.00	4.37	87	5.00	4.58	92	76.0-124	4.7	30.00
sec-Butylbenzene	5.00	4.29	86	5.00	4.60	92	78.0-121	7.0	30.00
1,3-Dichlorobenzene	5.00	4.35	87	5.00	4.63	93	75.0-120	6.2	30.00
4-Isopropyltoluene	5.00	4.34	87	5.00	4.52	90	77.0-120	4.1	30.00
1,4-Dichlorobenzene	5.00	4.38	88	5.00	4.46	89	70.0-125	1.8	30.00
1,2-Dichlorobenzene	5.00	4.37	87	5.00	4.80	96	76.0-118	9.4	30.00
n-Butylbenzene	5.00	4.13	83	5.00	4.44	89	78.0-118	7.2	30.00
1,2-Dibromo-3-chloropropane	30.0	26.3	88	30.0	26.6	89	62.0-130	1.1	30.00
1,2,4-Trichlorobenzene	5.00	4.12	82	5.00	4.36	87	72.0-119	5.7	30.00
Hexachlorobutadiene	5.00	4.18	84	5.00	4.22	84	69.0-121	0.95	30.00
Naphthalene	5.00	4.16	83	5.00	4.42	88	67.0-122	6.1	30.00
1,2,3-Trichlorobenzene	5.00	4.05	81	5.00	4.34	87	21.0-193	6.9	30.00
Surrogates									
1,2-Dichloroethane-d4			100			100	64.0-140		
Toluene d8			102			103	82.0-117		
4-Bromofluorobenzene			100			102	85.0-115		

Blank Spike Summary

Blank Spike ID: LCS for HBN 26750 [VXX/3765]
Blank Spike Lab ID: 83752
Date Analyzed: 08/06/2012 11:53

Spike Duplicate ID: LCSD for HBN 26750 [VXX/3765]
Spike Duplicate Lab ID: 83753
Date Analyzed: 08/06/2012 12:18
Matrix: Water

QC for Samples: 31202432002, 31202432016

Results by SM 6200-B

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL

Batch Information

Analytical Batch: VMS2448
Analytical Method: SM 6200-B
Instrument: MSD3
Analyst: BWS

Prep Batch: VXX3765
Prep Method: SW-846 5030B
Prep Date/Time: 08/06/2012 08:36
Spike Init Wt./Vol.: 40 mL Extract Vol: 40 mL
Dupe Init Wt./Vol.: 40 mL Extract Vol: 40 mL

Batch Summary

Analytical Method: SM 6200-B

Prep Method: SW-846 5030B
Prep Batch: VXX3771
Prep Date: 08/07/2012 08:48

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 26801 [VXX/3771]	84033	08/07/2012 09:59	VMS2453	MSD3	BWS
LCSD for HBN 26801 [VXX/3771]	84034	08/07/2012 10:24	VMS2453	MSD3	BWS
MB for HBN 26801 [VXX/3771]	84035	08/07/2012 11:14	VMS2453	MSD3	BWS
101 DPT-01	31202432002	08/07/2012 20:00	VMS2453	MSD3	BWS

Print Date: 08/15/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Method Blank

Blank ID: MB for HBN 26801 [VXX/3771]
Blank Lab ID: 84035
QC for Samples:
31202432002

Matrix: Water

Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Dichlorodifluoromethane	ND	U	0.171	5.00	ug/L	1
Chloromethane	ND	U	0.448	0.500	ug/L	1
Vinyl chloride	ND	U	0.124	0.500	ug/L	1
Bromomethane	ND	U	0.237	0.500	ug/L	1
Chloroethane	ND	U	0.311	0.500	ug/L	1
Trichlorofluoromethane	ND	U	0.137	0.500	ug/L	1
1,1-Dichloroethene	ND	U	0.212	0.500	ug/L	1
Methylene chloride	ND	U	0.152	5.00	ug/L	1
trans-1,2-Dichloroethene	ND	U	0.223	0.500	ug/L	1
tert-Butyl methyl ether (MTBE)	ND	U	0.144	0.500	ug/L	1
1,1-Dichloroethane	ND	U	0.165	0.500	ug/L	1
Diisopropyl Ether	ND	U	0.155	0.500	ug/L	1
2,2-Dichloropropane	ND	U	0.393	0.500	ug/L	1
cis-1,2-Dichloroethene	ND	U	0.136	0.500	ug/L	1
Bromochloromethane	ND	U	0.211	0.500	ug/L	1
Chloroform	ND	U	0.139	0.500	ug/L	1
1,1,1-Trichloroethane	ND	U	0.123	0.500	ug/L	1
Carbon tetrachloride	ND	U	0.101	0.500	ug/L	1
1,1-Dichloropropene	ND	U	0.112	0.500	ug/L	1
Benzene	ND	U	0.113	0.500	ug/L	1
1,2-Dichloroethane	ND	U	0.167	0.500	ug/L	1
Trichloroethene	ND	U	0.125	0.500	ug/L	1
1,2-Dichloropropane	ND	U	0.163	0.500	ug/L	1
Dibromomethane	ND	U	0.168	0.500	ug/L	1
Bromodichloromethane	ND	U	0.110	0.500	ug/L	1
cis-1,3-Dichloropropene	ND	U	0.0767	0.500	ug/L	1
Toluene	ND	U	0.133	0.500	ug/L	1
trans-1,3-Dichloropropene	ND	U	0.0862	0.500	ug/L	1
1,1,2-Trichloroethane	ND	U	0.126	0.500	ug/L	1
Tetrachloroethene	ND	U	0.155	0.500	ug/L	1
1,3-Dichloropropane	ND	U	0.189	0.500	ug/L	1
Dibromochloromethane	ND	U	0.134	0.500	ug/L	1
1,2-Dibromoethane	ND	U	0.120	0.500	ug/L	1
Chlorobenzene	ND	U	0.116	0.500	ug/L	1
1,1,1,2-Tetrachloroethane	ND	U	0.104	0.500	ug/L	1
Bromoform	ND	U	0.0974	0.500	ug/L	1
Bromobenzene	ND	U	0.110	0.500	ug/L	1
1,1,2,2-Tetrachloroethane	ND	U	0.156	0.500	ug/L	1
1,2,3-Trichloropropane	ND	U	0.212	0.500	ug/L	1
m,p-Xylene	ND	U	0.182	1.00	ug/L	1
Styrene	ND	U	0.102	0.500	ug/L	1
o-Xylene	ND	U	0.0874	0.500	ug/L	1

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26801 [VXX/3771]
Blank Lab ID: 84035
QC for Samples:
31202432002

Matrix: Water

Results by SM 6200-B

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Xylene (total)	ND	U	0.269	1.50	ug/L	1
2-Chlorotoluene	ND	U	0.113	0.500	ug/L	1
4-Chlorotoluene	ND	U	0.125	0.500	ug/L	1
tert-Butylbenzene	ND	U	0.0855	0.500	ug/L	1
sec-Butylbenzene	ND	U	0.112	0.500	ug/L	1
1,3-Dichlorobenzene	ND	U	0.103	0.500	ug/L	1
4-Isopropyltoluene	ND	U	0.0769	0.500	ug/L	1
1,4-Dichlorobenzene	ND	U	0.130	0.500	ug/L	1
1,2-Dichlorobenzene	ND	U	0.137	0.500	ug/L	1
n-Butylbenzene	ND	U	0.0769	0.500	ug/L	1
1,2-Dibromo-3-chloropropane	ND	U	0.748	5.00	ug/L	1
1,2,4-Trichlorobenzene	ND	U	0.0913	0.500	ug/L	1
Hexachlorobutadiene	ND	U	0.0792	0.500	ug/L	1
1,2,3-Trichlorobenzene	ND	U	0.110	0.500	ug/L	1
Surrogates						
1,2-Dichloroethane-d4	101			64.0-140	%	1
Toluene d8	102			82.0-117	%	1
4-Bromofluorobenzene	99.9			85.0-115	%	1

Batch Information

Analytical Batch: VMS2453
Analytical Method: SM 6200-B
Instrument: MSD3
Analyst: BWS
Analytical Date/Time: 8/7/2012 11:14:00AM

Prep Batch: VXX3771
Prep Method: SW-846 5030B
Prep Date/Time: 8/7/2012 8:48:00AM
Prep Initial Wt./Vol.: 40 mL
Prep Extract Vol: 40 mL

Print Date: 08/15/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26801 [VXX/3771]
Blank Spike Lab ID: 84033
Date Analyzed: 08/07/2012 09:59

Spike Duplicate ID: LCSD for HBN 26801 [VXX/3771]
Spike Duplicate Lab ID: 84034
Date Analyzed: 08/07/2012 10:24
Matrix: Water

QC for Samples: 31202432002

Results by SM 6200-B

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Dichlorodifluoromethane	5.00	5.33	107	5.00	4.94	99	33.0-170	7.6	30.00
Chloromethane	5.00	5.83	117	5.00	5.73	115	57.0-132	1.7	30.00
Vinyl chloride	5.00	6.06	121	5.00	5.42	108	59.0-138	11	30.00
Bromomethane	5.00	6.09	122	5.00	6.21	124	51.0-134	2.0	30.00
Chloroethane	5.00	5.90	118	5.00	4.91	98	64.0-145	18	30.00
Trichlorofluoromethane	5.00	6.13	123	5.00	5.85	117	64.0-133	4.7	30.00
1,1-Dichloroethene	5.00	5.49	110	5.00	4.63	93	71.0-128	17	30.00
Methylene chloride	5.00	5.83	117*	5.00	5.51	110	70.0-113	5.6	30.00
trans-1,2-Dichloroethene	5.00	5.59	112	5.00	5.03	101	57.0-138	11	30.00
tert-Butyl methyl ether (MTBE)	5.00	5.50	110	5.00	5.07	101	47.0-142	8.1	30.00
1,1-Dichloroethane	5.00	5.62	112	5.00	5.31	106	68.0-133	5.7	30.00
Diisopropyl Ether	5.00	5.66	113	5.00	5.17	103	66.0-132	9.0	30.00
2,2-Dichloropropane	5.00	5.99	120	5.00	5.42	108	74.0-125	10	30.00
cis-1,2-Dichloroethene	5.00	5.76	115	5.00	5.36	107	73.0-128	7.2	30.00
Bromochloromethane	5.00	6.52	130*	5.00	5.88	118	73.0-128	10	30.00
Chloroform	5.00	5.77	115	5.00	5.17	103	74.0-124	11	30.00
1,1,1-Trichloroethane	5.00	5.73	115	5.00	5.28	106	76.0-119	8.2	30.00
Carbon tetrachloride	5.00	5.95	119	5.00	5.60	112	75.0-120	6.1	30.00
1,1-Dichloropropene	5.00	5.91	118	5.00	5.11	102	76.0-124	15	30.00
Benzene	5.00	5.61	112	5.00	5.28	106	76.0-124	6.1	30.00
1,2-Dichloroethane	5.00	5.75	115	5.00	5.37	107	76.0-119	6.8	30.00
Trichloroethene	5.00	5.42	108	5.00	5.27	105	74.0-121	2.8	30.00
1,2-Dichloropropane	5.00	5.68	114	5.00	5.34	107	74.0-124	6.2	30.00
Dibromomethane	5.00	5.83	117	5.00	5.11	102	71.0-128	13	30.00
Bromodichloromethane	5.00	5.62	112	5.00	5.29	106	72.0-120	6.0	30.00
cis-1,3-Dichloropropene	5.00	5.42	108	5.00	5.00	100	73.0-122	8.1	30.00
Toluene	5.00	5.99	120	5.00	5.48	110	75.0-123	8.9	30.00
trans-1,3-Dichloropropene	5.00	5.91	118	5.00	5.19	104	70.0-125	13	30.00
1,1,2-Trichloroethane	5.00	5.64	113	5.00	5.19	104	76.0-121	8.3	30.00
Tetrachloroethene	5.00	5.58	112	5.00	5.08	102	59.0-112	9.4	30.00
1,3-Dichloropropane	5.00	5.44	109	5.00	5.27	105	74.0-120	3.2	30.00
Dibromochloromethane	5.00	5.57	111	5.00	4.99	100	67.0-122	11	30.00
1,2-Dibromoethane	5.00	5.47	109	5.00	5.04	101	74.0-119	8.2	30.00
Chlorobenzene	5.00	5.58	112	5.00	4.97	99	74.0-120	12	30.00

Blank Spike Summary

Blank Spike ID: LCS for HBN 26801 [VXX/3771]
Blank Spike Lab ID: 84033
Date Analyzed: 08/07/2012 09:59

Spike Duplicate ID: LCSD for HBN 26801 [VXX/3771]
Spike Duplicate Lab ID: 84034
Date Analyzed: 08/07/2012 10:24
Matrix: Water

QC for Samples: 31202432002

Results by SM 6200-B

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	5.00	5.59	112	5.00	5.18	104	73.0-119	7.6	30.00
Bromoform	5.00	5.64	113	5.00	4.96	99	62.0-127	13	30.00
Bromobenzene	5.00	5.45	109	5.00	4.93	99	75.0-120	10	30.00
1,1,2,2-Tetrachloroethane	5.00	5.37	107	5.00	4.78	96	68.0-129	12	30.00
1,2,3-Trichloropropane	5.00	5.26	105	5.00	4.83	97	67.0-126	8.5	30.00
m,p-Xylene	10.0	10.7	107	10.0	9.73	97	76.0-124	9.5	30.00
Styrene	5.00	5.34	107	5.00	4.89	98	76.0-121	8.8	30.00
o-Xylene	5.00	5.53	111	5.00	5.29	106	75.0-124	4.4	30.00
2-Chlorotoluene	5.00	5.32	106	5.00	5.18	104	74.0-127	2.7	30.00
4-Chlorotoluene	5.00	5.30	106	5.00	4.78	96	77.0-123	10	30.00
tert-Butylbenzene	5.00	5.35	107	5.00	4.91	98	67.0-122	8.6	30.00
sec-Butylbenzene	5.00	5.40	108	5.00	4.93	99	78.0-121	9.1	30.00
1,3-Dichlorobenzene	5.00	5.33	107	5.00	4.99	100	75.0-120	6.6	30.00
4-Isopropyltoluene	5.00	5.44	109	5.00	4.79	96	77.0-120	13	30.00
1,4-Dichlorobenzene	5.00	5.30	106	5.00	5.10	102	70.0-125	3.8	30.00
1,2-Dichlorobenzene	5.00	5.56	111	5.00	4.93	99	76.0-118	12	30.00
n-Butylbenzene	5.00	5.28	106	5.00	4.69	94	78.0-118	12	30.00
1,2-Dibromo-3-chloropropane	30.0	30.8	103	30.0	27.1	90	62.0-130	13	30.00
1,2,4-Trichlorobenzene	5.00	5.20	104	5.00	4.54	91	72.0-119	14	30.00
Hexachlorobutadiene	5.00	5.26	105	5.00	4.64	93	69.0-121	13	30.00
1,2,3-Trichlorobenzene	5.00	5.08	102	5.00	4.64	93	21.0-193	9.1	30.00
Surrogates									
1,2-Dichloroethane-d4			100			103	64.0-140		
Toluene d8			103			104	82.0-117		
4-Bromofluorobenzene			102			101	85.0-115		

Batch Information

Analytical Batch: VMS2453
Analytical Method: SM 6200-B
Instrument: MSD3
Analyst: BWS

Prep Batch: VXX3771
Prep Method: SW-846 5030B
Prep Date/Time: 08/07/2012 08:48
Spike Init Wt./Vol.: 40 mL Extract Vol: 40 mL
Dupe Init Wt./Vol.: 40 mL Extract Vol: 40 mL

Print Date: 08/15/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8015C GRO

Prep Method: SW-846 5035
Prep Batch: VXX3772
Prep Date: 08/07/2012 09:11

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 26803 [VXX/3772]	84049	08/07/2012 11:15	VGC2052	GC7	MDY
LCSD for HBN 26803 [VXX/3772]	84050	08/07/2012 11:40	VGC2052	GC7	MDY
MB for HBN 26803 [VXX/3772]	84051	08/07/2012 12:05	VGC2052	GC7	MDY
S-1(83731MS)	84183	08/07/2012 12:55	VGC2052	GC7	MDY
S-1(83731MSD)	84184	08/07/2012 13:20	VGC2052	GC7	MDY
101 HA-01 (4ft)	31202432001	08/07/2012 19:22	VGC2052	GC7	MDY
101 DPT-01 (5-5.5FT)	31202432004	08/07/2012 19:47	VGC2052	GC7	MDY

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26803 [VXX/3772]
Blank Lab ID: 84051
QC for Samples:
31202432001, 31202432004

Matrix: Soil-Solid as dry weight

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Gasoline Range Organics (GRO)	ND	U	4.00	4.00	mg/kg	1
Surrogates						
4-Bromofluorobenzene	98.3			70.0-130	%	1

Batch Information

Analytical Batch: VGC2052
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY
Analytical Date/Time: 8/7/2012 12:05:00PM

Prep Batch: VXX3772
Prep Method: SW-846 5035
Prep Date/Time: 8/7/2012 9:11:21AM
Prep Initial Wt./Vol.: 5 g
Prep Extract Vol: 5 mL

Print Date: 08/15/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26803 [VXX/3772]
Blank Spike Lab ID: 84049
Date Analyzed: 08/07/2012 11:15

Spike Duplicate ID: LCSD for HBN 26803 [VXX/3772]
Spike Duplicate Lab ID: 84050
Date Analyzed: 08/07/2012 11:40
Matrix: Soil-Solid as dry weight

QC for Samples: 31202432001, 31202432004

Results by SW-846 8015C GRO

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics (GRO)	16.0	15.5	97	16.0	16.9	106	70.0-130	8.6	30.00
Surrogates									
4-Bromofluorobenzene			95.9			98.2	70.0-130		

Batch Information

Analytical Batch: VGC2052
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY

Prep Batch: VXX3772
Prep Method: SW-846 5035
Prep Date/Time: 08/07/2012 09:11
Spike Init Wt./Vol.: 5 g Extract Vol: 5 mL
Dupe Init Wt./Vol.: 5 g Extract Vol: 5 mL

Batch Summary

Analytical Method: SW-846 8015C GRO

Prep Method: SW-846 5035
Prep Batch: VXX3782
Prep Date: 08/08/2012 09:15

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 26851 [VXX/3782]	84261	08/08/2012 11:20	VGC2056	GC7	MDY
LCSD for HBN 26851 [VXX/3782]	84262	08/08/2012 11:45	VGC2056	GC7	MDY
MB for HBN 26851 [VXX/3782]	84263	08/08/2012 12:11	VGC2056	GC7	MDY
101 DPT-03 (4.5-5ft)	31202432006	08/08/2012 19:13	VGC2056	GC7	MDY
101 DPT-02 (6-7ft)	31202432005	08/08/2012 19:38	VGC2056	GC7	MDY
101 DPT-05 (4.5-5ft)	31202432008	08/08/2012 20:29	VGC2056	GC7	MDY
101 DPT-05 (4.5-5ft)(83211MS)	84483	08/08/2012 20:54	VGC2056	GC7	MDY
101 DPT-05 (4.5-...(83211MSD)	84484	08/08/2012 21:19	VGC2056	GC7	MDY

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26851 [VXX/3782]
Blank Lab ID: 84263
QC for Samples:
31202432005, 31202432006, 31202432008

Matrix: Soil-Solid as dry weight

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Gasoline Range Organics (GRO)	ND	U	4.00	4.00	mg/kg	1
Surrogates						
4-Bromofluorobenzene	103			70.0-130	%	1

Batch Information

Analytical Batch: VGC2056
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY
Analytical Date/Time: 8/8/2012 12:11:00PM

Prep Batch: VXX3782
Prep Method: SW-846 5035
Prep Date/Time: 8/8/2012 9:15:11AM
Prep Initial Wt./Vol.: 5 g
Prep Extract Vol: 5 mL

Print Date: 08/15/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26851 [VXX/3782]
Blank Spike Lab ID: 84261
Date Analyzed: 08/08/2012 11:20

Spike Duplicate ID: LCSD for HBN 26851 [VXX/3782]
Spike Duplicate Lab ID: 84262
Date Analyzed: 08/08/2012 11:45
Matrix: Soil-Solid as dry weight

QC for Samples: 31202432005, 31202432006, 31202432008

Results by SW-846 8015C GRO

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics (GRO)	16.0	17.0	106	16.0	17.8	111	70.0-130	4.6	30.00
Surrogates									
4-Bromofluorobenzene			101			104	70.0-130		

Batch Information

Analytical Batch: VGC2056
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY

Prep Batch: VXX3782
Prep Method: SW-846 5035
Prep Date/Time: 08/08/2012 09:15
Spike Init Wt./Vol.: 5 g Extract Vol: 5 mL
Dupe Init Wt./Vol.: 5 g Extract Vol: 5 mL

Matrix Spike Summary

Original Sample ID: 31202432008 (101 DPT-05 (4.5-5ft))
MS Sample ID: 84483
MSD Sample ID: 84484

Analysis Date: 08/08/2012 20:29
Analysis Date: 08/08/2012 20:54
Analysis Date: 08/08/2012 21:19
Matrix: Soil-Solid as dry weight

QC for Samples: 31202432005, 31202432006, 31202432008

Results by SW-846 8015C GRO

		Matrix Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics (GRO)	ND	15.4	16.2	105	15.4	17.3	112	70.0-130	6.1	30.00

Batch Information

Analytical Batch: VGC2056
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY

Prep Batch: VXX3782
Prep Method: SW-846 5035
Prep Date/Time: 08/02/2012 13:54
MS Init Wt./Vol.: 6.64 g Extract Vol.: 5 mL
MSD Init Wt./Vol.: 6.64 g Extract Vol.: 5 mL

Print Date: 08/15/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8015C GRO

Prep Method: SW-846 5035
Prep Batch: VXX3793
Prep Date: 08/09/2012 09:03

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 26897 [VXX/3793]	84461	08/09/2012 11:04	VGC2061	GC7	MDY
LCSD for HBN 26897 [VXX/3793]	84462	08/09/2012 11:30	VGC2061	GC7	MDY
MB for HBN 26897 [VXX/3793]	84463	08/09/2012 11:55	VGC2061	GC7	MDY
101 DPT-04 (6-7ft)	31202432007	08/09/2012 18:08	VGC2061	GC7	MDY
101 DPT-06 (6-7ft)	31202432009	08/09/2012 18:34	VGC2061	GC7	MDY
101 DPT-09 (4.5-5ft)	31202432012	08/09/2012 19:50	VGC2061	GC7	MDY
101 DPT-10 (6-7ft)	31202432013	08/09/2012 20:15	VGC2061	GC7	MDY
101 DPT-11 (6-7ft)	31202432014	08/09/2012 20:40	VGC2061	GC7	MDY
101 DPT-12 (6-7ft)	31202432015	08/09/2012 21:06	VGC2061	GC7	MDY

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26897 [VXX/3793]
Matrix: Soil-Solid as dry weight
Blank Lab ID: 84463
QC for Samples:
31202432007, 31202432009, 31202432012, 31202432013, 31202432014, 31202432015

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Gasoline Range Organics (GRO)	ND	U	4.00	4.00	mg/kg	1
Surrogates						
4-Bromofluorobenzene	102			70.0-130	%	1

Batch Information

Analytical Batch: VGC2061
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY
Analytical Date/Time: 8/9/2012 11:55:00AM

Prep Batch: VXX3793
Prep Method: SW-846 5035
Prep Date/Time: 8/9/2012 9:03:51AM
Prep Initial Wt./Vol.: 5 g
Prep Extract Vol: 5 mL

Print Date: 08/15/2012
N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26897 [VXX/3793]
Blank Spike Lab ID: 84461
Date Analyzed: 08/09/2012 11:04

Spike Duplicate ID: LCSD for HBN 26897 [VXX/3793]
Spike Duplicate Lab ID: 84462
Date Analyzed: 08/09/2012 11:30
Matrix: Soil-Solid as dry weight

QC for Samples: 31202432007, 31202432009, 31202432012, 31202432013, 31202432014, 31202432015

Results by SW-846 8015C GRO

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics (GRO)	16.0	16.6	104	16.0	16.4	103	70.0-130	1.2	30.00
Surrogates									
4-Bromofluorobenzene			104			102	70.0-130		

Batch Information

Analytical Batch: VGC2061
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY

Prep Batch: VXX3793
Prep Method: SW-846 5035
Prep Date/Time: 08/09/2012 09:03
Spike Init Wt./Vol.: 5 g Extract Vol: 5 mL
Dupe Init Wt./Vol.: 5 g Extract Vol: 5 mL

Batch Summary

Analytical Method: SW-846 8015C GRO

Prep Method: SW-846 5035
Prep Batch: VXX3800
Prep Date: 08/10/2012 08:40

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 26931 [VXX/3800]	84679	08/10/2012 10:41	VGC2064	GC7	MDY
LCSD for HBN 26931 [VXX/3800]	84680	08/10/2012 11:06	VGC2064	GC7	MDY
MB for HBN 26931 [VXX/3800]	84681	08/10/2012 11:32	VGC2064	GC7	MDY
SS-2(82828MS)	84764	08/10/2012 12:38	VGC2064	GC7	MDY
SS-2(82828MSD)	84765	08/10/2012 13:03	VGC2064	GC7	MDY
101 DPT-07 (6-7ft)	31202432010	08/10/2012 14:19	VGC2064	GC7	MDY
101 DPT-08 (6-7ft)	31202432011	08/10/2012 14:44	VGC2064	GC7	MDY

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26931 [VXX/3800]
Blank Lab ID: 84681
QC for Samples:
31202432010, 31202432011

Matrix: Soil-Solid as dry weight

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Gasoline Range Organics (GRO)	ND	U	4.00	4.00	mg/kg	1
Surrogates						
4-Bromofluorobenzene	103			70.0-130	%	1

Batch Information

Analytical Batch: VGC2064
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY
Analytical Date/Time: 8/10/2012 11:32:00AM

Prep Batch: VXX3800
Prep Method: SW-846 5035
Prep Date/Time: 8/10/2012 8:40:03AM
Prep Initial Wt./Vol.: 5 g
Prep Extract Vol: 5 mL

Print Date: 08/15/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26931 [VXX/3800]
Blank Spike Lab ID: 84679
Date Analyzed: 08/10/2012 10:41

Spike Duplicate ID: LCSD for HBN 26931 [VXX/3800]
Spike Duplicate Lab ID: 84680
Date Analyzed: 08/10/2012 11:06
Matrix: Soil-Solid as dry weight

QC for Samples: 31202432010, 31202432011

Results by SW-846 8015C GRO

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics (GRO)	16.0	16.4	103	16.0	16.9	106	70.0-130	3.0	30.00
Surrogates									
4-Bromofluorobenzene			103			106	70.0-130		

Batch Information

Analytical Batch: VGC2064
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY

Prep Batch: VXX3800
Prep Method: SW-846 5035
Prep Date/Time: 08/10/2012 08:40
Spike Init Wt./Vol.: 5 g Extract Vol: 5 mL
Dupe Init Wt./Vol.: 5 g Extract Vol: 5 mL

Batch Summary

Analytical Method: EPA 625

Prep Method: EPA 625
Prep Batch: XXX2882
Prep Date: 08/02/2012 15:33

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 26410 [XXX/2882]	83372	08/03/2012 22:13	XMS1623	MSD10	CMP
LCS for HBN 26410 [XXX/2882]	83373	08/03/2012 22:36	XMS1623	MSD10	CMP
TMW-1(82830MS)	83374	08/03/2012 23:22	XMS1623	MSD10	CMP
99DPT-14(83220DUP)	83375	08/04/2012 00:08	XMS1623	MSD10	CMP
101 DPT-01	31202432002	08/06/2012 18:44	XMS1626	MSD10	CMP

Print Date: 08/15/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Method Blank

Blank ID: MB for HBN 26410 [XXX/2882]
Blank Lab ID: 83372
QC for Samples:
31202432002

Matrix: Water

Results by EPA 625

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Bis(2-Chloroethyl)ether	ND	U	2.21	5.00	ug/L	1
Bis(2-Chloroisopropyl)ether	ND	U	2.04	5.00	ug/L	1
n-Nitrosodi-n-propylamine	ND	U	2.23	5.00	ug/L	1
Hexachloroethane	ND	U	1.40	5.00	ug/L	1
Nitrobenzene	ND	U	2.19	5.00	ug/L	1
Isophorone	ND	U	2.09	5.00	ug/L	1
Bis(2-Chloroethoxy)methane	ND	U	2.12	5.00	ug/L	1
1,2,4-Trichlorobenzene	ND	U	1.73	5.00	ug/L	1
Naphthalene	ND	U	1.94	5.00	ug/L	1
Hexachlorobutadiene	ND	U	1.52	5.00	ug/L	1
Hexachlorocyclopentadiene	ND	U	0.788	10.0	ug/L	1
2-Chloronaphthalene	ND	U	2.00	5.00	ug/L	1
Dimethyl phthalate	ND	U	2.14	5.00	ug/L	1
2,6-Dinitrotoluene	ND	U	1.88	5.00	ug/L	1
Acenaphthene	ND	U	2.06	5.00	ug/L	1
2,4-Dinitrotoluene	ND	U	1.84	5.00	ug/L	1
Fluorene	ND	U	2.44	5.00	ug/L	1
Diethyl phthalate	ND	U	2.10	5.00	ug/L	1
4-Chlorophenyl phenyl ether	ND	U	2.46	5.00	ug/L	1
Diphenylamine	ND	U	2.02	5.00	ug/L	1
4-Bromophenyl phenyl ether	ND	U	2.04	5.00	ug/L	1
Hexachlorobenzene	ND	U	1.93	5.00	ug/L	1
Phenanthrene	ND	U	1.99	5.00	ug/L	1
Anthracene	ND	U	1.93	5.00	ug/L	1
Di-n-butyl phthalate	ND	U	1.91	5.00	ug/L	1
Fluoranthene	ND	U	2.02	5.00	ug/L	1
Pyrene	ND	U	2.01	5.00	ug/L	1
Butyl benzyl phthalate	ND	U	1.89	5.00	ug/L	1
Benzo(a)anthracene	ND	U	1.96	5.00	ug/L	1
3,3'-Dichlorobenzidine	ND	U	1.75	10.0	ug/L	1
Chrysene	ND	U	2.20	5.00	ug/L	1
Bis(2-Ethylhexyl)phthalate	ND	U	1.95	5.00	ug/L	1
Benzo(b)fluoranthene	ND	U	1.96	5.00	ug/L	1
Benzo(k)fluoranthene	ND	U	2.31	5.00	ug/L	1
Benzo(a)pyrene	ND	U	1.86	5.00	ug/L	1
Indeno(1,2,3-cd)pyrene	ND	U	2.02	5.00	ug/L	1
Dibenz(a,h)anthracene	ND	U	2.02	5.00	ug/L	1
Benzo(g,h,i)perylene	ND	U	2.15	5.00	ug/L	1
Acenaphthylene	ND	U	2.00	5.00	ug/L	1
Di-n-octyl phthalate	ND	U	1.46	5.00	ug/L	1
Surrogates						
2-Fluorophenol	71.1			33.1-118	%	1

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26410 [XXX/2882]
Blank Lab ID: 83372
QC for Samples:
31202432002

Matrix: Water

Results by EPA 625

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Phenol-d6	84.8			49.0-120	%	1
Nitrobenzene-d5	83.8			46.0-118	%	1
2-Fluorobiphenyl	81.0			50.0-107	%	1
2,4,6-Tribromophenol	64.9			29.3-152	%	1
Terphenyl-d14	93.8			22.1-142	%	1

Batch Information

Analytical Batch: XMS1623
Analytical Method: EPA 625
Instrument: MSD10
Analyst: CMP
Analytical Date/Time: 8/3/2012 10:13:00PM

Prep Batch: XXX2882
Prep Method: EPA 625
Prep Date/Time: 8/2/2012 3:33:04PM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 5 mL

Print Date: 08/15/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26410 [XXX/2882]
Blank Spike Lab ID: 83373
Date Analyzed: 08/03/2012 22:36

Matrix: Water

QC for Samples: 31202432002

Results by EPA 625

	Blank Spike (ug/L)			
Parameter	Spike	Result	Rec (%)	CL
Bis(2-Chloroethyl)ether	50.0	49.4	99	12.0-158
Bis(2-Chloroisopropyl)ether	50.0	50.7	101	36.0-166
n-Nitrosodi-n-propylamine	50.0	45.9	92	0.0100-230
Hexachloroethane	50.0	29.5	59	40.0-113
Nitrobenzene	50.0	49.9	100	35.0-180
Isophorone	50.0	52.2	104	21.0-196
Bis(2-Chloroethoxy)methane	50.0	52.5	105	33.0-184
1,2,4-Trichlorobenzene	50.0	40.7	81	44.0-142
Naphthalene	50.0	46.1	92	21.0-133
Hexachlorobutadiene	50.0	36.5	73	24.0-116
Hexachlorocyclopentadiene	50.0	53.2	106	0.0100-417
2-Chloronaphthalene	50.0	45.1	90	60.0-118
Dimethyl phthalate	50.0	51.1	102	0.0100-112
2,6-Dinitrotoluene	50.0	50.9	102	50.0-158
Acenaphthene	50.0	50.2	100	47.0-145
2,4-Dinitrotoluene	50.0	51.8	104	39.0-139
Fluorene	50.0	54.6	109	59.0-121
Diethyl phthalate	50.0	51.9	104	0.0100-114
4-Chlorophenyl phenyl ether	50.0	53.7	107	25.0-158
Diphenylamine	50.0	49.4	99	63.8-100
4-Bromophenyl phenyl ether	50.0	50.5	101	53.0-127
Hexachlorobenzene	50.0	50.7	101	0.0100-152
Phenanthrene	50.0	53.2	106	54.0-120
Anthracene	50.0	49.4	99	27.0-133
Di-n-butyl phthalate	50.0	56.5	113	1.00-118
Fluoranthene	50.0	54.2	108	26.0-137
Pyrene	50.0	49.7	99	52.0-115
Butyl benzyl phthalate	50.0	49.6	99	0.0100-152
Benzo(a)anthracene	50.0	48.2	96	33.0-143
3,3'-Dichlorobenzidine	50.0	39.7	79	0.0100-262
Chrysene	50.0	49.7	99	17.0-168
Bis(2-Ethylhexyl)phthalate	50.0	50.6	101	8.00-158
Benzo(b)fluoranthene	50.0	49.6	99	24.0-159
Benzo(k)fluoranthene	50.0	52.6	105	11.0-162

Print Date: 08/15/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26410 [XXX/2882]
Blank Spike Lab ID: 83373
Date Analyzed: 08/03/2012 22:36

Matrix: Water

QC for Samples: 31202432002

Results by EPA 625

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Benzo(a)pyrene	50.0	48.0	96	17.0-163
Indeno(1,2,3-cd)pyrene	50.0	53.4	107	0.0100-171
Dibenz(a,h)anthracene	50.0	53.5	107	0.0100-227
Benzo(g,h,i)perylene	50.0	54.8	110	0.0100-219
Acenaphthylene	50.0	50.2	100	33.0-145
Di-n-octyl phthalate	50.0	56.3	113	4.00-146
Surrogates				
2-Fluorophenol			87.4	33.1-118
Phenol-d6			107	49.0-120
Nitrobenzene-d5			103	46.0-118
2-Fluorobiphenyl			102	50.0-107
2,4,6-Tribromophenol			106	29.3-152
Terphenyl-d14			96.2	22.1-142

Batch Information

Analytical Batch: **XMS1623**
Analytical Method: **EPA 625**
Instrument: **MSD10**
Analyst: **CMP**

Prep Batch: **XXX2882**
Prep Method: **EPA 625**
Prep Date/Time: **08/02/2012 15:33**
Spike Init Wt./Vol.: **1000 mL** Extract Vol: **5 mL**
Dupe Init Wt./Vol.: Extract Vol:

Batch Summary

Analytical Method: SW-846 8015C DRO

Prep Method: SW-846 3541
Prep Batch: XXX2880
Prep Date: 08/02/2012 10:40

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 26393 [XXX/2880]	83258	08/03/2012 18:31	XGC2420	GC6	DTF
LCS for HBN 26393 [XXX/2880]	83259	08/03/2012 18:59	XGC2420	GC6	DTF
SB49-30 (2.5-5.0)(83020MS)	83260	08/03/2012 19:55	XGC2420	GC6	DTF
SB49-30 (2.5-5.0)(83020MSD)	83261	08/03/2012 20:24	XGC2420	GC6	DTF
101 HA-01 (4ft)	31202432001	08/04/2012 04:49	XGC2420	GC6	DTF
101 DPT-01 (5-5.5FT)	31202432004	08/04/2012 05:17	XGC2420	GC6	DTF
101 DPT-02 (6-7ft)	31202432005	08/04/2012 05:45	XGC2420	GC6	DTF
101 DPT-03 (4.5-5ft)	31202432006	08/04/2012 06:13	XGC2420	GC6	DTF

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26393 [XXX/2880]
Blank Lab ID: 83258
QC for Samples:
31202432001, 31202432004, 31202432005, 31202432006

Matrix: Soil-Solid as dry weight

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Diesel Range Organics (DRO)	ND	U	6.25	6.25	mg/kg	1
Surrogates						
o-Terphenyl	99.6			40.0-140	%	1

Batch Information

Analytical Batch: XGC2420
Analytical Method: SW-846 8015C DRO
Instrument: GC6
Analyst: DTF
Analytical Date/Time: 8/3/2012 6:31:00PM

Prep Batch: XXX2880
Prep Method: SW-846 3541
Prep Date/Time: 8/2/2012 10:40:55AM
Prep Initial Wt./Vol.: 32 g
Prep Extract Vol: 10 mL

Print Date: 08/15/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26393 [XXX/2880]
Blank Spike Lab ID: 83259
Date Analyzed: 08/03/2012 18:59

Matrix: Soil-Solid as dry weight

QC for Samples: 31202432001, 31202432004, 31202432005, 31202432006

Results by SW-846 8015C DRO

Blank Spike (mg/kg)

Parameter	Spike	Result	Rec (%)	CL
Diesel Range Organics (DRO)	62.5	63.1	101	55.0-137
Surrogates				
o-Terphenyl			103	40.0-140

Batch Information

Analytical Batch: **XGC2420**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **XXX2880**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/02/2012 10:40**
Spike Init Wt./Vol.: **32 g** Extract Vol: **10 mL**
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 08/15/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8015C DRO

Prep Method: SW-846 3541
Prep Batch: XXX2891
Prep Date: 08/06/2012 09:17

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 26757 [XXX/2891]	83770	08/07/2012 09:33	XGC2425	GC6	DTF
LCS for HBN 26757 [XXX/2891]	83771	08/07/2012 10:01	XGC2425	GC6	DTF
S-1(83731MS)	83772	08/07/2012 10:57	XGC2425	GC6	DTF
S-1(83731MSD)	83773	08/07/2012 11:26	XGC2425	GC6	DTF
101 DPT-06 (6-7ft)	31202432009	08/07/2012 15:38	XGC2425	GC6	DTF
101 DPT-07 (6-7ft)	31202432010	08/07/2012 16:06	XGC2425	GC6	DTF
101 DPT-09 (4.5-5ft)	31202432012	08/07/2012 17:02	XGC2425	GC6	DTF
101 DPT-10 (6-7ft)	31202432013	08/07/2012 17:30	XGC2425	GC6	DTF
101 DPT-11 (6-7ft)	31202432014	08/07/2012 17:58	XGC2425	GC6	DTF
101 DPT-12 (6-7ft)	31202432015	08/07/2012 18:27	XGC2425	GC6	DTF
101 DPT-08 (6-7ft)	31202432011	08/08/2012 14:47	XGC2429	GC6	DTF
101 DPT-04 (6-7ft)	31202432007	08/08/2012 15:15	XGC2429	GC6	DTF
101 DPT-05 (4.5-5ft)	31202432008	08/08/2012 15:43	XGC2429	GC6	DTF

Print Date: 08/15/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26757 [XXX/2891]
Matrix: Soil-Solid as dry weight
Blank Lab ID: 83770
QC for Samples:
31202432007, 31202432008, 31202432009, 31202432010, 31202432011, 31202432012, 31202432013, 31202432014, 31202432015

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Diesel Range Organics (DRO)	ND	U	6.25	6.25	mg/kg	1
Surrogates						
o-Terphenyl	108			40.0-140	%	1

Batch Information

Analytical Batch: XGC2425
Analytical Method: SW-846 8015C DRO
Instrument: GC6
Analyst: DTF
Analytical Date/Time: 8/7/2012 9:33:00AM

Prep Batch: XXX2891
Prep Method: SW-846 3541
Prep Date/Time: 8/6/2012 9:17:47AM
Prep Initial Wt./Vol.: 32 g
Prep Extract Vol: 10 mL

Print Date: 08/15/2012
N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26757 [XXX/2891]
Blank Spike Lab ID: 83771
Date Analyzed: 08/07/2012 10:01

Matrix: Soil-Solid as dry weight

QC for Samples: 31202432007, 31202432008, 31202432009, 31202432010, 31202432011, 31202432012, 31202432013, 31202432014, 31202432015

Results by SW-846 8015C DRO

Blank Spike (mg/kg)

Parameter	Spike	Result	Rec (%)	CL
Diesel Range Organics (DRO)	62.5	70.2	112	55.0-137
Surrogates				
o-Terphenyl			114	40.0-140

Batch Information

Analytical Batch: **XGC2425**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **XXX2891**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/06/2012 09:17**
Spike Init Wt./Vol.: **32 g** Extract Vol: **10 mL**
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 08/15/2012

N.C. Certification # 481

CHAIN OF CUSTODY

SGS ANALYTICAL PERSPECTIVES
5500 Business Drive
Wilmington, NC 28405
+1 910 350 1903
WWW.SGS.COM

CLIENT:	CATLIN / NCDOT
CONTACT:	Ben Ashley @ CATLIN **PHONE NO:** (910) 452-5861
PROJECT:	NCDOT Parcel 101 **SITE / PWSID / WBS #:** 35781.1.2
REPORTS TO:	Ben@CATLIN U-3315 Pitt County
EMAIL:	ben.ashley@catlinusa.com
INVOICE TO:	NCDOT **QUOTE #**
	P.O. NUMBER NCDOT

SGS Reference #: 31202432

PAGE 1 **OF** 2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	SAMPLE TYPE (C=COMP, G=GRAB)	PRESERVATIVES USED: MeOH	HCl	ANALYSES REQUIRED: TPH DRO & GRO	6200B	625 BN	REMARKS
	101 HA-01 (4')	8.1.12	1150	SOIL	3	G			✓			
	101 DPT-01	8.1.12	940	H_2O	4	G				X	X	HOT
	101 DPT-01 (5-5.5')	8.1.12	800	SOIL	3	G			✓			
	101 DPT-02 (6-7')		830									HOT
	101 DPT-03 (4.5-5')		840									
	101 DPT-04 (6-7')		930									
	101 DPT-05 (4.5-5')		1000									
	101 DPT-06 (6-7')		1030									
	101 DPT-07 (6-7')		1040									HOT
	101 DPT-08 (6-7')		1100									may be Hot

COLLECTED/RELINQUISHED BY: (1)	**DATE**	**TIME**	**RECEIVED BY:**	**REPORT LEVEL:** ☐ Level I ☒ Level II ☐ Level IV	**REQUESTED TURNAROUND TIME:** ☐ Rush: ☒ Standard
Ben Ashley	8.1.12	1400			
Relinquished By: (2)	Date	Time	Received By:	**SPECIAL DELIVERABLES:** State of Origin: NC	☐ Trust Fund
	8/1/12	1655		☐ DoD ☒ EDD: Summary	Other:
Relinquished By: (3)	Date	Time	Received By:	**SPECIAL INSTRUCTIONS:**	
Received For Laboratory By:	Date	Time	CoC Seal: INTACT BROKEN ABSENT Sample Receipt Temp: C 1.5, 0.5	Shipping Carrier: Shipping Ticket No:	Notes:

SGS-00055 (06/12)

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

White - Retained by Lab
Yellow - Retained by Client

CHAIN OF CUSTODY

SGS ANALYTICAL PERSPECTIVES
5500 Business Drive
Wilmington, NC 28405
+1 910 350 1903
www.sgs.com

CLIENT: CATLIN / NCDOT
CONTACT: Ben Ashba@CATLIN **PHONE NO:** (910) 452-5861
PROJECT: NCDOT Parcel 101 **SITE / PWSID / WBS #:** 35781.1.2
REPORTS TO: Bene CATLIN U-3315 Pitt County
EMAIL: ben.ashba@catlinusa.com
INVOICE TO: NCDOT **QUOTE #**
P.O. NUMBER NCDOT

SGS Reference #: 312024 32

PAGE 2 **OF** 2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	SAMPLE TYPE (C=COMP, G=GRAB)	PRESERVATIVES USED	ANALYSES REQUIRED: TPH DRO/GRO MeOH	REMARKS
	101 DPT-09 (4.5-5')	8.1.12	1110	SOIL	3	G		✓	
	101 DPT-10 (6-7')		1120						
	101 DPT-11 (6-7')		1130						
	101 DPT-12 (6-7')		1140						

COLLECTED/RELINQUISHED BY: (1)	DATE	TIME	RECEIVED BY:
Ben Ashba	8.1.12	1900	
Relinquished By: (2)	Date	Time	Received By:
	8/1/12	1655	
Relinquished By: (3)	Date	Time	Received By:
Received For Laboratory By:	Date	Time	CoC Seal: INTACT BROKEN ABSENT
			Sample Receipt Temp: C 1.5 0.5

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
REQUESTED TURNAROUND TIME: ☐ Rush: _____ ☒ Standard
SPECIAL DELIVERABLES: State of Origin: NC ☐ Trust Fund
☐ DoD ☒ EDD: Summary Other: _____
SPECIAL INSTRUCTIONS:
Shipping Carrier:
Shipping Ticket No:
Notes:

SGS-00055 (06/12)

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

White - Retained by Lab
Yellow - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **NCDOT-Catlin** Work Order No.: **31202432**

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: 1.5, 0.5
   ___ 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. X No Headspace present in VOC vials
    ___ Headspace present in VOC vials >6mm

Notes:

Comments:

Inspected and Logged in by: JJ

Date: Thu-8/2/12 00:00

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

Laboratory Report of Analysis

To: Ben Ashba
RICHARD CATLIN & ASSOCIATES
P.O. Box 10279
Wilmington, NC 28404

Report Number: **31202483**

Client Project: **NCDOT Parcel 101**

Dear Ben Ashba,

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 Barbara A. Hager at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

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

Sincerely,
SGS North America Inc.

Barbara A. Hager
2012.08.16 14:11:21 -05'00'

Barbara A. Hager
Project Manager
barbara.hager@sgs.com

Date

Print Date: 08/16/2012

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
101DPT-13 (6-7ft)	31202483001	08/01/2012 12:50	08/03/2012 15:00	Soil-Solid as dry weight
101DPT-14 (4.5-5ft)	31202483002	08/01/2012 13:30	08/03/2012 15:00	Soil-Solid as dry weight

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Detectable Results Summary

*** No Detectable Results ***

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Results of 101DPT-13 (6-7ft)

Client Sample ID: **101DPT-13 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202483001-A
Lab Project ID: 31202483

Collection Date: 08/01/2012 12:50
Received Date: 08/03/2012 15:00
Matrix: Soil-Solid as dry weight
Solids (%): 70.70

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	4.63	4.63	mg/kg	1	08/14/2012 16:29
Surrogates							
4-Bromofluorobenzene	107			70.0-130	%	1	08/14/2012 16:29

Batch Information

Analytical Batch: **VGC2067**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/14/2012 16:29**

Prep Batch: **VXX3822**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/06/2012 16:09**
Prep Initial Wt./Vol.: **6.11 g**
Prep Extract Vol: **5 mL**

Print Date: 08/16/2012

N.C. Certification # 481

SGS ANALYTICAL PERSPECTIVES

Results of 101DPT-13 (6-7ft)

Client Sample ID: **101DPT-13 (6-7ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202483001-C
Lab Project ID: 31202483

Collection Date: 08/01/2012 12:50
Received Date: 08/03/2012 15:00
Matrix: Soil-Solid as dry weight
Solids (%): 70.70

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	8.87	8.87	mg/kg	1	08/10/2012 20:12
Surrogates							
o-Terphenyl	69.4			40.0-140	%	1	08/10/2012 20:12

Batch Information

Analytical Batch: **XGC2437**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/10/2012 20:12**

Prep Batch: **XXX2905**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/09/2012 10:17**
Prep Initial Wt./Vol.: **31.9 g**
Prep Extract Vol: **10 mL**

Print Date: 08/16/2012

N.C. Certification # 481

Results of 101DPT-14 (4.5-5ft)

Client Sample ID: **101DPT-14 (4.5-5ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202483002-A
Lab Project ID: 31202483

Collection Date: 08/01/2012 13:30
Received Date: 08/03/2012 15:00
Matrix: Soil-Solid as dry weight
Solids (%): 73.50

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Gasoline Range Organics (GRO)	ND	U	4.67	4.67	mg/kg	1	08/14/2012 16:54
Surrogates							
4-Bromofluorobenzene	107			70.0-130	%	1	08/14/2012 16:54

Batch Information

Analytical Batch: **VGC2067**
Analytical Method: **SW-846 8015C GRO**
Instrument: **GC7**
Analyst: **MDY**
Analytical Date/Time: **08/14/2012 16:54**

Prep Batch: **VXX3822**
Prep Method: **SW-846 5035**
Prep Date/Time: **08/06/2012 15:33**
Prep Initial Wt./Vol.: **5.83 g**
Prep Extract Vol: **5 mL**

Print Date: 08/16/2012

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SGS ANALYTICAL PERSPECTIVES

Results of 101DPT-14 (4.5-5ft)

Client Sample ID: **101DPT-14 (4.5-5ft)**
Client Project ID: **NCDOT Parcel 101**
Lab Sample ID: 31202483002-C
Lab Project ID: 31202483

Collection Date: 08/01/2012 13:30
Received Date: 08/03/2012 15:00
Matrix: Soil-Solid as dry weight
Solids (%): 73.50

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF	Date Analyzed
Diesel Range Organics (DRO)	ND	U	8.58	8.58	mg/kg	1	08/10/2012 20:41
Surrogates							
o-Terphenyl	82.6			40.0-140	%	1	08/10/2012 20:41

Batch Information

Analytical Batch: **XGC2437**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**
Analytical Date/Time: **08/10/2012 20:41**

Prep Batch: **XXX2905**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/09/2012 10:17**
Prep Initial Wt./Vol.: **31.7 g**
Prep Extract Vol: **10 mL**

Print Date: 08/16/2012

N.C. Certification # 481

Batch Summary

Analytical Method: SW-846 8015C GRO

Prep Method: SW-846 5035
Prep Batch: VXX3822
Prep Date: 08/14/2012 08:34

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
LCS for HBN 27203 [VXX/3822]	85032	08/14/2012 10:36	VGC2067	GC7	MDY
LCSD for HBN 27203 [VXX/3822]	85033	08/14/2012 11:01	VGC2067	GC7	MDY
MB for HBN 27203 [VXX/3822]	85034	08/14/2012 11:26	VGC2067	GC7	MDY
HPFF-B(84990MS)	85152	08/14/2012 12:42	VGC2067	GC7	MDY
HPFF-B(84990MSD)	85153	08/14/2012 13:07	VGC2067	GC7	MDY
101DPT-13 (6-7ft)	31202483001	08/14/2012 16:29	VGC2067	GC7	MDY
101DPT-14 (4.5-5ft)	31202483002	08/14/2012 16:54	VGC2067	GC7	MDY

Print Date: 08/16/2012

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Method Blank

Blank ID: MB for HBN 27203 [VXX/3822]
Blank Lab ID: 85034
QC for Samples:
31202483001, 31202483002

Matrix: Soil-Solid as dry weight

Results by SW-846 8015C GRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Gasoline Range Organics (GRO)	ND	U	4.00	4.00	mg/kg	1
Surrogates						
4-Bromofluorobenzene	101			70.0-130	%	1

Batch Information

Analytical Batch: VGC2067
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY
Analytical Date/Time: 8/14/2012 11:26:00AM

Prep Batch: VXX3822
Prep Method: SW-846 5035
Prep Date/Time: 8/14/2012 8:34:58AM
Prep Initial Wt./Vol.: 5 g
Prep Extract Vol: 5 mL

Print Date: 08/16/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 27203 [VXX/3822]
Blank Spike Lab ID: 85032
Date Analyzed: 08/14/2012 10:36

Spike Duplicate ID: LCSD for HBN 27203 [VXX/3822]
Spike Duplicate Lab ID: 85033
Date Analyzed: 08/14/2012 11:01
Matrix: Soil-Solid as dry weight

QC for Samples: 31202483001, 31202483002

Results by SW-846 8015C GRO

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics (GRO)	16.0	16.8	105	16.0	16.8	105	70.0-130	0.0	30.00
Surrogates									
4-Bromofluorobenzene			100			100	70.0-130		

Batch Information

Analytical Batch: VGC2067
Analytical Method: SW-846 8015C GRO
Instrument: GC7
Analyst: MDY

Prep Batch: VXX3822
Prep Method: SW-846 5035
Prep Date/Time: 08/14/2012 08:34
Spike Init Wt./Vol.: 5 g Extract Vol: 5 mL
Dupe Init Wt./Vol.: 5 g Extract Vol: 5 mL

Batch Summary

Analytical Method: SW-846 8015C DRO

Prep Method: SW-846 3541
Prep Batch: XXX2905
Prep Date: 08/09/2012 10:17

Client Sample ID	Lab Sample ID	Analysis Date	Analytical Batch	Instrument	Analyst
MB for HBN 26903 [XXX/2905]	84477	08/09/2012 22:18	XGC2435	GC6	DTF
LCS for HBN 26903 [XXX/2905]	84478	08/09/2012 22:46	XGC2435	GC6	DTF
99DPT-06 (6-7ft)(83228MS)	84479	08/10/2012 02:05	XGC2435	GC6	DTF
99DPT-06 (6-7ft)(83228MSD)	84480	08/10/2012 02:33	XGC2435	GC6	DTF
101DPT-13 (6-7ft)	31202483001	08/10/2012 20:12	XGC2437	GC6	DTF
101DPT-14 (4.5-5ft)	31202483002	08/10/2012 20:41	XGC2437	GC6	DTF

Print Date: 08/16/2012

N.C. Certification # 481

Method Blank

Blank ID: MB for HBN 26903 [XXX/2905]
Blank Lab ID: 84477
QC for Samples:
31202483001, 31202483002

Matrix: Soil-Solid as dry weight

Results by SW-846 8015C DRO

Parameter	Result	Qual	DL	LOQ/CL	Units	DF
Diesel Range Organics (DRO)	ND	U	6.25	6.25	mg/kg	1
Surrogates						
o-Terphenyl	95.4			40.0-140	%	1

Batch Information

Analytical Batch: XGC2435
Analytical Method: SW-846 8015C DRO
Instrument: GC6
Analyst: DTF
Analytical Date/Time: 8/9/2012 10:18:00PM

Prep Batch: XXX2905
Prep Method: SW-846 3541
Prep Date/Time: 8/9/2012 10:17:35AM
Prep Initial Wt./Vol.: 32 g
Prep Extract Vol: 10 mL

Print Date: 08/16/2012

N.C. Certification # 481

Blank Spike Summary

Blank Spike ID: LCS for HBN 26903 [XXX/2905]
Blank Spike Lab ID: 84478
Date Analyzed: 08/09/2012 22:46

Matrix: Soil-Solid as dry weight

QC for Samples: 31202483001, 31202483002

Results by SW-846 8015C DRO

Blank Spike (mg/kg)

Parameter	Spike	Result	Rec (%)	CL
Diesel Range Organics (DRO)	62.5	66.6	107	55.0-137
Surrogates				
o-Terphenyl			101	40.0-140

Batch Information

Analytical Batch: **XGC2435**
Analytical Method: **SW-846 8015C DRO**
Instrument: **GC6**
Analyst: **DTF**

Prep Batch: **XXX2905**
Prep Method: **SW-846 3541**
Prep Date/Time: **08/09/2012 10:17**
Spike Init Wt./Vol.: **32 g** Extract Vol: **10 mL**
Dupe Init Wt./Vol.: Extract Vol:

SGS ANALYTICAL PERSPECTIVES

CHAIN OF CUSTODY

SGS ANALYTICAL PERSPECTIVES
5500 Business Drive
Wilmington, NC 28405
+1 910 350 1903
WWW.SGS.COM

CLIENT: CATLIN / NCDOT
CONTACT: Ben Ashbe@CATLIN PHONE NO: 910 452-5861
PROJECT: NCDOT Parcel 101 SITE / PWSID WBS #: 35781.1.2
REPORTS TO:
EMAIL: ben.ashbe@catlinusa.com
INVOICE TO: NCDOT QUOTE #
P.O. NUMBER NCDOT

SGS Reference #: 312-02483

PAGE 1 OF 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	SAMPLE TYPE (C=COMP G=GRAB)	PRESERVATIVES USED	ANALYSIS REQUIRED: TPH DRO/GRO	MeOH	REMARKS
	101DPT-13 (6-7')	8-1-12	1250	SOIL	3	G		✓		
	101DPT-14 (4.5-5')	8-1-12	1330	SOIL	3	G		✓		

COLLECTED/RELINQUISHED BY: (1)	DATE	TIME	RECEIVED BY:
Ben Ashbe	8-3-12	1500	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Received For Laboratory By:	Date	Time	CoC Seal: INTACT BROKEN ABSENT Sample Receipt Temp: C 5.2°C

REPORT LEVEL: ☐ Level I ☒ Level II ☐ Level IV
REQUESTED TURNAROUND TIME: ☐ Rush:_____ ☒ Standard
SPECIAL DELIVERABLES: State of Origin:_____ ☐ Trust Fund
☐ DoD ☒ EDD: Summary Other:_____
SPECIAL INSTRUCTIONS:
Shipping Carrier:
Shipping Ticket No:
Notes:

White - Retained by Lab
Yellow - Retained by Client

SGS North America Inc.

Sample Receipt Checklist (SRC)

Client: **NCDOT-Catlin** Work Order No.: **3120483**

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: 5.2
   ___ 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

Notes:

Comments:

Inspected and Logged in by: AV

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 D
PHOTOGRAPHS

PARCEL 101 WALTER WILLIAMS – VACANT LOT
204 W. 10TH STREET

From near proposed catch basin 1005 (foreground)
looking Northwest across the site.

From Eastern portion of property near S. Washington St.
looking West-southwest across the site.

PARCEL 101 WALTER WILLIAMS – VACANT LOT
204 W. 10TH STREET

From near northern edge of concrete pad looking South, former UST access vaults filled with concrete in foreground, Eastern UST access manhole visible in background on the left.

Former Eastern UST access manhole filled with concrete.

Former Western UST access port (assumed) filled with concrete.