hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

Via Email

August 19, 2019

NC DOT Geotechnical Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Attention: Mr. Gordon Box

Re: Phase II Investigation Report - Parcel 5
NC DOT State Project No. R-4707
WBS Element #36599.1.2
Greensboro, Guilford County, North Carolina
H&H Job No. ROW-603

Dear Gordon:

Please find the attached electronic copy of the Phase II Investigation report for the Delta Phoenix, Inc. property (NC DOT Parcel 5) located in Greensboro, Guilford County, North Carolina. Please return via DocuSign for final signatures. If you have any questions or need additional information, please contact us at (704) 586-0007.

Sincerely,

Hart & Hickman, PC

David Graham, PG
Senior Project Geologist

Matt Bramblett, PE
Principal

Attachment

Phase II Investigation
Delta Phoenix, Inc. Property

NC DOT Parcel 5
Greensboro, Guilford County
North Carolina

H&H Job No. ROW-603
State Project R-4707
WBS Element #36599.1.2
August 19, 2019

hart hickman

SMARTER ENVIRONMENTAL SOLUTIONS

#C-1269 Engineering
#-245 Geology

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Phase II Investigation
Delta Phoenix, Inc. Property - NC DOT Parcel 5
Greensboro, Guilford County, North Carolina
H&H Project ROW-603

Table of Contents

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Phase II Investigation
Delta Phoenix, Inc. Property - NC DOT Parcel 5
Greensboro, Guilford County, North Carolina
H&H Project ROW-603

1.0 Introduction and Background

Hart & Hickman, PC (H&H) has prepared this Phase II Investigation (Phase II) report documenting assessment activities performed at the Delta Phoenix, Inc. property (Parcel 5) in Greensboro, Guilford County, North Carolina. Parcel 5 is located at 4820 US Highway 29 North. The Parcel 5 property is currently occupied by Wysong & Miles (Wysong), a metal working machine manufacturer. This assessment was conducted on behalf of the North Carolina Department of Transportation (NC DOT) in accordance with H&H's May 10, 2019 proposal.

The purpose of this assessment was to collect data to evaluate the potential for underground storage tank (UST) systems and the presence or absence of impacted soil in proposed right of way and construction easement areas on the subject property related to proposed road improvements along US Highway 29 North (State Project R-4707). The NC DOT project includes proposed road improvements and installation of storm water drainage piping and catch basins. A site location map is included as Figure 1, and a site map is presented as Figure 2. NC DOT plan sheets depicting Parcel 5 are included in Appendix A.

H&H searched the North Carolina Department of Environmental Quality (NC DEQ) Laserfiche website for incident files for the Parcel 5 property to better target potential UST system areas and to find locations of previously reported impacts. NC DEQ Incident No. NCD982156812 was identified for the Wysong facility on Parcel 5.

According to Delta Environmental Consultants, Inc. *UST Removal/Closure Report* dated August 1991, a 4,000-gallon hydraulic oil UST was removed from the site in July 1991. Low level concentrations of oil and grease (O&G) were detected in the soil samples collected beneath the UST. The O&G results were below NC DEQ Action Levels in place at the time. The former UST was located outside of proposed NC DOT work areas.

Based on H&H *Phase I Remedial Action Plan (RAP)*, dated April 15, 2010, the Wysong facility has operated as a metal working machinery manufacturer since the 1960s. Degreasing operations during manufacture of precision machine tools at Wysong resulted in the release of the chlorinated solvent 1,1,1-trichloroethane (1,1,1-TCA). Two separate release areas have been identified at the site including near a former 1,500-gallon 1,1,1-TCA AST at the northeast corner of the Wysong facility and a former machine coolant disposal basin located on the southwest side of the facility. Based on extensive site investigation and remedial data, the majority of chlorinated solvent released at the Wysong facility was associated with a leaking line below the 1,500-gallon 1,1,1-TCA AST. Remedial efforts including soil excavation, soil vapor extraction (SVE) systems, and groundwater recovery have been conducted at the site to address soil and groundwater impacts associated with the releases. The releases and associated impacted soil source areas were located outside of proposed NC DOT work areas.

Over 30 monitoring wells have been installed on the Wysong property and adjacent properties to the southwest and northeast to investigate groundwater impacts associated with the releases at Wysong. No monitoring wells are depicted in NC DOT work areas on Paracel 5.

Groundwater at the Wysong site is impacted with volatile organic compounds (VOCs), including 1,1,1-TCA, 1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethane, 1,4-dioxane, and other VOCs above the 15A NCAC 2L .0202 Groundwater Quality Standards (2L Standards). Surface water to the northeast of the Wysong facility is also impacted with VOCs associated with the releases at Wysong. The impacted groundwater plume associated with the Wysong release extends from the site facility to off-site properties to the northeast. The H&H Phase I RAP indicates another release of 1,1,1-TCA to groundwater from an off-site source upgradient and to the southwest near a residential subdivision and a former Texaco service station. This release appears to have migrated onto the southwestern portion of the Wysong property and comingled with the Wysong groundwater plume.

With the exception of the southwestern portion of the property, the groundwater impacts and surface water impacts appear to be located outside of proposed NC DOT work areas. The RAP indicates that groundwater is typically encountered at 25-40 ft below ground surface (bgs) except

in low lying areas near surface water bodies where it is typically 5-10 ft bgs. No surface water bodies are located in the southwestern portion of the property near NC DOT work areas. Groundwater was not identified in soil borings (maximum depth of 12 ft bgs) advanced at the site during the recent Phase II activities conducted by H&H. Pertinent information from environmental documents are included in Appendix B.

Based on the location of the Wysong facility and associated soil and groundwater impacts, the Phase II investigation activities were only conducted in the proposed NC DOT right of way and construction easement areas in the southwestern portion of Parcel 5. The Phase II activities recently conducted by H&H on Parcel 5 are discussed below.

2.0 Geophysical Survey

Prior to advancing soil borings, H&H reviewed the results of a geophysical survey performed on Parcel 5 by ESP Associates, Inc. (ESP) between June 10 and 20, 2019. ESP's work consisted of metal detection using a Geonics EM61 MK2 instrument and ground penetrating radar (GPR) to identify potential geophysical anomalies and potential USTs at the site. The geophysical survey results indicate that no suspected USTs were identified in proposed NC DOT work areas. Other anomalies were present in the survey data but were attributed to known surface metallic objects, buried utilities, or storm drains, etc. The anomalies were not characteristic signatures of potential USTs. ESP's report, including figures depicting the results of the geophysical survey, is provided in Appendix C.

3.0 Soil Assessment

3.1 Soil Sampling

H&H contracted with South Atlantic Environmental Drilling and Construction Co. (SAEDACCO) of Fort Mill, South Carolina to advance soil borings on Parcel 5. On June 25, 2019, eleven soil borings (5-1 through 5-11) were advanced in proposed NC DOT work areas in the southwestern portion of Parcel 5 using a direct push technology (DPT) drill rig. Prior to conducting soil borings,

underground utilities were marked by the NC 811 public utility locator and by ESP for private underground utilities. Borings were also cleared up to a five foot depth by hand auger.

The soil borings were advanced to maximum depths of 12 ft bgs. To facilitate the selection of soil samples for laboratory analysis, soil from each boring was screened continuously for the presence of VOCs with a photoionization detector (PID). Additionally, H&H observed the soil for visual and olfactory indications of impacts. Based on PID readings, there was a moderate indication of potential impacts in boring 5-4 (0-2 ft); however, no staining or odors were observed in the sample. Soil samples were collected at depths of 0 to 2 ft bgs from each boring for laboratory analysis. Soil boring logs are included in Appendix D. GPS coordinate data for the soil borings are summarized in Table 1, and the boring locations are shown on Figures 2, 3A, and 3B.

H&H submitted a total of eleven soil samples from borings 5-1 through 5-11 for laboratory analysis. The soil samples were placed into laboratory supplied sample containers using nitrile glove-covered hands. The containers were then labeled as to content, analyses requested, sample date and time, and sampler's name. The samples were placed in an iced coolers upon collection and were subsequently submitted to Red Lab, LLC of Wilmington, NC under standard chain-of-custody protocol for analysis of total petroleum hydrocarbons (TPH) as gasoline-range organics (GRO) and diesel-range organics (DRO) using QED ultraviolet fluorescence (UVF) technology. Samples were also sent to Pace Analytical of Huntersville, NC for analysis of VOCs using EPA Method 8260 and for 1,4-Dioxane using EPA Method 8260 Select Ion Monitoring (SIM). Soil sample depths and analytical results are summarized in Table 2. Laboratory analytical data sheets and chain-of-custody documentation are provided in Appendix E. The analytical results are discussed below.

Upon completion of soil sampling activities, soil cuttings generated during drilling activities were containerized in 55-gallon metal drums and staged on site. The soil borings were filled with bentonite pellets, and the surface was patched with soil to match the existing ground surface.

3.2 Soil Analytical Results

Concentrations of TPH DRO (ranging from 0.28 mg/kg to 23.7 mg/kg) and/or TPH GRO (ranging from 0.72 mg/kg to 2.8 mg/kg) were detected in soil samples 5-1 through 5-11 collected from Parcel 5. The DRO and GRO concentrations do not exceed the NC DEQ Action Levels of 100 mg/kg and 50 mg/kg, respectively. Low level concentrations of acetone were detected in each soil sample collected at the site below the NC DEQ Inactive Hazardous Sites Branch (IHSB) Preliminary Soil Remediation Goals (PSRGS). Acetone is a common laboratory-introduced contaminant. A low level concentration of 2-butanone (MEK) was also detected in soil sample 5-3 below the PSRGs. MEK is also a common laboratory-introduced contaminant.

Based on laboratory analytical results and PID readings, impacted soil above NC DEQ Action Levels and IHSB PSRGs does not appear to be present at the site in the vicinity of the soil boring locations. However, if impacted soil is encountered during the NC DOT construction activities, it should be properly managed and disposed.

4.0 Investigative Derived Waste

Soil cuttings and decontamination water generated during the soil sampling activities were containerized in 55-gallon drums. Soil sample analytical data from Parcel 5 were used for profiling the soil investigation derived waste (IDW) drum. A sample from the soil drum was also analyzed for total RCRA metals using EPA Method 6010/7471. Low level metals were detected in the soil sample collected from the IDW soil drum. A sample of the IDW water drum was analyzed for total VOCs, 1,4-dioxane, and total RCRA metals. Low level metals, 1,4-dioxane, and acetone were detected in the water sample collected from the IDW water drum. Based on the analytical data, the soil and water drums were disposed as non-hazardous waste. The IDW drums were removed by EVO Corporation of Winston-Salem, NC for proper off-site disposal.

Laboratory analytical data sheets and chain-of-custody documentation for IDW are provided in Appendix E. Please note that analytical data for IDW drums from a separate parcel are included

in the attached analytical report. The non-hazardous waste disposal manifests are provided in Appendix F.

5.0 Summary and Regulatory Considerations

H&H has reviewed available NC DEQ incident files, geophysical survey results, and analytical results of soil samples collected at the Parcel 5 property in Greensboro, Guilford County, North Carolina. Parcel 5 is currently occupied by Wysong and Miles. Review of NC DEQ incident files indicate a hydraulic oil UST was removed from the site in 1991. Low level concentrations of oil and grease below NC DEQ Action Levels in place at that time were detected in soil beneath the UST. The former UST was located outside of proposed NC DOT work areas. Soil and groundwater on Parcel 5 are impacted with VOCs associated with historical use and releases of 1,1,1-TCA at the Wysong site and from an off-site groundwater source to the southwest. Impacted soil source areas associated with the 1,1,1,-TCA releases at the Wysong facility are located outside of proposed NC DOT work areas. Groundwater impacted with VOCs appears to be located beneath proposed NC DOT work areas in the southwestern portion of the site. No groundwater was encountered in soil borings advanced in NC DOT work areas during the recent Phase II activities conducted by H&H.

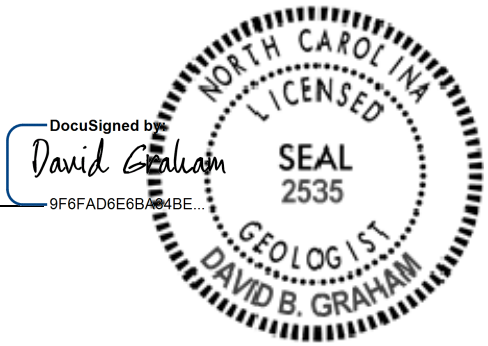
Based on the geophysical survey, no suspected USTs were identified in proposed NC DOT work areas on Parcel 5. Analytical results of soil samples collected by H&H indicate concentrations of TPH DRO and GRO below NC DEQ Action Levels and concentrations of VOCs below the NC DEQ IHSB PSRGs in soil samples collected on Parcel 5. The VOC detections may be laboratory-introduced contaminants.

NC DOT plans indicate a proposed cut for road improvement activities and proposed drainage structures in the proposed NC DOT work areas on Parcel 5. Impacted media is not expected to be encountered in proposed cut areas or areas of proposed drainage structures. If impacted soil is encountered during road construction activities, it should be properly managed and disposed at a permitted facility. If impacted groundwater is encountered and dewatering activities are required during NC DOT construction activities, the groundwater should be properly managed via

NPDES permit or disposed at permitted facility. If a UST is encountered during construction activities, the UST system(s) and their contents should be removed in accordance with NC DEQ regulations and properly disposed.

6.0 Signature Page

This report was prepared by:



DocuSigned by:
David Graham
9F6FAD6E6BA04BE...

David Graham, PG
Senior Project Geologist for
Hart & Hickman, PC

This report was reviewed by:

DocuSigned by:
CBCA88CDF0E547B...

Matt Bramblett, PE
Principal and Project Manager for
Hart & Hickman, PC

Not considered final unless all signatures are completed.

Table 1
Soil Boring GPS Coordinate Data
NC DOT Parcel 5
Greensboro, Guilford County, North Carolina
H&H Job No. ROW-603

Sample ID	Latitude	Longitude
5-1	36.1691746	-79.7159287
5-2	36.1688916	-79.7161571
5-3	36.1685925	-79.7163629
5-4	36.1682667	-79.7165986
5-5	36.1680006	-79.7167786
5-6	36.1677338	-79.7169779
5-7	36.1671942	-79.7173115
5-8	36.1667616	-79.7176415
5-9	36.1666484	-79.7177760
5-10	36.1664435	-79.7179256
5-11	36.1683120	-79.7165576

Notes:

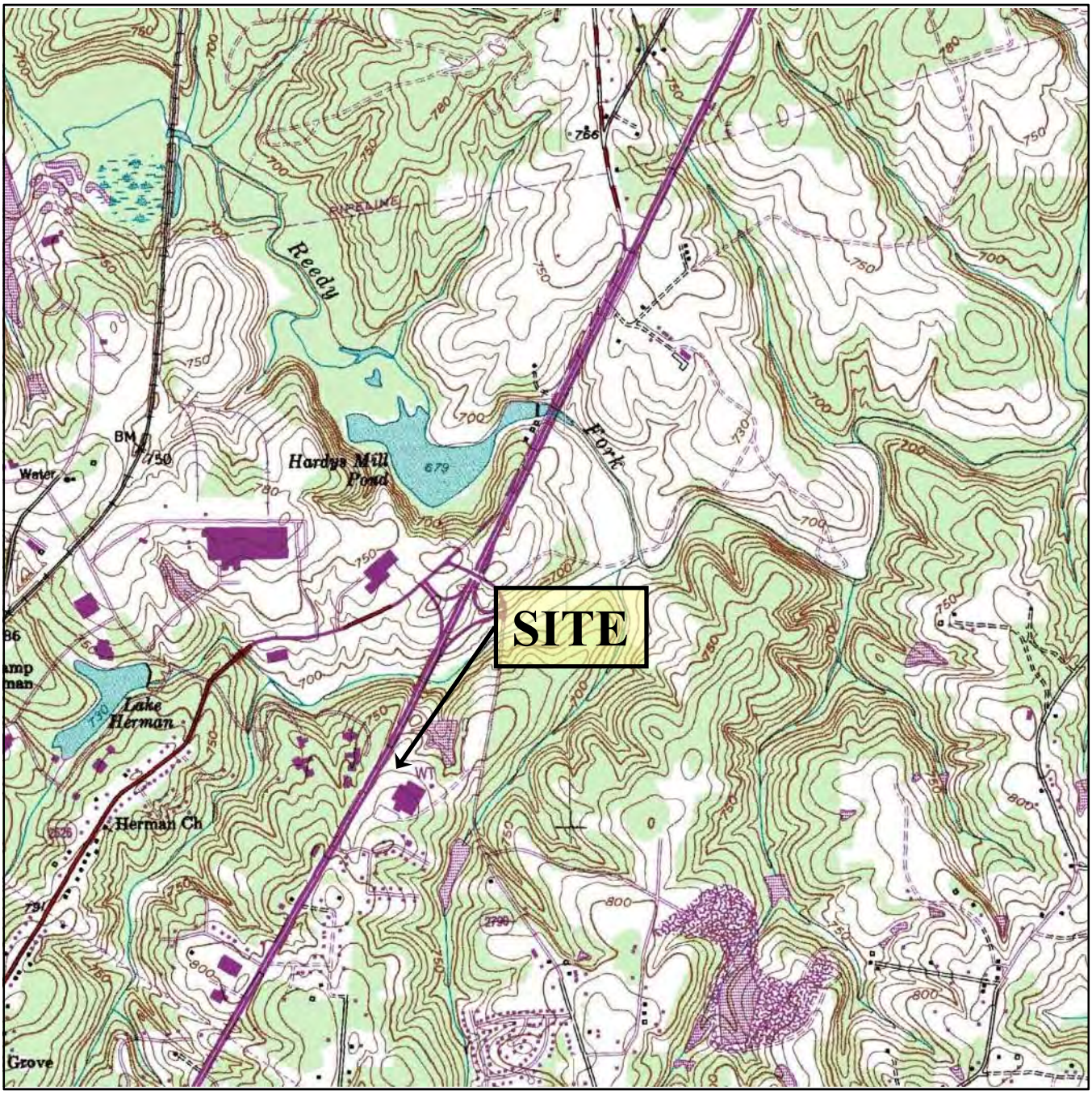
GPS coordinate data points collected using a Trimble GeoExplorer 6000 series unit

with external satellite for increased accuracy.

Table 2 (Page 1 of 1)
Soil Analytical Results
NC DOT Parcel 5
Greensboro, Guilford County, North Carolina
H&H Job No. ROW-603

Sample ID	5-1	5-2	5-3	5-4	5-5	5-6	5-7	5-8	5-9	5-10	5-11	Regulatory Standard			
Sample Depth (ft)	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	NC DEQ Action Level	IHSB Residential PSRG[1]	IHSB Industrial PSRG[2]	IHSB POG[3]
Sample Date	6/25/2019	6/25/2019	6/25/2019	6/25/2019	6/25/2019	6/25/2019	6/25/2019	6/25/2019	6/25/2019	6/25/2019	6/25/2019				
TPH-DRO/GRO (UVF) (mg/kg)															
Diesel-Range Organics (DRO)	<0.37	<0.32	0.28	1.3	1.7	0.6	23.7	0.56	0.61	4.1	17.1	100	--	--	--
Gasoline-Range Organics (GRO)	0.72	1.1	<0.28	<0.74	2.8	<0.6	<0.56	<0.56	<0.61	<0.53	1.2	50	--	--	--
VOCs (8260) (mg/kg)															
Acetone	0.13	0.11 J	0.27	0.039 J	0.049 J	0.026 J	0.055 J	0.068 J	0.011 J	0.029 J	0.061 J	--	12,000	140,000	25
2-Butanone (MEK)	<0.0034	<0.0034	0.0067 J	<0.0037	<0.0036	<0.0028	<0.0025	<0.0027	<0.0027	<0.0027	<0.0032	--	5,500	40,000	17
VOCs (8260 SIM) (mg/kg)															
1,4-Dioxane	<0.0036	<0.0033	<0.0046	<0.0035	<0.0030	<0.0033	<0.0036	<0.0024	<0.0028	<0.0028	<0.0031	--	5.4	25	0.012

Notes:
1. NC DEQ Inactive Hazardous Sites Branch (IHSB) Residential Health-Based Preliminary Soil Remediation Goals (PSRGs) (May 2019).
2. NC DEQ IHSB Industrial Health-Based PSRG (May 2019).
3. NC DEQ IHSB Protection of Groundwater (POG) PSRG (May 2019).
UVF = QED Ultraviolet fluorescence technology; TPH = Total Petroleum Hydrocarbons
VOCs = Volatile Organic Compounds; SIM = Select Ion Monitoring; -- = Not Applicable
Laboratory analytical method follows parameter in parentheses.
Gray = Value below the Reporting Limit (RL) for UVF Data and Method Detection Limit (MDL) for remaining data.
J = Estimated concentration above the laboratory MDL and below the laboratory reporting limit (RL).
With the exception of 1,4-Dioxane, only detected compounds shown.



N

APPROXIMATE

0 2000 4000

SCALE IN FEET

U.S.G.S. QUADRANGLE MAP

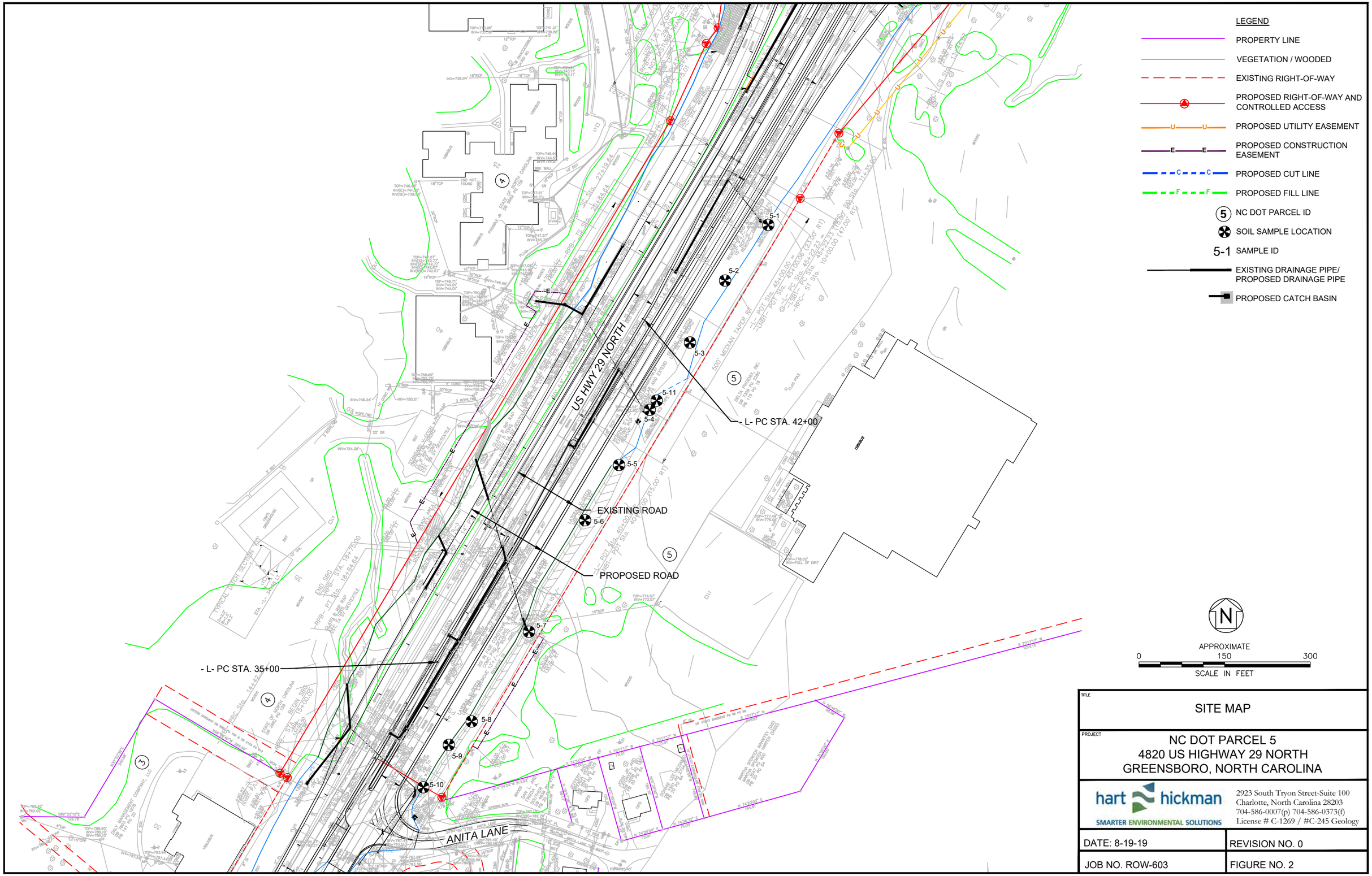
BROWNS SUMMIT, NORTH CAROLINA, 1994

QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

TITLE	**SITE LOCATION MAP**
PROJECT	NC DOT PARCEL 5 4820 US HIGHWAY 29 NORTH GREENSBORO, NORTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007 (p) 704-586-0373 (f)

DATE:	8-2-19	REVISION NO:	0
JOB NO:	ROW-603	FIGURE:	1



TITLE

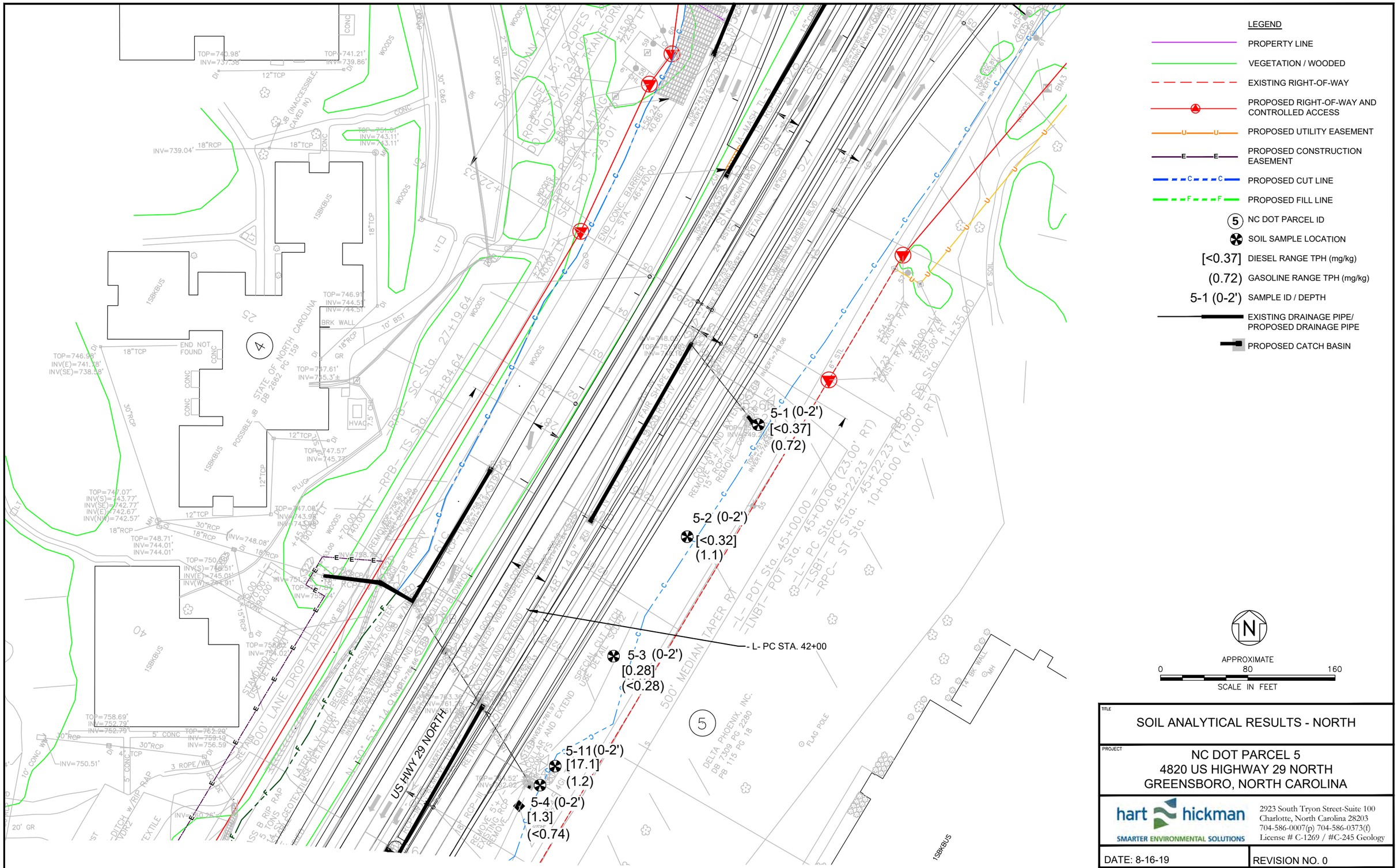
SITE MAP

PROJECT

NC DOT PARCEL 5
4820 US HIGHWAY 29 NORTH
GREENSBORO, NORTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

DATE: 8-19-19	REVISION NO. 0
JOB NO. ROW-603	FIGURE NO. 2



TITLE

SOIL ANALYTICAL RESULTS - NORTH

PROJECT

NC DOT PARCEL 5
4820 US HIGHWAY 29 NORTH
GREENSBORO, NORTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
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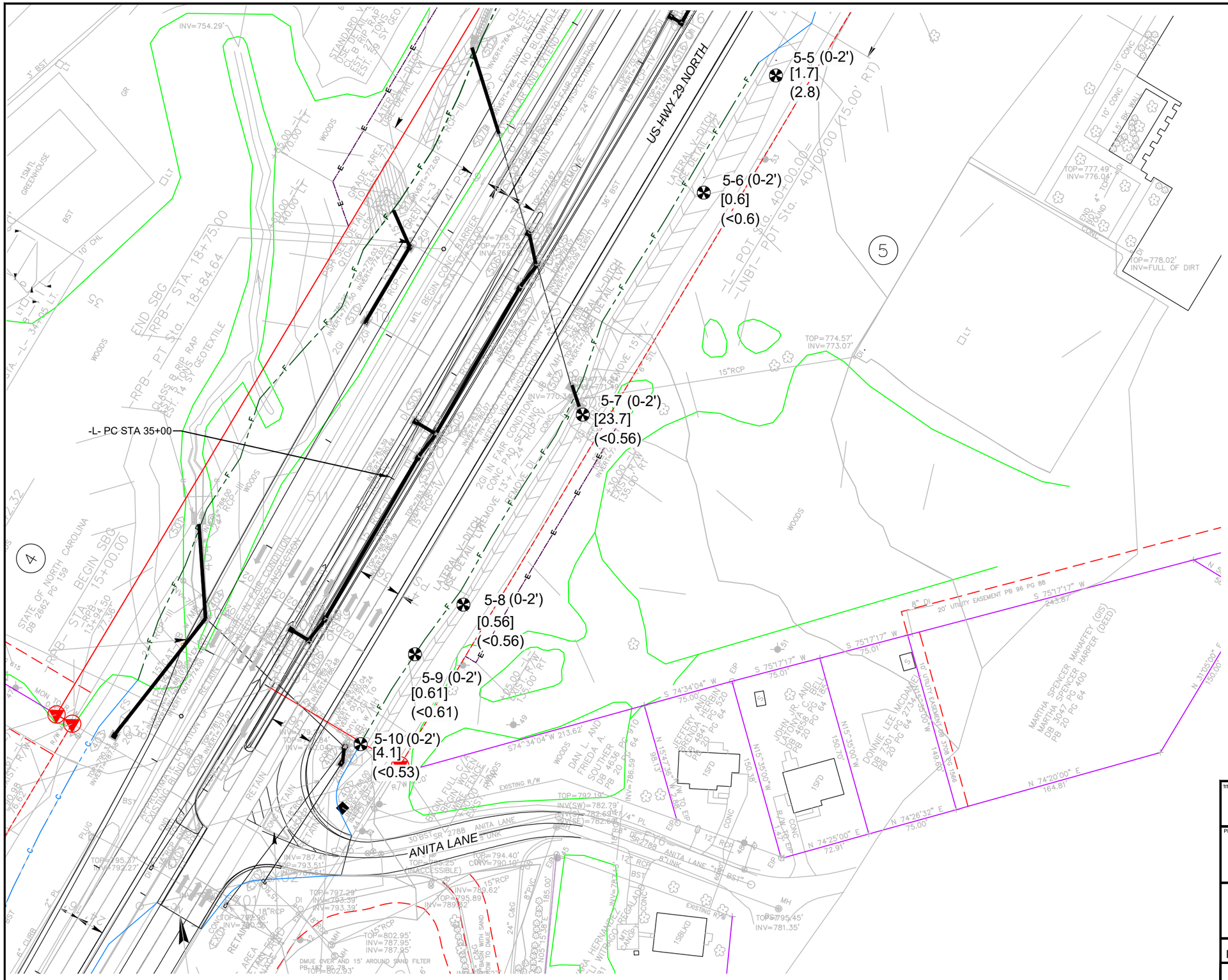
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

DATE: 8-16-19	REVISION NO. 0
JOB NO. ROW-603	FIGURE NO. 3A



TITLE

SOIL ANALYTICAL RESULTS - SOUTH

PROJECT

NC DOT PARCEL 5
4820 US HIGHWAY 29 NORTH
GREENSBORO, NORTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

DATE: 8-16-19	REVISION NO. 0
JOB NO. ROW-603	FIGURE NO. 3B

Appendix A

NC DOT Preliminary Plan

PROJECT REFERENCE NO.	SHEET NO.
R-4707	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Mead&Hunt
111 E. Hargett Street, Suite 300
Raleigh, North Carolina 27601
919-714-8670 | meadhunt.com
NC License No. F-1235

8/17/99

REVISIONS

-RPB- CURVE DATA

PI Sta 12+21.22	PI Sta 16+63.54
△ = 3° 06' 34.5" (LT)	△ = 3° 06' 34.5" (RT)
D = 0° 42' 10.9"	D = 0° 42' 10.9"
L = 442.32'	L = 442.32'
T = 221.22'	T = 221.22'
R = 8,150.00'	R = 8,150.00'
e = NC	e = NC

NAD 83(2011)

1 MICHAEL DALE AND KIMBERLY B. LOFTIS DB 4901 PG 1218

2 DALY MANAGEMENT COMPANY, LLC DB 7803 PG 1678 PB 167 PG 43

3 DALY MANAGEMENT COMPANY, LLC DB 7803 PG 1678 PB 141 PG 20

4 STATE OF NORTH CAROLINA DB 2662 PG 159

5 BEGIN FULL C/A BEGIN WOVEN WIRE FENCE +00.00 -L- EXIST. R/W

BEGIN FULL C/A BEGIN WOVEN WIRE FENCE +00.00 -L- EXIST. R/W

-L- POT Sta. 28+00.00 = -RPB- PC Sta. 10+00.00 (39.00' LT)

-RPB- PRC Sta. 14+42.32

BEGIN SBG -RPB- STA. 15+00.00

-RPB- 13+94.50 77.36'

+90.57 -L- 140.00' LT (EXIST. P/L)

+90.61 -L- EXIST. R/W

+90.98 76.62'

+46.56 125.00'

+76.24 125.02'

+60.70 180.99'

300' TAPER

500' ACCELERATION LANE

8:1 TAPER

TIE GR TO EXISTING

GRADE CUT DITCH TO DRAIN

GREU TL-3

4' PS

RETAIN

REMOVE

JB w/MH

2GI (TYPE D)

FS

24" RCP-III

15" CAT-1

15" RCP-IV

Conv. 2GI To JB w/MH

BEGIN GRADE -L- STA. 31+00.00

RETAIN CONC. ISLAND

RETAIN EXISTING LEFT TURN MOVEMENT TIE TO EXISTING PAVEMENT ELEVATION

BEGIN TIP PROJECT R-4707 -L- STA. 20+00.00

-BL- 12

-BL- 13

-BL- 14

N 30°53'14.9" E

L 4' PS

MATCHLINE -L- STA. 33+50.00

SEE SHEET 5

FOR -RPB- PROFILE, SEE SHEET 18

FOR -L- SB PROFILE, SEE SHEET 10

FOR -L- NB PROFILE, SEE SHEET 10

CITY OF GREENSBORO GUILFORD COUNTY

WOODS

ISBLKBUS

ISBRK BUS

MTL CANOPY

VACUUM

GREASE TRAPS

PERMANENT UTILITY EASEMENT DB 6613 PG 550

ACCESS EASEMENT DB 6613 PG 553

ACCESS EASEMENT PB 149 PG 80

CITY OF GREENSBORO ACCESS EASEMENT PB 149 PG 80

EASEMENT DB 2662 PG 159 & DB 2103 PG 615

LEWIS H. AND SHIRLEY R. EAST DB 3127 PG 105

THE GREATER STEPPING STONE CHURCH NONDENOMINATIONAL DB 5036 PG 1610 PB 32 PG 55

FSH PROPERTIES, LLC DB 5483 PG 1365 DB 5483 PG 1369 PB 187 PG 78 PB 186 PG 41

(PER GIS) FLEETA MAE AYERS SEAWELL (PER DEED) BILLY C. AND FLEETA MAE AYERS DB 3188 PG 915 PB 32 PG 55

(PER GIS) FLEETA MAE AYERS SEAWELL (PER DEED) FLEETA MAE AYERS DB 3760 PG 1210 DB 3760 PG 1212 (PLAT)

ROBIN W. AND RENEE T. SAUL DB 7551 PG 1354 PB 32 PG 55

DONALD L. VANEATON DB 7394 PG 2255 PB 32 PG 55

JEFFREY I. AND DEBORAH HARRIS RICHARDSON DB 7683 PG 1850 PB 32 PG 55

BRASON PROPERTIES, LLC DB 6111 PG 101 PB 20 PG 64

RAMON GUEVARA HERNANDEZ ESTHER ARACELI WITRAGO REGALADO DB 7933 PG 2481 PB 20 PG 64

STEVEN WAYNE AND MARGARET EVELYN MORETZ DB 4913 PG 879 PB 20 PG 64

JANICE T. DAVIS DB 5554 PG 1005 PB 20 PG 64

06-MAR-2018 17:37
R:\Projects\R4707_Rdy_psh_04.dgn
17345.rd

PROJECT REFERENCE NO.	SHEET NO.
R-4707	5

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Mead&Hunt
111 E. Hargett Street, Suite 300
Raleigh, North Carolina 27601
919-714-8670 | meadhunt.com
NC License No. F-1235

REVISIONS

8/17/99

-L- CURVE DATA

PI Sta 52+64.99
Δ = 3° 42' 45.0" (LT)
D = 0° 15' 00.0"
L = 1,485.00'
T = 742.76'
R = 22,918.31'
e = NC

-LSBI- CURVE DATA

PI Sta 47+72.06
Δ = 1° 15' 00.6" (LT)
D = 0° 15' 00.7"
L = 499.65'
T = 249.83'
R = 22,899.31'
e = NC

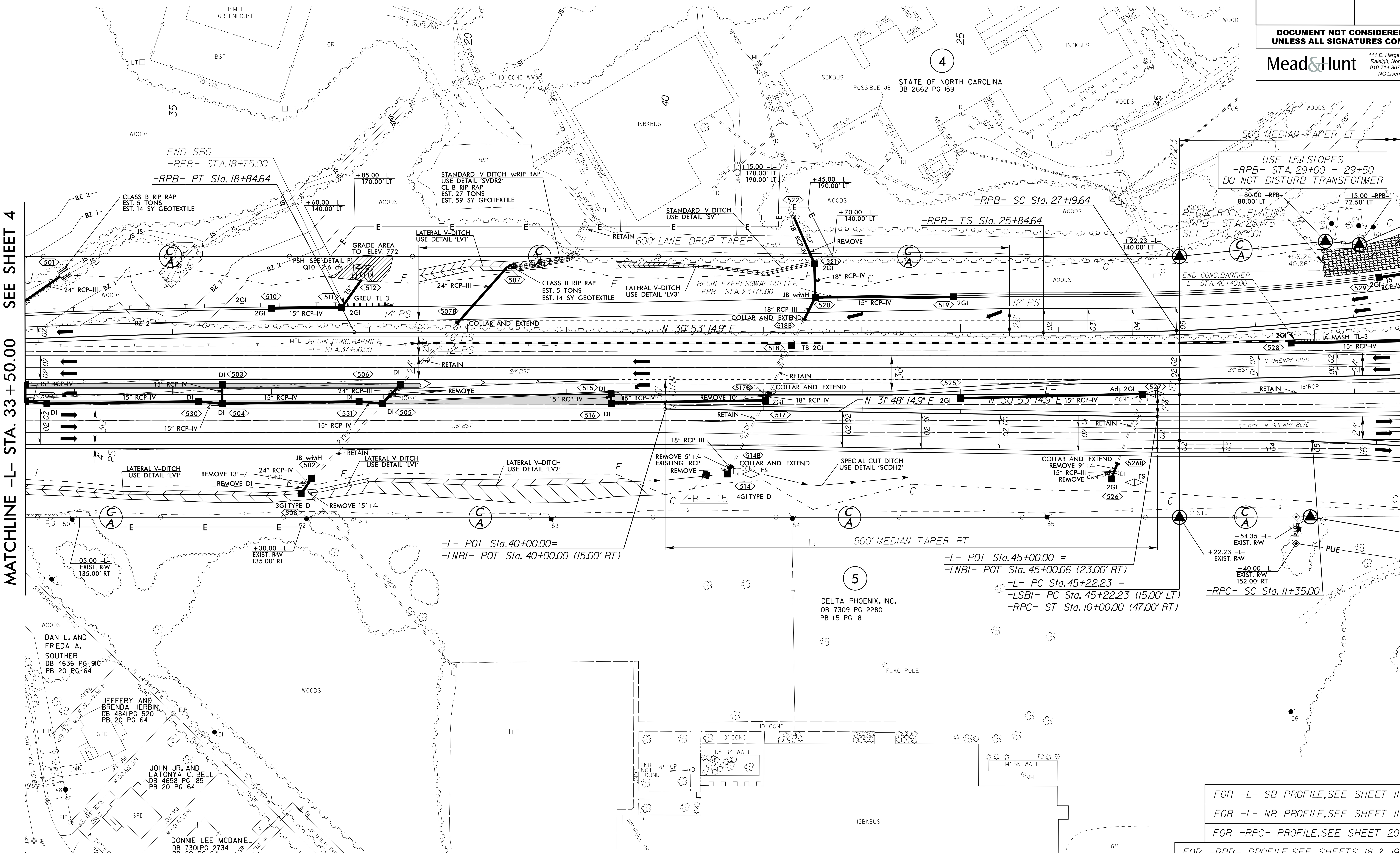
-RPB- CURVE DATA

PI Sta 16+63.54	PIs Sta 26+74.65	PI Sta 28+60.83
Δ = 3° 06' 34.5" (RT)	Θs = 1° 50' 29.9"	Δ = 7° 41' 32.6" (LT)
D = 0° 42' 10.9"	Ls = 135.00'	D = 2° 43' 42.1"
L = 442.32'	LT = 90.00'	L = 281.94'
T = 221.22'	ST = 45.00'	T = 141.18'
R = 8,150.00'	INC = 45'	R = 2,100.00'
e = NC		e = 0.05

-RPC- CURVE DATA

PIs Sta 10+90.00	PI Sta 12+39.90
Θs = 1° 36' 41.2"	Δ = 5° 00' 20.0" (RT)
Ls = 135.00'	D = 2° 23' 14.4"
LT = 90.00'	L = 209.67'
ST = 45.00'	T = 104.90'
INC = 45'	R = 2,400.00'
	e = 0.05

NAD 83/2011



MATCHLINE -L- STA. 33+50.00
SEE SHEET 4
MATCHLINE -L- STA. 47+50.00
SEE SHEET 6
END SBG
-RPB- STA.18+75.00
-RPB- PT Sta. 18+84.64
CLASS B RIP RAP
EST. 5 TONS
EST. 14 SY GEOTEXTILE
STANDARD V-DITCH wRIP RAP
USE DETAIL 'SVDR2'
CL B RIP RAP
EST. 27 TONS
EST. 59 SY GEOTEXTILE
GRADE AREA TO ELEV. 772
PSH SEE DETAIL P1 Q10 = 2.6 cfs
LATERAL V-DITCH USE DETAIL 'LV1'
600' LANE DROP TAPER
STANDARD V-DITCH USE DETAIL 'SV1'
BEGIN EXPRESSWAY GUTTER
-RPB- STA. 23+75.00
LATERAL V-DITCH USE DETAIL 'LV3'
-RPB- TS Sta. 25+84.64
-RPB- SC Sta. 27+19.64
500' MEDIAN TAPER LT
USE 1.5:1 SLOPES
-RPB- STA. 29+00 - 29+50
DO NOT DISTURB TRANSFORMER
BEGIN ROCK PLATING
-RPB- STA. 28+75
SEE STD. 275.01
END CONC. BARRIER
-L- STA. 46+40.00
BEGIN CONC. BARRIER
-L- STA. 37+50.00
N 30° 53' 14.9" E
N 31° 48' 14.9" E
STATE OF NORTH CAROLINA
DB 2662 PG 159
N OHENRY BLVD
LATERAL V-DITCH USE DETAIL 'LV2'
SPECIAL CUT DITCH USE DETAIL 'SCDH2'
500' MEDIAN TAPER RT
-L- POT Sta. 40+00.00 =
-LNBI- POT Sta. 40+00.00 (15.00' RT)
-L- POT Sta. 45+00.00 =
-LNBI- POT Sta. 45+00.06 (23.00' RT)
-L- PC Sta. 45+22.23 =
-LSBI- PC Sta. 45+22.23 (15.00' LT)
-RPC- ST Sta. 10+00.00 (47.00' RT)
-RPC- SC Sta. 11+35.00
DELTA PHOENIX, INC.
DB 7309 PG 2280
PB 115 PG 18
DAN L. AND FRIEDA A. SOUTHER
DB 4636 PG 910
PB 20 PG 64
JEFFERY AND BRENDA HERBIN
DB 4841 PG 520
PB 20 PG 64
JOHN JR. AND LATONYA C. BELL
DB 4658 PG 185
PB 20 PG 64
DONNIE LEE MCDANIEL
DB 7301 PG 2734
PB 20 PG 64

FOR -L- SB PROFILE, SEE SHEET 11
FOR -L- NB PROFILE, SEE SHEET 11
FOR -RPC- PROFILE, SEE SHEET 20
FOR -RPB- PROFILE, SEE SHEETS 18 & 19

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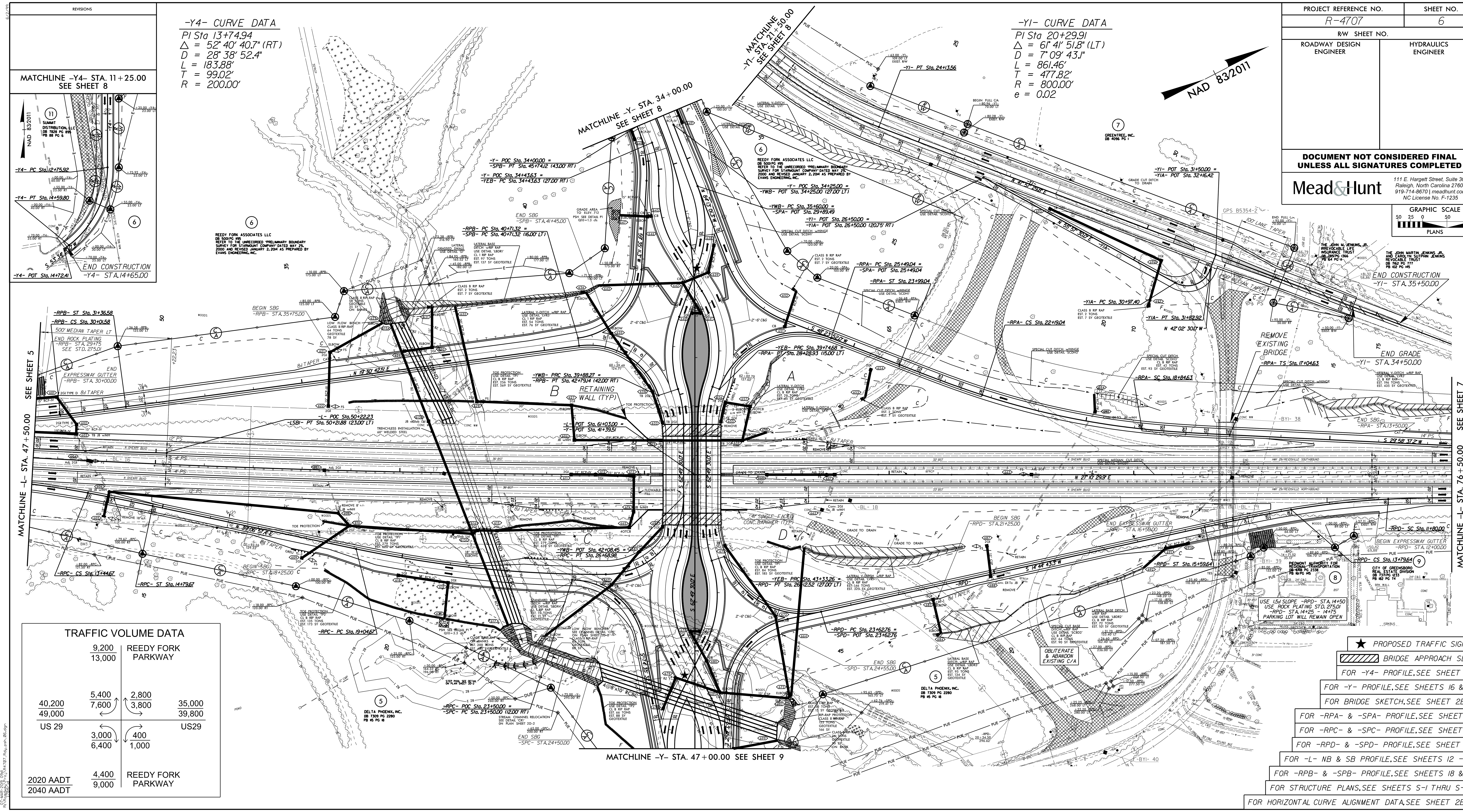

-Y4- CURVE DATA

PI Sta 13+74.94
Δ = 52° 40' 40.7" (RT)
D = 28° 38' 52.4"
L = 183.88'
T = 99.02'
R = 200.00'

-Y1- CURVE DATA

PI Sta 20+29.91
Δ = 61° 41' 51.8" (LT)
D = 7° 09' 43.1"
L = 861.46'
T = 477.82'
R = 800.00'
e = 0.02

TRAFFIC VOLUME DATA

		9,200 / 13,000	REEDY FORK PARKWAY	
40,200 / 49,000 (US 29)	5,400 / 7,600		2,800 / 3,800	35,000 / 39,800 (US29)
	3,000 / 6,400		400 / 1,000	
2020 AADT / 2040 AADT		4,400 / 9,000	REEDY FORK PARKWAY	

PROJECT REFERENCE NO.	SHEET NO.
R-4707	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Mead&Hunt
111 E. Hargett Street, Suite 300
Raleigh, North Carolina 27601
919-714-8670 | meadhunt.com
NC License No. F-1235

GRAPHIC SCALE
50 25 0 50 100
PLANS

★ PROPOSED TRAFFIC SIGNAL
BRIDGE APPROACH SLAB
FOR -Y4- PROFILE, SEE SHEET 24
FOR -Y- PROFILE, SEE SHEETS 16 & 17
FOR BRIDGE SKETCH, SEE SHEET 2B-4
FOR -RPA- & -SPA- PROFILE, SEE SHEET 18
FOR -RPC- & -SPC- PROFILE, SEE SHEET 21
FOR -RPD- & -SPD- PROFILE, SEE SHEET 20
FOR -L- NB & SB PROFILE, SEE SHEETS 12 - 14
FOR -RPB- & -SPB- PROFILE, SEE SHEETS 18 & 19
FOR STRUCTURE PLANS, SEE SHEETS S-1 THRU S-XX
FOR HORIZONTAL CURVE ALIGNMENT DATA, SEE SHEET 2B-3

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REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-4707	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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NAD 83/2011

-Y2- CURVE DATA

PI Sta 10+33.66	PI Sta 13+21.66	PI Sta 19+16.32
Δ = 4° 54' 06.8" (LT)	Δ = 64° 54' 25.0" (LT)	Δ = 98° 07' 07.4" (RT)
D = 7° 17' 06.1"	D = 14° 19' 26.2"	D = 28° 38' 52.4"
L = 67.29'	L = 453.14'	L = 342.50'
T = 33.66'	T = 254.37'	T = 230.56'
R = 786.49'	R = 400.00'	R = 200.00'
e = EXISTING	e = 0.04	e = 0.04

-Y- CURVE DATA

PI Sta 51+32.55	PI Sta 57+06.40
Δ = 9° 10' 26.7" (RT)	Δ = 22° 32' 57.8" (LT)
D = 1° 11' 37.2"	D = 5° 59' 58.4"
L = 768.57'	L = 375.85'
T = 385.11'	T = 190.39'
R = 4,800.00'	R = 955.00'
e = NC	e = EXISTING

TRAFFIC VOLUME DATA

		OLD REEDY FORK PARKWAY	
4,400 / 9,000			3,400 / 8,100
REEDY FORK PARKWAY	1,700 / 2,100	700 / 1,200	REEDY FORK PARKWAY
2020 AADT / 2040 AADT	2,400 / 3,300	ECKERSON ROAD	

-Y2- PC Sta. 10+00.00
BEGIN CONSTRUCTION
-Y2- STA. 10+50.00
-Y2- PCC Sta. 10+67.29

-Y2- PC Sta. 16+85.76
-Y2- PT Sta. 15+20.42

-Y- POC Sta. 48+60.56 =
-YWB+ PT Sta. 49+13.58 (27.00' LT)

-YWB- POC Sta. 47+58.39 =
-SPD- POT Sta. 27+68.60
-YWB- PRC Sta. 48+32.89

-Y- PT Sta. 58+91.86
END CONSTRUCTION
-Y- STA. 58+80.00

-Y2- PT Sta. 20+28.26

-YEB- PRC Sta. 48+15.26
-Y- PC Sta. 47+47.44

-YEB- POC Sta. 47+81.23 =
-SPC- POT Sta. 28+24.47

-Y- POC Sta. 48+58.58 =
-YEB- PT Sta. 49+00.72 (27.00' RT)

-Y- PRC Sta. 55+16.01

-Y- POC Sta. 55+46.24 =
-Y2- POT Sta. 20+67.26
-Y5- POT Sta. 10+00.00

END CONSTRUCTION
-Y5- STA. 12+10.00

-Y5- POT Sta. 12+54.62

MATCHLINE -Y- STA. 47+00.00 SEE SHEET 6

FOR -Y2- PROFILE, SEE SHEET 22	
FOR -Y5- PROFILE, SEE SHEET 23	
FOR -Y- PROFILE, SEE SHEETS 16 & 17	
FOR INTERSECTION DETAIL, SEE SHEET 2B-2	

(5) DELTA PHOENIX, INC.
DB 7309 PG 2280
PB 115 PG 18

(13) AF-REEDY FORK COMMERCIAL, LLC
DB 7425 PG 292
PB 183 PG 111 & 112

(14) AF-REEDY FORK COMMERCIAL, LLC
DB 7425 PG 292
PB 183 PG 109 & 110

(15) AF-REEDY FORK COMMERCIAL, LLC
DB 7425 PG 292
PB 183 PG 113 & 114

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Appendix B

NC DEQ Incident Files

UST REMOVAL/CLOSURE REPORT

Wysong & Miles Company

Greensboro, North Carolina

Delta No. 50-88-173.03

This report was prepared by:

Delta Environmental Consultants, Inc.
6701 Carmel Road, Suite 200
Charlotte, North Carolina 28226

August 1991

Delta
Environmental
Consultants, Inc.

6701 Carmel Road
Suite 200
Charlotte, NC 28226-3901
705/541-9890
FAX: 704/543-4035

August 13, 1991

North Carolina Department of Environment,
Health and Natural Resources
Winston-Salem Regional Office
8025 North Point Boulevard
Winston-Salem, North Carolina 27106

Attention: Mr. Thomas Salley

Subject: UST Removal/Closure
Wysong & Miles Company
Greensboro, North Carolina
Delta No. 50-88-173.03

Dear Mr. Salley:

This report was prepared by Delta Environmental Consultants, Inc. (Delta) on behalf of Wysong & Miles Company regarding removal of an underground storage tank from the premises on July 8, 1991. The report presents required assessment information in accordance with federal, state, and local specifications.

Site Location and Site Maps

Wysong and Miles Company is located along U.S. Highway 29 North in Greensboro, North Carolina. Local topographic and site specific maps are included as Figures 1, 2, and 3.

UST Description

The UST was excavated and removed from the Wysong and Miles Company property on July 8, 1991. The tank geometry was 64" diameter by 24' long with a total volume of 4000 gallons. The tank was used to store Mobil DTE 25 hydraulic oil. A MSDS sheet of the oil is attached. No other material was stored in the tank according to Wysong and Miles Company representatives. Depth to the top of the tank from land surface was two (2) feet. A map illustrating the tank location, orientation, and underground distribution line location is shown in Figure 3. The distribution line ran underground from the tank to the building wall. Past the building wall, the line ran above ground.

Soil Sampling and Chemical Analysis

A total of four soil samples were collected from the excavation. One sample was collected from below the distribution line where it elbowed upward out of the ground adjacent to the building. Because the tank length exceeded twenty (20) feet, three soil samples were collected from the native soil beneath the tank. The soil sample locations are illustrated in Figure 3.

The soil samples were collected with an impact sampler and brass sleeves. Samples collected from below the tank were collected from the bucket of the trackhoe used for excavation. Sample depth below the distribution line was two (2) feet below grade whereas the sample depths below the UST were eight (8) feet below grade and one (1) to two (2) feet below the tank bottom. The impact sampler was cleaned between samples with isopropyl alcohol and a deionized water rinse. Dedicated brass sleeves were used for each sample. Upon collection, the samples were packed in ice for next day shipment to the Industrial and Environmental Analysis, Inc. (IEA) via Pony Express. Each sample was submitted for analysis of oil and grease by SW-846 Method 9071. A summary of the soil sample analytical results is presented in Table 1. A copy of the laboratory report is attached.

Observations

During excavation, no evidence existed to indicate the existence of a tank leak or soil contamination resulting from tank overspills. No odors were detected in the soil during excavation activities or tank removal.

Backfill

No evidence of soil contamination was observed during soil excavation and tank removal activities. As a result, the tank basin was filled in with the excavated soil and backfill supplied by Bobby's Backhoe service.

Photographs

Attached are photographs of the UST/distribution line removal.

Remarks

The recommendations contained in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Steven S. Gerritsen
Project Manager
North Carolina Licensed Geologist #1055

SSG/zga

TABLE 1
SOIL ANALYTICAL RESULTS

WYSONG & MILES COMPANY
GREENSBORO, NORTH CAROLINA
DELTA NO. 50-88-173

TARGETED PARAMETER	SOIL SAMPLE			
	SS-1	SS-2	SS-3	SS-4
Oil & Grease	70	35	23	20

All results in mg/kg

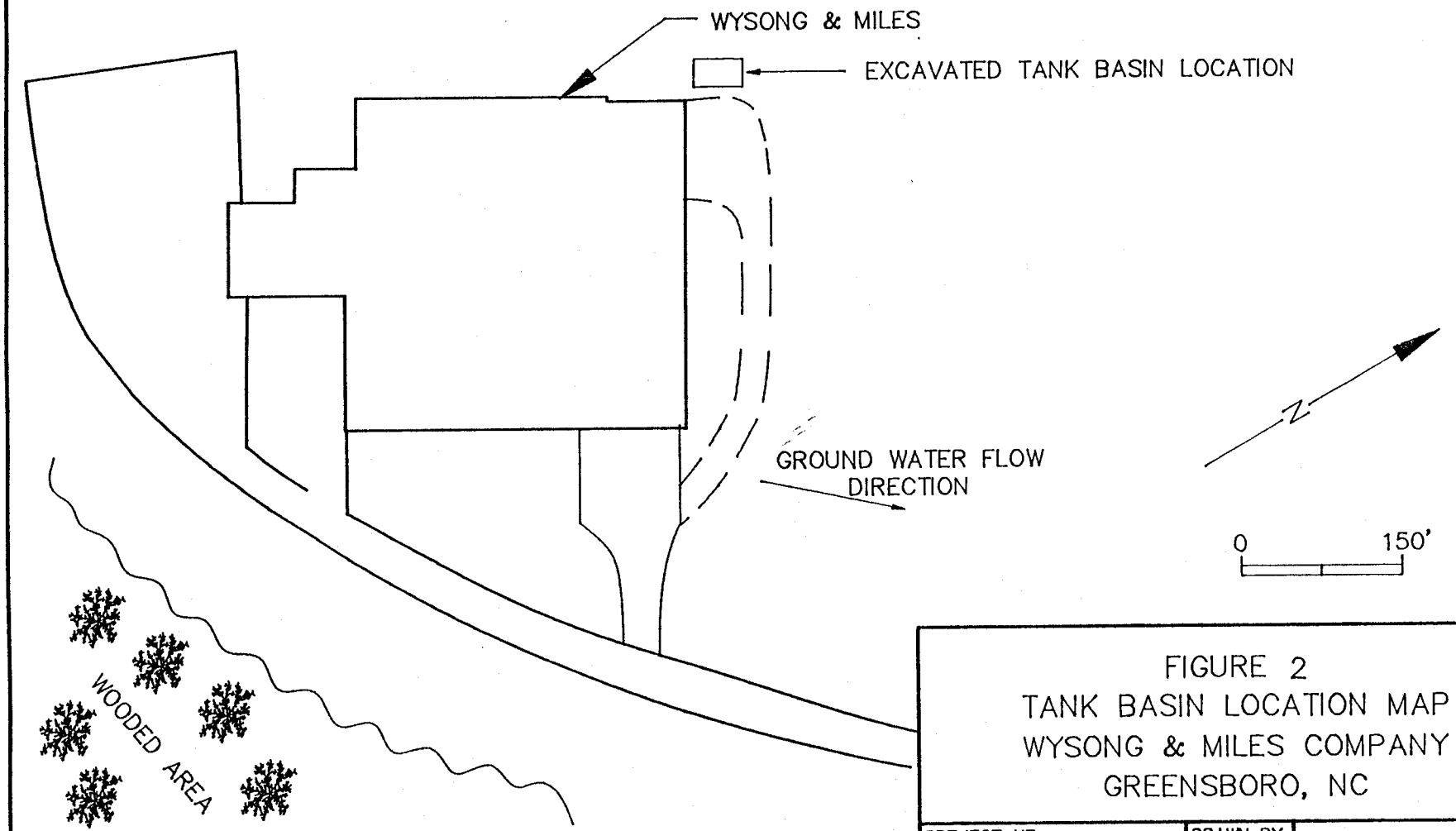
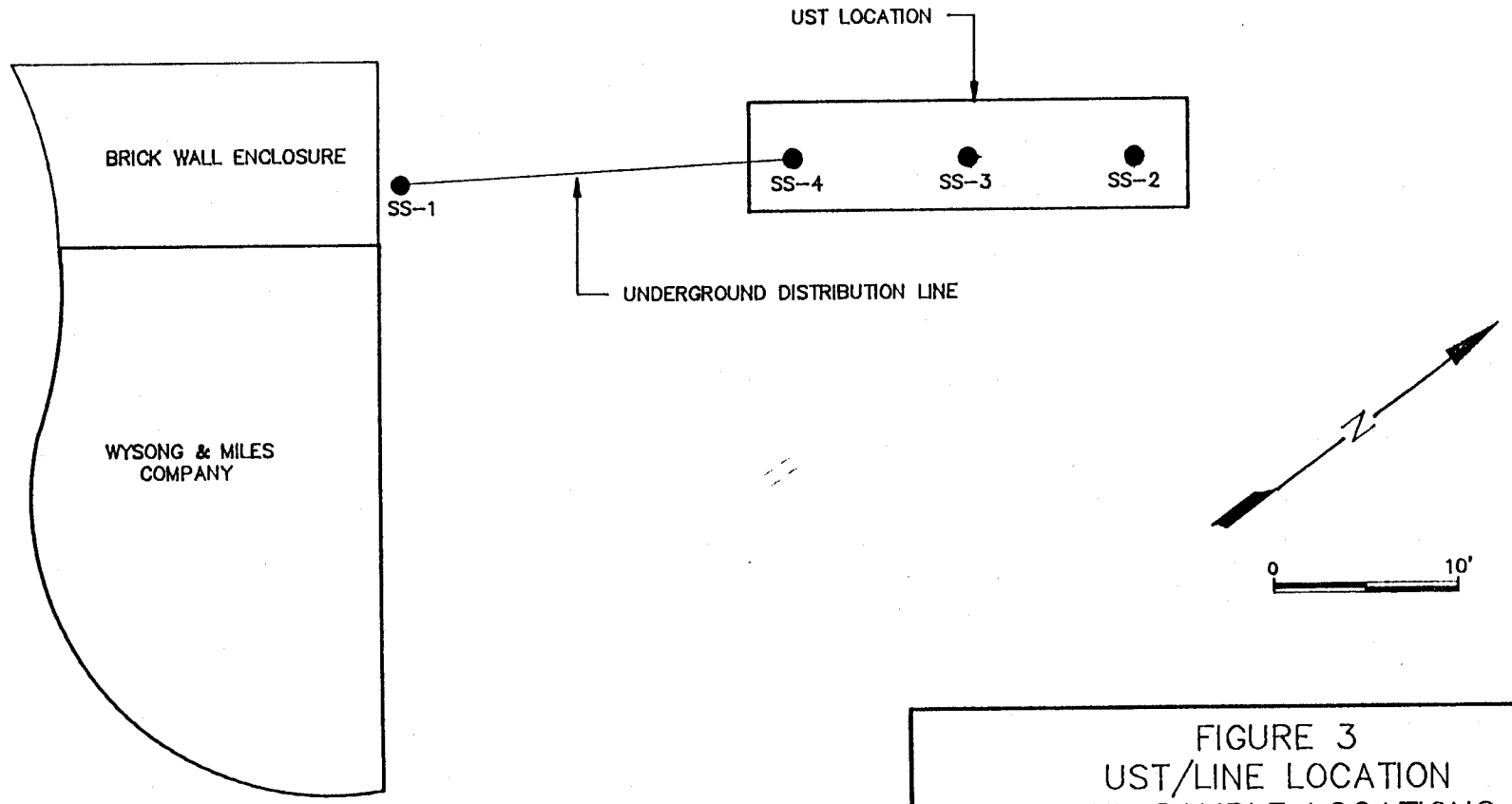


FIGURE 2
TANK BASIN LOCATION MAP
WYSONG & MILES COMPANY
GREENSBORO, NC

PROJECT NO		DRAWN BY
50-88-173		C.W.H.
DATE	CAD NO.	REVIEW BY
7-24-91	173-LSGW	

Delta Environmental Consultants, Inc.



LEGEND:

● SOIL SAMPLE LOCATION

FIGURE 3
UST/LINE LOCATION
SOIL SAMPLE LOCATIONS
WYSONG & MILES COMPANY
GREENSBORO, NC

PROJECT NO		DRAWN BY
50-88-173		C.W.H.
DATE	CAD NO.	REVIEW BY
7-24-91	173-UST	

Delta Environmental Consultants, Inc.

Phase I Remedial Action Plan
Wysong & Miles Site
Greensboro, North Carolina

H&H Job No. WYM-002

December 15, 2009
Revised April 15, 2010

Hart & Hickman

2923 South Tryon Street
Suite 100
Charlotte, NC 28203
704-586-0007

3334 Hillsborough Street
Raleigh, NC 27607
919-847-4241

#C-1269 Engineering
#C-245 Geology

1.0 INTRODUCTION

This Phase I Remedial Action Plan (RAP) has been prepared for the Wysong & Miles facility and downgradient property owned by Pennston Corporation in accordance with the Inactive Hazardous Sites Program Guidelines for Assessment and Cleanup (NCDENR, October 2009). Certification statements for this RAP are in **Appendix A**. The properties are located along U.S. Highway 29 approximately 10 miles north of Greensboro in Guilford County, North Carolina (**Figure 1**). The Wysong & Miles property consists of approximately 60 acres of land bounded to the west by U.S. Highway 29, to the north and east by Pennston's property, and to the south by a residential subdivision and British Petroleum Service Station, formerly owned by Texaco and the Lee Oil Company (**Figure 2**).

Progressive site assessments, source area remediation activities, groundwater extraction and treatment system operation, and routine groundwater and surface water monitoring have been completed over the past 20 years. Background soil sampling and soil vapor sampling investigations were completed in September 2009. Details related to these activities are provided in various reports previously submitted to NCDENR and are not repeated in this document except where necessary to support the evaluation of remedial alternatives for the Wysong and Pennston properties.

Remedial action evaluation for this site is being phased so that groundwater is addressed first in this Phase I RAP, followed by evaluation of remedial action for source area soil (in a Phase II RAP). This approach has been developed for the following reasons:

- Soil in the source area, particularly beneath the floor slab of the manufacturing building, has not been completely delineated;

  Groundwater impacts on the Pennston property need to be expeditiously addressed to allow settlement of their claim against Wysong in bankruptcy court so both parties may move forward with future plans.

This RAP specifically addresses groundwater impacts on the Wysong and Pennston properties related to historic chlorinated solvent releases that occurred at the Wysong facility and at an unidentified, off-site area near the Lacy Allred Farm subdivision. The upgradient, off-site chlorinated solvent contamination has migrated onto the Wysong property and joined with similar chlorinated solvents released circa 1987 from a former 1,1,1-trichloroethane (TCA) storage tank at the northeast corner of the Wysong facility. The joined plume currently extends from the southern portion of the Wysong facility to the northeast beneath the Wysong facility and thence onto the Pennston property as shown on **Figure 3**.

2.0 SITE BACKGROUND

The current approximate extent of the groundwater contamination associated with the joined chlorinated solvent plumes is shown on **Figure 3**. Contaminant migration and dispersion is controlled by the local hydrogeology, generally extending in the direction of groundwater flow north-northeast from the Lacy Allred Subdivision and Wysong release areas toward the eastern tributary to Reedy Fork Creek north of Reedy Fork Parkway. The following sections provide summary descriptions of the chlorinated solvent releases associated with the groundwater plume.

2.1 LACY ALLRED FARM/SERVICE STATION SOLVENT RELEASE

Groundwater samples collected in the late 1980s by Guilford County and NCDENR from several off-site, upgradient monitoring wells and residential wells within the Lacy Allred Farm Subdivision and near the former Texaco service station confirm that a large release of TCA (i.e., with groundwater concentrations of at least 20 mg/L in shallow wells and greater than 7.0 mg/L in deep bedrock wells) occurred in this area. The specific source area(s) has not been identified, however it is suspected that the TCA was released by disposal into the former service station's septic field and/or during historic residential auto body repair businesses reported to have been conducted at one or more of the Lacy Allred Farm residences.

Based upon review of over 20 years of historical data, it is evident the upgradient off-site chlorinated solvent release(s) has migrated onto the Wysong & Miles property and that associated chlorinated volatile organic compounds (CVOCs) are present along with CVOCs released at the Wysong & Miles facility. The resulting combined plumes have subsequently migrated onto Pennston's property.

2.2 WYSONG SOLVENT RELEASE AREAS

Degreasing operations during manufacture of precision machine tools at Wysong & Miles resulted in the release of the chlorinated solvent TCA. Two separate release areas have been identified, including a 1,500-gallon TCA aboveground storage tank previously located at the northeast corner of the Wysong & Miles facility and a former machine coolant disposal basin southwest of the facility (**Figure 4**). Based on extensive site investigation and remedial data, it is evident the majority of chlorinated solvent released at the Wysong facility was associated with a leaking TCA line below the 1,500-gallon TCA tank, not from the machine coolant disposal basin.

2.2.1 Machine Coolant Disposal Basin

The machine coolant disposal basin was located at the southwest side of the Wysong facility and consisted of a concrete dry well used for disposal of machine cutting oils (i.e., petroleum hydrocarbons) from 1965 to April 1985. Cutting oils entered the disposal basin through a network of six floor drains installed in the machine shop area. Solvents were not intentionally disposed through the floor drain network or machine coolant basin, although a limited amount of solvent appears to have been mixed with machine cutting oils. Groundwater is typically located at 25-35 feet below ground surface (bgs) near the machine coolant disposal basin. The machine coolant disposal basin area and cover were paved with concrete throughout its history, minimizing the potential for surface water infiltration.

After closure of the machine coolant disposal basin in April 1985, Wysong installed and operated a soil vapor extraction (SVE) system to recover petroleum hydrocarbons from the disposal basin area in 1988-1989. Wysong excavated the former machine coolant disposal basin in August 1992, following completion of SVE operations. This remedial action included removal of the concrete disposal basin and approximately 140 cubic yards of impacted soil. During the soil removal process, the SVE system components were also removed. Remedial excavation was completed to approximately 17 feet bgs

and confirmatory soil samples were collected to document that impacted source material had been removed. The excavation was then backfilled with clean material and a concrete cap was installed over the area. A Soil Treatment Unit Closure Report (Delta Environmental Consultants, Inc.) was submitted to NCDENR on December 12, 1994.

The majority of contaminants detected at the machine coolant disposal basin area consisted of petroleum hydrocarbons related to machine cutting oils. Based on confirmatory soil sampling data and downgradient groundwater sampling results, the machine coolant disposal basin did not contribute significantly to the dissolved-phase chlorinated solvent impacts associated with groundwater in the joined plume shown on **Figure 3**. Therefore no further investigation or remediation of the machine coolant disposal basin is necessary.

2.2.2 Former TCA Tank Area

The 1,500 gallon TCA above-ground storage tank formerly located at the northeast corner of the Wysong facility (**Figure 4**) operated from 1965 until February 1989. On October 16, 1987 Wysong discovered and repaired a leak in the TCA supply line below the tank. Following repair of the TCA line, TCA continued to be used for degreasing operations throughout 1988 and into early 1989. The TCA tank and supply line were subsequently removed and TCA use was discontinued.

Based on Wysong's inventory records, it appears the TCA leak may have begun in May 1987 and continued until discovered and corrected in October 1987. During this period the inventory records and corresponding TCA usage indicate that approximately 2,500 gallons of TCA was unintentionally leaked through an underground line below the above ground storage tank.

Wysong was proactive in implementing recovery operations immediately following discovery of the TCA tank release in October 1987. Wysong immediately began design and construction of a SVE system, activated in October 1988. The SVE system included

a network of vertical vapor extraction points in the vadose-zone near the TCA tank. Based on vapor emission monitoring data and corresponding SVE flow rate records, the composite TCA recovery was approximately 2,035 gallons from October 1988 through May 1990 when asymptotic conditions were attained and the SVE system was de-activated.

In a further effort to contain the TCA release, Wysong installed a groundwater recovery well (RW-2) immediately downgradient from the TCA tank. Recovery well RW-2 was activated in July 1990. The total TCA recovered from RW-2 was approximately 133 gallons, primarily accomplished between July 1990 and 1992 when the aqueous-phase mass removal reached asymptotic conditions.

Wysong was able to recover approximately 2,170 gallons of TCA, more than 85 percent of the estimated 2,500 gallon release at the former TCA tank area. The fate of the unrecovered TCA includes several pathways, such as volatilization during the leak event; sorption to vadose zone soils near the TCA tank area; and migration through the vadose zone to groundwater. Based on analytical trend data at the recovery wells and at nearby monitoring wells (including MW-1; MW-4; and MW-9D), the remedial operations were very effective for containment and recovery of the TCA tank release.

In August 2006 and August 2007 direct-push investigations were conducted in the former TCA tank area to evaluate the extent of residual vadose zone impacts after the 1988-1990 SVE operations and approximately 17 years of natural attenuation. The investigations indicate that residual soil impacts remain in vadose zone soils near the former TCA tank. The extent of CVOCs in soil has not been delineated to the north and east of the source area or below the slab of the manufacturing building. The extent of 1,4-dioxane in soil has not been delineated laterally or vertically with respect to the source area. Additional investigation proposed to delineate soil impacts is described in Section 8.1.

In June 2009, H&H conducted a soil vapor investigation to address potential vapor intrusion risks (*Soil Vapor Sampling Investigation*, H&H, October 2009). The TCA tank

area was one area of concern because of the impacted soil. Three soil vapor samples were collected in the TCA tank area: one inside the building from below the floor slab; and one each from the capillary and vadose zones outdoors near the former TCA tank pad. Analytical results from all samples reported several CVOCs at concentrations greater than NCDENR Industrial screening levels. One sample collected from the exterior vadose zone reported 1,4-dioxane at concentrations greater than Industrial Screening Levels provided by IHSB. The former TCA tank area is the only location on the Wysong property where residual soil and soil vapor impacts are present at concentrations exceeding corresponding NCDENR remedial guidelines. **Figure 5** illustrates the soil boring and soil vapor sampling locations at the former TCA tank area.

2.3 HYDROGEOLOGIC SUMMARY

The impacted properties are underlain by typical Piedmont North Carolina geology that includes shallow saprolite underlain by partially weathered rock (PWR) which grades downward to competent bedrock that exhibits fractures in upper portions with the fractures decreasing with depth. Each of these geological zones contains groundwater that is interconnected. More detail regarding these interconnected hydrological zones is provided below:

- **Shallow Zone** - unconsolidated regolith, which includes the surface soil and underlying saprolitic unit generally encountered from surface grade to 20 – 30 feet bgs. In undisturbed areas there are several feet of red silty clay underlain by a tan to light brown micaceous silt which grades to saprolite.

- **Intermediate Zone** –PWR encountered from approximately 30 - 60 feet bgs. The PWR is characterized by residual, or remnant bedrock features such as mineral grain definition, foliation, and fractures. In Piedmont geological settings, this zone typically exhibits the highest effective porosity and therefore serves as the dominant groundwater flow zone.

- **Deep Zone**–fractured bedrock, consisting of diorite and phyllite, typically encountered below 60 feet bgs, although the depth to bedrock diminishes rapidly near the tributaries to Reedy Fork Creek at the northern extent of the plume. A high degree of fracturing was noted during previous site investigations to a depth of approximately 200 feet bgs.

Groundwater is typically encountered at 25-40 feet bgs, except in low lying areas near surface water bodies where it is typically encountered at 5-10 feet bgs. The hydraulic conductivity, determined from aquifer pump tests, is approximately 17.1 feet per year (*Remedial Action Work Plan*, Delta, 1990).

Generally, groundwater flow in the shallow and intermediate zones is to the northeast, although a shallow groundwater divide occurs along a ridge running from near monitoring well MW-22 north-northeast toward TW-15. The east and west sides of the ridge are drained by separate branches of Reedy Fork Creek. These tributaries join together at Reedy Fork Creek, approximately 3,500 feet northeast of the Wysong & Miles facility. The potentiometric surface is shown on **Figure 6**, based on well gauging measurements collected during October 2008.

Hydrogeologic cross-sections with flow nets were prepared using water table elevation data from June 19, 2006 when the former groundwater extraction system was operational. **Figure 7** illustrates the locations of the cross-sections. Cross-section A – A' (**Figure 8**) trends northeasterly along the length of the impacted zone and cross-section B – B' (**Figure 9**) is perpendicular to A – A', just south of the pond on the Wysong property.

As shown on cross-section A – A', groundwater flow near the Wysong facility was influenced by the recovery wells. Downward vertical gradients due to pumping in the deep zone have likely pulled contaminants downward toward these wells; however, the lateral cone of influence of these recovery wells was not large enough to capture the impacted groundwater, particularly along the lateral extents of the plume. Therefore, impacted groundwater has migrated along with groundwater flow in a northeasterly

direction. Downgradient of the recovery wells the groundwater flows northeasterly with little vertical gradient except near the eastern branch of Reedy Fork Creek where it moves upward and discharges into the stream.

Cross-section B – B' trends east-west, just south of the pond on the Wysong property. The flow net shows that groundwater discharges to both the pond and the stream north of the pond. None of the surface water samples collected from the pond or the stream north of the pond contained contaminants.

Deep groundwater is present in bedrock fractures, and for purposes of this discussion ranges from approximately 75 feet bgs to 300 feet bgs. Packer testing performed on well WSW D in the early 1990's and at bedrock wells BR-1 and BR-2 in 2007 indicated that water producing fractures exist to the bottom of these wells. At this site, the predominant fracture pattern trends northeasterly, therefore it is assumed that deep groundwater flow is to the northeast, although an insufficient number of deep monitoring wells are available to develop a potentiometric surface map. The fate and transport of dissolved-phase CVOCs in deep groundwater is influenced most significantly by bedrock fracture patterns.

TABLE 1
Constituents of Concern and Remedial Goals
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Soil	NCDENR Protection of Groundwater Remediation Goal (µg/kg)	NCDENR Health-Based Remediation Goal (µg/kg)
Tetrachloroethene	5	550
Trichloroethene	18	2,800
1,1,1-Trichloroethane	1,200	640,000
1,1-Dichloroethane	30	3,300
1,2-Dichloroethane	2	430
1,1-Dichloroethene	46	49,000
Vinyl Chloride	0.19	60
Methylene Chloride	23	11,000
1,4-Dioxane	12	44,000
Soil Vapor	**Residential Screening Level (µg/m^3)**	**Industrial Screening Level (µg/m^3)**
Tetrachloroethene	41	210
Trichloroethene	120	610
1,1,1-Trichloroethane	10,400	44,000
1,1-Dichloroethene	420	1,760
1,4-Dioxane	32 *	160 *
Groundwater	**NCAC 2L Standard (µg/L)**	**IHSB Residential Vapor Intrusion Screening Levels (µg/L)**
1,1,1-Trichloroethane	200	1500
1,1-Dichloroethane	6.0	65
1,2-Dichloroethane	0.4	20
1,1-Dichloroethene	7.0	38
Trichloroethene	3.0	30
Tetrachloroethene	0.7	5.7
Vinyl Chloride	0.03	1.5
1,4-Dioxane	3.0	NE
Surface Water	**NCAC 2B Standard (µg/L)**	**Risk-Based Screening Level for Adolescent Contact ** (µg/L)**
1,4-Dioxane	110	20000
Vinyl Chloride	2.4	38

NOTES:
* indicates value calculated by NC IHSB
** calculated based on 45-day per year adolescent exposure frequency to Reedy Fork Creek (HHRA, July 2009)
NE = not established

TABLE 2
Summary of TCA Tank Soil Samples, August 2006
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Sample ID Date Collected	SB-1 (3-4') 8/22/2006	SB-1 (13-14') 8/22/2006	SB-2 (17-18') 8/22/2006	SB-3 (9-10') 8/22/2006	SB-4 (17-18') 8/22/2006	SB-5 (2-3') 8/22/2006	SB-6 (1-2') 8/22/2006	NCDENR Protection of Groundwater Remediation Goal	NCDENR Health-Based Remediation Goal
VOCs (EPA Method 8260B)									
Acetone	<21	26	<20	<22	<18	79	<22	24,000	12,000,000
Chloroform	4.9J	<5.8	<5.0	<5.5	<4.6	<4.7	<5.5	340	300
Ethylbenzene	4.0J	<5.8	<5.0	<5.5	<4.6	<4.7	<5.5	8,200	5,700
1,2-Dichlorobenzene	13	<12	<9.9	<11	<9.2	<9.4	<11	240	380,000
1,1-Dichloroethane	6.2	<5.8	<5.0	<5.5	<4.6	<4.7	<5.5	30	3,300
1,2-Dichloroethane	**22**	<5.8	<5.0	<5.5	<4.6	<4.7	<5.5	2.0	430
1,1-Dichloroethene	**900**	<0.85	<5.0	<5.5	<4.6	<4.7	<5.5	46	49,000
1,4- Dioxane	**570**	**1,800,000**	**150,000**	**32,000**	**11,000**	<6.2	<6.9	12	44,000
Tetrachloroethene	**20**	<12	<9.9	<11	<9.2	<9.4	<11	5.0	550
1,1,1-Trichloroethane	**28,000**	18	<5.0	<5.5	<4.6	<4.7	<5.5	1,200	640,000
Trichloroethene	**57**	<5.8	<5.0	<5.5	<4.6	<4.7	<5.5	18	2,800
Toluene	26	<5.8	<5.0	<5.5	<4.6	<4.7	<5.5	5,500	820,000
Xylenes	21.1	<12	<9.9	<11	<9.2	<9.4	<11	6,000	130,000

NOTES:
All values reported as micrograms per kilogram.
Bold - Value exceeds NCDENR Protection of Groundwater Remediation Goals, IHSB January 2010
Boxed - Value exceeds NCDENR Health-Based Remediation Goal, IHSB January 2010
J - Estimated value

TABLE 3
Summary of TCA Tank Soil Samples, August 2007
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Sample ID Date Collected	SB-7A (3-4') 8/2/2007	SB-7B (11-12') 8/2/2007	SB-8A (12-13') 8/2/2007	SB-8B (16-17') 8/2/2007	SB-9A (3-4') 8/2/2007	SB-9B (16-17') 8/2/2007	SB-10A (4-5') 8/2/2007	SB-10B (13-14') 8/2/2007	NCDENR Protection of Groundwater Remediation Goal	NCDENR Health-Based Remediation Goal
VOCs (EPA Method 8260B)										
Chloroethane	<12	<11	<12	<12	<11	15	<12	<11	16,000	2,100,000
Acetone	59	76	220	<23	<22	<22	<23	<22	24,000	12,000,000
Chloroform	<5.8	<5.7	<5.8	<5.8	72	21	6.1	<5.5	340	300
Chloromethane	<12	<11	<12	<12	<11	12	<12	<11	15	24,000
4-Methyl-2-pentanone	<12	<11	<12	<12	76	14	<12	<11	NS	1,100,000
Ethylbenzene	<5.8	<5.7	<5.8	<5.8	29	7.9	12	<5.5	8,200	5,700
1,2-Dichlorobenzene	<12	<11	2.6J	<12	39	18	36	<11	240	380,000
1,1-Dichloroethane	3.1J	<5.7	<5.8	<5.8	140	**930**	11	<5.5	30	3,300
1,2-Dichloroethane	<5.8	**5.4J**	**3.9J**	<5.8	**240**	**78**	**17**	<5.5	2.0	430
1,1-Dichloroethene	**1,400**	41	36	<5.8	**4,000**	**1,700**	**1,400**	<5.5	46	49,000
cis-1,2-Dichloroethene	<5.8	<5.7	<5.8	<5.8	5.0J	<5.4	<5.8	<5.5	360	160,000
Isopropyl ether (IPE)	<5.8	<5.7	<5.8	<5.8	30	8.6	<5.8	<5.5	320	270,000
Methylene Chloride	<12	<11	<12	<12	**73**	18	9.0J	<11	23	11,000
Tetrachloroethene	**47**	<11	**7.3J**	<12	**290E**	**63**	**130**	<11	5.0	550
1,1,1-Trichloroethane	**22,000**	230	310	89	**88,000**	**160,000**	**45,000**	12	1,200	640,000
1,1,2-Trichloroethane	<5.8	<5.7	<5.8	<5.8	19	7.0	<5.8	<5.5	NS	1,100
Trichloroethene	**65**	4.5J	8.6	<5.8	**260**	**170**	**230**	<5.5	18	2,800
Trichlorofluoromethane	<5.8	<5.7	<5.8	<5.8	14	<5.4	<5.8	<5.5	24,000	160,000
Vinyl chloride	<12	<11	<12	<12	<11	**4.9J**	<12	<11	0.190	60
Toluene	3.3J	<5.7	2.9J	<5.8	230	64	85	<5.5	5,500	820,000
Xylenes	<12	<11	<12	<12	128	37.2	57	<11	6,000	130,000
8260 SIMS Method										
1,4- Dioxane	**88**	**50,000**	**1,500,000**	**770,000**	**8,400**	**34,000**	**1,000**	**590,000**	12	44,000
Total CVOCs	**23,515**	**281**	**368**	**89**	**92,993**	**162,986**	**46,824**	**12**		

NOTES:
Samples collected by others prior to Hart & Hickman involvement
All values reported as micrograms per kilogram.
Bold - Value exceeds NCDENR Protection of Groundwater Remediation Goals, IHSB January 2010
Boxed - Value exceeds NCDENR Health-Based Remediation Goal, IHSB January 2010
NS - No Standard
J - Estimated value between reporting limit and detection limit
E - Estimated value above calibration range

TABLE 5
Summary of Three Most Recent Groundwater Sampling Event
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride
MW-1	6/22/2006	ND	**9.6**	ND	**720**	ND	NS	**1**	140	2	ND	ND
	12/19/2007	ND	**11**	ND	**70**	ND	**170**	**1.2**	130	2.1	ND	ND
	6/26/2008	ND	**13**	ND	**55**	ND	**140**	**1.2**	92	1.9	ND	ND
MW-2	8/25/2005	ND	ND	ND	**12.5**	ND	NS	ND	3.78	ND	ND	ND
	3/13/2006	ND	ND	ND	**13.6**	ND	NS	ND	4.08	ND	ND	ND
	6/19/2006	ND	ND	ND	**8.7**	ND	NS	ND	2.8	ND	ND	ND
MW-3	8/17/2004	ND	1.02	**2.1**	3.73	ND	NS	ND	ND	ND	ND	ND
	3/13/2006	ND	1.47	**2.32**	ND	ND	NS	ND	ND	ND	ND	ND
	6/20/2006	ND	2.8	**2**	6	ND	NS	ND	1.2	ND	ND	ND
MW-4	8/25/2005	ND	ND	ND	**38.7**	ND	NS	ND	ND	ND	ND	ND
	3/13/2006	ND	2.4	ND	**20.2**	ND	NS	ND	2.4	ND	ND	ND
	6/20/2006	ND	1.8	ND	**44**	ND	NS	ND	1.9	ND	ND	ND
MW-5D	8/25/2005	ND	ND	ND	**87.5**	ND	NS	ND	27.3	ND	ND	ND
	3/13/2006	ND	ND	ND	**96.4**	ND	NS	ND	25.5	ND	ND	ND
	6/23/2006	ND	2.2	ND	**92**	ND	NS	ND	26	ND	ND	ND
MW-6	8/17/2004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/22/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
MW-8	8/25/2005	ND	ND	ND	**121**	ND	NS	ND	37.8	ND	ND	ND
	3/13/2006	ND	ND	ND	**122**	ND	NS	ND	36.4	ND	ND	ND
	6/22/2006	ND	**6.7**	ND	**140**	ND	NS	ND	40	ND	ND	ND
MW-9D	3/13/2006	ND	ND	ND	ND	ND	NS	ND	**1,560**	ND	ND	ND
	12/19/2007	ND	**85**	ND	**390**	ND	**240**	**9.1J**	**2,000**	7.4J	ND	ND
	6/26/2008	ND	**60**	ND	**290**	ND	**1,662**	**6.3J**	**1,300**	5.4J	ND	ND
NCAC 2L Standard		***3000***	***6.0***	***0.4***	***7.0***	***70***	***3.0***	***0.7***	***200***	***NS***	***3.0***	***0.03***
Risk Based Screening Level [1]		***NS***	***65***	***20***	***38***	***NS***	***NS***	***5.7***	***1500***	***44***	***30***	***1.5***

1. IHSB Residential Vapor Intrusion Screening Level for Groundwater, January 2010
Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
NS = no standard

TABLE 5
Summary of Three Most Recent Groundwater Sampling Events
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride
MW-10	6/22/2006	ND	**14**	**7.9**	**870**	ND	NS	ND	60	2.2	1.5	ND
	12/19/2007	ND	**15**	**9.0**	**870**	ND	**952**	**1.7**	52	2.5	1.8J	ND
	6/26/2008	ND	**10**	**7.1**	**350**	ND	**405**	**1.1**	31	2.2	1.1J	ND
MW-11	8/16/2004	ND	ND	ND	ND	ND	NS	ND	ND	ND	**5.22**	ND
	3/13/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	**3.82**	ND
	6/21/2006	ND	ND	ND	ND	1.1	NS	ND	ND	ND	**4.1**	ND
MW-12	5/17/1995	ND	ND	ND	2.4	ND	NS	ND	2.1	ND	ND	ND
MW-13D	6/22/2006	ND	**13**	ND	**72**	ND	NS	ND	22	ND	1.8	ND
	12/19/2007	ND	**13**	**0.71J**	**130**	ND	**62**	0.62J	45	ND	0.71J	**1.2J**
	6/25/2008	ND	**8.4**	ND	**140**	ND	**174**	ND	26	ND	ND	ND
MW-14	3/27/2008	ND	**97**	**8.6J**	**1,100**	ND	**520**	ND	**550**	6.3J	ND	ND
	6/27/2008	ND	**110**	**9.2J**	**1,700**	ND	**2,576**	ND	**750**	6.4J	ND	ND
	10/1/2008	ND	**100**	**8.6J**	**1,400**	ND	**490**	ND	**540**	6.2J	ND	ND
MW-15	8/25/2005	ND	ND	ND	**67**	ND	NS	ND	108	ND	ND	ND
	3/13/2006	ND	ND	ND	**90.2**	ND	NS	ND	156	ND	ND	ND
	6/22/2006	ND	**12**	ND	**74**	ND	NS	ND	120	1.1	ND	ND
MW-16D	8/16/2004	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	6/21/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
MW-17	8/17/2004	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	6/19/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
NCAC 2L Standard		***3000***	***6.0***	***0.4***	***7.0***	***70***	***3.0***	***0.7***	***200***	***NS***	***3.0***	***0.03***
Risk Based Screening Level [1]		***NS***	***65***	***20***	***38***	***NS***	***NS***	***5.7***	***1500***	***44***	***30***	***1.5***

1. IHSB Residential Vapor Intrusion Screening Level for Groundwater, January 2010
Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
NS = no standard

TABLE 5
Summary of Three Most Recent Groundwater Sampling Events
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride
MW-18	8/17/2004	ND	ND	ND	**93.6**	ND	NS	ND	12.9	ND	ND	ND
	3/13/2006	ND	ND	NS	**39.9**	ND	NS	ND	ND	ND	ND	ND
	6/20/2006	ND	ND	NS	**81**	ND	NS	ND	9.5	ND	ND	ND
MW-19	2/28/2005	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	8/25/2005	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	6/20/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-20	8/16/2004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/25/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-21D	3/27/2008	ND	**8.6**	ND	**23**	1.2	**61**	ND	13	ND	**5.4**	ND
	6/25/2008	ND	**11**	ND	**43**	0.98J	**70**	ND	19	ND	**5.5**	ND
	10/1/2008	ND	**10**	ND	**32**	1.1	**62**	ND	13	ND	**5.3**	ND
MW-22	3/27/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-23D	3/27/2008	ND	**84**	ND	**950**	ND	**2,634**	ND	**1,600**	ND	ND	ND
	6/26/2008	ND	**98**	ND	**1,400**	ND	**660**	ND	**2,000**	ND	ND	ND
	10/1/2008	ND	**78**	ND	**920**	ND	**560**	ND	**1,400**	ND	ND	ND
WSW-D	3/27/2008	ND	**14**	**0.88J**	**140**	ND	**208**	0.69J	51	0.51J	0.52J	ND
	6/27/2008	ND	**12**	**0.75J**	**120**	ND	**94**	0.69J	48	ND	ND	ND
	10/1/2008	ND	**9.7**	**0.55J**	**110**	ND	**153**	0.63J	32	ND	ND	ND
PWR-1	8/11/2006	ND	1.6	**0.625**	**500**	ND	**39**	ND	**250**	2.4	1.7J	ND
	12/18/2007	ND	ND	ND	**290**	ND	ND	ND	140	ND	ND	ND
	6/25/2008	ND	0.67J	ND	**200**	ND	ND	ND	110	ND	0.69J	ND
NCAC 2L Standard		***3000***	***6.0***	***0.4***	***7.0***	***70***	***3.0***	***0.7***	***200***	***NS***	***3.0***	***0.03***
Risk Based Screening Level [1]		***NS***	***65***	***20***	***38***	***NS***	***NS***	***5.7***	***1500***	***44***	***30***	***1.5***

1. IHSB Residential Vapor Intrusion Screening Level for Groundwater, January 2010
Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
NS = no standard

TABLE 5
Summary of Three Most Recent Groundwater Sampling Events
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride
PWR-2	8/11/2006	ND	**19**	**2.0**	**200**	ND	**76**	ND	47	1.8	ND	ND
	12/17/2007	ND	**27**	ND	**340**	ND	**57**	ND	67	ND	ND	ND
	6/26/2008	ND	**29**	**3.0**	**310**	ND	**120**	ND	69	2.5	0.66J	ND
PWR-3	5/23/2007	ND	ND	ND	**11**	ND	ND	ND	1.4	ND	ND	ND
	12/17/2007	ND	0.74J	ND	**16**	ND	ND	ND	2.0	ND	ND	ND
	6/25/2008	ND	0.67J	ND	**11**	ND	ND	ND	1.5	ND	ND	ND
PWR-4	5/23/2007	ND	**45**	**5.0**	**590**	ND	**200**	ND	95	4	1.1	ND
	12/18/2007	ND	**64**	**7.4J**	**600**	ND	**210**	ND	140	6.1J	ND	ND
	6/26/2008	ND	**54**	**6.1J**	**700**	ND	**270**	ND	100	ND	ND	ND
PWR-5	5/23/2007	ND	**26**	ND	**260**	ND	**120**	**1.4**	**460**	3.7	ND	ND
	12/18/2007	ND	**24**	ND	**190**	ND	**190**	ND	**490**	ND	ND	ND
	6/26/2008	ND	**22**	ND	**150**	ND	**100**	ND	**440**	ND	ND	ND
PWR-6	8/30/2007	ND	**170**	ND	**1,100**	ND	**780**	ND	**1,800**	ND	ND	ND
	12/19/2007	ND	**170**	ND	**1,100**	ND	**510**	ND	**2,200**	ND	ND	ND
	6/27/2008	ND	**140**	ND	**960**	ND	**480**	ND	**1,800**	ND	ND	ND
TW-1	6/20/2006	ND	**7.2**	ND	**77**	ND	**29**	ND	16	ND	ND	ND
	12/18/2007	ND	**6.6**	**0.75J**	**77**	ND	**29**	ND	14	0.61J	ND	ND
	6/25/2008	ND	5.0	**0.59J**	**52**	ND	**41**	ND	9.3	ND	ND	ND
TW-2	8/26/2005	ND	ND	ND	**45.6**	ND	NS	ND	20.8	ND	ND	ND
	3/14/2006	ND	ND	ND	**12**	ND	NS	ND	53.8	ND	ND	ND
	6/21/2006	ND	ND	ND	**40**	ND	ND	ND	16	ND	ND	ND
TW-3	8/26/2005	ND	ND	ND	1.7	ND	NS	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	1.3	ND	NS	ND	ND	ND	ND	ND
	6/20/2006	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND
NCAC 2L Standard		***3000***	***6.0***	***0.4***	***7.0***	***70***	***3.0***	***0.7***	***200***	***NS***	***3.0***	***0.03***
Risk Based Screening Level [1]		***NS***	***65***	***20***	***38***	***NS***	***NS***	***5.7***	***1500***	***44***	***30***	***1.5***

1. IHSB Residential Vapor Intrusion Screening Level for Groundwater, January 2010
Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
NS = no standard

TABLE 5
Summary of Three Most Recent Groundwater Sampling Events
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride
TW-14	2/21/2000	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	8/15/2000	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	8/23/2001	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
TW-15	6/21/2006	ND	1.8	ND	**120**	ND	**46**	ND	55	2.3	ND	ND
	12/18/2007	ND	2.2	**0.85J**	**140**	ND	**60**	ND	48	2.7	0.64J	ND
	6/26/2008	ND	1.9	ND	**95**	ND	**59**	ND	34	2.2	ND	ND
TW-16	6/21/2006	ND	**82**	0.018	**1,500**	ND	**1,000E**	**2.1**	**640**	15	**4.6**	**6.1**
	12/18/2007	ND	**180**	**17**	**2,300**	ND	**980**	ND	**910**	15	ND	ND
	6/26/2008	ND	**170**	ND	**2,100**	ND	**1,000**	ND	**810**	ND	ND	ND
RW-1	6/22/2006	ND	**70**	**1.9**	**330**	ND	NS	**5.2**	**1,400**	10	2.0	ND
	6/27/2008	ND	5.3	ND	**65**	ND	**27**	ND	20	ND	ND	ND
	10/1/2008	ND	5.4	ND	**46**	ND	**82**	0.54J	30	ND	ND	ND
RW-2	6/22/2006	ND	**8.3**	ND	**86**	ND	NS	**4.4**	**1,300**	ND	ND	ND
	6/27/2008	ND	ND	ND	**290**	ND	**6.4**	ND	**2,700**	ND	ND	ND
	10/1/2008	ND	**12**	ND	**300**	ND	**1,816**	**4.1**	**1,500**	ND	ND	ND
BR-1	5/24/2007	ND	**34**	**3.6**	**390**	ND	NS	ND	77	3.1	ND	ND
	12/19/2007	ND	**44**	**5.0J**	**550**	ND	**150**	ND	110	ND	ND	ND
	6/26/2008	ND	**38**	ND	**500**	ND	**190**	ND	79	ND	ND	ND
BR-2	8/30/2007	ND	**100**	ND	**1,300**	ND	**670**	ND	**2,300**	ND	ND	ND
	12/19/2007	ND	**200**	ND	**1,600**	ND	**610**	ND	**2,600**	ND	ND	ND
	6/27/2008	ND	**95**	ND	**1,000**	ND	**320**	ND	**2,200**	ND	ND	ND
NCAC 2L Standard		***3000***	***6.0***	***0.4***	***7.0***	***70***	***3.0***	***0.7***	***200***	***NS***	***3.0***	***0.03***
Risk Based Screening Level [1]		***NS***	***65***	***20***	***38***	***NS***	***NS***	***5.7***	***1500***	***44***	***30***	***1.5***

1. IHSB Residential Vapor Intrusion Screening Level for Groundwater, January 2010
Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
NS = no standard

TABLE 6
Summary of Three Most Recent Surface Water Sampling Events
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride
SW-A	10/22/2007	1.8J	31	3.5	110	ND	**200**	ND	13	ND	0.59J	**18**
SW-1	8/26/2005	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	6/22/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-2	8/26/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/22/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-3	8/26/2005	ND	ND	ND	0.83	ND	NS	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	1.4	ND	NS	ND	ND	ND	ND	ND
	6/22/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-4	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-5	6/23/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-6	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
SW-7	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2007	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
SW-8	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-9	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-10	6/23/2006	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-11	6/23/2006	ND	ND	ND	1.7	ND	24	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND
	10/22/2007	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND
NCAC 2B Standard		***550***	***20000***	***37***	***5400***	***4900***	***110***	***3.3***	***2500***	***16***	***30***	***2.4***
Risk Based Screening Level		***190000***	***610***	***40***	***3000***	***3900***	***20000***	***8.5***	***80000***	***61***	***370***	***38***

NOTES:

"NCAC 2B Standard" based on the most stringent of human health or freshwater aquatic life values, as applicable to a Class C water per 2-5-2010 EPA and NC standards and criteria

Risk Based Screening Level calculated based on 45-day per year adolescent exposure frequency to Reedy Fork Creek (HHRA, July 2009)

Concentrations Reported in Micrograms per Liter (µg/L)

Bold = Concentration Exceeds NCAC 2B Standard

TABLE 7
Summary of Pore Water Sampling Events
Wysong & Miles Corporation
Greensboro, North Carolina
H&H Job No. WYM-002

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride
SW-4A	6/23/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-5A	6/23/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
SW-6A	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-7A	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-8A	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-9A	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2007	ND	ND	ND	ND	ND	6.0	ND	ND	ND	ND	ND
SW-10A	6/23/2006	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-11A	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NCAC 2B Standard		***550***	***20000***	***37***	***5400***	***4900***	***110***	***3.3***	***2500***	***16***	***30***	***2.4***
Risk Based Screening Level		***190000***	***610***	***40***	***3000***	***3900***	***20000***	***8.5***	***80000***	***61***	***370***	***38***

NOTES:
"NCAC 2B Standard" based on the most stringent of human health or freshwater aquatic life values, as applicable to a Class C water per 2-5-2010 EPA and NC standards and criteria
Risk Based Screening Level calculated based on 45-day per year adolescent exposure frequency to Reedy Fork Creek (HHRA, July 2009)
Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2B Standard

PENNSTON PROPERTY

PENNSTON PROPERTY

U.S. HIGHWAY 29

OLD ECKERSON ROAD

POND

WYSONG & MILES FACILITY

WYSONG & MILES PROPERTY LINE

SW-7
SW-7A
SW-6
SW-6A
SW-5
SW-4
SW-4A
PWR-3
TW-15
TW-14
(ABANDONED)
SW-11A
SW-11
PWR-2
SW-A
PWR-1
TW-2
TW-1
BR-1
SW-10A
SW-10
PWR-4
SW-1
SW-2
MW-19
MW-23D
MW-18
MW-22
BR-2
TW-16
SW-3
MW-14
SW-9
SW-9A
TW-3
MW-17
MW-10
PWR-6
MW-21D
PWR-5
MW-4
MW-13D
MW-20
RW-2
WSW D
MW-1
MW-12
MW-11
MW-16D
MW-9D
MW-7
RW-1
MW-2
MW-15
MW-5D
MW-6
MW-8
SW-8
SW-8A
5829 CARLA LANE
30-40 FT WELL
3711 ANITA LANE
TEXACO
WELL
MW-3
3706 ANITA LANE
72 FT DEEP

LEGEND:

- SHALLOW MONITORING WELL
- RECOVERY WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- WATER SUPPLY WELL
- SURFACE WATER SAMPLE

N

APPROXIMATE
0 300 600
SCALE IN FEET

NOTES:

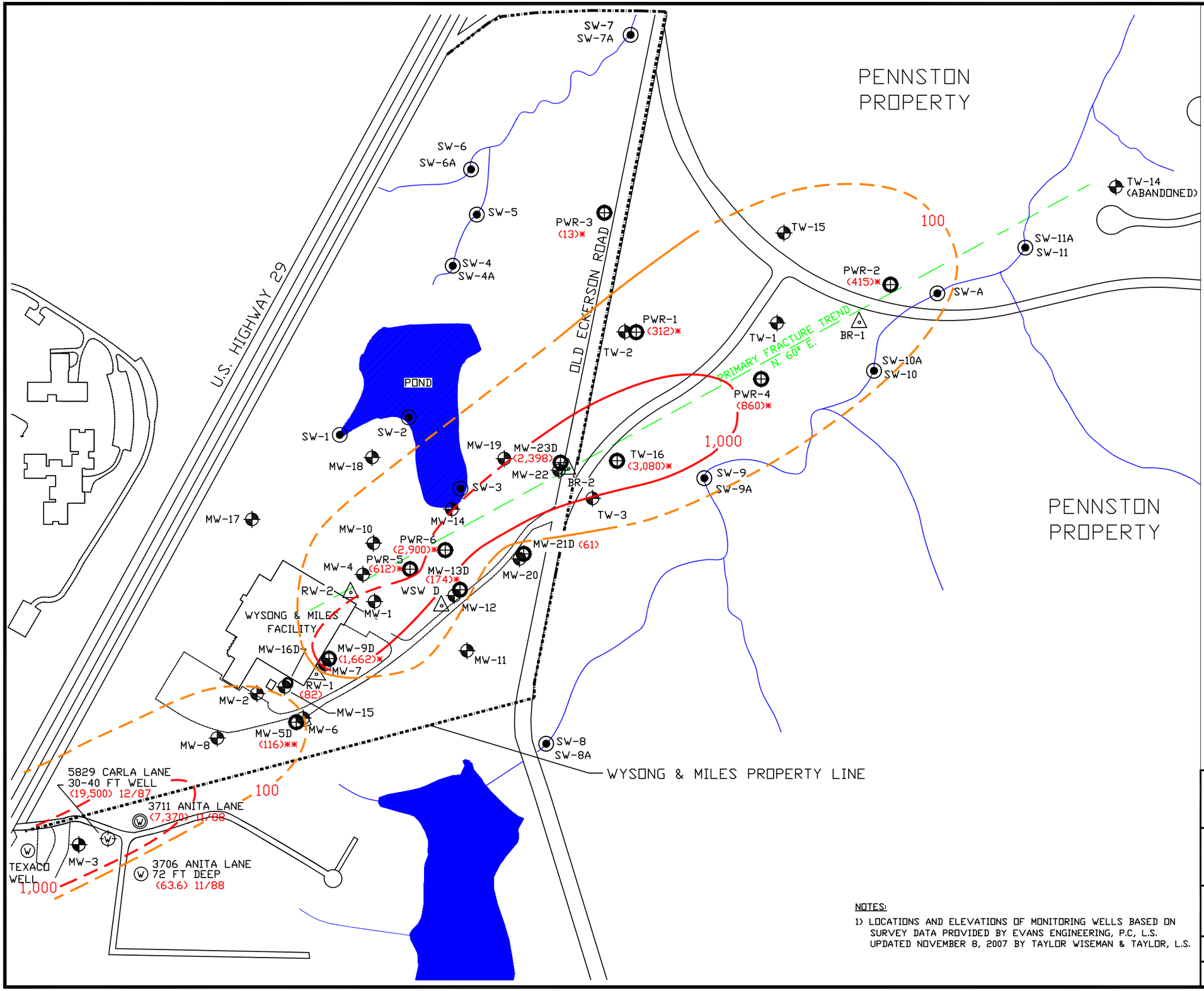
1) LOCATIONS AND ELEVATIONS OF MONITORING WELLS BASED ON SURVEY DATA PROVIDED BY EVANS ENGINEERING, P.C, L.S. UPDATED NOVEMBER 8, 2007 BY TAYLOR WISEMAN & TAYLOR, L.S.

SITE LAYOUT

WYSONG & MILES
GREENSBORO, NORTH CAROLINA

Hart & Hickman
A PROFESSIONAL CORPORATION
3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

DATE: 12/3/09	REVISION NO. 0
JOB NO: WYM-002	FIGURE NO. 2



LEGEND:

- SHALLOW MONITORING WELL
- RECOVERY WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- WATER SUPPLY WELL
- SURFACE WATER SAMPLE

SAMPLING NOTES:

TOTAL CVOC CONCENTRATIONS IN ug/L
* JUNE 2008 DATA
** JUNE 2006 DATA
ALL OTHER DATA OCTOBER 2008
UNLESS NOTED OTHERWISE.

PUMP & TREAT SYSTEM INACTIVE

OFF-SITE ISOPLETHS DRAWN BASED ON DATA FROM 1987/1988. CURRENT EXTENT AND CONCENTRATIONS OF RESIDUAL IMPACTS IS NOT KNOWN

N

APPROXIMATE
0 300 600
SCALE IN FEET

NOTES:

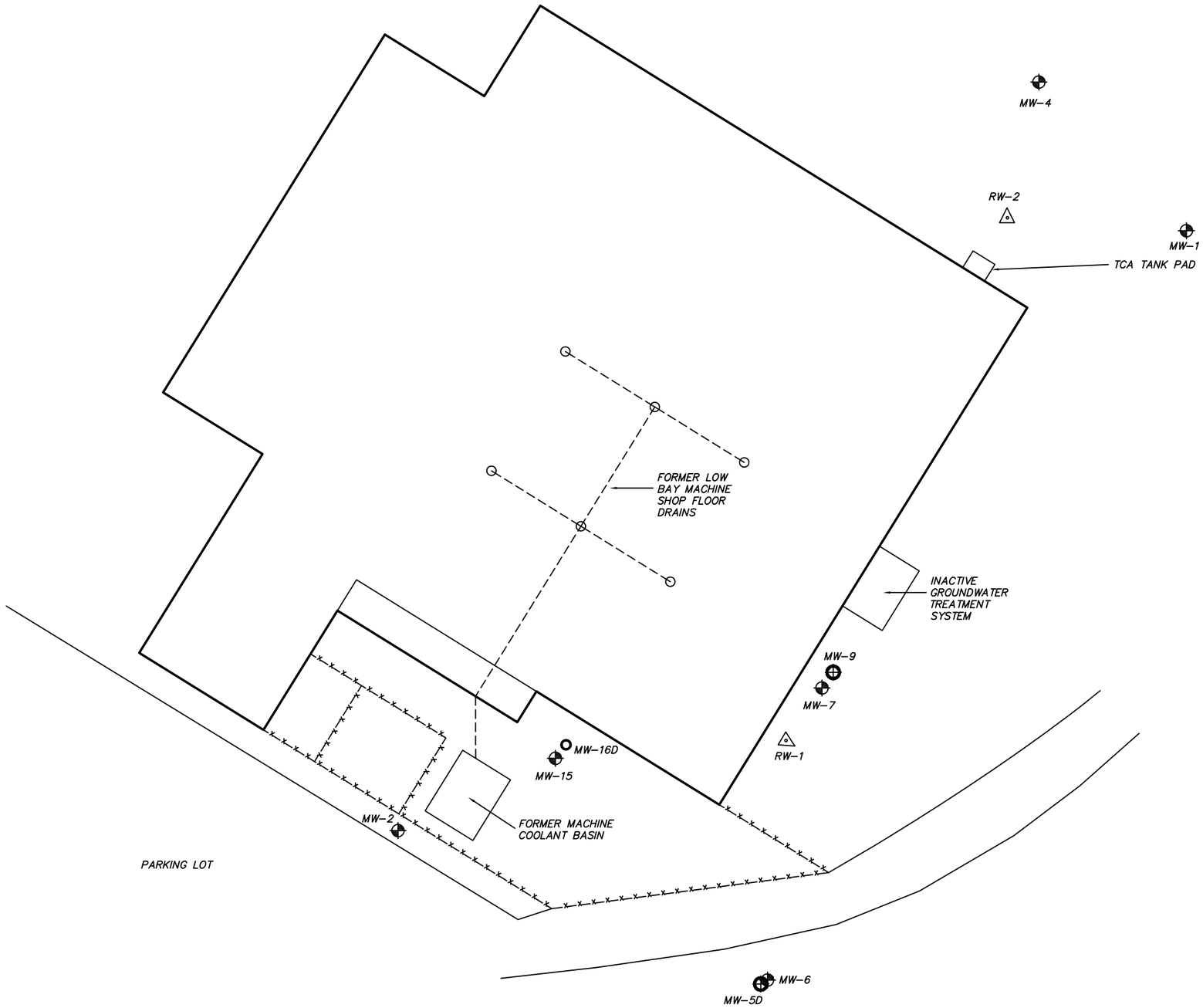
1) LOCATIONS AND ELEVATIONS OF MONITORING WELLS BASED ON SURVEY DATA PROVIDED BY EVANS ENGINEERING, P.C, L.S. UPDATED NOVEMBER 8, 2007 BY TAYLOR WISEMAN & TAYLOR, L.S.

INTERPRETED CVOC ISOPLETHS (ug/L) INTERMEDIATE GROUNDWATER OCTOBER 2008

WYSONG & MILES
GREENSBORO, NORTH CAROLINA

Hart & Hickman
A PROFESSIONAL CORPORATION
3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

DATE: 12/3/09	REVISION NO. 0
JOB NO: WYM-002	FIGURE NO. 3



LEGEND:

- SHALLOW MONITORING WELL
- RECOVERY WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- WATER SUPPLY WELL
- SURFACE WATER SAMPLE
- SOIL VAPOR POINT

N

APPROXIMATE
0 50 100
SCALE IN FEET

TITLE

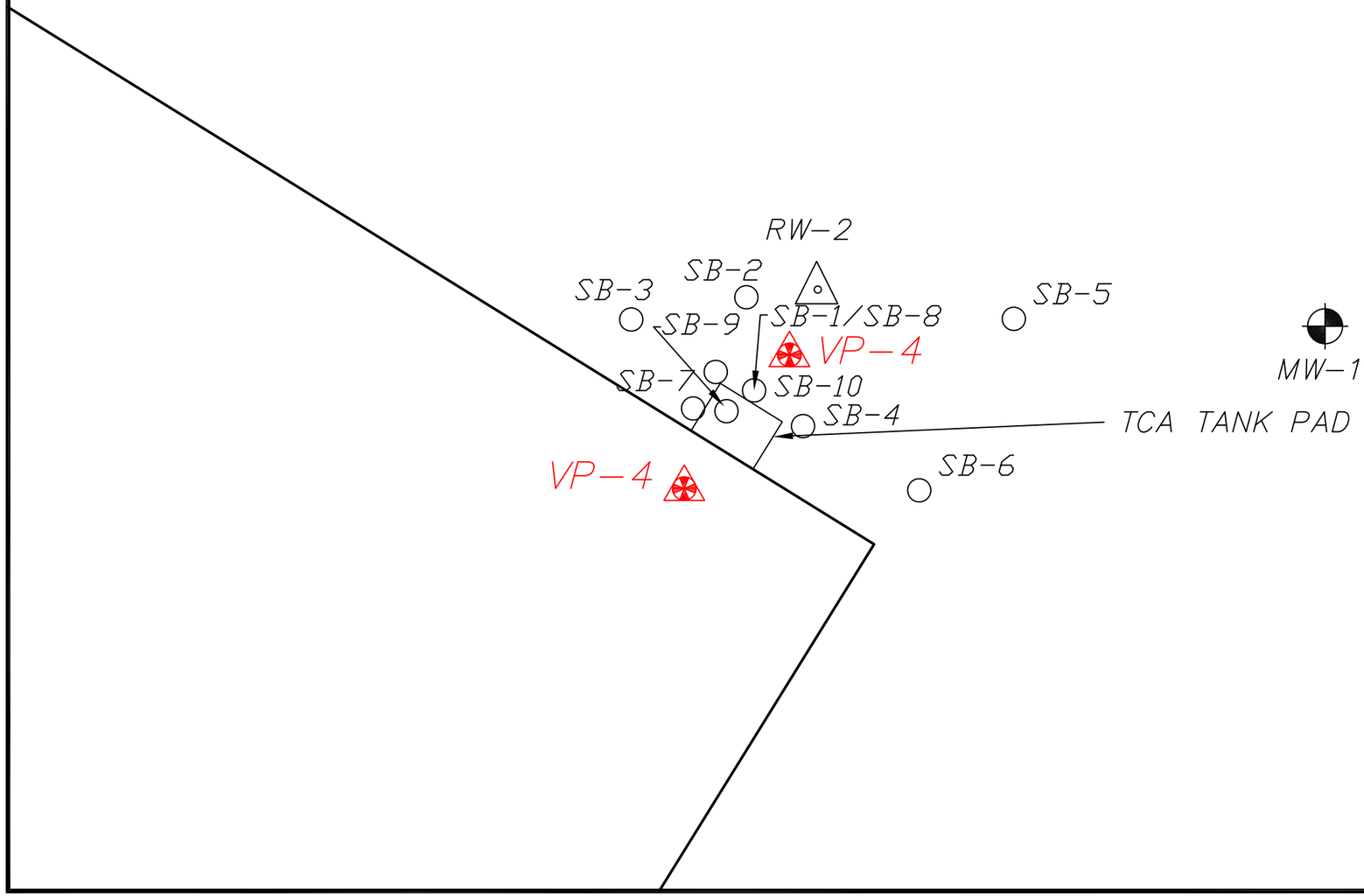
SOURCE AREA LOCATIONS

PROJECT

WYSONG & MILES
GREENSBORO, NORTH CAROLINA

Hart & Hickman
A PROFESSIONAL CORPORATION
3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

DATE: 12/3/09	REVISION NO. 0
JOB NO: WYM-002	FIGURE NO. 4



LEGEND:

- SHALLOW MONITORING WELL
- RECOVERY WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- WATER SUPPLY WELL
- SURFACE WATER SAMPLE
- SOIL VAPOR POINT
- SOIL BORING

N

APPROXIMATE
0 20 40
SCALE IN FEET

TITLE

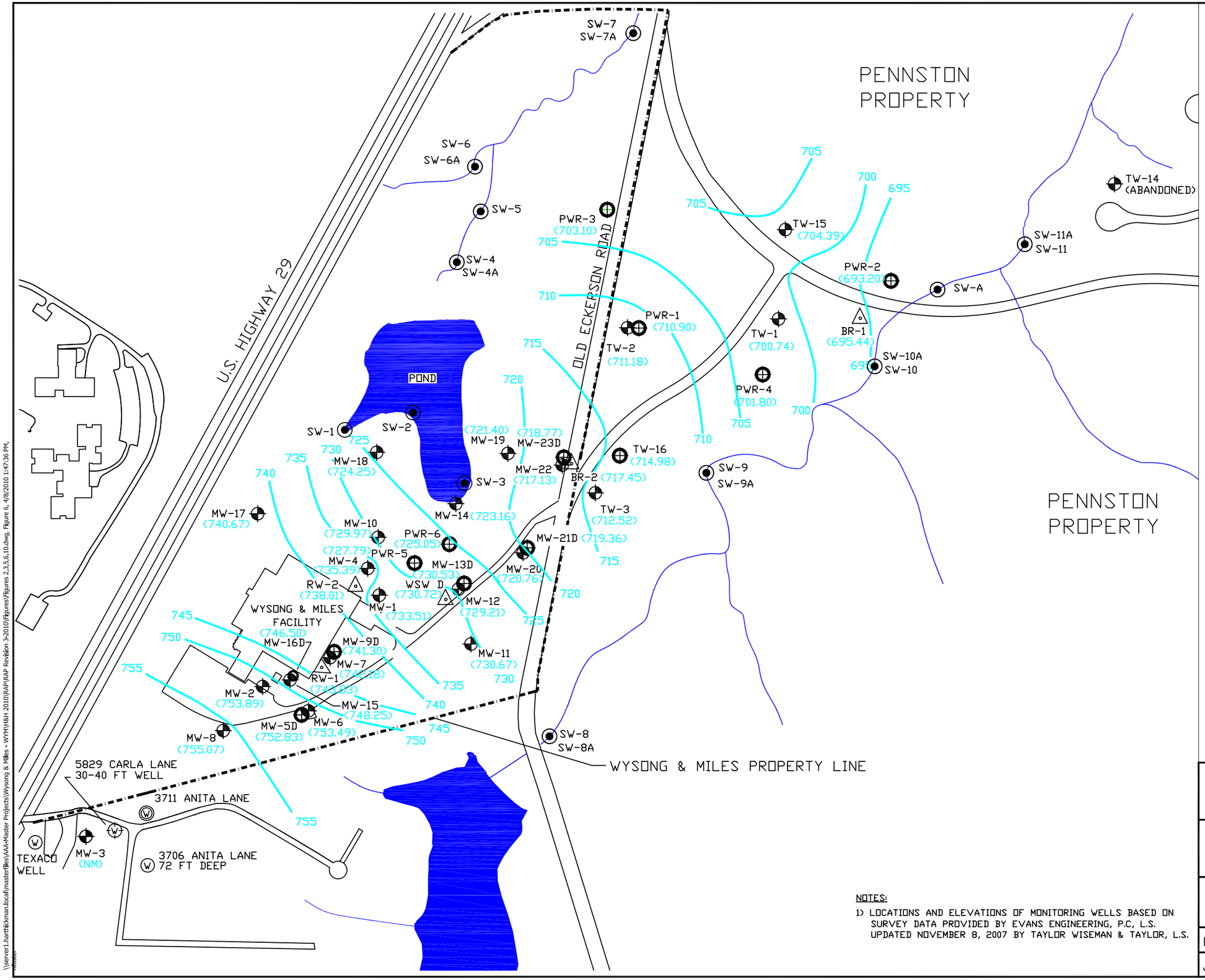
SOIL SAMPLE LOCATIONS AT THE TCA TANK AREA

PROJECT

WYSONG & MILES
GREENSBORO, NORTH CAROLINA

Hart & Hickman
A PROFESSIONAL CORPORATION
3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

DATE: 12/3/09	REVISION NO. 0
JOB NO: WYM-002	FIGURE NO. 5



LEGEND:

- SHALLOW MONITORING WELL
- RECOVERY WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- WATER SUPPLY WELL
- SURFACE WATER SAMPLE

PUMP & TREAT SYSTEM INACTIVE

N

APPROXIMATE
0 300 600
SCALE IN FEET

NOTES:

1) LOCATIONS AND ELEVATIONS OF MONITORING WELLS BASED ON SURVEY DATA PROVIDED BY EVANS ENGINEERING, P.C, L.S. UPDATED NOVEMBER 8, 2007 BY TAYLOR WISEMAN & TAYLOR, L.S.

POTENTIOMETRIC SURFACE MAP
OCTOBER 1, 2008

WYSONG & MILES
GREENSBORO, NORTH CAROLINA

Hart & Hickman
A PROFESSIONAL CORPORATION
3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

DATE: 12/3/09	REVISION NO. 0
JOB NO: WYM-002	FIGURE NO. 6

PENNSTON PROPERTY

PENNSTON PROPERTY

U.S. HIGHWAY 29

OLD ECKERSON ROAD

SW-7
SW-7A

SW-6
SW-6A

SW-5

SW-4
SW-4A

PWR-3

PWR-1

TW-2

TW-15

TW-14
(ABANDONED)

PWR-2

SW-A

SW-11A
SW-11

A'

BR-1

TW-1

SW-10A
SW-10

PRIMARY FRACTURE TREND
N. 60° E./PWR-4
FOLIATION
65° E.

POND

B

SW-1

SW-2

MW-18

MW-19

MW-23D

MW-22

C

BR-2

TW-16

SW-3

MW-14

TW-3

SW-9
SW-9A

MW-17

MW-10

PWR-6

PWR-5

MW-4

MW-13D

MW-21D

MW-20

RW-2

WSW D

MW-12

C'

B'

WYSONG & MILES
FACILITY

MW-1

MW-16D

MW-9D

MW-7

RW-1

MW-11

MW-2

MW-15

MW-5D

MW-6

A

MW-8

SW-8
SW-8A

WYSONG & MILES PROPERTY LINE

5829 CARLA LANE
30-40 FT WELL

3711 ANITA LANE

TEXACO
WELL

MW-3

3706 ANITA LANE
72 FT DEEP

LEGEND:

- SHALLOW MONITORING WELL
- RECOVERY WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- WATER SUPPLY WELL
- SURFACE WATER SAMPLE

N

APPROXIMATE
0 300 600
SCALE IN FEET

NOTES:

1) LOCATIONS AND ELEVATIONS OF MONITORING WELLS BASED ON SURVEY DATA PROVIDED BY EVANS ENGINEERING, P.C, L.S. UPDATED NOVEMBER 8, 2007 BY TAYLOR WISEMAN & TAYLOR, L.S.

GEOLOGIC CROSS-SECTION INDEX

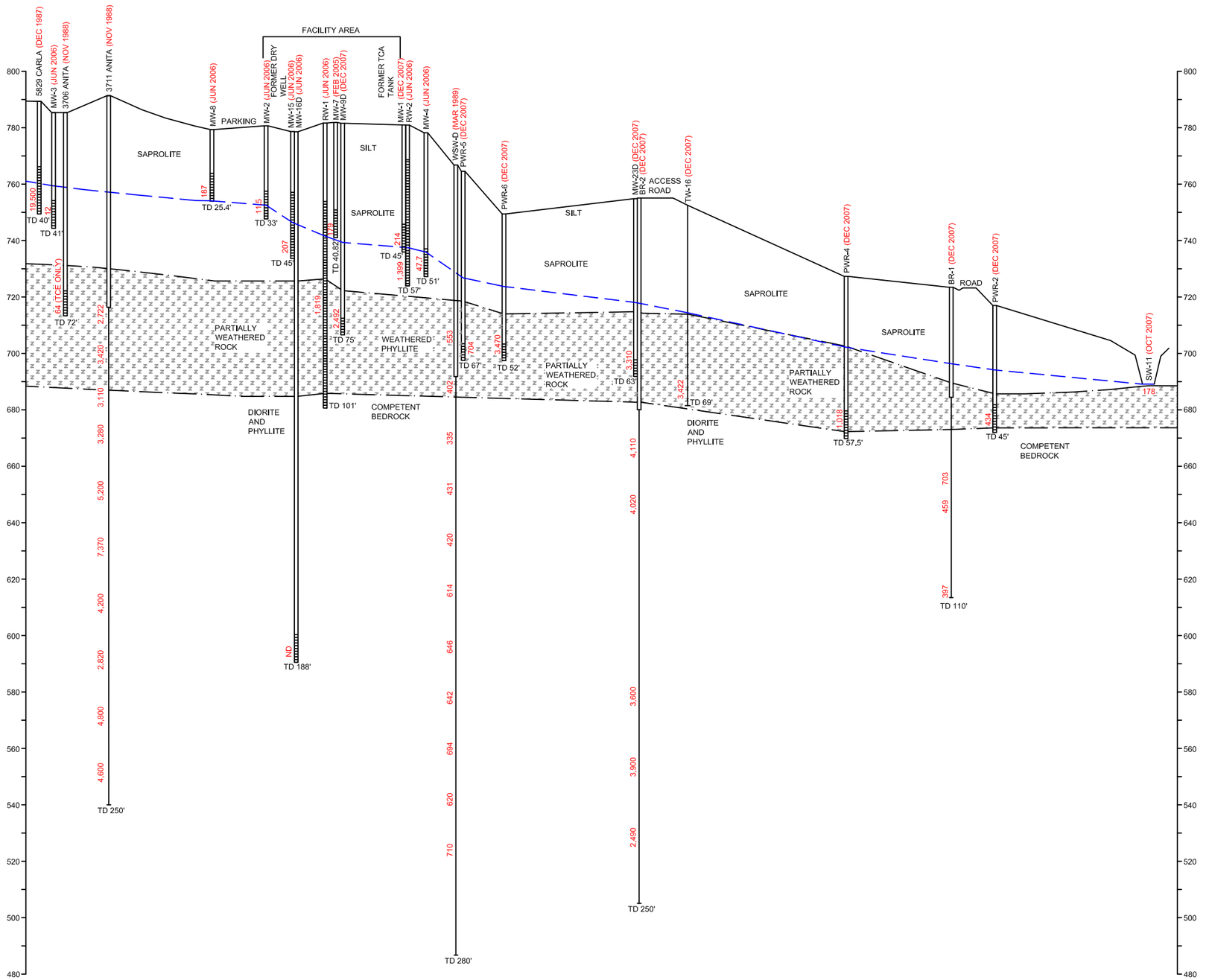
WYSONG & MILES
GREENSBORO, NORTH CAROLINA

Hart & Hickman
A PROFESSIONAL CORPORATION
3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

DATE: 12/3/09	REVISION NO. 0
JOB NO: WYM-002	FIGURE NO. 7

A
SOUTHWEST

A'
NORTHEAST



NOTES:

WATER LEVEL ELEVATIONS WERE MEASURED ON DECEMBER 17, 2007 BY HART & HICKMAN PERSONNEL

HISTORICAL CVOC SAMPLING DATA NOTED ABOVE MONIOTORING WELL

LEGEND

178 — CVOC CONCENTRATION (µg/L)

PARTIALLY WEATHERED BEDROCK

APPROXIMATE
0 — 400 — 800
SCALE IN FEET

VERTICAL EXAGERATION 10X

TITLE

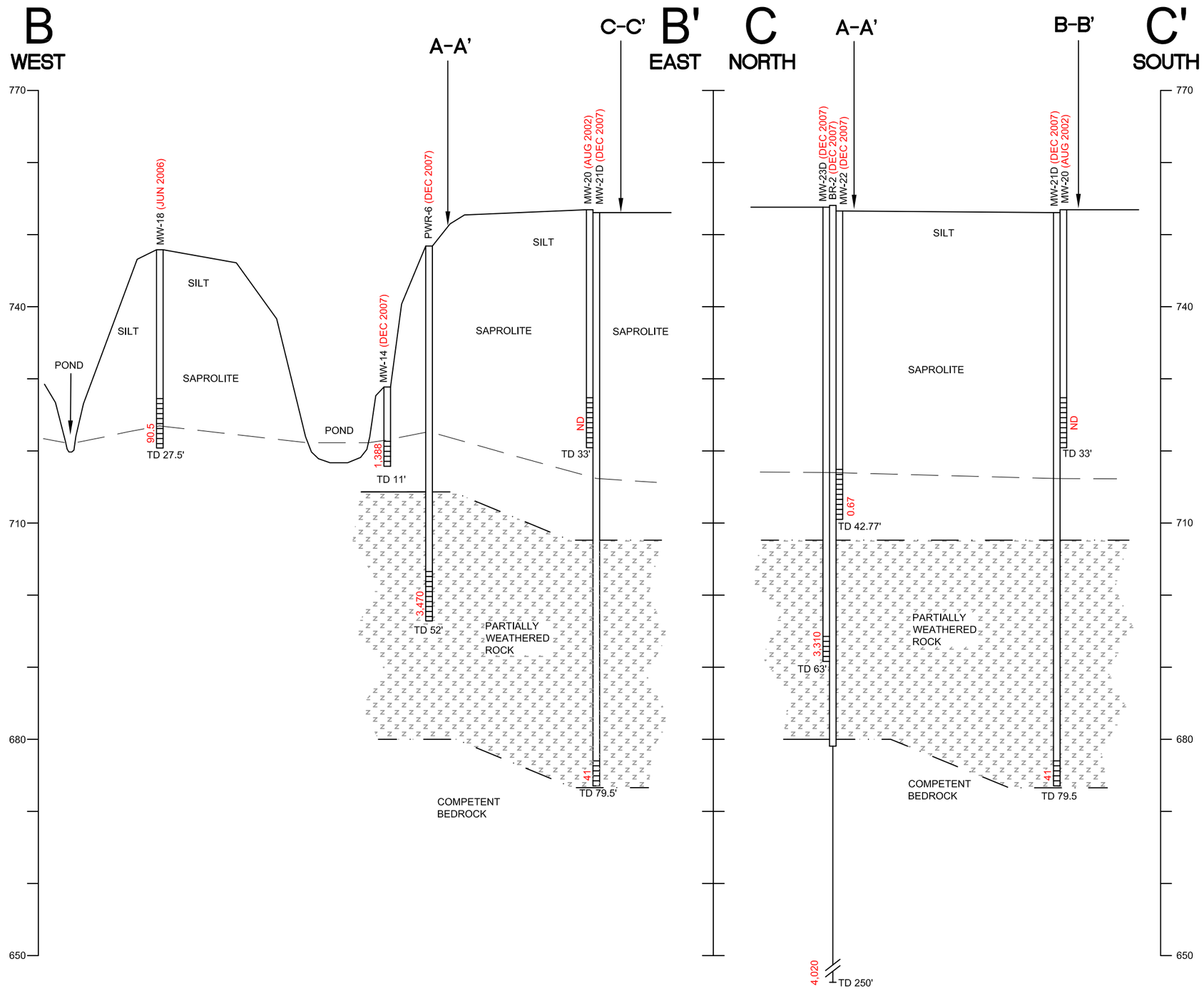
CROSS–SECTION A–A'

PROJECT

WYSONG & MILES CORPORATION
GREENSBORO, NC

Hart & Hickman
A PROFESSIONAL CORPORATION
3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

DATE: 12/3/09	REVISION NO. 0
JOB NO: WYM.002	FIGURE NO. 8



NOTES:

WATER LEVEL ELEVATIONS WERE MEASURED ON DECEMBER 17, 2007 BY HART & HICKMAN PERSONNEL

HISTORICAL CVOC SAMPLING DATA NOTED ABOVE MONIOTORING WELL

LEGEND

178 CVOC CONCENTRATION (µg/L)

PARTIALLY WEATHERED BEDROCK

APPROXIMATE
0 75 150
SCALE IN FEET

VERTICAL EXAGERATION 10X

TITLE

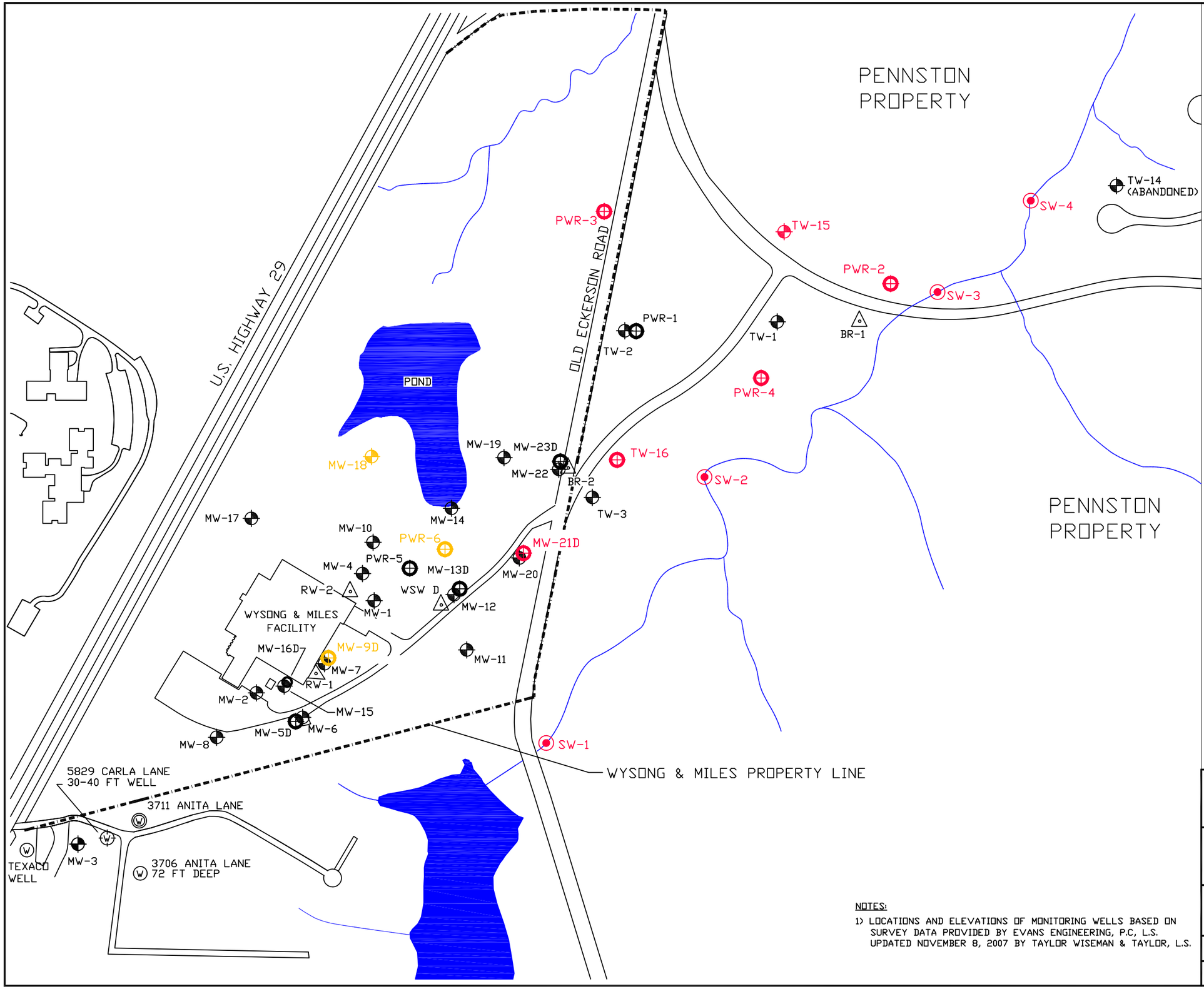
CROSS SECTIONS B–B' & C–C'

PROJECT

WYSONG & MILES CORPORATION
GREENSBORO, NC

Hart & Hickman
A PROFESSIONAL CORPORATION
3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

DATE: 12/3/09	REVISION NO. 0
JOB NO: WYM.002	FIGURE NO. 9



LEGEND:

- SHALLOW MONITORING WELL
- RECOVERY WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- WATER SUPPLY WELL
- SURFACE WATER SAMPLE

TW-15 RED DENOTES ANNUAL SAMPLING SCHEDULE

PWR-6 ORANGE DENOTES BIENNIAL SAMPLING SCHEDULE

N

APPROXIMATE
0 300 600
SCALE IN FEET

NOTES:

1) LOCATIONS AND ELEVATIONS OF MONITORING WELLS BASED ON SURVEY DATA PROVIDED BY EVANS ENGINEERING, P.C, L.S. UPDATED NOVEMBER 8, 2007 BY TAYLOR WISEMAN & TAYLOR, L.S.

LONG TERM MONITORING LOCATIONS

WYSONG & MILES
GREENSBORO, NORTH CAROLINA

Hart & Hickman
A PROFESSIONAL CORPORATION
3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)

DATE: 12/3/09	REVISION NO. 0
JOB NO: WYM-002	FIGURE NO. 11

CERTIFICATION STATEMENTS

Remediating Party Certification:

"I certify that, to the best of my knowledge, after thorough investigation, the information contained in or accompanying this certification is true, accurate, and complete".

Russell Hall 4/15/10

Russell Hall, President
Wysong & Miles

Date

North Carolina

Guilford County

I, Billy R Carter, a Notary Public for said County and State, do hereby certify that Russell Hall personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 15th day of April, 2010.

(Official Seal)

NOTARY PUBLIC ALAMANCE COUNTY, NC

Notary Public

My commission expires 9/27, 2012.

Consultant Certification

"I certify that, to the best of my knowledge, after thorough investigation, the information contained in or accompanying this certification is true, accurate, and complete".

Leonard Moretz 4-16-10

Leonard Moretz, LG
Hart & Hickman, PC

Date

North Carolina

Wake County

I, Kimberly P. Petrolungo, a Notary Public for said County and State, do hereby certify that Leonard Moretz personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 16 day of April, 20 10.

Official Seal

KIMBERLY P. PETROLUNGO NOTARY PUBLIC WAKE COUNTY, NC

Notary Public

My commission expires 3/28, 20 14.

Table 1
Summary of Ground Water Elevation Measurements

Wysong & Miles Facility
Greensboro, North Carolina
H&H Job No. WYM.001

Monitoring Well ID	Date Installed	Well Depth (ft - bgs)	Screen Length (ft)	Well TOC Elevation (ft)	10/22/2007		12/17/2007		3/27/2008		6/25/2008		10/1/2008	
					Depth to Water (ft)	Ground Water Elevation (ft)	Depth to Water (ft)	Ground Water Elevation (ft)	Depth to Water (ft)	Ground Water Elevation (ft)	Depth to Water (ft)	Ground Water Elevation (ft)	Depth to Water (ft)	Ground Water Elevation (ft)
MW-1	1/20/1988	45	10	772.75	Wet	-	41.67	731.01	NM	-	39.21	733.54	39.24	733.51
MW-2	1/22/1988	33	10	779.65	27.78	751.87	28.15	751.50	NM	-	NM	-	25.76	753.89
MW-3	1/27/1988	41	10	799.43	28.49	770.94	27.78	771.65	NM	-	NM	-	Destroyed	
MW-4	9/8/1988	51	10	777.19	43.17	734.02	42.31	734.88	NM	-	NM	-	41.80	735.39
MW-5D	9/13/1988	78	5	778.31	27.70	750.61	27.68	750.63	NM	-	NM	-	25.48	752.83
MW-6	9/14/1988	30.5	10	778.33	27.08	751.25	27.18	751.15	NM	-	NM	-	24.84	753.49
MW-7	9/15/1988	40.82	10	780.84	Dry	-	Dry	-	NM	-	NM	-	38.66	742.18
MW-8	9/15/1988	25.4	10	778.34	Dry	-	25.31	753.03	NM	-	NM	-	23.27	755.07
MW-9D	7/19/1989	75	5	780.55	43.53	737.02	42.25	738.30	NM	-	39.93	740.62	39.25	741.30
MW-10	6/28/1989	49.5	10	775.20	47.11	728.09	46.54	728.66	NM	-	45.01	730.19	45.23	729.97
MW-11	6/28/1989	30	10	754.56	26.48	728.08	26.95	727.61	NM	-	NM	-	23.89	730.67
MW-12	6/27/1989	37	10	760.92	36.96	723.96	36.71	724.21	NM	-	NM	-	31.71	729.21
MW-13D	7/21/1989	82	5	760.72	57.87	702.85	35.19	725.53	NM	-	30.84	729.88	30.19	730.53
MW-14	11/15/1990	11	5	728.87	9.70	719.17	7.35	721.52	5.84	723.03	5.68	723.19	5.71	723.16
MW-15	6/25/1992	45	20	777.61	32.87	744.74	32.25	745.36	NM	-	NM	-	29.36	748.25
MW-16D		188	5-10	777.53	50.14	727.39	45.85	731.68	NM	-	NM	-	31.03	746.50
MW-17	6/25/1992	33.5	10	771.46	31.62	739.84	32.10	739.36	NM	-	NM	-	30.79	740.67
MW-18	6/23/1992	27.5	10	747.91	27.20	720.71	24.44	723.47	NM	-	NM	-	23.66	724.25
MW-19	6/24/1992	23	10	740.58	22.83	717.75	20.61	719.97	NM	-	NM	-	19.18	721.40
MW-20	6/26/1992	33.06	10	753.45	Dry	-	Dry	-	Dry	-	32.67	720.78	32.69	720.76
MW-21D		79.5	5	753.05	37.61	715.44	36.86	716.19	35.31	717.74	33.52	719.53	33.69	719.36
MW-22		42.77	10	753.28	38.04	715.24	37.91	715.37	36.96	716.32	35.47	717.81	36.15	717.13
MW-23D		63	5	753.81	37.44	716.37	36.78	717.03	35.39	718.42	34.31	719.50	35.04	718.77
RW-1	7/24/1989	101	75	780.63	75.80	704.83	40.09	740.54	NM	-	37.38	743.25	36.80	743.83
RW-2	7/20/1989	57	45	779.90	Dry	-	43.43	736.47	NM	-	42.46	737.44	41.89	738.01
WSW-D	Circa 1970's	280	Open	761.34	72.01	689.33	35.58	725.76	33.34	728.00	31.29	730.05	30.62	730.72
TW-1		49.5		734.41	33.72	700.69	33.97	700.44	NM	-	32.73	701.68	33.67	700.74
TW-2		56		761.55	50.14	711.41	50.46	711.09	NM	-	NM	-	50.37	711.18
TW-3		50		748.73	38.03	710.70	37.96	710.77	NM	-	NM	-	36.21	712.52
TW-15		33.5		734.14	29.41	704.73	29.78	704.36	NM	-	28.51	705.63	29.75	704.39
TW-16		69		751.48	37.90	713.58	38.10	713.38	NM	-	35.99	715.49	36.50	714.98
PWR-1	7/19/2006	73	10	761.23	50.07	711.16	50.48	710.75	NM	-	49.79	711.44	50.33	710.90
PWR-2	7/20/2006	45	10	715.98	24.28	691.70	22.86	693.12	NM	-	22.59	693.39	22.78	693.20
PWR-3	5/15/2007	73.5	10	741.05	38.73	702.32	38.45	702.60	NM	-	37.78	703.27	37.95	703.10
PWR-4	5/16/2007	57.5	10	726.28	26.87	699.41	25.11	701.17	NM	-	23.94	702.34	24.48	701.80
PWR-5	5/22/2007	67	10	763.52	39.84	723.68	37.77	725.75	NM	-	35.52	728.00	35.73	727.79
PWR-6	8/2/2007	52	10	748.42	27.08	721.34	25.74	722.68	NM	-	23.17	725.25	23.37	725.05
BR-1	5/21/2007	110	Open	722.41	28.51	693.90	27.11	695.30	NM	-	26.06	696.35	26.97	695.44
BR-2	7/31/2007	250	Open	754.05	38.83	715.22	38.16	715.89	37.26	716.79	35.95	718.10	36.60	717.45

Notes:
TOC = Top of Casing
BGS = Below Grade Surface

GROUNDWATER & SURFACE WATER MONITORING REPORT

Prepared for:

Delta Phoenix Inc

Dba: Wysong Parts and Service

SITE:

WYSONG & MILES COMPANY

GREENSBORO, NORTH CAROLINA

NCD 982 156 812

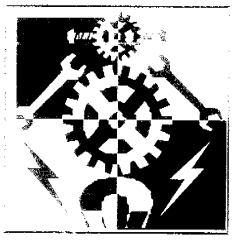
Prepared by

Piedmont Industrial Services, Inc.

1680 Lowery Street

Winston-Salem NC 27101

February 15, 2012



Thomas P. Lennon, P.G.
Project Manager

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APPENDIX

1.0 Introduction

The former Wysong & Miles facility (NCD 982 156 814), is located at 4820 US 29 North in Greensboro, North Carolina (**Figure 1**). Piedmont Industrial Services, Inc. (Piedmont) presents the following Groundwater and Surface Water Monitoring Report on behalf of Delta Phoenix, Inc., doing business as, Wysong Parts and Service (Wysong). The following monitoring program was conducted at the requested of Robert Modarelli with the NCDENR-Hazardous Waste Section (see Appendix A) to determine the current contaminant concentrations present at the site. As indicated in the email attachment, the NCDENR requested environmental sampling to be conducted on the following nine wells:

MW-9D	PIWR-2	RW-2
MW-14	PIWR-7	TW-15
MW-20D	PIWR-8	TW-16

In addition to the above, the NCDENR requested surface water sampling of the eastern tributary of Reedy Fork Creek in sampling locations SW-1 and SW-4. The groundwater and surface water sampling event was conducted on January 9-10, 2018. All collected samples were analyzed by EPA Method 8260B and 1,4-dioxane by 8260B SIM Method.

A site map illustrating the location of the monitoring wells and surface water sample location are shown in **Figures 2 and 3**. Piedmont has generated the following report based on previously submitted environmental assessment reports in addition to current assessment data compiled during the 2018 sampling event.

2.0 Groundwater Monitoring Data

On January 9-10, 2018, Piedmont completed the groundwater sampling event for the above reference wells located at the site. Well MW-14 could not be sampled as the result of no water was observed in the well. The eight remaining wells were sampled by using the low-flow purging of the wells and a flow cell in accordance the EPA Region 4, Science and Ecosystem Support Division Groundwater Sampling Document. A summary of the water table depths and geochemical data collected at the time of sample collection are presented in **Table 1**. A total of three 55-gallon drums of Investigation Derived Waste were generated as a result of the sampling event. A composite sample (ID: Purge Decon Composite) was collected for laboratory analysis for disposal profiling.

Following sample collection, all acquired samples were stored in coolers and packed in ice to maintain a temperature of 4° C. The groundwater samples were shipped via to Prism Laboratories, Inc. located in Charlotte, North Carolina. In accordance with the SAP, the acquired samples were analyzed for the detection of volatile organic compounds using EPA Method 8260B and 1,4-dioxane by 8260B SIM Method.

Table 4 summarizes all compounds and concentrations detected during the most recent sampling event and offers a comparative analysis with the previous analytical results. Copies of the laboratory report and chain of custody for the recent sampling events are included as Appendix B.

As indicated in Table 2, the following targeted compounds were detected above North Carolina 2L Groundwater Quality Standards in the collected groundwater samples: 1,1 dichloroethane (1,1 –DCA,); 1,2 dichloroethane (1,2-DCA, 1,1); dichloroethene (1-1-DCE); 1,4 dioxane; tetrachloroethylene (PCE); 1,1,1 trichloroethane (1,1,1-TCA); trichloroethene (TCE); and vinyl chloride. In general, detected contaminant concentrations exceeding the standard were evidenced in similar concentrations to those previously detected at the site.

A total of three 55-gallon drums of Investigation Derived Waste were generated as a result of the groundwater sampling event. A copy of the analytical results (Appendix B) for the composite sample (IDW Purge Decon Composite) collected for laboratory analysis was provided to A&D Environmental for disposal profiling. Base on their review, the drums were disposed of as a non-hazardous waste on February 14, 2018. A copy of the waste disposal profile and manifest is attached in Appendix C

3.0 Surface Water Monitoring Data

On January 9, 2018, two surface water samples (SW-1 and SW-4) were collected from an unnamed tributary of Reedy Fork Creek located on an adjacent property to the northeast of the Wysong & Miles facility. The approximate locations of collection for the surface water samples are depicted in Figure 3.

All surface water samples were collected in accordance with the EPA Region 4, Science and Ecosystem Support Division Surface Water Sampling Document. Following sample collection all acquired samples were stored in coolers and packed in ice to maintain a temperature of 4° C. A summary of geochemical parameters measured during sample collection are summarized in Table 1. The collected samples were shipped via to Prism Laboratories, in Charlotte, North Carolina. The surface water samples collected were analyzed for the detection of volatile organic compounds using EPA Method 8260B and 1,4-dioxane by 8260B SIM Method

Laboratory results for the collected samples are summarized in Table 3 along with the results of the three prior sampling events for comparative analysis. Laboratory samples SW-1 and SW-4 did not indicate the presence of detectable concentrations of any targeted compounds in excess of North Carolina 2B Surface Water Standards. Copies of the laboratory reports and chain of custody for the above mention sampling events are included as Appendix B.

5.0 Conclusions

On January 9-10, 2013, Pleasnon completed the NCDENR requested groundwater and surface water sampling event at the former Wysong & Miles facility (NCD 982 156 812). The following is a summary of results:

- A total of eight groundwater samples were collected for laboratory analysis. The following compounds were detected above North Carolina 2L Groundwater Quality Standards in the collected groundwater samples: 1,1 dichloroethane (1,1 –DCA), 1,2 dichloroethane (1,2-DCA), 1,1,1 dichloroethene (1,1-DCE), 1,4 dioxane, tetrachloroethylene (PCE), 1,1,1 trichloroethane (1,1,1-TCA), trichloroethene (TCE), and vinyl chloride. In general, detected contaminant concentrations exceeding the standard were evidenced in similar concentrations to those previously detected on the site.

- On January 9, 2013, two surface water samples (SW-1 and SW-4) were collected from an unnamed tributary of Reedy Fork Creek located on an adjacent property to the northeast of the Wysong & Miles facility. Laboratory samples SW-1 and SW-4 did not indicate the presence of detectable concentrations of any targeted compounds in excess of North Carolina 2B Surface Water Standards.

- A total of three 55-gallon drums of Investigation Derived Waste were generated as a result of the groundwater sampling event. The drums were disposed of as a non hazardous waste by A&D Environmental on February 14, 2013.

Table 1
2018 Sampling Event Data
Wysong Miles Corporation
Greensboro, NC

Well	TD	DGW	Volume purged	Sampled date	Sampled Time	ORP (MV)	TURB (NTU)	SPC (µs/cm)	Temp (C)	PH	DO (mg/l)
MW-9D	75.9	36.33	13 GAL	1/10/2018	10:00:00 AM	-177.90	0.35	125.7	17.9	8.1	0.53
MW-14	9.2	8.75	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW-23D	65.2	29.30	9 GAL	1/10/2018	9:00:00 AM	-167.90	2.99	65.07	15.2	14.0	6.4
PWR-2	45.0	23.08	11 GAL	10/10/2018	9:00:00 AM	-40.30	14	125.2	15.8	6.2	13.22
PWR-7	34.8	13.07	6 GAL	1/9/2018	11:46:00 AM	17.30	28	96.2	14.7	6.4	5.27
PWR-8	32.9	14.24	20 GAL	1/9/2018	10:45:00 AM	23.10	52.7	107.4	14.9	6.2	5.69
RW-2	57.0	39.35	20 GAL	1/10/2018	11:00:00 AM	83.40	9.23	143.4	17.9	7.1	5.22
TW-15	33.7	30.63	1.2 GAL	1/10/2018	8:20:00 AM	-61.30	50.4	181.1	13.6	12.5	8.65
TW-16	71.2	36.75	15 GAL	1/9/2017	2:30:00 PM	-8.12	5.85	151.8	15.7	6.6	2.19
SW-4	NA	NA	NA	1/9/2018	11:00:00 AM	-24.80	1.67	96.5	0.3	6.5	21.92
SW-1	NS	NA	NA	1/9/2018	12:10:00 PM	-45.80	5.1	92.6	4.9	6.8	12.71

Table 2
Summary of Four Most Recent Groundwater Sampling Events
Wysong & Miles Corporation
Greensboro, North Carolina

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Chloroform	xlyene	MTBE	Acetone	1,2,4 trimethylbenzene	1,3,5 trimethylbenzene	Vinyl Chloride
MW-1	6/22/2006	ND	9.6	ND	**720**	ND	NS	**1**	140	2	ND	ND	ND	ND	ND	ND	ND	ND
	12/19/2007	ND	11	ND	**70**	ND	**170**	1.2	130	2.1	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	13	ND	**55**	ND	**140**	1.2	92	1.9	ND	ND	ND	ND	ND	ND	ND	ND
MW-2	8/25/2005	ND	ND	ND	**12.5**	ND	NS	ND	3.78	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	ND	**13.6**	ND	NS	ND	4.08	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/19/2006	ND	ND	ND	**8.7**	ND	NS	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3	8/17/2004	ND	1.02	**2.1**	3.73	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	1.47	**2.32**	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/20/2006	ND	2.8	**2**	6	ND	NS	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4	8/25/2005	ND	ND	ND	**38.7**	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	2.4	ND	**20.2**	ND	NS	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/20/2006	ND	1.8	ND	**44**	ND	NS	ND	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-5D	8/25/2005	ND	ND	ND	**87.5**	ND	NS	ND	27.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	ND	**96.4**	ND	NS	ND	25.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/23/2006	ND	2.2	ND	**92**	ND	NS	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-6	8/17/2004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/22/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-8	8/25/2005	ND	ND	ND	**121**	ND	NS	ND	37.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	ND	**122**	ND	NS	ND	36.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/22/2006	ND	6.7	ND	**140**	ND	NS	ND	40	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-9D	3/13/2006	ND	ND	ND	ND	ND	NS	ND	**1,560**	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/19/2007	ND	**85**	ND	**390**	ND	**240**	**9.1J**	**2,000**	7.4J	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	60	ND	**290**	ND	**1,662**	**6.3J**	**1,300**	5.4J	ND	ND	ND	ND	ND	ND	ND	ND
	1/10/2018	0.77	93	0.57	**210**	ND	**29**	**9.5**	**630**	**6.3**	2.4		0.6	3.5	ND	1.3	1.5	0.66
NCAC 2L Standard		*3000*	*6*	*0.4*	*7.0*	*70*	*3.0*	*0.7*	*200*	*NS*	*3*	*70*	*500*	*20*	*6000*	*400*	*400*	*0.015*
Groundwater Screening Level		*4.60E+03*	*7.60E+01*	*2.20E+01*	*3.90E+01*	*NA*	*NA*	*1.20E+01*	*1.50E+03*	*1.20E+00*	*1.00E+00*	*8.10E+00*	*9.80E+01*	*4.50E+03*	*4.50E+06*	*5.00E+01*	*3.50E+01*	*1.5*

Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
Piedmont ind = 2018 sampling event

TABLE 2
Summary of Four Most Recent Groundwater Samples
Wysong & Miles Corporation
Greensboro, North Carolina

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Chloroform	xlyene	MTBE	Acetone	1,2,4 trimethylbenzene	1,3,5 trimethylbenzene	Vinyl Chloride
MW-10	6/22/2006	ND	14	7.9	870	ND	NS	ND	60	2.2	1.5	ND	ND	ND	ND	ND	ND	ND
	12/19/2007	ND	15	9.0	870	ND	952	1.7	52	2.5	1.8J	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	10	7.1	350	ND	405	1.1	31	2.2	1.1J	ND	ND	ND	ND	ND	ND	ND
MW-11	8/16/2004	ND	ND	ND	ND	ND	NS	ND	ND	ND	5.22	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	3.82	ND	ND	ND	ND	ND	ND	ND
	6/21/2006	ND	ND	ND	ND	1.1	NS	ND	ND	ND	4.1	ND	ND	ND	ND	ND	ND	ND
MW-12	5/17/1995	ND	ND	ND	2.4	ND	NS	ND	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13D	6/22/2006	ND	13	ND	72	ND	NS	ND	22	ND	1.8	ND	ND	ND	ND	ND	ND	ND
	12/19/2007	ND	13	0.71J	130	ND	62	0.62J	45	ND	0.71J	ND	ND	ND	ND	ND	ND	1.2J
	6/25/2008	ND	8.4	ND	140	ND	174	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-14	3/27/2008	ND	97	8.6J	1,100	ND	520	ND	550	6.3J	ND	ND	ND	ND	ND	ND	ND	ND
	6/27/2008	ND	110	9.2J	1,700	ND	2,576	ND	750	6.4J	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	100	8.6J	1,400	ND	490	ND	540	6.2J	ND	ND	ND	ND	ND	ND	ND	ND
MW-15	8/25/2005	ND	ND	ND	67	ND	NS	ND	108	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	ND	90.2	ND	NS	ND	156	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/22/2006	ND	12	ND	74	ND	NS	ND	120	1.1	ND	ND	ND	ND	ND	ND	ND	ND
MW-16D	8/16/2004	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/21/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-17	8/17/2004	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/19/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NCAC 2L Standard		*3000*	*6*	*0.4*	*7.0*	*70*	*3.0*	*0.7*	*200*	*NS*	*3*	*70*	*500*	*20*	*6000*	*400*	*400*	*0.015*
Groundwater Screening Level		*4.60E+03*	*7.60E+01*	*2.20E+01*	*3.90E+01*	*NA*	*NA*	*1.20E+01*	*1.50E+03*	*1.20E+00*	*1.00E+00*	*8.10E+00*	*9.80E+01*	*4.50E+03*	*4.50E+06*	*5.00E+01*	*3.50E+01*	*1.5*

Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
Piedmont ind = 2018 sampling event

Table 2
Summary of Four Most Recent Groundwater Samples
Wysong & Miles Corporation
Greensboro, North Carolina

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Chloroform	o-xlyene	MTBE	Acetone	1,2,4 trimethylbenzene	1,3,5 trimethylbenzene	Vinyl Chloride
MW-18	8/17/2004	ND	ND	ND	**93.6**	ND	NS	ND	12.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/13/2006	ND	ND	NS	**39.9**	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/20/2006	ND	ND	NS	**81**	ND	NS	ND	9.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-19	2/28/2005	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/25/2005	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/20/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-20	8/16/2004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/25/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-21D	3/27/2008	ND	8.6	ND	**23**	1.2	**61**	ND	13	ND	**5.4**	ND	ND	ND	ND	ND	ND	ND
	6/25/2008	ND	11	ND	**43**	0.98J	**70**	ND	19	ND	**5.5**	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	10	ND	**32**	1.1	**62**	ND	13	ND	**5.3**	ND	ND	ND	ND	ND	ND	ND
MW-22	3/27/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-23D	3/27/2008	ND	**84**	ND	**950**	ND	**2,634**	ND	**1,600**	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	**98**	ND	**1,400**	ND	**660**	ND	**2,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	**78**	ND	**920**	ND	**560**	ND	**1,400**	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	39	1.6	**230**	ND	**97**	0.89	**220**	2.5	1.5	ND	ND	7.1	18	ND	ND	ND
WSW-D	3/27/2008	ND	14	**0.88J**	**140**	ND	**208**	0.69J	51	0.51J	0.52J	ND	ND	ND	ND	ND	ND	ND
	6/27/2008	ND	12	**0.75J**	**120**	ND	94	0.69J	48	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	9.7	**0.55J**	**110**	ND	**153**	0.63J	32	ND	ND	ND	ND	ND	ND	ND	ND	ND
PWR-1	8/11/2006	ND	1.6	**0.625**	**500**	ND	**39**	ND	**250**	2.4	1.7J	ND	ND	ND	ND	ND	ND	ND
	12/18/2007	ND	ND	ND	**290**	ND	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/25/2008	ND	0.67J	ND	**200**	ND	ND	ND	110	ND	0.69J	ND	ND	ND	ND	ND	ND	ND
NCAC 2L Standard		*3000*	*6*	*0.4*	*7.0*	*70*	*3.0*	*0.7*	*200*	*NS*	*3*	*70*	*500*	*20*	*6000*	*400*	*400*	*0.015*
Groundwater Screening Level		*4.60E+03*	*7.60E+01*	*2.20E+01*	*3.90E+01*	*NA*	*NA*	*1.20E+01*	*1.50E+03*	*1.20E+00*	*1.00E+00*	*8.10E+00*	*9.80E+01*	*4.50E+03*	*4.50E+06*	*5.00E+01*	*3.50E+01*	*1.5*

Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
Piedmont ind = 2018 sampling event

TABLE 2
Summary of Three Most Recent Groundwater Samples
Wysong & Miles Corporation
Greensboro, North Carolina

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Chloroform	xlyene	MTBE	Acetone	1,2,4 trimethylbenzene	1,3,5 trimethylbenzene	Vinyl Chloride
PWR-2	8/11/2006	ND	19	2.0	200	ND	76	ND	47	1.8	ND	ND	ND	ND	ND	ND	ND	ND
	12/17/2007	ND	27	ND	340	ND	57	ND	67	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	29	3.0	310	ND	120	ND	69	2.5	0.66J	ND	ND	ND	ND	ND	ND	ND
	1/10/2018	ND	71	5.8	840	ND	390	1.7	91	6	1.4	0.73	ND	2.1	ND	ND	ND	ND
PWR-3	5/23/2007	ND	ND	ND	11	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/17/2007	ND	0.74J	ND	16	ND	ND	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/25/2008	ND	0.67J	ND	11	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
PWR-4	5/23/2007	ND	45	5.0	590	ND	200	ND	95	4	1.1	ND	ND	ND	ND	ND	ND	ND
	12/18/2007	ND	64	7.4J	600	ND	210	ND	140	6.1J	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	54	6.1J	700	ND	270	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
PWR-5	5/23/2007	ND	26	ND	260	ND	120	1.4	460	3.7	ND	ND	ND	ND	ND	ND	ND	ND
	12/18/2007	ND	24	ND	190	ND	190	ND	490	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	22	ND	150	ND	100	ND	440	ND	ND	ND	ND	ND	ND	ND	ND	ND
PWR-6	8/30/2007	ND	170	ND	1,100	ND	780	ND	1,800	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/19/2007	ND	170	ND	1,100	ND	510	ND	2,200	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/27/2008	ND	140	ND	960	ND	480	ND	1,800	ND	ND	ND	ND	ND	ND	ND	ND	ND
PWR-7	1/9/2018	ND	4.6	0.62	130	ND	28	ND	22	ND	ND	ND	ND	ND	ND	ND	ND	ND
PWR-8	1/9/2018	ND	3.9	1.7	190	ND	110	ND	25	2.8	1.4	ND	ND	ND	ND	ND	ND	ND
TW-1	6/20/2006	ND	7.2	ND	77	ND	29	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/18/2007	ND	6.6	0.75J	77	ND	29	ND	14	0.61J	ND	ND	ND	ND	ND	ND	ND	ND
	6/25/2008	ND	5.0	0.59J	52	ND	41	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
TW-2	8/26/2005	ND	ND	ND	45.6	ND	NS	ND	20.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	12	ND	NS	ND	53.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/21/2006	ND	ND	ND	40	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND
TW-3	8/26/2005	ND	ND	ND	1.7	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	1.3	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/20/2006	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NCAC 2L Standard		*3000*	*6*	*0.4*	*7.0*	*70*	*3.0*	*0.7*	*200*	*NS*	*3*	*70*	*500*	*20*	*6000*	*400*	*400*	*0.015*
Groundwater Screening Level		*4.60E+03*	*7.60E+01*	*2.20E+01*	*3.90E+01*	*NA*	*NA*	*1.20E+01*	*1.50E+03*	*1.20E+00*	*1.00E+00*	*8.10E+00*	*9.80E+01*	*4.50E+03*	*4.50E+06*	*5.00E+01*	*3.50E+01*	*1.5*

Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
Piedmont ind = 2018 sampling event

TABLE 2
Summary of Three Most Recent Groundwater Samples
Wysong & Miles Corporation
Greensboro, North Carolina

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Chloroform	xlyene	MTBE	Acetone	1,2,4 trimethylbenzene	1,3,5 trimethylbenzen	Vinyl Chloride
TW-14	2/21/2000	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/15/2000	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	8/23/2001	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TW-15	6/21/2006	ND	1.8	ND	**120**	ND	**46**	ND	55	2.3	ND	ND	ND	ND	ND	ND	ND	ND
	12/18/2007	ND	2.2	**0.85J**	**140**	ND	**60**	ND	48	2.7	0.64J	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	1.9	ND	95	ND	59	ND	34	2.2	ND	ND	ND	ND	ND	ND	ND	ND
	1/10/2018	ND	5.4	0.75	**130**	ND	**56**	ND	32	1.2	ND	ND	ND	ND	ND	ND	ND	ND
TW-16	6/21/2006	ND	82	0.018	1,500	ND	1,000E	2.1	640	15	4.6	ND	ND	ND	ND	ND	ND	6.1
	12/18/2007	ND	180	17	2,300	ND	980	ND	910	15	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	170	ND	2,100	ND	1,000	ND	810	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1/9/2018	ND	77	5.9	700	ND	390	1.8	130	6.2	1.6	0.66	ND	10	ND	ND	ND	ND
RW-1	6/22/2006	ND	70	1.9	330	ND	NS	5.2	1,400	10	2.0	ND	ND	ND	ND	ND	ND	ND
	6/27/2008	ND	5.3	ND	65	ND	27	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	5.4	ND	46	ND	82	0.54J	30	ND	ND	ND	ND	ND	ND	ND	ND	ND
RW-2	6/22/2006	ND	8.3	ND	86	ND	NS	4.4	1,300	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/27/2008	ND	ND	ND	290	ND	6.4	ND	2,700	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2008	ND	12	ND	300	ND	1,816	4.1	1,500	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1/10/2018	ND	16	0.066	220	ND	55	2.6	3,100	0.74	ND	ND	ND	ND	ND	ND	ND	ND
BR-1	5/24/2007	ND	34	3.6	390	ND	NS	ND	77	3.1	ND	ND	ND	ND	ND	ND	ND	ND
	12/19/2007	ND	44	5.0J	550	ND	150	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/26/2008	ND	38	ND	500	ND	190	ND	79	ND	ND	ND	ND	ND	ND	ND	ND	ND
BR-2	8/30/2007	ND	100	ND	1,300	ND	670	ND	2,300	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/19/2007	ND	200	ND	1,600	ND	610	ND	2,600	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/27/2008	ND	95	ND	1,000	ND	320	ND	2,200	ND	ND	ND	ND	ND	ND	ND	ND	ND
NCAC 2L Standard		*3000*	*6*	*0.4*	*7.0*	*70*	*3.0*	*0.7*	*200*	*NS*	*3*	*70*	*500*	*20*	*6000*	*400*	*400*	*0.015*
Groundwater Screening Level		*4.60E+03*	*7.60E+01*	*2.20E+01*	*3.90E+01*	*NA*	*NA*	*1.20E+01*	*1.50E+03*	*1.20E+00*	*1.00E+00*	*8.10E+00*	*9.80E+01*	*4.50E+03*	*4.50E+06*	*5.00E+01*	*3.50E+01*	*1.5*

Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
Piedmont Ind = 2018 sampling event

TABLE 3
Summary of Four Most Recent Surface Water Samples
Wysong & Miles Corporation
Greensboro, North Carolina

Well	Date	Chloroethane	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	1,4-Dioxane	PCE	1,1,1-TCA	1,1,2-TCA	TCE	Vinyl Chloride
SW-A	10/22/2007	1.8J	31	3.5	110	ND	200	ND	**13**	ND	0.59J	**18**
SW-1	8/26/2005	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	6/22/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1/9/2018	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND
SW-2	8/26/2005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/22/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-3	8/26/2005	ND	ND	ND	0.83	ND	NS	ND	ND	ND	ND	ND
	3/14/2006	ND	ND	ND	1.4	ND	NS	ND	ND	ND	ND	ND
	6/22/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-4	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1/9/2018	ND	0.7	ND	7	ND	9	ND	ND	ND	ND	ND
SW-5	6/23/2006	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-6	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
SW-7	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2007	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
SW-8	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-9	6/23/2006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/23/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-10	6/23/2006	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-11	6/23/2006	ND	ND	ND	1.7	ND	24	ND	ND	ND	ND	ND
	5/16/2007	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND
	10/22/2007	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND
NCAC 2B Standard		***550***	***20000***	***37***	***5400***	***4900***	***110***	***3.3***	***4.4***	***16***	***30***	***2.4***

Concentrations Reported in Micrograms per Liter (µg/L)
Bold = Concentration Exceeds NCAC 2L Standard
Piedmont Inc = 2018 sampling event

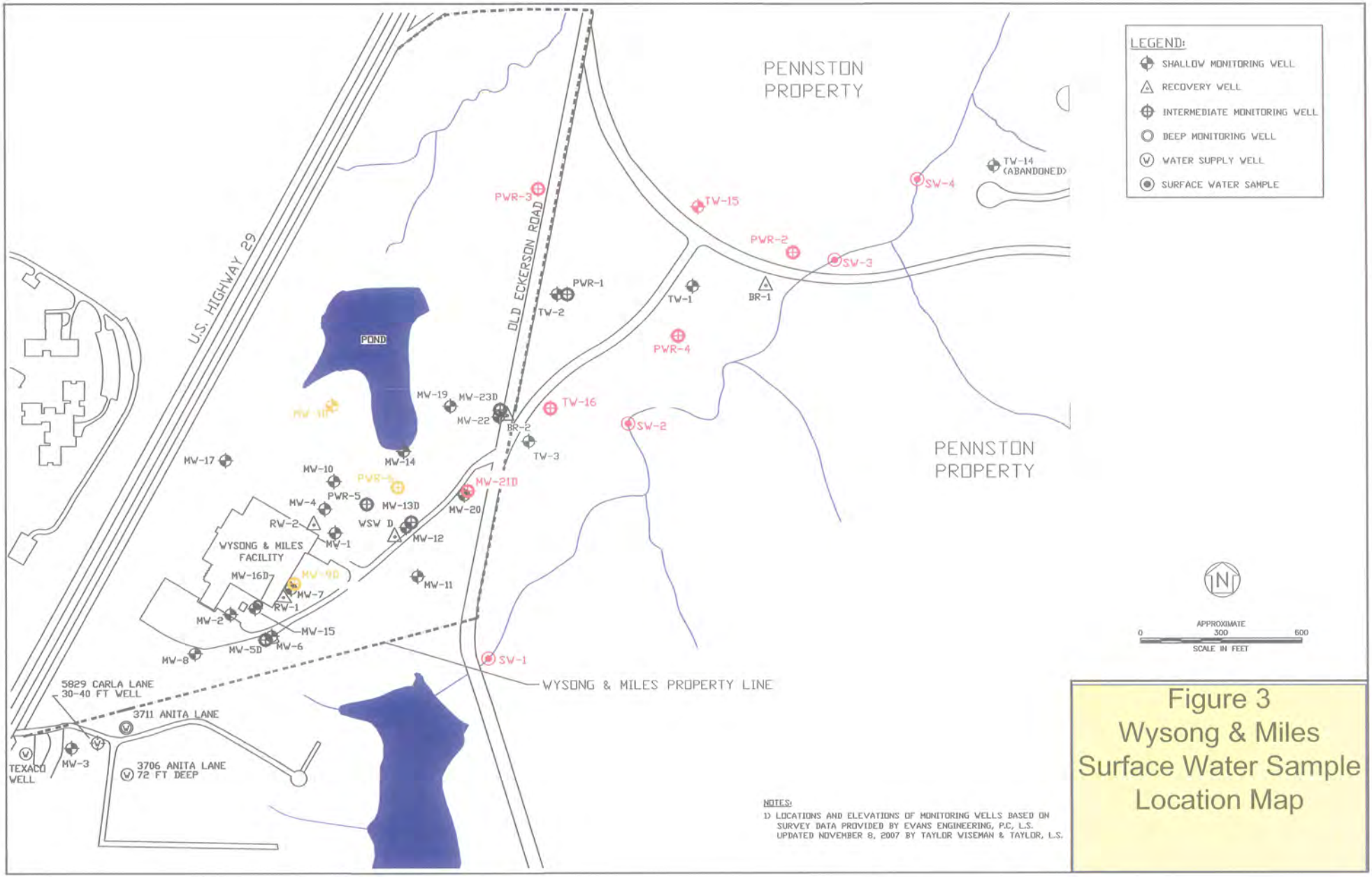
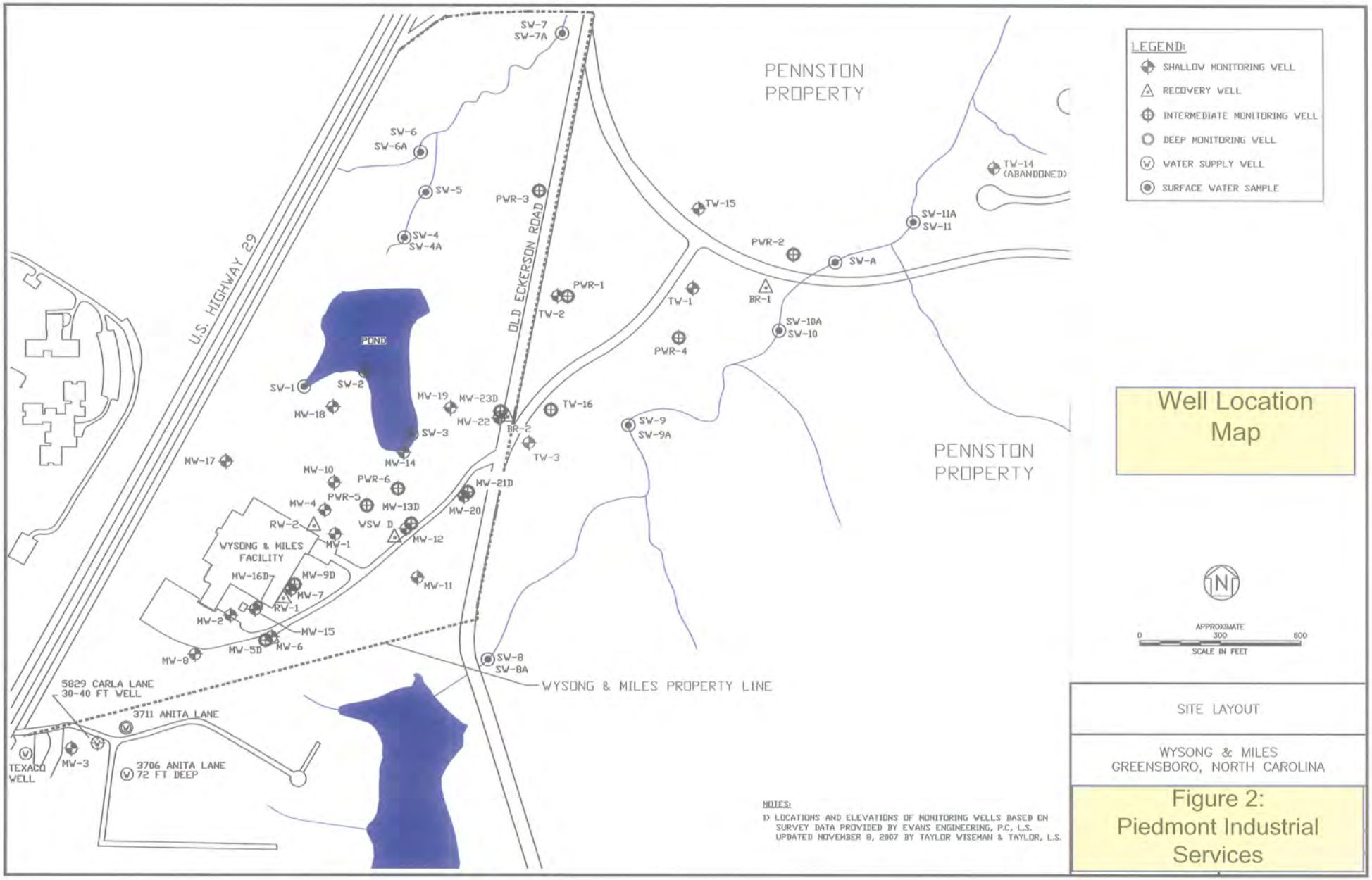


Figure 3
Wysong & Miles
Surface Water Sample
Location Map



Well Location Map

SITE LAYOUT

WYSONG & MILES
GREENSBORO, NORTH CAROLINA

Figure 2: Piedmont Industrial Services

Appendix C

ESP Associates, Inc. Report on Geophysical Services

July 12, 2019

Mr. David Graham, P.G.
Hart & Hickman, P.C.
2923 S. Tryon Street, Suite 100
Charlotte, North Carolina 28203

Reference: **REPORT ON GEOPHYSICAL SERVICES FOR PARCEL 5**
Delta Phoenix Inc.
4820 US 29 North, Guilford, North Carolina
ESP Project No. HR12.300

TIP Number: R-4707
WBS Number: 36599.1.2
County: Guilford
Description: SR 2526 (Summit Avenue) from SR 2641 (Bryan Park Road) to US 29-SR 2970 (Ready Fork Parkway) Interchange

Dear Mr. Graham:

ESP Associates, Inc. (ESP) is pleased to present this report to Hart & Hickman, P.C. (Hart & Hickman) on the geophysical services we provided for the referenced project. This work was performed under our contractor agreement dated May 31, 2019, as authorized by the Work Authorization dated June 6, 2019, and in accordance with our cost proposal to you dated April 17, 2019. The purpose of the work was to help identify possible metallic underground storage tanks (USTs).

1.0 GEOPHYSICAL DATA COLLECTION

On June 10 through 20, 2019, ESP performed geophysical studies at Parcel 5, located on the east side of US 29-SR Browns Summit, North Carolina. The work consisted of metal detection using a Geonics EM61 MK2 instrument, obtaining the approximate locations of relevant site features using a DGPS instrument, and collecting ground-penetrating radar (GPR) data over selected EM61 anomalies. In addition, our survey group provided utility locating and marked the found utilities on site.

The limits of the study area were based on NCDOT field staking and on the NCDOT MicroStation file provided by Hart & Hickman, and extended from the edge of the current roadway to the proposed right-of-way (ROW)/easement. Representative photographs of the geophysical study area are provided on Figure 1.

The EM61 data were collected over the accessible areas of the study area using a line spacing of approximately 3 feet. We used a Hemisphere XF101 differential GPS instrument (DGPS) connected to an Archer field computer to provide approximate locations of the EM61 data in real time. The DGPS instrument was also used to obtain the approximate location of site features that could affect the EM61 readings.

We compared the location of the EM61 responses to the location of site features and noted anomalies associated with buried utilities, storm drains, and metallic debris. We collected GPR data using a Sensors and Software Noggin GPR system with a 250 MHz antenna to investigate four of these anomalies.

2.0 DATA ANALYSIS AND PRESENTATION

The EM61 data were gridded and contoured in Surfer to produce plan view contour maps of the early time gate response (Figures 2 and 3) and the differential response (Figures 4 and 5). The differential response is calculated by subtracting the response of the bottom coil from the response of the top coil of the EM61. Typically, the differential response diminishes the response from smaller, near-surface metallic objects, thus emphasizing the response from deeper and larger metallic objects, such as metallic USTs. The DGPS locations of observed site features were superimposed on the EM61 contour maps so that anomalies caused by site features such as metal objects on the ground surface could be recognized. Figures 2 through 5 show the EM61 data and the site features that we observed and mapped in the field with DGPS; these figures do not necessarily show all existing site features.

The EM61 early time gate response and differential response were exported from Surfer as geo-referenced images and attached to the NCDOT plan sheet in MicroStation (Figures 6 through 9). The legend for the NCDOT line types and symbols is shown on Figure 10.

4.0 SUMMARY AND CONCLUSIONS

Our review of the geophysical data collected for this project does not indicate the presence of metallic USTs within the proposed ROW/easement of Parcel 5.

5.0 LIMITATIONS

These services have been provided to Hart & Hickman in accordance with generally accepted guidelines for performing geophysical surveys. It is recognized that the results of geophysical surveys are non-unique and subject to interpretation. Further, the locations of data and features included in this report are approximate and were collected using a DGPS instrument. ESP makes no guarantee as to the accuracy of these locations.

Thank you for the opportunity to be of service on this project. Please contact us if you have any questions or need further information.

Sincerely,

ESP Associates, Inc.

Edward D. Billington, PG
Senior Geophysicist

SBM/EDB

Attachments: Figures 1 – 10

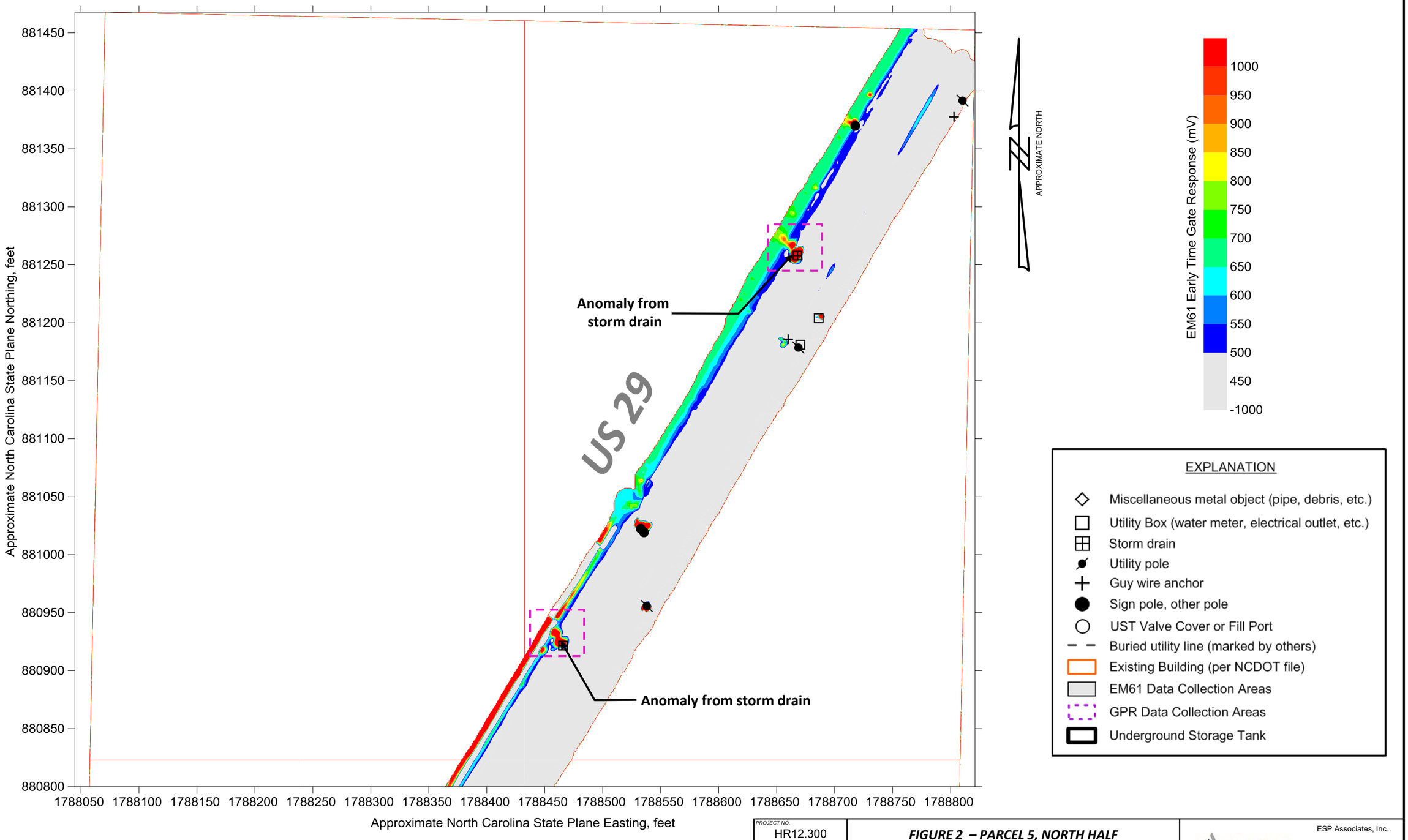
A. Photograph of geophysical area taken, looking southwest.

B. Sign within geophysical area.

C. Photograph of geophysical area, looking northeast.

D. Photograph of portion of geophysical area, looking northeast.

PROJECT NO. HR12.300	***FIGURE 1 – PARCEL 5, DELTA PHOENIX, INC. SITE PHOTOGRAPHS***	ESP Associates, Inc. 7011 Albert Pick Rd., Suite E Greensboro, NC 27409 336.334.7724 www.espassociates.com
SCALE N/A		
DATE 7/12/19	***NCDOT PROJECT R-4707 SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE GUILFORD COUNTY, NORTH CAROLINA***	
BY SBM/EDB		



Note: Locations of data and features are approximate and were collected using a DGPS instrument. ESP make no guarantees as to the accuracy of these locations. Coordinates on the axes of the maps are approximate and provided for general reference only.

PROJECT NO. HR12.300	***FIGURE 2 – PARCEL 5, NORTH HALF EM61 EARLY TIME GATE DATA***
SCALE AS SHOWN	***NCDOT PROJECT R-4707 SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE GUILFORD COUNTY, NORTH CAROLINA***
DATE 7/12/19	
BY SBM/EDB	

ESP Associates, Inc.
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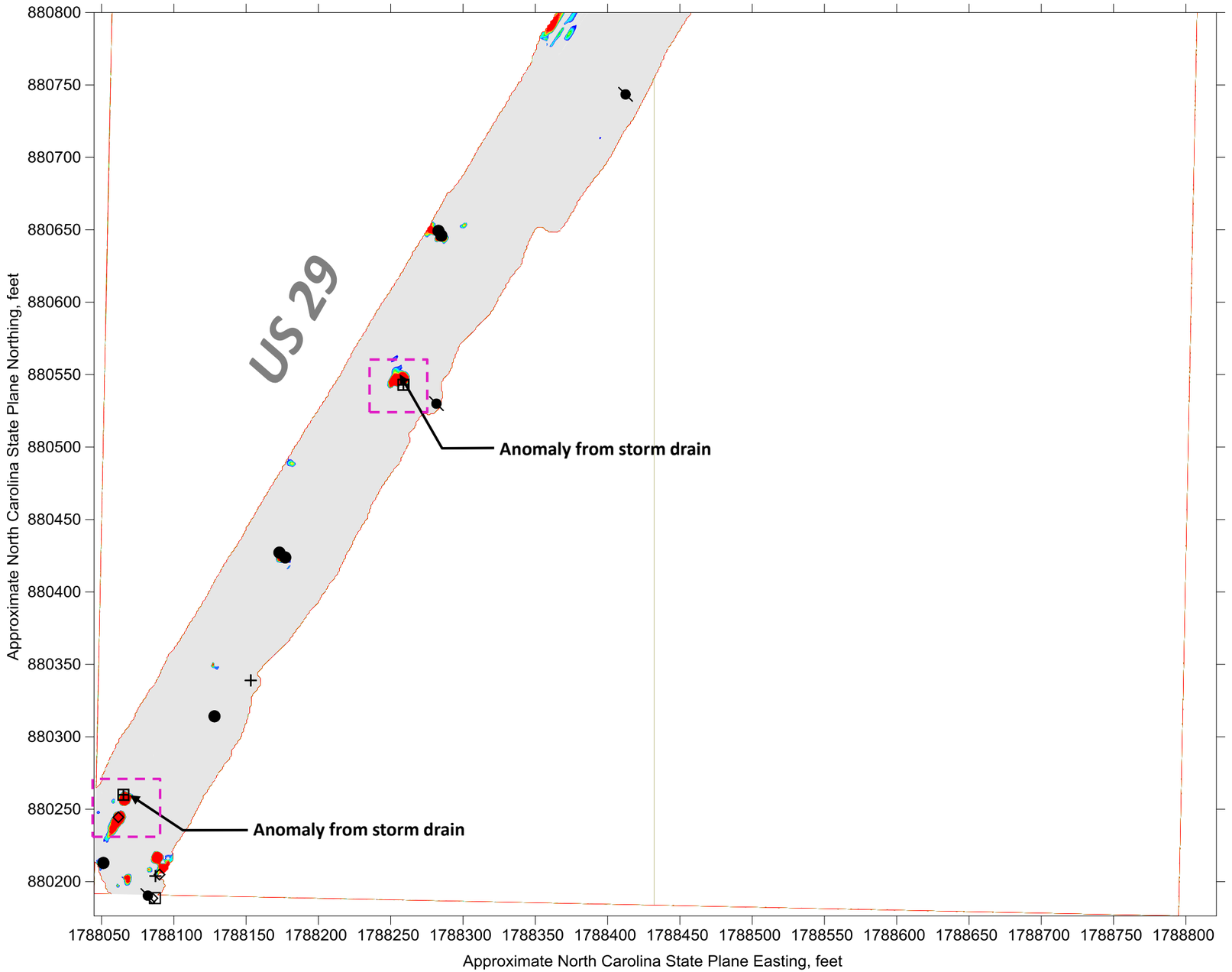
Greensboro, NC 27409
336.334.7724
www.espassociates.com



APPROXIMATE NORTH

EM61 Early Time Gate Response (mV)

1000
950
900
850
800
750
700
650
600
550
500
450
-1000

EXPLANATION

- Miscellaneous metal object (pipe, debris, etc.)
- Utility Box (water meter, electrical outlet, etc.)
- Storm drain
- Utility pole
- Guy wire anchor
- Sign pole, other pole
- UST Valve Cover or Fill Port
- Buried utility line (marked by others)
- Existing Building (per NCDOT file)
- EM61 Data Collection Areas
- GPR Data Collection Areas
- Underground Storage Tank

Note: Locations of data and features are approximate and were collected using a DGPS instrument. ESP make no guarantees as to the accuracy of these locations. Coordinates on the axes of the maps are approximate and provided for general reference only.

PROJECT NO.	HR12.300
SCALE	AS SHOWN
DATE	7/12/19
BY	SBM/EDB

FIGURE 3 – PARCEL 5, SOUTH HALF
EM61 EARLY TIME GATE DATA

NCDOT PROJECT R-4707
SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE
GUILFORD COUNTY, NORTH CAROLINA

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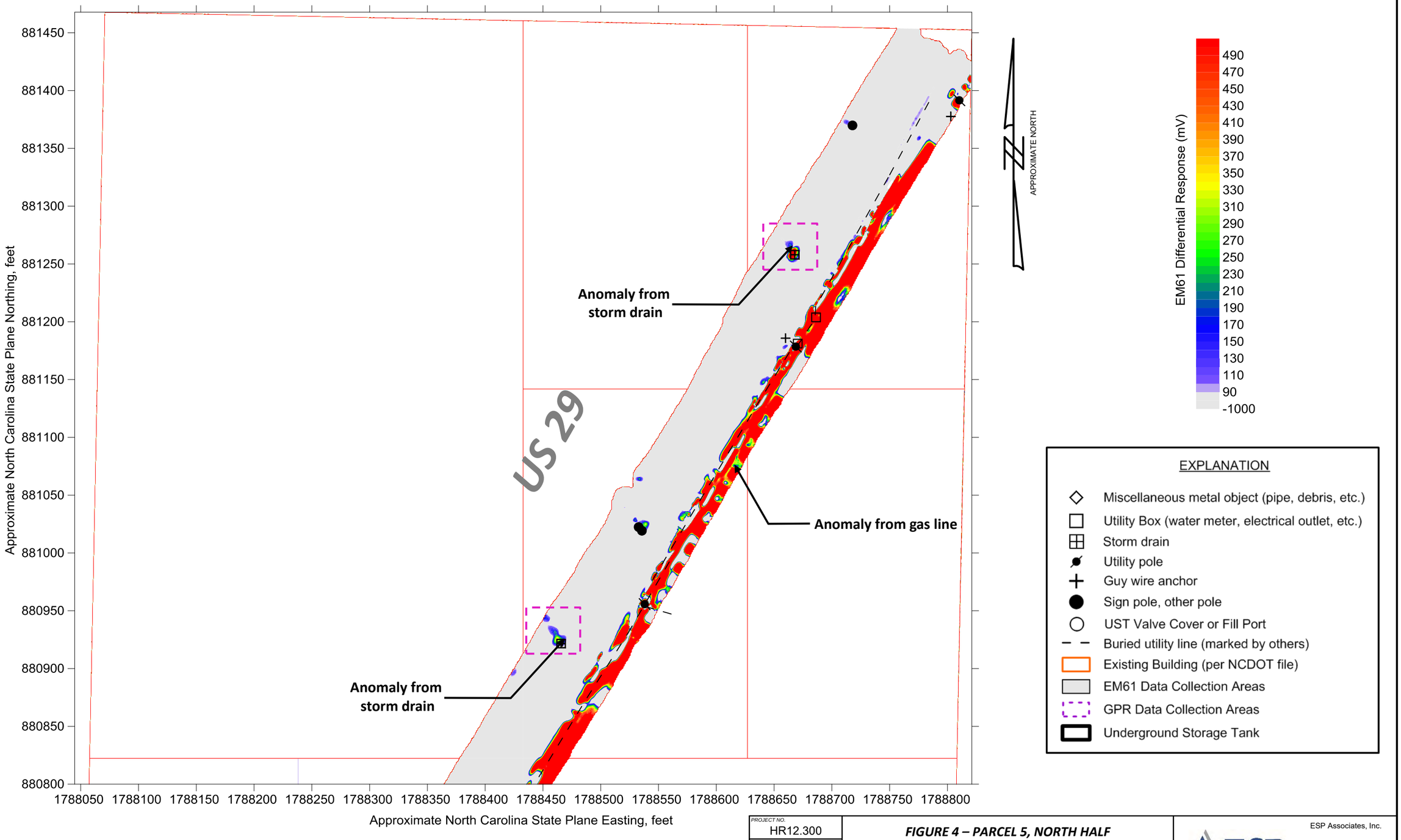
www.espassociates.com



Note: Locations of data and features are approximate and were collected using a DGPS instrument. ESP make no guarantees as to the accuracy of these locations. Coordinates on the axes of the maps are approximate and provided for general reference only.

PROJECT NO. HR12.300	***FIGURE 4 – PARCEL 5, NORTH HALF EM61 DIFFERENTIAL DATA***
SCALE AS SHOWN	
DATE 7/12/19	***NCDOT PROJECT R-4707 SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE GUILFORD COUNTY, NORTH CAROLINA***
BY SBM/EDB	

ESP Associates, Inc.
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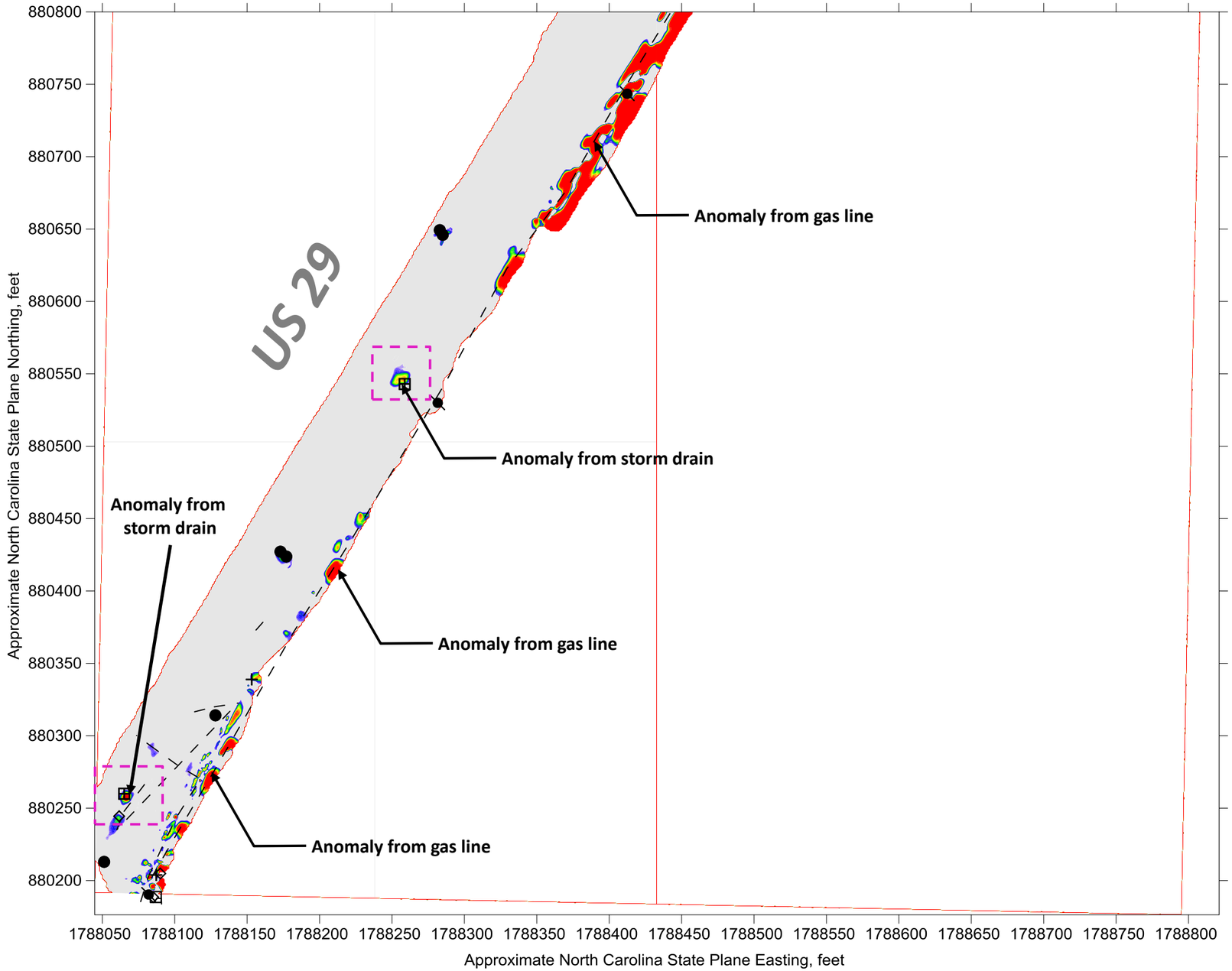
336.334.7724
www.espassociates.com



APPROXIMATE NORTH

EM61 Differential Response (mV)

490
470
450
430
410
390
370
350
330
310
290
270
250
230
210
190
170
150
130
110
90
-1000

EXPLANATION

- Miscellaneous metal object (pipe, debris, etc.)
- Utility Box (water meter, electrical outlet, etc.)
- Storm drain
- Utility pole
- Guy wire anchor
- Sign pole, other pole
- UST Valve Cover or Fill Port
- Buried utility line (marked by others)
- Existing Building (per NCDOT file)
- EM61 Data Collection Areas
- GPR Data Collection Areas
- Underground Storage Tank

Note: Locations of data and features are approximate and were collected using a DGPS instrument. ESP make no guarantees as to the accuracy of these locations. Coordinates on the axes of the maps are approximate and provided for general reference only.

PROJECT NO. HR12.300	***FIGURE 5 – PARCEL 5, SOUTH HALF EM61 DIFFERENTIAL DATA***
SCALE AS SHOWN	
DATE 7/12/19	***NCDOT PROJECT R-4707***
BY SBM/EDB	***SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE***
	GUILFORD COUNTY, NORTH CAROLINA

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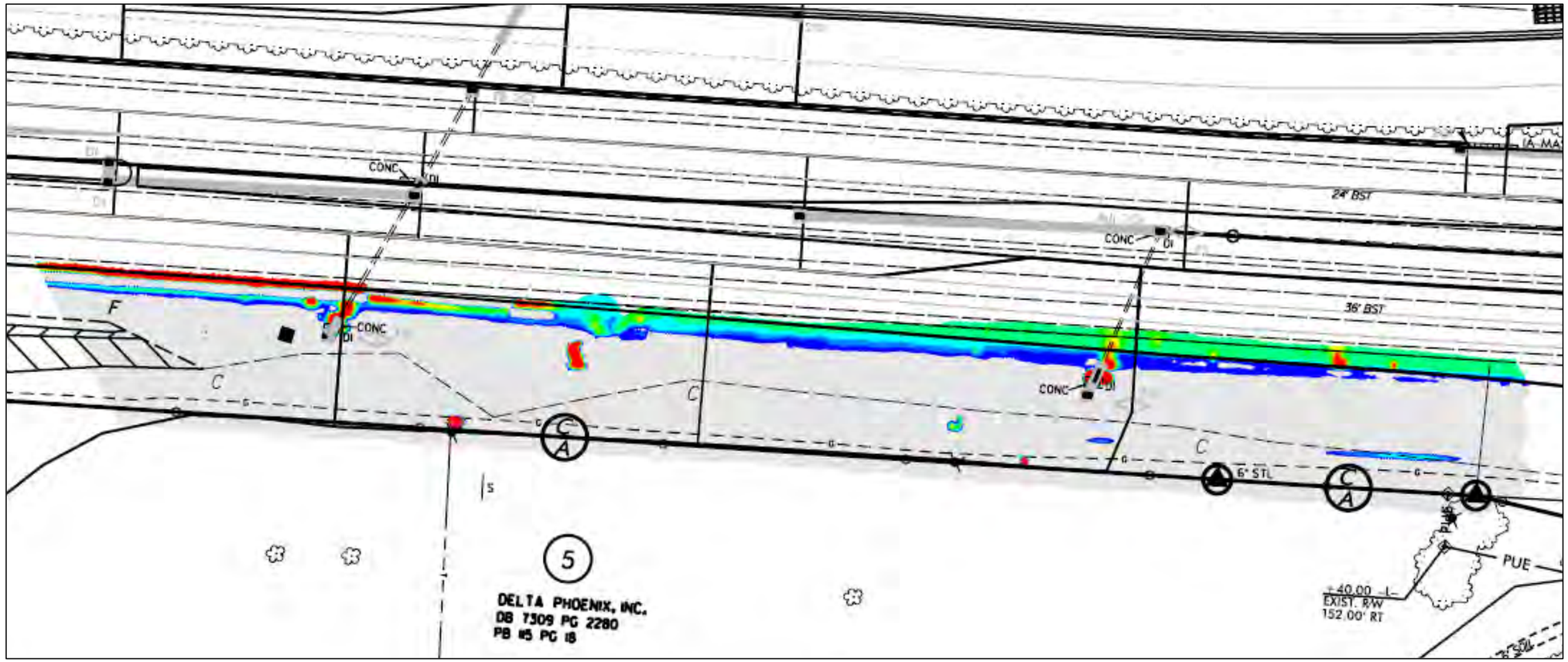
Greensboro, NC 27409
336.334.7724
www.espassociates.com

APPROXIMATE NORTH



EM61 Early Time Gate Response (mV)

1000
950
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
0
-1000

See Figure 10 for explanation of symbols and line types

List of NCDOT reference files

- R4707_Geo_Env.dgn
  - R4707_FS_NCDOT.dgn
  - R4707_hyd_drn.dgn
  - R4707_Rdy_dsn.dgn
  - R4707_Rdy_row.dgn
  - R4707_Rdy_ss.dgn

60’ 0’ 60’

GRAPHIC SCALE

PROJECT NO. HR12.300	***FIGURE 6 – PARCEL 5, NORTH HALF EM61 EARLY TIME GATE DATA ON PLAN SHEET***
SCALE 1” = 60’	
DATE 7/12/19	***NCDOT PROJECT R-4707 SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE GUILFORD COUNTY, NORTH CAROLINA***
BY SBM/EDB	

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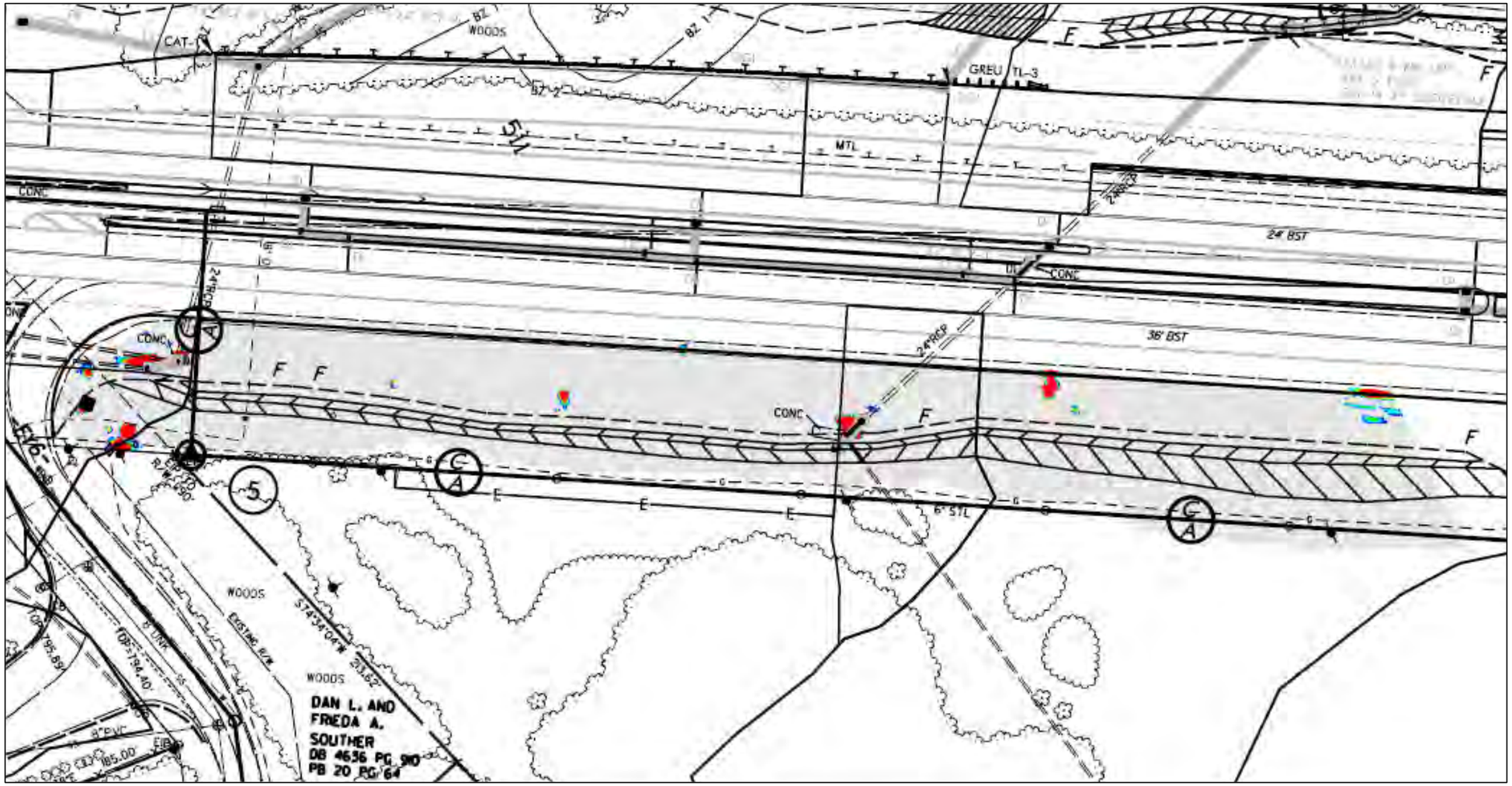

See Figure 10 for explanation of symbols and line types

List of NCDOT reference files

- R4707_Geo_Env.dgn
  - R4707_FS_NCDOT.dgn
  - R4707_hyd_drn.dgn
  - R4707_Rdy_dsn.dgn
  - R4707_Rdy_row.dgn
  - R4707_Rdy_ss.dgn

60’ 0’ 60’

GRAPHIC SCALE

PROJECT NO. HR12.300	***FIGURE 7 – PARCEL 5, SOUTH HALF EM61 EARLY TIME GATE DATA ON PLAN SHEET***
SCALE 1” = 60’	
DATE 7/12/19	***NCDOT PROJECT R-4707 SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE GUILFORD COUNTY, NORTH CAROLINA***
BY SBM/EDB	

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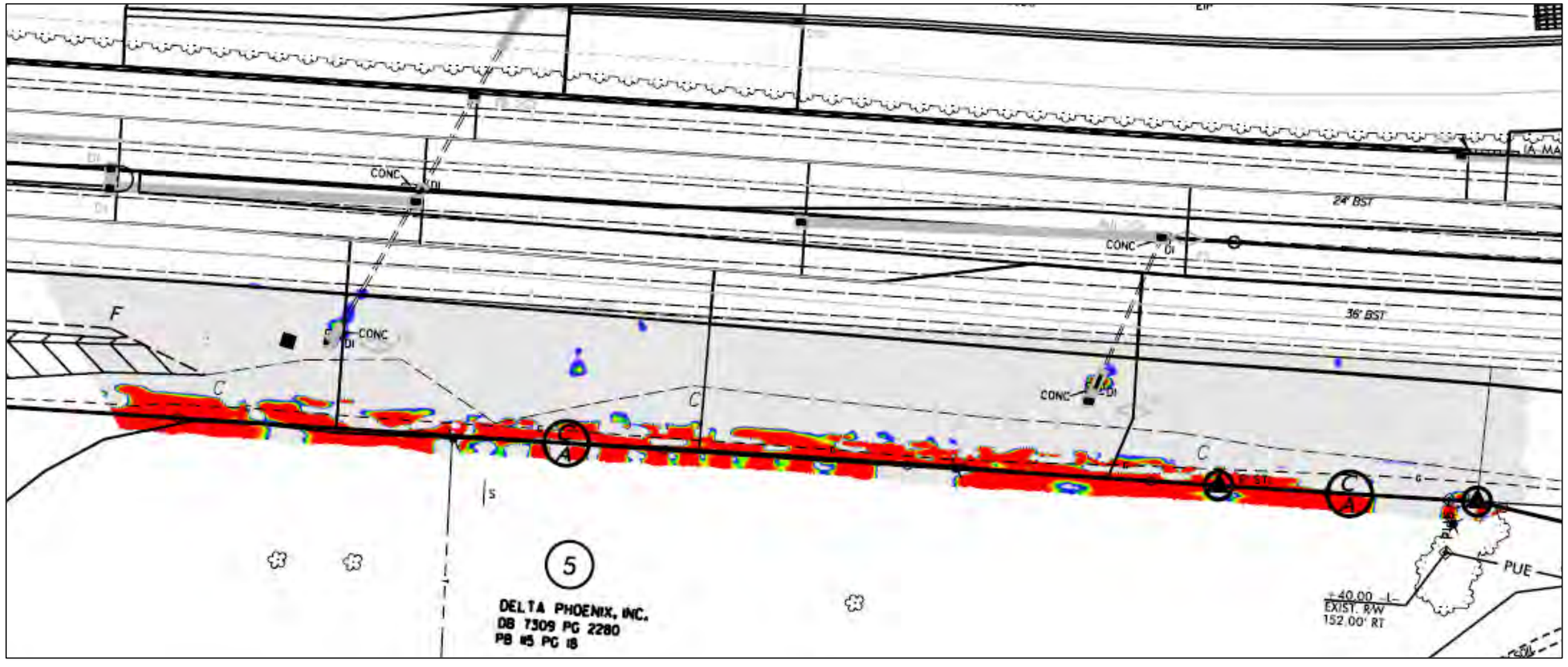
APPROXIMATE NORTH



EM61 Differential Response (mV)

490
470
450
430
410
390
370
350
330
310
290
270
250
230
210
190
170
150
130
110
90
-1000

See Figure 10 for explanation of symbols and line types

List of NCDOT reference files

- R4707_Geo_Env.dgn
  - R4707_FS_NCDOT.dgn
  - R4707_hyd_drn.dgn
  - R4707_Rdy_dsn.dgn
  - R4707_Rdy_row.dgn
  - R4707_Rdy_ss.dgn

60’ 0’ 60’

GRAPHIC SCALE

PROJECT NO. HR12.300	***FIGURE 8 – PARCEL 5, NORTH HALF EM61 DIFFERENTIAL DATA ON PLAN SHEET***
SCALE 1” = 60’	
DATE 7/12/19	***NCDOT PROJECT R-4707 SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE GUILFORD COUNTY, NORTH CAROLINA***
BY SBM/EDB	

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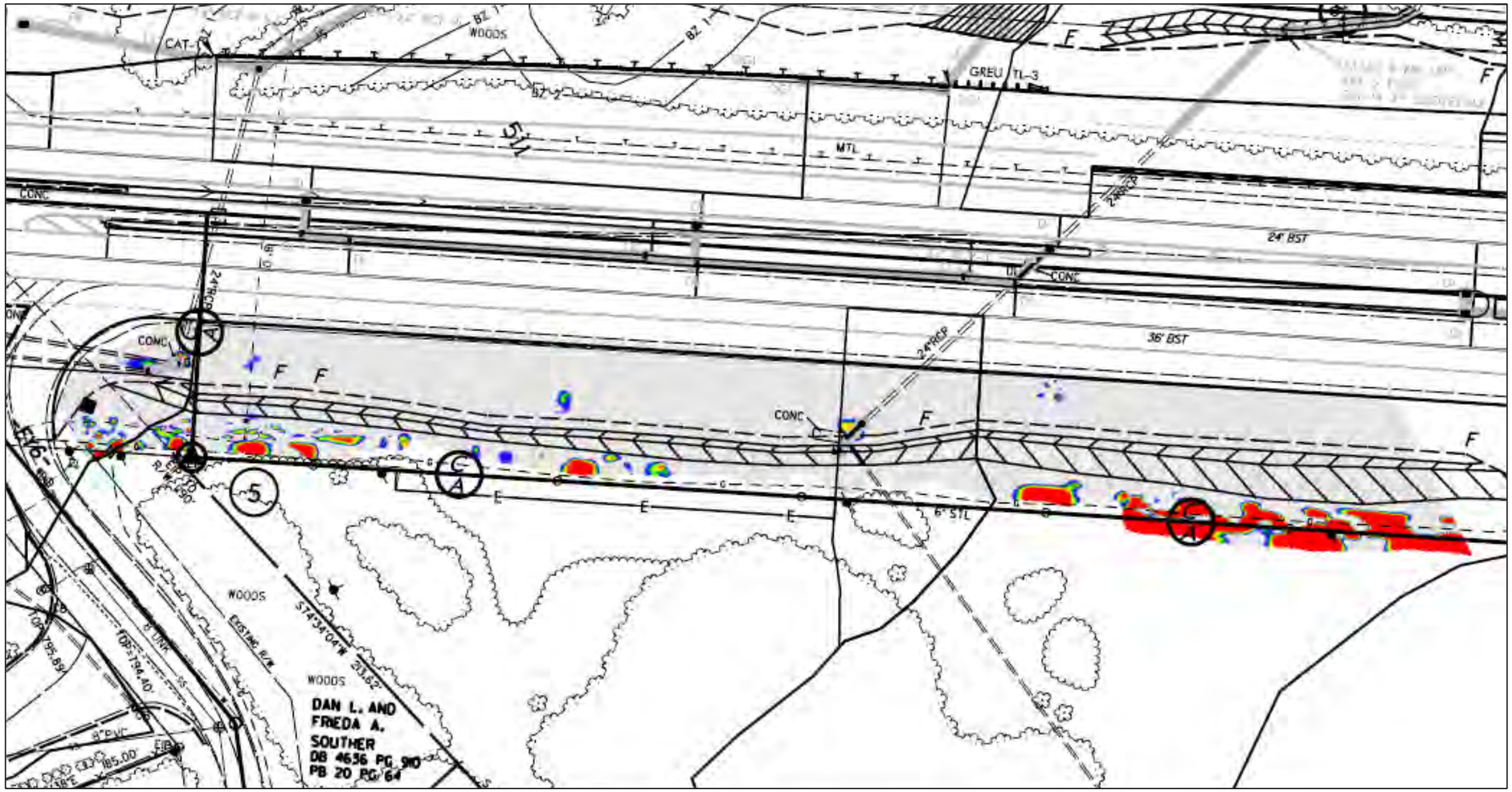

See Figure 10 for explanation of symbols and line types

List of NCDOT reference files

- R4707_Geo_Env.dgn
  - R4707_FS_NCDOT.dgn
  - R4707_hyd_drn.dgn
  - R4707_Rdy_dsn.dgn
  - R4707_Rdy_row.dgn
  - R4707_Rdy_ss.dgn

60’ 0’ 60’

GRAPHIC SCALE

PROJECT NO. HR12.300	***FIGURE 9 – PARCEL 5, SOUTH HALF EM61 DIFFERENTIAL DATA ON PLAN SHEET***
SCALE 1” = 60’	
DATE 7/12/19	***NCDOT PROJECT R-4707 SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE GUILFORD COUNTY, NORTH CAROLINA***
BY SBM/EDB	

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04/26/15

PROJECT REFERENCE NO. | SHEET NO.

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

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
- Existing Historic Property Boundary
- Known Contamination Area: Soil
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- Contaminated Site: Known or Potential

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 (Ave)
- 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 R/W Marker
- Proposed Control of Access Line with Concrete C/A 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
- Proposed Slope Stakes Fill
- Proposed Curb Ramp (CR)
- 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 (P)
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line LOS B (S.U.E.*)
- U/G Power Line LOS C (S.U.E.*)
- U/G Power Line LOS D (S.U.E.*)

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole (T)
- Telephone Pedestal (T)
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole (T)
- U/G Telephone Cable LOS B (S.U.E.*)
- U/G Telephone Cable LOS C (S.U.E.*)
- U/G Telephone Cable LOS D (S.U.E.*)
- U/G Telephone Conduit LOS B (S.U.E.*)
- U/G Telephone Conduit LOS C (S.U.E.*)
- U/G Telephone Conduit LOS D (S.U.E.*)
- U/G Fiber Optics Cable LOS B (S.U.E.*)
- U/G Fiber Optics Cable LOS C (S.U.E.*)
- U/G Fiber Optics Cable LOS D (S.U.E.*)

WATER:

- Water Manhole (W)
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E*)
- U/G Water Line LOS C (S.U.E*)
- U/G Water Line LOS D (S.U.E*)
- Above Ground Water Line (A/G Water)

TV:

- TV Pedestal (TV)
- TV Tower
- U/G TV Cable Hand Hole (TV)
- U/G TV Cable LOS B (S.U.E.*)
- U/G TV Cable LOS C (S.U.E.*)
- U/G TV Cable LOS D (S.U.E.*)
- U/G Fiber Optic Cable LOS B (S.U.E.*) (TV FO)
- U/G Fiber Optic Cable LOS C (S.U.E.*) (TV FO)
- U/G Fiber Optic Cable LOS D (S.U.E.*) (TV FO)

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*)
- U/G Gas Line LOS C (S.U.E.*)
- U/G Gas Line LOS D (S.U.E.*)
- Above Ground Gas Line (A/G Gas)

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line (SS)
- Above Ground Sanitary Sewer (A/G Sanitary Sewer)
- SS Forced Main Line LOS B (S.U.E.*) (FSS)
- SS Forced Main Line LOS C (S.U.E.*) (FSS)
- SS Forced Main Line LOS D (S.U.E.*) (FSS)

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box
- Utility Unknown U/G Line LOS B (S.U.E.*) (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 LOS A (S.U.E.*)
- Abandoned According to Utility Records (AATUR)
- End of Information (E.O.I.)

PROJECT NO.	HR12.300
SCALE	N/A
DATE	7/12/19
BY	SBM/EDB

FIGURE 10– PARCEL 5, DELTA PHOENIX, INC.
LEGEND FOR PLAN SHEET FIGURES

NCDOT PROJECT R-4707
SR 2526 FROM SR 2641 TO US 29-SR 2970 INTERCHANGE
GUILFORD COUNTY, NORTH CAROLINA

ESP Associates, Inc.
7011 Albert Pick Rd., Suite E
Greensboro, NC 27409
336.334.7724
www.espassociates.com

Appendix D

Soil Boring Logs

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

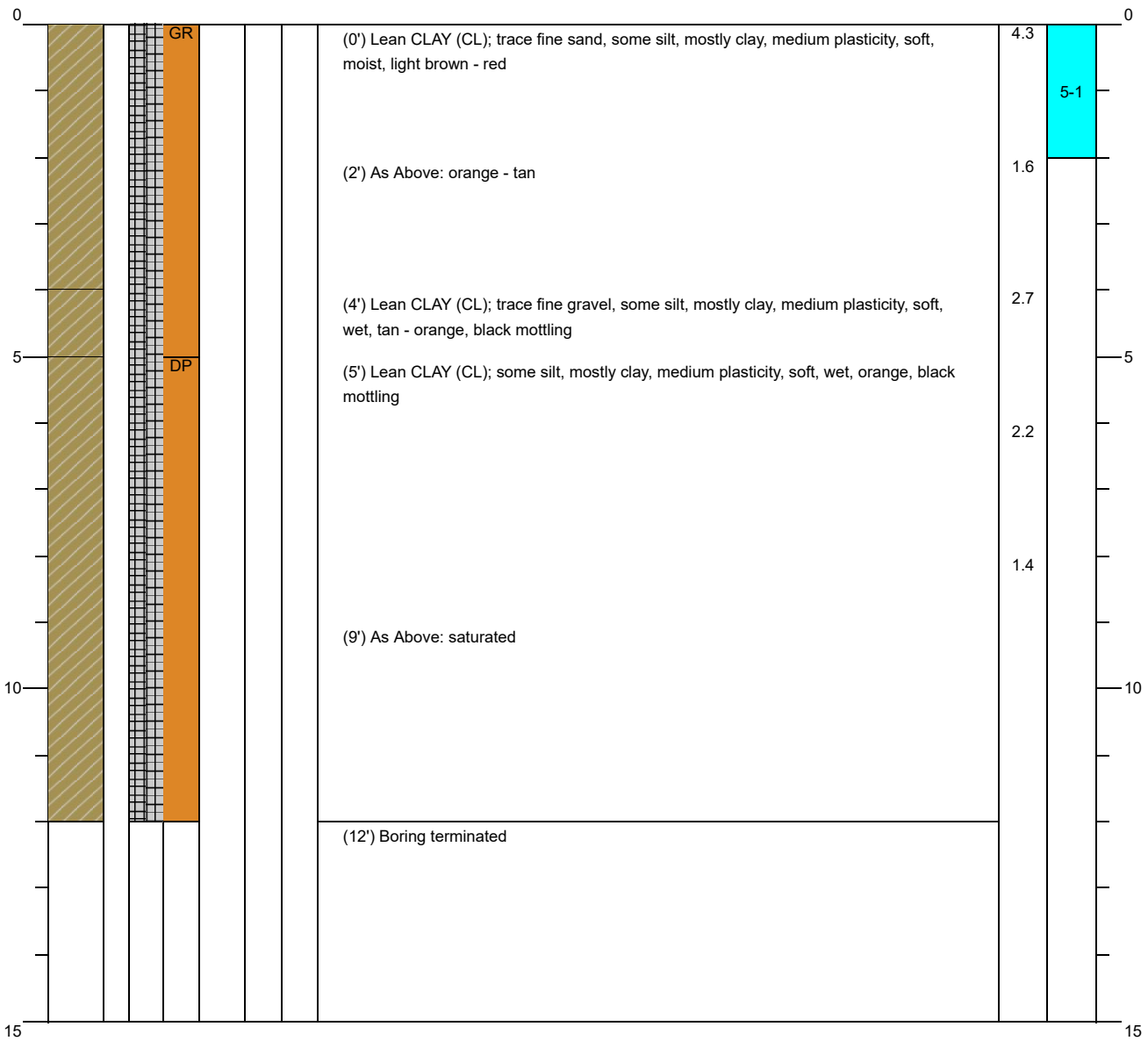
Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. **5-1**

Page: **1 of 1**

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	



DEPTH (ft)	SOIL/ROCK VISUAL DESCRIPTION	PID (ppm)	Lab Sample
0	(0') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, soft, moist, light brown - red	4.3	5-1
	(2') As Above: orange - tan	1.6	
	(4') Lean CLAY (CL); trace fine gravel, some silt, mostly clay, medium plasticity, soft, wet, tan - orange, black mottling	2.7	
5	(5') Lean CLAY (CL); some silt, mostly clay, medium plasticity, soft, wet, orange, black mottling	2.2	
		1.4	
10	(9') As Above: saturated		
	(12') Boring terminated		
15			

NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

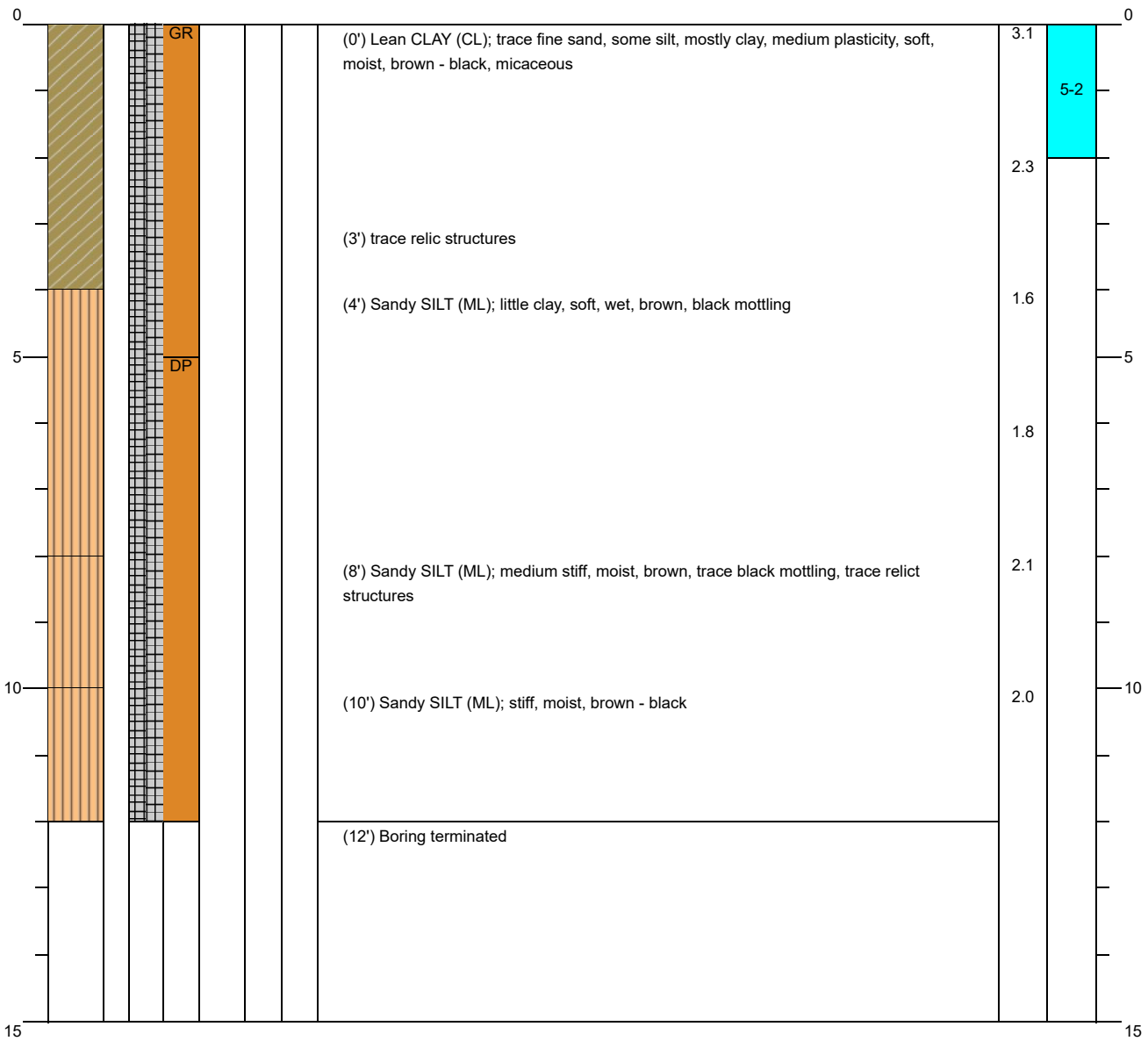
Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. **5-2**

Page: **1 of 1**

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	



NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

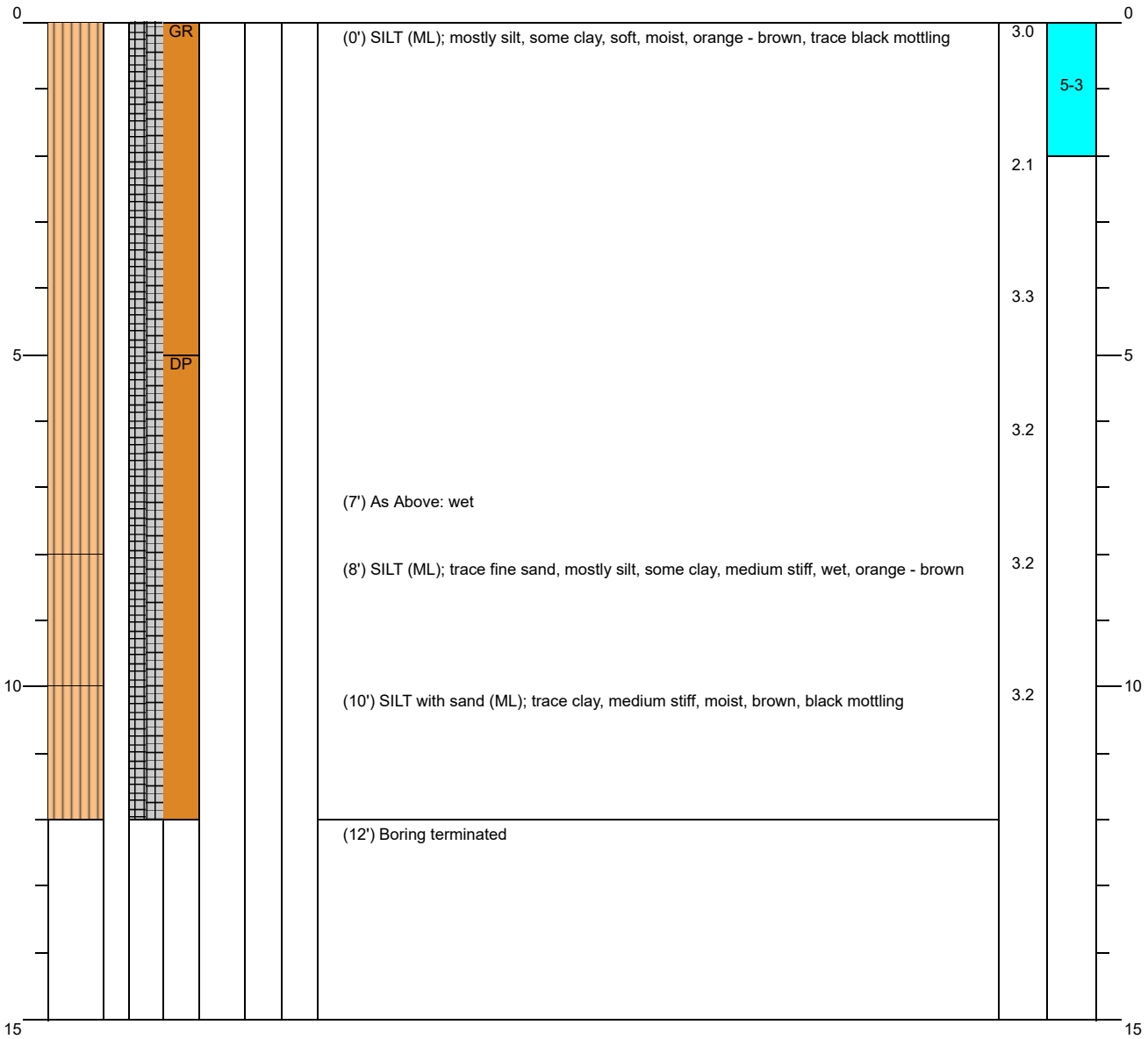
Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. **5-3**

Page: **1 of 1**

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	



NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

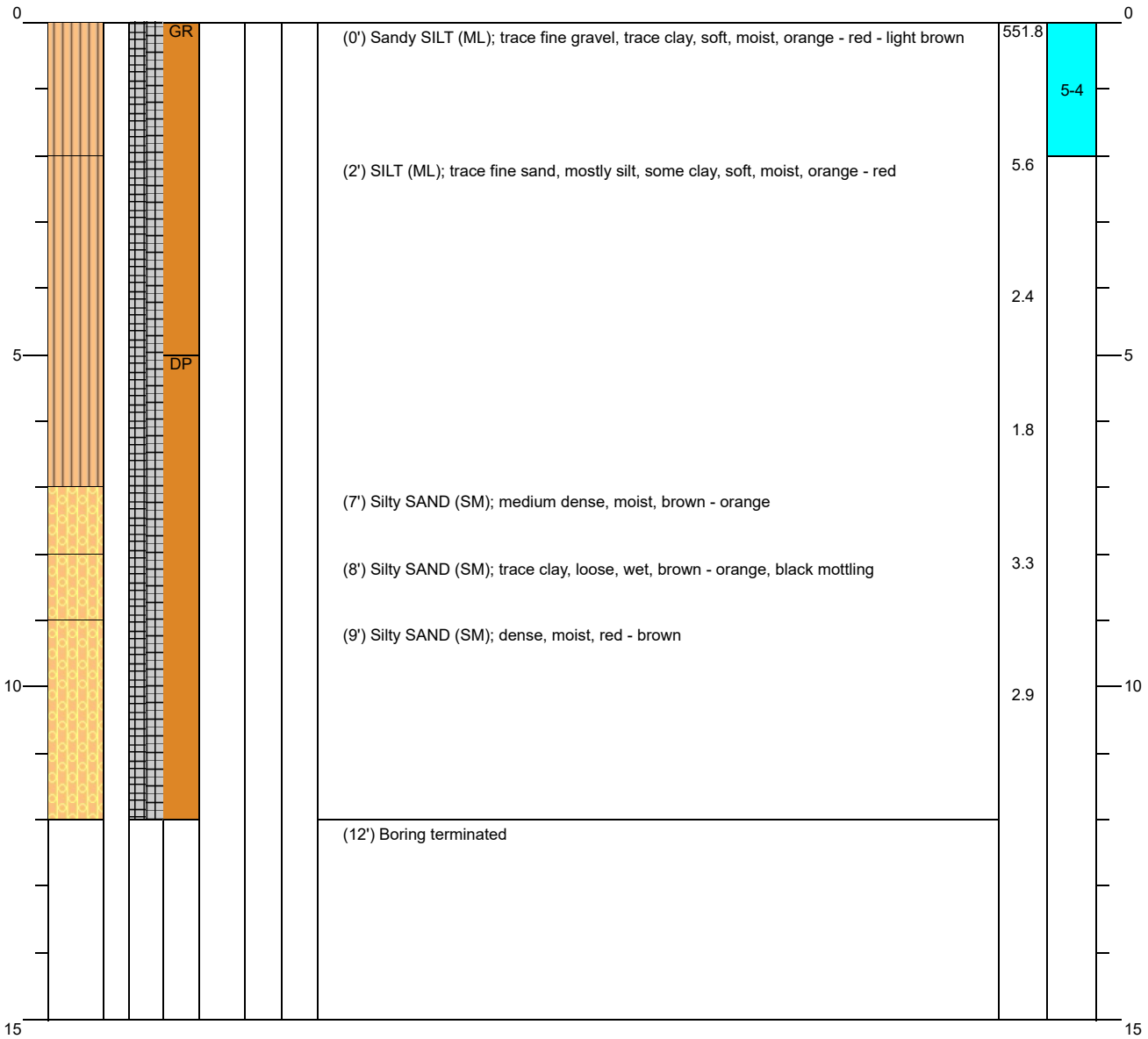
Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. 5-4

Page: 1 of 1

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	



NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. 5-5

Page: 1 of 1

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT: Sample Type	COLLECT: Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample	DEPTH (ft)
0				GR				(0') Sandy SILT (ML); soft, moist, red - brown	3.6	5-5	0
									3.0		
								(3') Silty SAND (SM); loose, moist, red - brown	2.9		
5				DP				(5') Sandy SILT (ML); soft, moist, red - orange - white			5
								(5.5') Sandy SILT (ML); medium stiff, moist, red - orange	3.3		
								(7') Sandy SILT (ML); few fine gravel, medium stiff, moist, light tan - orange			
								(7.5') Silty SAND (SM); medium dense, moist, tan - brown, trace black mottling	2.3		
								(9') Silty SAND (SM); medium dense, moist, red - orange - brown			
10								(10') As Above: few clay	2.4		10
								(12') Boring terminated			
15											15

NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. **5-6**

Page: **1 of 1**

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT: Sample Type	COLLECT: Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample	DEPTH (ft)
0				GR				(0') SILT (ML); trace fine sand, mostly silt, some clay, soft, moist, red - orange - brown	2.3	5-6	0
									2.2		
								(3') SILT (ML); mostly silt, some clay, medium stiff, moist, orange - red, two large quartz fragments, trace black mottling			
								(4') SILT (ML); few fine gravel, mostly silt, some clay, medium stiff, moist, orange - red - brown	1.2		
5				DP				(5') SILT (ML); mostly silt, little clay, medium stiff, moist, brown - orange			5
									1.6		
								(7') Lean CLAY (CL); some silt, mostly clay, medium plasticity, medium stiff, moist, orange - white			
								(7.25') Silty SAND (SM); few fine gravel, medium dense, moist, brown - black	1.8		
								(9') Sandy SILT (ML); soft, moist, light tan			
10									1.7		10
								(12') Boring terminated			
15											15

NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. 5-7

Page: 1 of 1

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT: Sample Type	COLLECT: Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample	DEPTH (ft)
0				GR				(0') Lean CLAY (CL); some silt, mostly clay, medium plasticity, soft, moist, brown	4.5	5-7	0
								(2') Lean CLAY (CL); some silt, mostly clay, medium plasticity, medium stiff, moist, gray - tan	4.0		
									3.7		
5				DP				(5') Lean CLAY (CL); some silt, mostly clay, medium plasticity, medium stiff, moist, light brown, few coarse gravel at top 0.25'			5
									5.2		
								(7') Silty SAND (SM); medium dense, moist, brown			
								(8') Sandy lean CLAY (CL); medium plasticity, medium stiff, moist, white - gray	4.6		
								(8.5') Well-graded SAND (SW); mostly fine-medium grained sand, few silt, trace clay, dense, moist, tan - white			
10									4.8		10
								(12') Boring terminated			
15											15

NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. **5-8**

Page: **1 of 1**

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT: Sample Type	COLLECT: Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample	DEPTH (ft)
0				GR				(0') Sandy SILT (ML); medium stiff, moist, brown	2.1	5-8	0
								(1') Lean CLAY (CL); some silt, mostly clay, medium plasticity, medium stiff, moist, brown - orange	2.6		
									3.0		
5				DP				(5') SILT (ML); mostly silt, some clay, medium stiff, moist, brown, extremely micaceous, in-tact mica books present			5
								(5.5') SILT (ML); mostly silt, little clay, medium stiff, moist, tan - orange	2.8		
								(7') SILT (ML); stiff, moist, brown - black, extremely micaceous, in-tact mica books			
								(7.5') Silty SAND (SM); medium dense, moist, tan - white	3.1		
								(9') Well-graded SAND with silt (SW-SM); mostly fine grained sand, few silt, medium dense, moist, white- tan			
10								(10') SILT (ML); medium stiff, moist, black - brown, extremely micaceous, in-tact mica books	3.7		10
								(12') Boring terminated			
15											15

NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

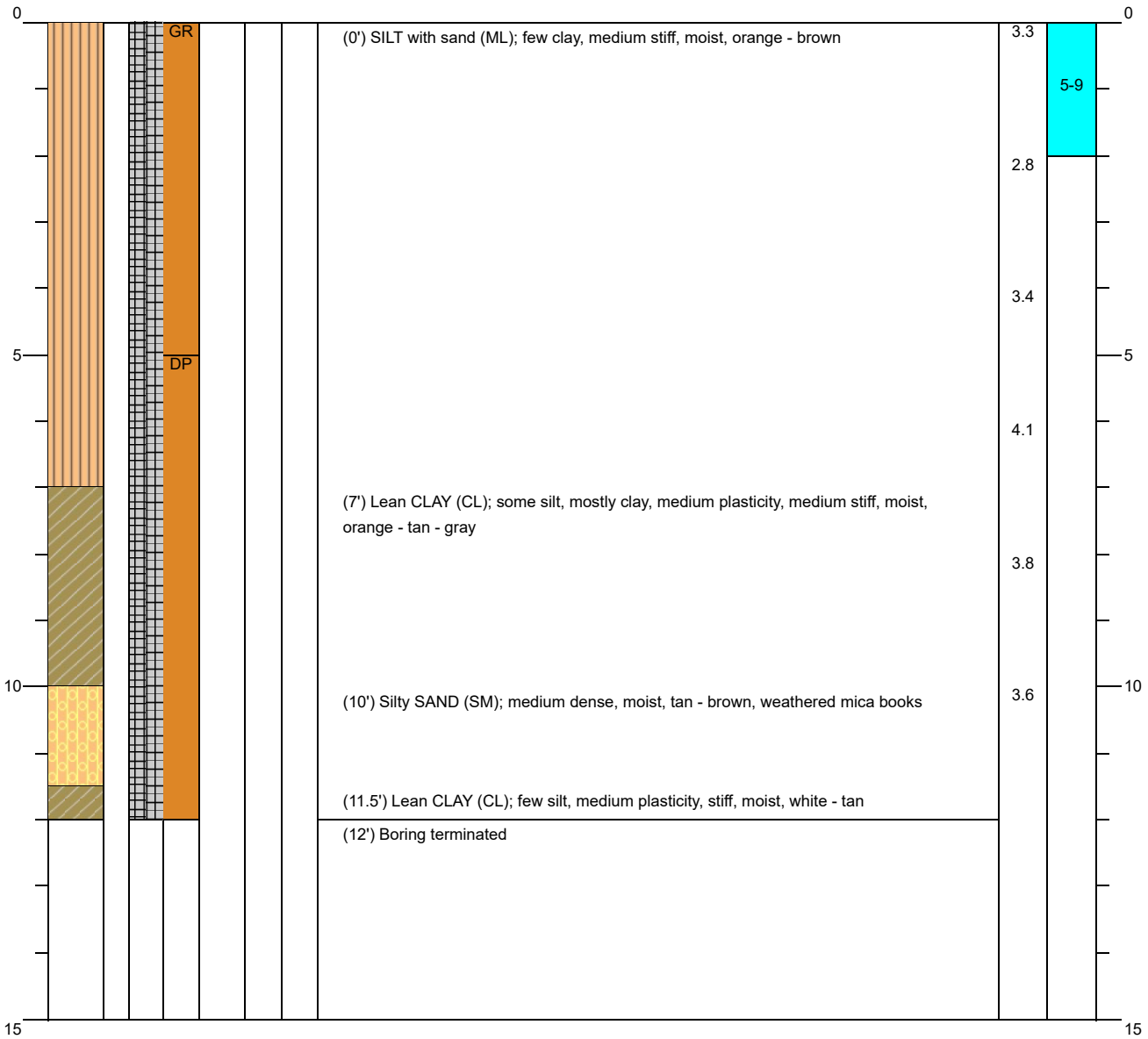
Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. 5-9

Page: 1 of 1

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	



NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

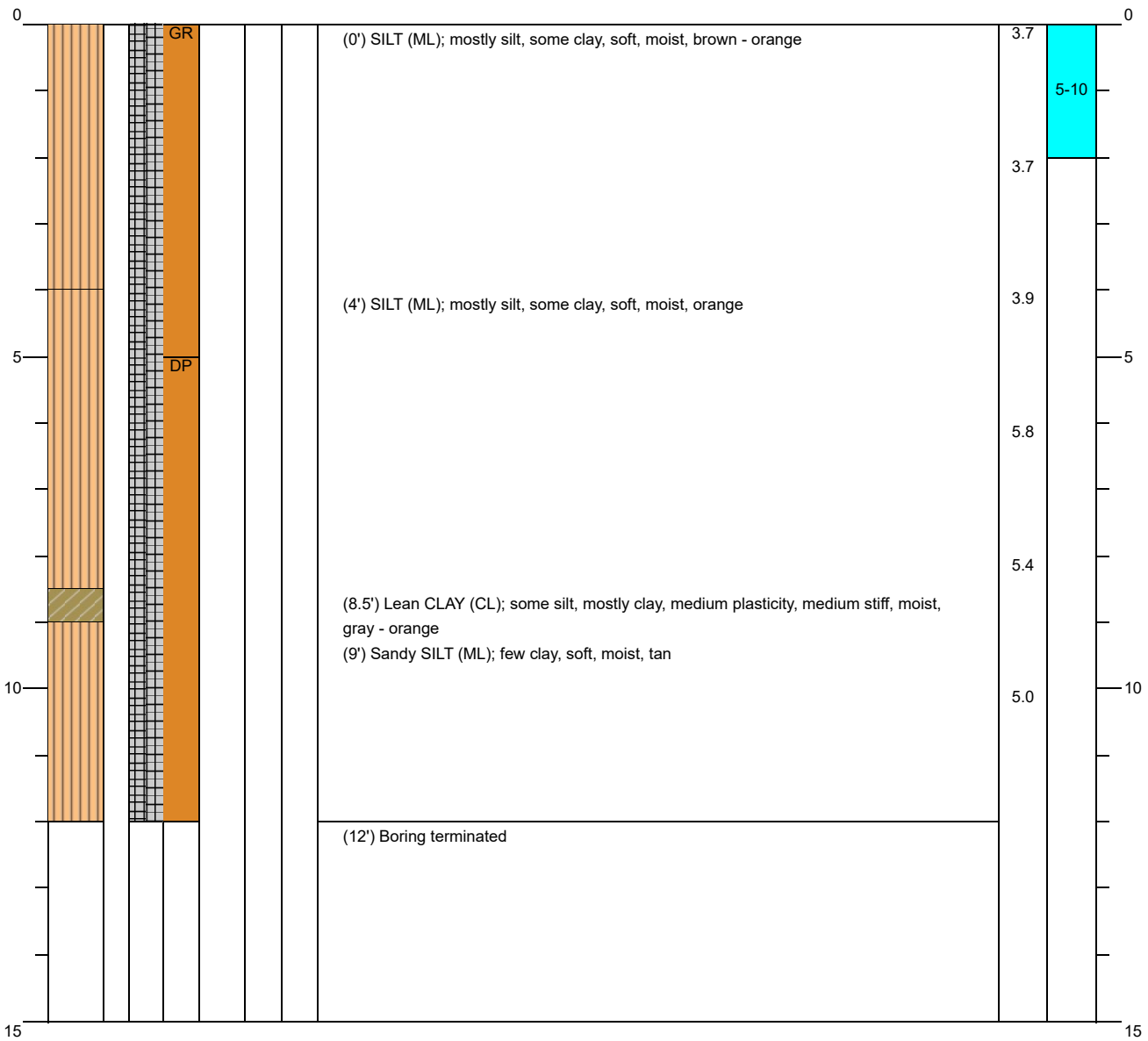
Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. **5-10**

Page: **1 of 1**

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	



DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT: Sample Type	COLLECT: Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample	DEPTH (ft)
0				GR				(0') SILT (ML); mostly silt, some clay, soft, moist, brown - orange	3.7	5-10	0
5				DP				(4') SILT (ML); mostly silt, some clay, soft, moist, orange	3.9		5
									5.8		
									5.4		
10								(8.5') Lean CLAY (CL); some silt, mostly clay, medium plasticity, medium stiff, moist, gray - orange (9') Sandy SILT (ML); few clay, soft, moist, tan	5.0		10
15								(12') Boring terminated			15

NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

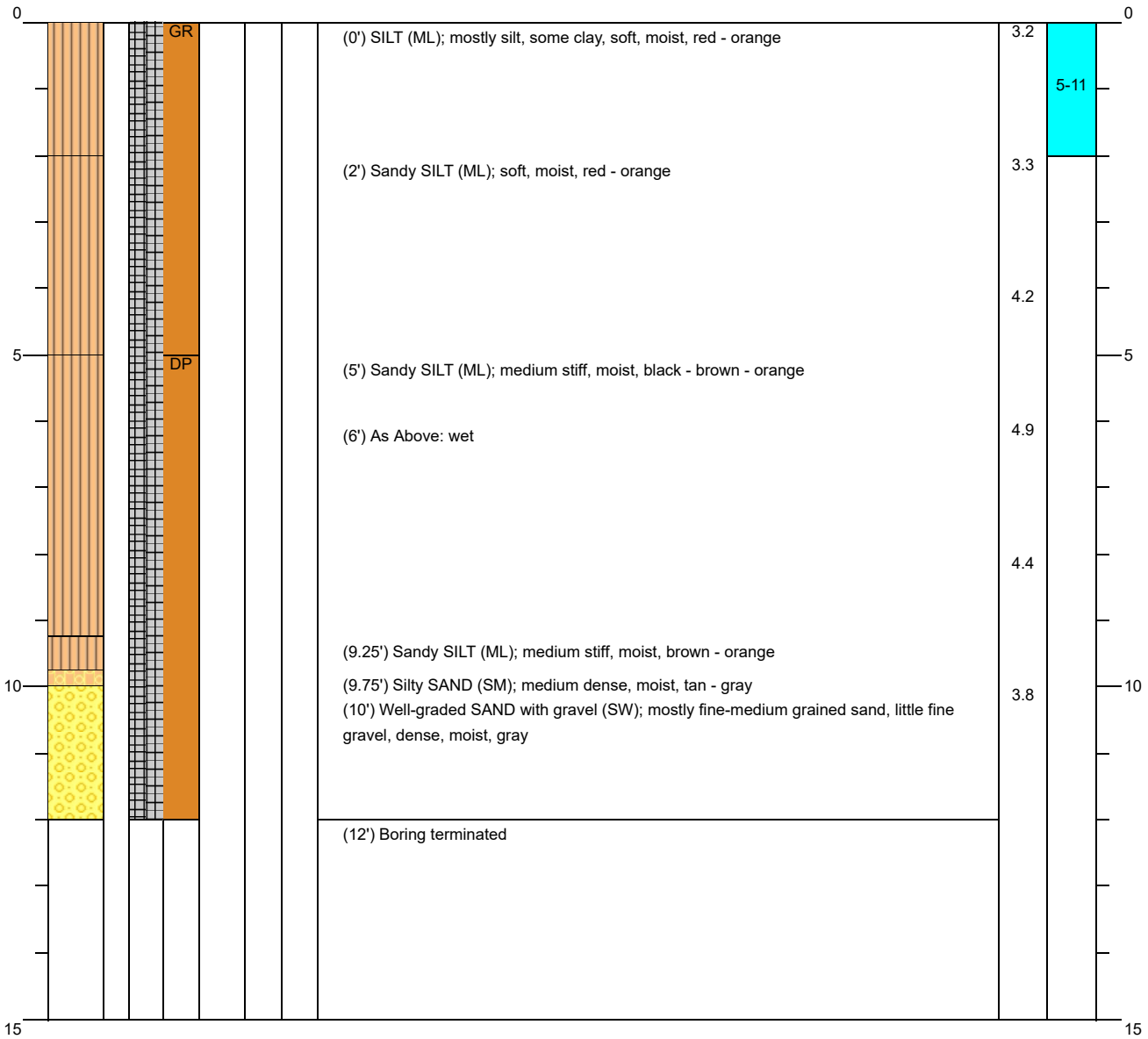
Client:	**NC DOT**
Project:	**ROW-603**
Address:	**Parcel 5, Greensboro, NC**

BORING LOG

Boring No. 5-11

Page: 1 of 1

Drilling Start Date:	**6/25/2019**	Boring Depth (ft):	**12.0**
Drilling End Date:	**6/25/2019**	Boring Diameter (in):	**2.50**
Drilling Company:	**SAEDACCO**	Sampling Method(s):	**Direct Push, Grab**
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	
Drilling Equipment:	**Geoprobe 7822 DT**	DTW After Drilling (ft):	
Driller:	**Stefan Smith**	Ground Surface Elev. (ft):	
Logged By:	**AFM**	Location (X,Y):	



DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT: Sample Type	COLLECT: Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample	DEPTH (ft)
0				GR				(0') SILT (ML); mostly silt, some clay, soft, moist, red - orange	3.2	5-11	0
								(2') Sandy SILT (ML); soft, moist, red - orange	3.3		
									4.2		
5				DP				(5') Sandy SILT (ML); medium stiff, moist, black - brown - orange			5
								(6') As Above: wet	4.9		
									4.4		
								(9.25') Sandy SILT (ML); medium stiff, moist, brown - orange			
10								(9.75') Silty SAND (SM); medium dense, moist, tan - gray (10') Well-graded SAND with gravel (SW); mostly fine-medium grained sand, little fine gravel, dense, moist, gray	3.8		10
								(12') Boring terminated			
15											15

NOTES: Hole precleared to 5.0' by SAEDACCO using hand auger.

Appendix E

Laboratory Analytical Reports

QED REDLAB RAPID ENVIRONMENTAL DIAGNOSTICS QROS

Hydrocarbon Analysis Results

Client: HART HICKMAN
Address: 2923 S TRYON ST SUITE 100
CHARLOTTE NC 28203

Samples taken Tuesday, June 25, 2019
Samples extracted Tuesday, June 25, 2019
Samples analysed Thursday, June 27, 2019

Contact: DAVID GRAHAM

Operator JENN RYAN

Project: ROW - 603

U04049

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	5-1	14.7	<0.37	0.72	<0.37	0.72	0.28	<0.12	<0.015	90.7	4.2	5.1	V.Deg.PHC 74.9%,(FCM)
s	5-2	12.8	<0.32	1.1	<0.32	1.1	0.22	<0.1	<0.013	94.3	3.3	2.4	V.Deg.PHC 75.6%,(FCM)
s	5-3	11.2	<0.28	<0.28	0.28	0.28	0.21	<0.09	<0.011	0	49.3	50.7	V.Deg.PHC 90.1%,(FCM),(BO)
s	5-4	29.5	<0.74	<0.74	1.3	1.3	0.67	<0.24	<0.03	0	68	32	Deg.PHC 80.8%,(FCM)
s	5-5	27.1	<0.68	2.8	1.7	4.5	0.88	<0.22	<0.027	85.9	9.2	4.9	Deg.PHC 80.6%,(FCM)
s	5-6	24.1	<0.6	<0.6	0.6	0.6	0.45	<0.19	<0.024	0	55.6	44.4	V.Deg.PHC 78%,(FCM)
s	5-7	22.4	<0.56	<0.56	23.7	23.7	0.98	<0.18	<0.022	0	64.5	35.5	Deg.Fuel 86.3%,(FCM)
s	5-8	22.4	<0.56	<0.56	0.56	0.56	0.29	<0.18	<0.022	93.4	3	3.6	V.Deg.PHC 77.2%,(FCM),(P)
s	5-9	24.3	<0.61	<0.61	0.61	0.61	0.5	<0.19	<0.024	0	53.7	46.3	V.Deg.PHC 77%,(FCM),(P)
s	5-10	21.1	<0.53	<0.53	4.1	4.1	1.8	<0.17	<0.021	0	65.6	34.4	V.Deg.PHC 95.4%,(FCM)

Initial Calibrator QC check OK Final FCM QC Check OK 100.6 %

Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content

Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library

(SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present

QED REDLAB RAPID ENVIRONMENTAL DIAGNOSTICS QROS

Hydrocarbon Analysis Results

Client: HART HICKMAN
Address: 2923 S TRYON ST SUITE 100
CHARLOTTE NC 28203

Samples taken Tuesday, June 25, 2019
Samples extracted Tuesday, June 25, 2019
Samples analysed Thursday, June 27, 2019

Contact: DAVID GRAHAM

Operator JENN RYAN

Project: ROW - 603

U04049

Matrix	Sample ID	Dilution used	BTEX (C6 - C9)	GRO (C5 - C10)	DRO (C10 - C35)	TPH (C5 - C35)	Total Aromatics (C10-C35)	16 EPA PAHs	BaP	Ratios			HC Fingerprint Match
										% light	% mid	% heavy	
s	5-11	25.0	<0.63	1.2	17.1	18.3	8.3	0.88	<0.025	18.9	58	23.1	Road Tar 77.7%,(FCM)

Initial Calibrator QC check OK Final FCM QC Check OK 109.5 %

Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content

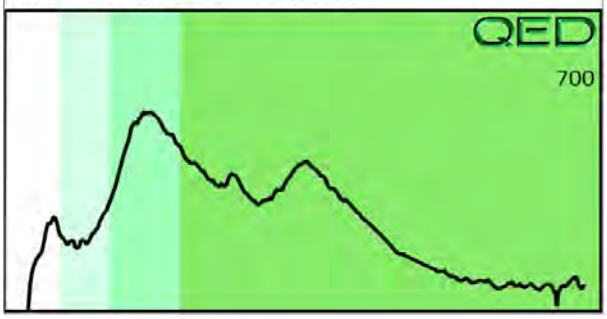
Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library

(SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present

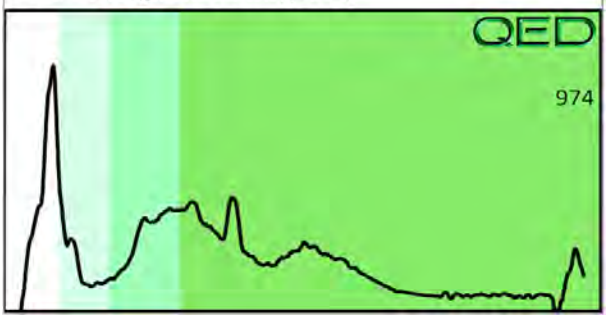
QED Hydrocarbon Fingerprints

Project: ROW - 603 Wednesday, June 26, 2019

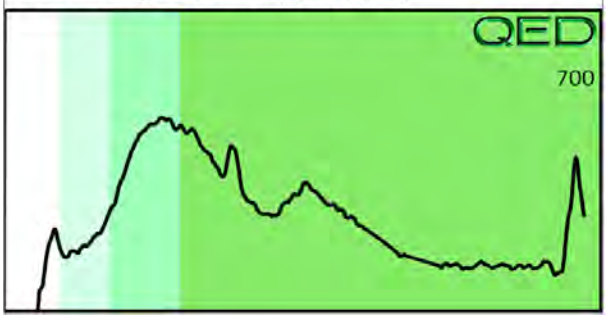
5-1 : V.Deg.PHC 74.9%,(FCM)



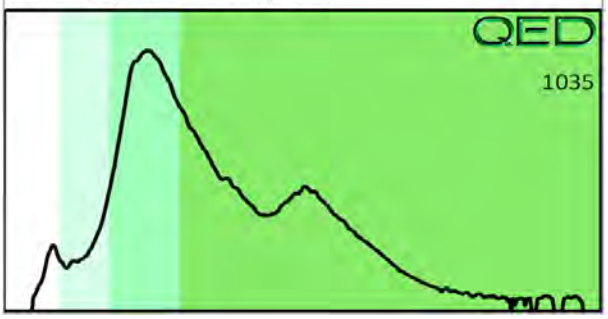
5-2 : V.Deg.PHC 75.6%,(FCM)



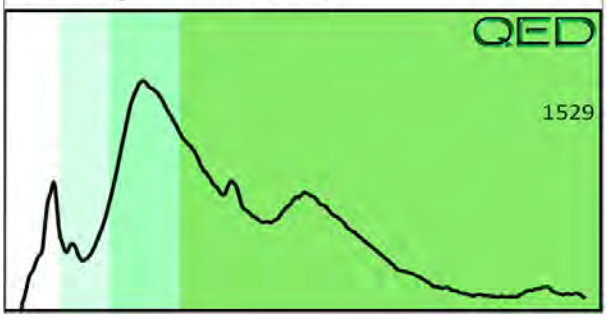
5-3 : V.Deg.PHC 90.1%,(FCM),(BO)



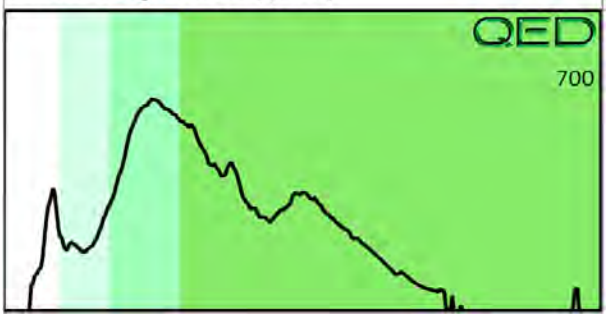
5-4 : Deg.PHC 80.8%,(FCM)



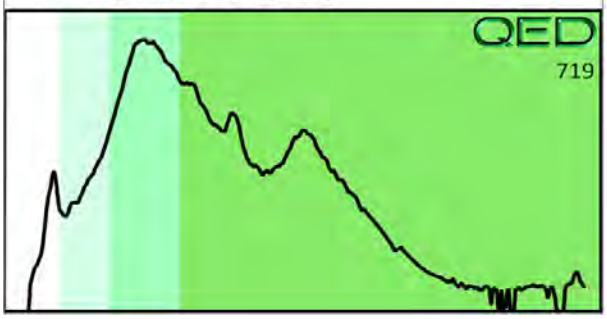
5-5 : Deg.PHC 80.6%,(FCM)



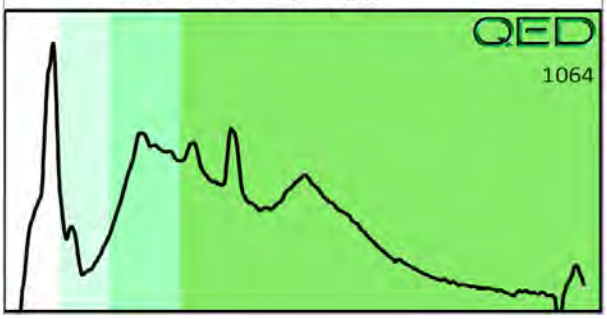
5-6 : V.Deg.PHC 78%,(FCM)



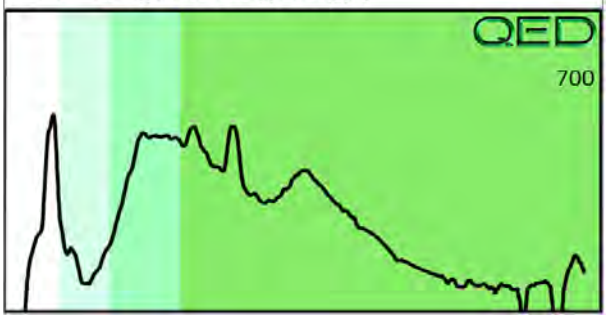
5-7 : Deg.Fuel 86.3%,(FCM)



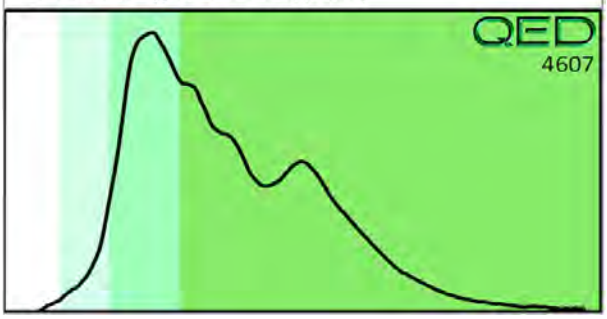
5-8 : V.Deg.PHC 77.2%,(FCM),(P)



5-9 : V.Deg.PHC 77%,(FCM),(P)

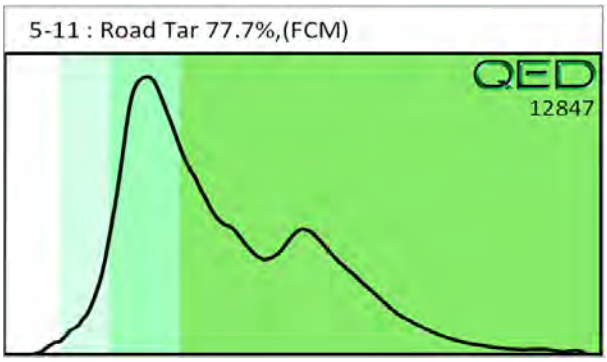


5-10 : V.Deg.PHC 95.4%,(FCM)



QED Hydrocarbon Fingerprints

Project: ROW - 603 Wednesday, June 26, 2019



B128

Client Name:	HART & HICKMAN, P.C
Address:	2923 S. TRYON ST, SUITE 100 CHARLOTTE, NC 28203
Contact:	DAVID GRAHAM
Project Ref.:	ROW-603
Email:	DGRAHAM@HARTHICKMAN.COM
Phone #:	704-586-0007
Collected by:	AFM, CDG

REDLAB™
RAPID ENVIRONMENTAL DIAGNOSTICS

CHAIN OF CUSTODY AND ANALYTICAL REQUEST FORM

RED Lab, LLC
5598 Marvin K Moss Lane
MARBIONC Bldg, Suite 2003
Wilmington, NC 28409

Each UVF sample will be analyzed for total BTEX, GRO, DRO, TPH, PAH total aromatics and BaP. Standard GC Analyses are for BTEX and Chlorinated Solvents: VC, 1,1 DCE, 1,2 cis DCE, 1,2 trans DCE, TCE, and PCE. Specify target analytes in the space provided below.

Sample Collection	TAT Requested		Analysis Type		Initials	Sample ID			
Date/Time	24 Hour	48 Hour	UVF	GC			Total Wt.	Tare Wt.	Sample Wt.
6/24/19 / 1200			X		CDG	4-1 (0-2)	55.4	44.3	11.1
6/24/19 / 1300			X		CDG	4-2 (0-2)	56.1	44.2	11.9
6/24/19 / 1410			X		CDG	4-3 (0-2)	56.4	43.9	12.5
6/24/19 / 1445			X		CDG	4-4 (0-2)	55	43.7	11.3
6/24/19 / 1635			X		CDG	4-5 (2-4)	56.8	44.2	12.6
6/24/19 / 1505			X		CDG	4-6 (0-2)	56.5	44.4	12.1
6/24/19 / 1535			X		CDG	4-7 (8-10)	55.7	43.8	11.9
6/25/19 / 0820			X		CDG	5-1	53.6	44.1	9.5
6/25/19 / 0910			X		CDG	5-2	54.6	43.7	10.9
6/25/19 / 0940			X		CDG	5-3	53.3	44.4	8.9
6/25/19 / 1015			X		CDG	5-4	52.7	43.9	8.8
6/25/19 / 1050			X		CDG	5-5	54	44.4	9.6
6/25/19 / 1150			X		CDG	~~5-6~~	55	44.2	10.8
6/24/19 / 1535			X		CDG	~~4-7A~~ 4-7 (2-4)	56.1	44.2	11.9
6/25/19 / 1345			X		CDG	5-7	56.0	44.4	11.6
6/25/19 / 1415			X		CDG	5-8	55.5	43.9	11.6
6/25/19 / 1455			X		CDG	5-9	54.6	43.9	10.7
6/25/19 / 1525			X		CDG	5-10	56.1	43.8	12.3
6/25/19 / 1615			X		CDG	5-11	54.7	44.3	10.4
6/25/19 / 1810			X		CDG	SED 6-1	56.5	44.1	12.4

COMMENTS/REQUESTS: PLEASE PLT 4-1 TO 4-7 ON REPORT 1, 5-1 TO 5-11 ON REPORT 2, SED 6-1 ON REPORT 3

TARGET GC/UVF ANALYTES: BTEX, GRO, DRO, TPH, PAH, BaP

Relinquished by		Accepted by	Date/Time
			6/26/19 1832
Relinquished by		Accepted by	Date/Time

RED Lab USE ONLY
20
Ref. No 061719A

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

July 05, 2019

David Graham
Hart & Hickman
2923 S. Tryon Street
Charlotte, NC 28203

RE: Project: ROW-603
Pace Project No.: 92434654

Dear David Graham:
Enclosed are the analytical results for sample(s) received by the laboratory on June 26, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
1(704)875-9092
Project Manager

Enclosures

cc: Alan McCreary, Hart & Hickman

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: ROW-603
Pace Project No.: 92434654

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: ROW-603
Pace Project No.: 92434654

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92434654001	**5-1**	Solid	06/25/19 08:20	06/26/19 09:40
92434654002	**5-2**	Solid	06/25/19 09:10	06/26/19 09:40
92434654003	**5-3**	Solid	06/25/19 09:40	06/26/19 09:40
92434654004	**5-4**	Solid	06/25/19 10:15	06/26/19 09:40
92434654005	**5-5**	Solid	06/25/19 10:50	06/26/19 09:40
92434654006	**5-6**	Solid	06/25/19 11:50	06/26/19 09:40
92434654007	**5-7**	Solid	06/25/19 13:45	06/26/19 09:40
92434654008	**5-8**	Solid	06/25/19 14:15	06/26/19 09:40
92434654009	**5-9**	Solid	06/25/19 14:55	06/26/19 09:40
92434654010	**5-10**	Solid	06/25/19 15:25	06/26/19 09:40
92434654011	**5-11**	Solid	06/25/19 16:15	06/26/19 09:40

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: ROW-603
Pace Project No.: 92434654

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92434654001	**5-1**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654002	**5-2**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654003	**5-3**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654004	**5-4**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654005	**5-5**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654006	**5-6**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654007	**5-7**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654008	**5-8**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654009	**5-9**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654010	**5-10**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C
92434654011	**5-11**	EPA 8260D	DLK	70	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C
		ASTM D2974-87	KDF	1	PASI-C

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-1 **Lab ID: 92434654001** Collected: 06/25/19 08:20 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.13**	mg/kg	0.12	0.012	1	07/01/19 13:49	07/01/19 21:22	67-64-1	
Benzene	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:22	71-43-2	
Bromobenzene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:22	108-86-1	
Bromochloromethane	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:22	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:22	75-27-4	
Bromoform	ND	mg/kg	0.0059	0.0027	1	07/01/19 13:49	07/01/19 21:22	75-25-2	
Bromomethane	ND	mg/kg	0.012	0.0029	1	07/01/19 13:49	07/01/19 21:22	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.12	0.0034	1	07/01/19 13:49	07/01/19 21:22	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:22	135-98-8	
tert-Butylbenzene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:22	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0059	0.0030	1	07/01/19 13:49	07/01/19 21:22	56-23-5	
Chlorobenzene	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:22	108-90-7	
Chloroethane	ND	mg/kg	0.012	0.0028	1	07/01/19 13:49	07/01/19 21:22	75-00-3	
Chloroform	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:22	67-66-3	
Chloromethane	ND	mg/kg	0.012	0.0028	1	07/01/19 13:49	07/01/19 21:22	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:22	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0059	0.0042	1	07/01/19 13:49	07/01/19 21:22	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	106-93-4	
Dibromomethane	ND	mg/kg	0.0059	0.0029	1	07/01/19 13:49	07/01/19 21:22	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:22	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:22	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:22	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.012	0.0042	1	07/01/19 13:49	07/01/19 21:22	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0059	0.0018	1	07/01/19 13:49	07/01/19 21:22	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0059	0.0026	1	07/01/19 13:49	07/01/19 21:22	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0059	0.0016	1	07/01/19 13:49	07/01/19 21:22	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:22	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:22	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:22	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:22	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0059	0.0018	1	07/01/19 13:49	07/01/19 21:22	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0059	0.0018	1	07/01/19 13:49	07/01/19 21:22	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:22	108-20-3	
Ethylbenzene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:22	87-68-3	
2-Hexanone	ND	mg/kg	0.059	0.0046	1	07/01/19 13:49	07/01/19 21:22	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:22	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:22	99-87-6	
Methylene Chloride	ND	mg/kg	0.023	0.0035	1	07/01/19 13:49	07/01/19 21:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.059	0.0043	1	07/01/19 13:49	07/01/19 21:22	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-1 **Lab ID: 92434654001** Collected: 06/25/19 08:20 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0059	0.0018	1	07/01/19 13:49	07/01/19 21:22	1634-04-4	
Naphthalene	ND	mg/kg	0.0059	0.0014	1	07/01/19 13:49	07/01/19 21:22	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:22	103-65-1	
Styrene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0059	0.0025	1	07/01/19 13:49	07/01/19 21:22	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:22	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:22	127-18-4	
Toluene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0059	0.0026	1	07/01/19 13:49	07/01/19 21:22	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:22	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0059	0.0025	1	07/01/19 13:49	07/01/19 21:22	79-00-5	
Trichloroethene	ND	mg/kg	0.0059	0.0025	1	07/01/19 13:49	07/01/19 21:22	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0059	0.0026	1	07/01/19 13:49	07/01/19 21:22	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:22	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:22	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:22	108-67-8	
Vinyl acetate	ND	mg/kg	0.059	0.010	1	07/01/19 13:49	07/01/19 21:22	108-05-4	
Vinyl chloride	ND	mg/kg	0.012	0.0021	1	07/01/19 13:49	07/01/19 21:22	75-01-4	
Xylene (Total)	ND	mg/kg	0.012	0.0042	1	07/01/19 13:49	07/01/19 21:22	1330-20-7	
m&p-Xylene	ND	mg/kg	0.012	0.0042	1	07/01/19 13:49	07/01/19 21:22	179601-23-1	
o-Xylene	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:22	95-47-6	
Surrogates									
Toluene-d8 (S)	99	%	70-130		1	07/01/19 13:49	07/01/19 21:22	2037-26-5	
4-Bromofluorobenzene (S)	102	%	70-130		1	07/01/19 13:49	07/01/19 21:22	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-132		1	07/01/19 13:49	07/01/19 21:22	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.012	0.0036	1	07/03/19 12:46	07/03/19 14:52	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	90	%	50-150		1	07/03/19 12:46	07/03/19 14:52	17060-07-0	
Toluene-d8 (S)	96	%	50-150		1	07/03/19 12:46	07/03/19 14:52	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**26.5**	%	0.10	0.10	1		06/26/19 17:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-2 **Lab ID: 92434654002** Collected: 06/25/19 09:10 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.11J**	mg/kg	0.12	0.012	1	07/01/19 13:49	07/01/19 21:48	67-64-1	
Benzene	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:48	71-43-2	
Bromobenzene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:48	108-86-1	
Bromochloromethane	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:48	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:48	75-27-4	
Bromoform	ND	mg/kg	0.0059	0.0027	1	07/01/19 13:49	07/01/19 21:48	75-25-2	
Bromomethane	ND	mg/kg	0.012	0.0029	1	07/01/19 13:49	07/01/19 21:48	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.12	0.0034	1	07/01/19 13:49	07/01/19 21:48	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:48	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:48	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0059	0.0030	1	07/01/19 13:49	07/01/19 21:48	56-23-5	
Chlorobenzene	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:48	108-90-7	
Chloroethane	ND	mg/kg	0.012	0.0028	1	07/01/19 13:49	07/01/19 21:48	75-00-3	
Chloroform	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:48	67-66-3	
Chloromethane	ND	mg/kg	0.012	0.0028	1	07/01/19 13:49	07/01/19 21:48	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:48	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0059	0.0042	1	07/01/19 13:49	07/01/19 21:48	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	106-93-4	
Dibromomethane	ND	mg/kg	0.0059	0.0029	1	07/01/19 13:49	07/01/19 21:48	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:48	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:48	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:48	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.012	0.0042	1	07/01/19 13:49	07/01/19 21:48	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0059	0.0018	1	07/01/19 13:49	07/01/19 21:48	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0059	0.0026	1	07/01/19 13:49	07/01/19 21:48	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0059	0.0016	1	07/01/19 13:49	07/01/19 21:48	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:48	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:48	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:48	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:48	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0059	0.0018	1	07/01/19 13:49	07/01/19 21:48	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0059	0.0018	1	07/01/19 13:49	07/01/19 21:48	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:48	108-20-3	
Ethylbenzene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:48	87-68-3	
2-Hexanone	ND	mg/kg	0.059	0.0046	1	07/01/19 13:49	07/01/19 21:48	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:48	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:48	99-87-6	
Methylene Chloride	ND	mg/kg	0.023	0.0035	1	07/01/19 13:49	07/01/19 21:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.059	0.0043	1	07/01/19 13:49	07/01/19 21:48	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-2 **Lab ID: 92434654002** Collected: 06/25/19 09:10 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0059	0.0018	1	07/01/19 13:49	07/01/19 21:48	1634-04-4	
Naphthalene	ND	mg/kg	0.0059	0.0014	1	07/01/19 13:49	07/01/19 21:48	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:48	103-65-1	
Styrene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0059	0.0025	1	07/01/19 13:49	07/01/19 21:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:48	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0059	0.0020	1	07/01/19 13:49	07/01/19 21:48	127-18-4	
Toluene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0059	0.0026	1	07/01/19 13:49	07/01/19 21:48	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:48	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0059	0.0025	1	07/01/19 13:49	07/01/19 21:48	79-00-5	
Trichloroethene	ND	mg/kg	0.0059	0.0025	1	07/01/19 13:49	07/01/19 21:48	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0059	0.0026	1	07/01/19 13:49	07/01/19 21:48	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0059	0.0019	1	07/01/19 13:49	07/01/19 21:48	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0059	0.0023	1	07/01/19 13:49	07/01/19 21:48	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0059	0.0021	1	07/01/19 13:49	07/01/19 21:48	108-67-8	
Vinyl acetate	ND	mg/kg	0.059	0.010	1	07/01/19 13:49	07/01/19 21:48	108-05-4	
Vinyl chloride	ND	mg/kg	0.012	0.0021	1	07/01/19 13:49	07/01/19 21:48	75-01-4	
Xylene (Total)	ND	mg/kg	0.012	0.0042	1	07/01/19 13:49	07/01/19 21:48	1330-20-7	
m&p-Xylene	ND	mg/kg	0.012	0.0042	1	07/01/19 13:49	07/01/19 21:48	179601-23-1	
o-Xylene	ND	mg/kg	0.0059	0.0022	1	07/01/19 13:49	07/01/19 21:48	95-47-6	
Surrogates									
Toluene-d8 (S)	110	%	70-130		1	07/01/19 13:49	07/01/19 21:48	2037-26-5	IS
4-Bromofluorobenzene (S)	105	%	70-130		1	07/01/19 13:49	07/01/19 21:48	460-00-4	
1,2-Dichloroethane-d4 (S)	124	%	70-132		1	07/01/19 13:49	07/01/19 21:48	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.011	0.0033	1	07/03/19 12:46	07/03/19 15:12	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%	50-150		1	07/03/19 12:46	07/03/19 15:12	17060-07-0	
Toluene-d8 (S)	96	%	50-150		1	07/03/19 12:46	07/03/19 15:12	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**28.5**	%	0.10	0.10	1		06/26/19 17:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-3 **Lab ID: 92434654003** Collected: 06/25/19 09:40 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.27**	mg/kg	0.12	0.012	1	07/01/19 13:49	07/01/19 22:14	67-64-1	
Benzene	ND	mg/kg	0.0061	0.0019	1	07/01/19 13:49	07/01/19 22:14	71-43-2	
Bromobenzene	ND	mg/kg	0.0061	0.0024	1	07/01/19 13:49	07/01/19 22:14	108-86-1	
Bromochloromethane	ND	mg/kg	0.0061	0.0021	1	07/01/19 13:49	07/01/19 22:14	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0061	0.0023	1	07/01/19 13:49	07/01/19 22:14	75-27-4	
Bromoform	ND	mg/kg	0.0061	0.0028	1	07/01/19 13:49	07/01/19 22:14	75-25-2	
Bromomethane	ND	mg/kg	0.012	0.0030	1	07/01/19 13:49	07/01/19 22:14	74-83-9	
2-Butanone (MEK)	**0.0067J**	mg/kg	0.12	0.0035	1	07/01/19 13:49	07/01/19 22:14	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0061	0.0019	1	07/01/19 13:49	07/01/19 22:14	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0061	0.0024	1	07/01/19 13:49	07/01/19 22:14	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0061	0.0031	1	07/01/19 13:49	07/01/19 22:14	56-23-5	
Chlorobenzene	ND	mg/kg	0.0061	0.0023	1	07/01/19 13:49	07/01/19 22:14	108-90-7	
Chloroethane	ND	mg/kg	0.012	0.0029	1	07/01/19 13:49	07/01/19 22:14	75-00-3	
Chloroform	ND	mg/kg	0.0061	0.0019	1	07/01/19 13:49	07/01/19 22:14	67-66-3	
Chloromethane	ND	mg/kg	0.012	0.0029	1	07/01/19 13:49	07/01/19 22:14	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0061	0.0021	1	07/01/19 13:49	07/01/19 22:14	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0061	0.0044	1	07/01/19 13:49	07/01/19 22:14	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	106-93-4	
Dibromomethane	ND	mg/kg	0.0061	0.0030	1	07/01/19 13:49	07/01/19 22:14	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0061	0.0023	1	07/01/19 13:49	07/01/19 22:14	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0061	0.0024	1	07/01/19 13:49	07/01/19 22:14	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0061	0.0021	1	07/01/19 13:49	07/01/19 22:14	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.012	0.0044	1	07/01/19 13:49	07/01/19 22:14	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0061	0.0018	1	07/01/19 13:49	07/01/19 22:14	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0061	0.0027	1	07/01/19 13:49	07/01/19 22:14	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0061	0.0017	1	07/01/19 13:49	07/01/19 22:14	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0061	0.0023	1	07/01/19 13:49	07/01/19 22:14	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0061	0.0021	1	07/01/19 13:49	07/01/19 22:14	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0061	0.0023	1	07/01/19 13:49	07/01/19 22:14	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0061	0.0021	1	07/01/19 13:49	07/01/19 22:14	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0061	0.0018	1	07/01/19 13:49	07/01/19 22:14	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0061	0.0018	1	07/01/19 13:49	07/01/19 22:14	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0061	0.0021	1	07/01/19 13:49	07/01/19 22:14	108-20-3	
Ethylbenzene	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0061	0.0024	1	07/01/19 13:49	07/01/19 22:14	87-68-3	
2-Hexanone	ND	mg/kg	0.061	0.0047	1	07/01/19 13:49	07/01/19 22:14	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0061	0.0023	1	07/01/19 13:49	07/01/19 22:14	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0061	0.0021	1	07/01/19 13:49	07/01/19 22:14	99-87-6	
Methylene Chloride	ND	mg/kg	0.024	0.0036	1	07/01/19 13:49	07/01/19 22:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.061	0.0045	1	07/01/19 13:49	07/01/19 22:14	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-3 **Lab ID: 92434654003** Collected: 06/25/19 09:40 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0061	0.0018	1	07/01/19 13:49	07/01/19 22:14	1634-04-4	
Naphthalene	ND	mg/kg	0.0061	0.0015	1	07/01/19 13:49	07/01/19 22:14	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0061	0.0021	1	07/01/19 13:49	07/01/19 22:14	103-65-1	
Styrene	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0061	0.0025	1	07/01/19 13:49	07/01/19 22:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0061	0.0023	1	07/01/19 13:49	07/01/19 22:14	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0061	0.0021	1	07/01/19 13:49	07/01/19 22:14	127-18-4	
Toluene	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0061	0.0027	1	07/01/19 13:49	07/01/19 22:14	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0061	0.0019	1	07/01/19 13:49	07/01/19 22:14	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0061	0.0025	1	07/01/19 13:49	07/01/19 22:14	79-00-5	
Trichloroethene	ND	mg/kg	0.0061	0.0025	1	07/01/19 13:49	07/01/19 22:14	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0061	0.0027	1	07/01/19 13:49	07/01/19 22:14	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0061	0.0019	1	07/01/19 13:49	07/01/19 22:14	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0061	0.0024	1	07/01/19 13:49	07/01/19 22:14	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0061	0.0022	1	07/01/19 13:49	07/01/19 22:14	108-67-8	
Vinyl acetate	ND	mg/kg	0.061	0.011	1	07/01/19 13:49	07/01/19 22:14	108-05-4	
Vinyl chloride	ND	mg/kg	0.012	0.0022	1	07/01/19 13:49	07/01/19 22:14	75-01-4	
Xylene (Total)	ND	mg/kg	0.012	0.0044	1	07/01/19 13:49	07/01/19 22:14	1330-20-7	
m&p-Xylene	ND	mg/kg	0.012	0.0044	1	07/01/19 13:49	07/01/19 22:14	179601-23-1	
o-Xylene	ND	mg/kg	0.0061	0.0023	1	07/01/19 13:49	07/01/19 22:14	95-47-6	
Surrogates									
Toluene-d8 (S)	98	%	70-130		1	07/01/19 13:49	07/01/19 22:14	2037-26-5	
4-Bromofluorobenzene (S)	107	%	70-130		1	07/01/19 13:49	07/01/19 22:14	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-132		1	07/01/19 13:49	07/01/19 22:14	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.015	0.0046	1	07/03/19 12:46	07/03/19 15:31	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	96	%	50-150		1	07/03/19 12:46	07/03/19 15:31	17060-07-0	
Toluene-d8 (S)	100	%	50-150		1	07/03/19 12:46	07/03/19 15:31	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**32.5**	%	0.10	0.10	1		06/26/19 17:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-4 **Lab ID: 92434654004** Collected: 06/25/19 10:15 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.039J**	mg/kg	0.13	0.013	1	07/01/19 13:49	07/01/19 22:39	67-64-1	
Benzene	ND	mg/kg	0.0064	0.0021	1	07/01/19 13:49	07/01/19 22:39	71-43-2	
Bromobenzene	ND	mg/kg	0.0064	0.0026	1	07/01/19 13:49	07/01/19 22:39	108-86-1	
Bromochloromethane	ND	mg/kg	0.0064	0.0022	1	07/01/19 13:49	07/01/19 22:39	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0064	0.0024	1	07/01/19 13:49	07/01/19 22:39	75-27-4	
Bromoform	ND	mg/kg	0.0064	0.0030	1	07/01/19 13:49	07/01/19 22:39	75-25-2	
Bromomethane	ND	mg/kg	0.013	0.0032	1	07/01/19 13:49	07/01/19 22:39	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.13	0.0037	1	07/01/19 13:49	07/01/19 22:39	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0064	0.0021	1	07/01/19 13:49	07/01/19 22:39	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0064	0.0026	1	07/01/19 13:49	07/01/19 22:39	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0064	0.0033	1	07/01/19 13:49	07/01/19 22:39	56-23-5	
Chlorobenzene	ND	mg/kg	0.0064	0.0024	1	07/01/19 13:49	07/01/19 22:39	108-90-7	
Chloroethane	ND	mg/kg	0.013	0.0031	1	07/01/19 13:49	07/01/19 22:39	75-00-3	
Chloroform	ND	mg/kg	0.0064	0.0021	1	07/01/19 13:49	07/01/19 22:39	67-66-3	
Chloromethane	ND	mg/kg	0.013	0.0031	1	07/01/19 13:49	07/01/19 22:39	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0064	0.0022	1	07/01/19 13:49	07/01/19 22:39	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0064	0.0046	1	07/01/19 13:49	07/01/19 22:39	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	106-93-4	
Dibromomethane	ND	mg/kg	0.0064	0.0032	1	07/01/19 13:49	07/01/19 22:39	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0064	0.0024	1	07/01/19 13:49	07/01/19 22:39	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0064	0.0026	1	07/01/19 13:49	07/01/19 22:39	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0064	0.0022	1	07/01/19 13:49	07/01/19 22:39	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.013	0.0046	1	07/01/19 13:49	07/01/19 22:39	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0064	0.0019	1	07/01/19 13:49	07/01/19 22:39	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0064	0.0028	1	07/01/19 13:49	07/01/19 22:39	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0064	0.0018	1	07/01/19 13:49	07/01/19 22:39	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0064	0.0024	1	07/01/19 13:49	07/01/19 22:39	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0064	0.0022	1	07/01/19 13:49	07/01/19 22:39	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0064	0.0024	1	07/01/19 13:49	07/01/19 22:39	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0064	0.0022	1	07/01/19 13:49	07/01/19 22:39	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0064	0.0019	1	07/01/19 13:49	07/01/19 22:39	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0064	0.0019	1	07/01/19 13:49	07/01/19 22:39	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0064	0.0022	1	07/01/19 13:49	07/01/19 22:39	108-20-3	
Ethylbenzene	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0064	0.0026	1	07/01/19 13:49	07/01/19 22:39	87-68-3	
2-Hexanone	ND	mg/kg	0.064	0.0050	1	07/01/19 13:49	07/01/19 22:39	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0064	0.0024	1	07/01/19 13:49	07/01/19 22:39	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0064	0.0022	1	07/01/19 13:49	07/01/19 22:39	99-87-6	
Methylene Chloride	ND	mg/kg	0.026	0.0039	1	07/01/19 13:49	07/01/19 22:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.064	0.0048	1	07/01/19 13:49	07/01/19 22:39	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-4 **Lab ID: 92434654004** Collected: 06/25/19 10:15 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0064	0.0019	1	07/01/19 13:49	07/01/19 22:39	1634-04-4	
Naphthalene	ND	mg/kg	0.0064	0.0015	1	07/01/19 13:49	07/01/19 22:39	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0064	0.0022	1	07/01/19 13:49	07/01/19 22:39	103-65-1	
Styrene	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0064	0.0027	1	07/01/19 13:49	07/01/19 22:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0064	0.0024	1	07/01/19 13:49	07/01/19 22:39	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0064	0.0022	1	07/01/19 13:49	07/01/19 22:39	127-18-4	
Toluene	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0064	0.0028	1	07/01/19 13:49	07/01/19 22:39	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0064	0.0021	1	07/01/19 13:49	07/01/19 22:39	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0064	0.0027	1	07/01/19 13:49	07/01/19 22:39	79-00-5	
Trichloroethene	ND	mg/kg	0.0064	0.0027	1	07/01/19 13:49	07/01/19 22:39	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0064	0.0028	1	07/01/19 13:49	07/01/19 22:39	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0064	0.0021	1	07/01/19 13:49	07/01/19 22:39	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0064	0.0026	1	07/01/19 13:49	07/01/19 22:39	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0064	0.0023	1	07/01/19 13:49	07/01/19 22:39	108-67-8	
Vinyl acetate	ND	mg/kg	0.064	0.011	1	07/01/19 13:49	07/01/19 22:39	108-05-4	
Vinyl chloride	ND	mg/kg	0.013	0.0023	1	07/01/19 13:49	07/01/19 22:39	75-01-4	
Xylene (Total)	ND	mg/kg	0.013	0.0046	1	07/01/19 13:49	07/01/19 22:39	1330-20-7	
m&p-Xylene	ND	mg/kg	0.013	0.0046	1	07/01/19 13:49	07/01/19 22:39	179601-23-1	
o-Xylene	ND	mg/kg	0.0064	0.0024	1	07/01/19 13:49	07/01/19 22:39	95-47-6	
Surrogates									
Toluene-d8 (S)	97	%	70-130		1	07/01/19 13:49	07/01/19 22:39	2037-26-5	
4-Bromofluorobenzene (S)	99	%	70-130		1	07/01/19 13:49	07/01/19 22:39	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-132		1	07/01/19 13:49	07/01/19 22:39	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.012	0.0035	1	07/03/19 12:46	07/03/19 15:51	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	83	%	50-150		1	07/03/19 12:46	07/03/19 15:51	17060-07-0	
Toluene-d8 (S)	94	%	50-150		1	07/03/19 12:46	07/03/19 15:51	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.1**	%	0.10	0.10	1		06/26/19 17:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-5 **Lab ID: 92434654005** Collected: 06/25/19 10:50 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.049J**	mg/kg	0.12	0.012	1	07/01/19 13:49	07/01/19 23:05	67-64-1	
Benzene	ND	mg/kg	0.0062	0.0020	1	07/01/19 13:49	07/01/19 23:05	71-43-2	
Bromobenzene	ND	mg/kg	0.0062	0.0025	1	07/01/19 13:49	07/01/19 23:05	108-86-1	
Bromochloromethane	ND	mg/kg	0.0062	0.0021	1	07/01/19 13:49	07/01/19 23:05	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0062	0.0024	1	07/01/19 13:49	07/01/19 23:05	75-27-4	
Bromoform	ND	mg/kg	0.0062	0.0028	1	07/01/19 13:49	07/01/19 23:05	75-25-2	
Bromomethane	ND	mg/kg	0.012	0.0031	1	07/01/19 13:49	07/01/19 23:05	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.12	0.0036	1	07/01/19 13:49	07/01/19 23:05	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0062	0.0020	1	07/01/19 13:49	07/01/19 23:05	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0062	0.0025	1	07/01/19 13:49	07/01/19 23:05	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0062	0.0032	1	07/01/19 13:49	07/01/19 23:05	56-23-5	
Chlorobenzene	ND	mg/kg	0.0062	0.0024	1	07/01/19 13:49	07/01/19 23:05	108-90-7	
Chloroethane	ND	mg/kg	0.012	0.0030	1	07/01/19 13:49	07/01/19 23:05	75-00-3	
Chloroform	ND	mg/kg	0.0062	0.0020	1	07/01/19 13:49	07/01/19 23:05	67-66-3	
Chloromethane	ND	mg/kg	0.012	0.0030	1	07/01/19 13:49	07/01/19 23:05	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0062	0.0021	1	07/01/19 13:49	07/01/19 23:05	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0062	0.0045	1	07/01/19 13:49	07/01/19 23:05	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	106-93-4	
Dibromomethane	ND	mg/kg	0.0062	0.0031	1	07/01/19 13:49	07/01/19 23:05	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0062	0.0024	1	07/01/19 13:49	07/01/19 23:05	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0062	0.0025	1	07/01/19 13:49	07/01/19 23:05	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0062	0.0021	1	07/01/19 13:49	07/01/19 23:05	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.012	0.0045	1	07/01/19 13:49	07/01/19 23:05	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0062	0.0019	1	07/01/19 13:49	07/01/19 23:05	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0062	0.0027	1	07/01/19 13:49	07/01/19 23:05	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0062	0.0017	1	07/01/19 13:49	07/01/19 23:05	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0062	0.0024	1	07/01/19 13:49	07/01/19 23:05	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0062	0.0021	1	07/01/19 13:49	07/01/19 23:05	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0062	0.0024	1	07/01/19 13:49	07/01/19 23:05	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0062	0.0021	1	07/01/19 13:49	07/01/19 23:05	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0062	0.0019	1	07/01/19 13:49	07/01/19 23:05	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0062	0.0019	1	07/01/19 13:49	07/01/19 23:05	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0062	0.0021	1	07/01/19 13:49	07/01/19 23:05	108-20-3	
Ethylbenzene	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0062	0.0025	1	07/01/19 13:49	07/01/19 23:05	87-68-3	
2-Hexanone	ND	mg/kg	0.062	0.0048	1	07/01/19 13:49	07/01/19 23:05	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0062	0.0024	1	07/01/19 13:49	07/01/19 23:05	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0062	0.0021	1	07/01/19 13:49	07/01/19 23:05	99-87-6	
Methylene Chloride	ND	mg/kg	0.025	0.0037	1	07/01/19 13:49	07/01/19 23:05	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.062	0.0046	1	07/01/19 13:49	07/01/19 23:05	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-5 **Lab ID: 92434654005** Collected: 06/25/19 10:50 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0062	0.0019	1	07/01/19 13:49	07/01/19 23:05	1634-04-4	
Naphthalene	ND	mg/kg	0.0062	0.0015	1	07/01/19 13:49	07/01/19 23:05	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0062	0.0021	1	07/01/19 13:49	07/01/19 23:05	103-65-1	
Styrene	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0062	0.0026	1	07/01/19 13:49	07/01/19 23:05	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0062	0.0024	1	07/01/19 13:49	07/01/19 23:05	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0062	0.0021	1	07/01/19 13:49	07/01/19 23:05	127-18-4	
Toluene	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0062	0.0027	1	07/01/19 13:49	07/01/19 23:05	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0062	0.0020	1	07/01/19 13:49	07/01/19 23:05	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0062	0.0026	1	07/01/19 13:49	07/01/19 23:05	79-00-5	
Trichloroethene	ND	mg/kg	0.0062	0.0026	1	07/01/19 13:49	07/01/19 23:05	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0062	0.0027	1	07/01/19 13:49	07/01/19 23:05	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0062	0.0020	1	07/01/19 13:49	07/01/19 23:05	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0062	0.0025	1	07/01/19 13:49	07/01/19 23:05	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0062	0.0022	1	07/01/19 13:49	07/01/19 23:05	108-67-8	
Vinyl acetate	ND	mg/kg	0.062	0.011	1	07/01/19 13:49	07/01/19 23:05	108-05-4	
Vinyl chloride	ND	mg/kg	0.012	0.0022	1	07/01/19 13:49	07/01/19 23:05	75-01-4	
Xylene (Total)	ND	mg/kg	0.012	0.0045	1	07/01/19 13:49	07/01/19 23:05	1330-20-7	
m&p-Xylene	ND	mg/kg	0.012	0.0045	1	07/01/19 13:49	07/01/19 23:05	179601-23-1	
o-Xylene	ND	mg/kg	0.0062	0.0024	1	07/01/19 13:49	07/01/19 23:05	95-47-6	
Surrogates									
Toluene-d8 (S)	99	%	70-130		1	07/01/19 13:49	07/01/19 23:05	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1	07/01/19 13:49	07/01/19 23:05	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-132		1	07/01/19 13:49	07/01/19 23:05	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.010	0.0030	1	07/03/19 12:46	07/03/19 16:11	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	89	%	50-150		1	07/03/19 12:46	07/03/19 16:11	17060-07-0	
Toluene-d8 (S)	95	%	50-150		1	07/03/19 12:46	07/03/19 16:11	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.0**	%	0.10	0.10	1		06/26/19 17:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-6 **Lab ID: 92434654006** Collected: 06/25/19 11:50 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.026J**	mg/kg	0.096	0.0096	1	07/01/19 13:49	07/01/19 23:30	67-64-1	
Benzene	ND	mg/kg	0.0048	0.0015	1	07/01/19 13:49	07/01/19 23:30	71-43-2	
Bromobenzene	ND	mg/kg	0.0048	0.0019	1	07/01/19 13:49	07/01/19 23:30	108-86-1	
Bromochloromethane	ND	mg/kg	0.0048	0.0016	1	07/01/19 13:49	07/01/19 23:30	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0048	0.0018	1	07/01/19 13:49	07/01/19 23:30	75-27-4	
Bromoform	ND	mg/kg	0.0048	0.0022	1	07/01/19 13:49	07/01/19 23:30	75-25-2	
Bromomethane	ND	mg/kg	0.0096	0.0024	1	07/01/19 13:49	07/01/19 23:30	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.096	0.0028	1	07/01/19 13:49	07/01/19 23:30	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0048	0.0015	1	07/01/19 13:49	07/01/19 23:30	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0048	0.0019	1	07/01/19 13:49	07/01/19 23:30	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0048	0.0025	1	07/01/19 13:49	07/01/19 23:30	56-23-5	
Chlorobenzene	ND	mg/kg	0.0048	0.0018	1	07/01/19 13:49	07/01/19 23:30	108-90-7	
Chloroethane	ND	mg/kg	0.0096	0.0023	1	07/01/19 13:49	07/01/19 23:30	75-00-3	
Chloroform	ND	mg/kg	0.0048	0.0015	1	07/01/19 13:49	07/01/19 23:30	67-66-3	
Chloromethane	ND	mg/kg	0.0096	0.0023	1	07/01/19 13:49	07/01/19 23:30	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0048	0.0016	1	07/01/19 13:49	07/01/19 23:30	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0048	0.0035	1	07/01/19 13:49	07/01/19 23:30	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	106-93-4	
Dibromomethane	ND	mg/kg	0.0048	0.0024	1	07/01/19 13:49	07/01/19 23:30	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0048	0.0018	1	07/01/19 13:49	07/01/19 23:30	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0048	0.0019	1	07/01/19 13:49	07/01/19 23:30	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0048	0.0016	1	07/01/19 13:49	07/01/19 23:30	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.0096	0.0035	1	07/01/19 13:49	07/01/19 23:30	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0048	0.0014	1	07/01/19 13:49	07/01/19 23:30	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0048	0.0021	1	07/01/19 13:49	07/01/19 23:30	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0048	0.0013	1	07/01/19 13:49	07/01/19 23:30	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0048	0.0018	1	07/01/19 13:49	07/01/19 23:30	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0048	0.0016	1	07/01/19 13:49	07/01/19 23:30	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0048	0.0018	1	07/01/19 13:49	07/01/19 23:30	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0048	0.0016	1	07/01/19 13:49	07/01/19 23:30	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0048	0.0014	1	07/01/19 13:49	07/01/19 23:30	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0048	0.0014	1	07/01/19 13:49	07/01/19 23:30	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0048	0.0016	1	07/01/19 13:49	07/01/19 23:30	108-20-3	
Ethylbenzene	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0048	0.0019	1	07/01/19 13:49	07/01/19 23:30	87-68-3	
2-Hexanone	ND	mg/kg	0.048	0.0037	1	07/01/19 13:49	07/01/19 23:30	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0048	0.0018	1	07/01/19 13:49	07/01/19 23:30	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0048	0.0016	1	07/01/19 13:49	07/01/19 23:30	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	0.0029	1	07/01/19 13:49	07/01/19 23:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.048	0.0036	1	07/01/19 13:49	07/01/19 23:30	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-6 **Lab ID: 92434654006** Collected: 06/25/19 11:50 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0048	0.0014	1	07/01/19 13:49	07/01/19 23:30	1634-04-4	
Naphthalene	ND	mg/kg	0.0048	0.0012	1	07/01/19 13:49	07/01/19 23:30	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0048	0.0016	1	07/01/19 13:49	07/01/19 23:30	103-65-1	
Styrene	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0048	0.0020	1	07/01/19 13:49	07/01/19 23:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0048	0.0018	1	07/01/19 13:49	07/01/19 23:30	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0048	0.0016	1	07/01/19 13:49	07/01/19 23:30	127-18-4	
Toluene	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0048	0.0021	1	07/01/19 13:49	07/01/19 23:30	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0048	0.0015	1	07/01/19 13:49	07/01/19 23:30	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0048	0.0020	1	07/01/19 13:49	07/01/19 23:30	79-00-5	
Trichloroethene	ND	mg/kg	0.0048	0.0020	1	07/01/19 13:49	07/01/19 23:30	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0048	0.0021	1	07/01/19 13:49	07/01/19 23:30	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0048	0.0015	1	07/01/19 13:49	07/01/19 23:30	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0048	0.0019	1	07/01/19 13:49	07/01/19 23:30	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0048	0.0017	1	07/01/19 13:49	07/01/19 23:30	108-67-8	
Vinyl acetate	ND	mg/kg	0.048	0.0085	1	07/01/19 13:49	07/01/19 23:30	108-05-4	
Vinyl chloride	ND	mg/kg	0.0096	0.0017	1	07/01/19 13:49	07/01/19 23:30	75-01-4	
Xylene (Total)	ND	mg/kg	0.0096	0.0035	1	07/01/19 13:49	07/01/19 23:30	1330-20-7	
m&p-Xylene	ND	mg/kg	0.0096	0.0035	1	07/01/19 13:49	07/01/19 23:30	179601-23-1	
o-Xylene	ND	mg/kg	0.0048	0.0018	1	07/01/19 13:49	07/01/19 23:30	95-47-6	
Surrogates									
Toluene-d8 (S)	100	%	70-130		1	07/01/19 13:49	07/01/19 23:30	2037-26-5	
4-Bromofluorobenzene (S)	103	%	70-130		1	07/01/19 13:49	07/01/19 23:30	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-132		1	07/01/19 13:49	07/01/19 23:30	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.011	0.0033	1	07/03/19 12:46	07/03/19 16:51	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%	50-150		1	07/03/19 12:46	07/03/19 16:51	17060-07-0	
Toluene-d8 (S)	97	%	50-150		1	07/03/19 12:46	07/03/19 16:51	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.0**	%	0.10	0.10	1		06/26/19 17:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-7 **Lab ID: 92434654007** Collected: 06/25/19 13:45 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.055J**	mg/kg	0.087	0.0087	1	07/01/19 13:49	07/01/19 23:56	67-64-1	
Benzene	ND	mg/kg	0.0044	0.0014	1	07/01/19 13:49	07/01/19 23:56	71-43-2	
Bromobenzene	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	108-86-1	
Bromochloromethane	ND	mg/kg	0.0044	0.0015	1	07/01/19 13:49	07/01/19 23:56	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	75-27-4	
Bromoform	ND	mg/kg	0.0044	0.0020	1	07/01/19 13:49	07/01/19 23:56	75-25-2	
Bromomethane	ND	mg/kg	0.0087	0.0022	1	07/01/19 13:49	07/01/19 23:56	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.087	0.0025	1	07/01/19 13:49	07/01/19 23:56	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0044	0.0014	1	07/01/19 13:49	07/01/19 23:56	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0044	0.0023	1	07/01/19 13:49	07/01/19 23:56	56-23-5	
Chlorobenzene	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	108-90-7	
Chloroethane	ND	mg/kg	0.0087	0.0021	1	07/01/19 13:49	07/01/19 23:56	75-00-3	
Chloroform	ND	mg/kg	0.0044	0.0014	1	07/01/19 13:49	07/01/19 23:56	67-66-3	
Chloromethane	ND	mg/kg	0.0087	0.0021	1	07/01/19 13:49	07/01/19 23:56	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0044	0.0015	1	07/01/19 13:49	07/01/19 23:56	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0044	0.0031	1	07/01/19 13:49	07/01/19 23:56	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	106-93-4	
Dibromomethane	ND	mg/kg	0.0044	0.0022	1	07/01/19 13:49	07/01/19 23:56	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0044	0.0015	1	07/01/19 13:49	07/01/19 23:56	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.0087	0.0031	1	07/01/19 13:49	07/01/19 23:56	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0044	0.0013	1	07/01/19 13:49	07/01/19 23:56	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0044	0.0019	1	07/01/19 13:49	07/01/19 23:56	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0044	0.0012	1	07/01/19 13:49	07/01/19 23:56	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0044	0.0015	1	07/01/19 13:49	07/01/19 23:56	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0044	0.0015	1	07/01/19 13:49	07/01/19 23:56	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0044	0.0013	1	07/01/19 13:49	07/01/19 23:56	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0044	0.0013	1	07/01/19 13:49	07/01/19 23:56	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0044	0.0015	1	07/01/19 13:49	07/01/19 23:56	108-20-3	
Ethylbenzene	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	87-68-3	
2-Hexanone	ND	mg/kg	0.044	0.0034	1	07/01/19 13:49	07/01/19 23:56	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0044	0.0015	1	07/01/19 13:49	07/01/19 23:56	99-87-6	
Methylene Chloride	ND	mg/kg	0.017	0.0026	1	07/01/19 13:49	07/01/19 23:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.044	0.0032	1	07/01/19 13:49	07/01/19 23:56	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-7 **Lab ID: 92434654007** Collected: 06/25/19 13:45 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0044	0.0013	1	07/01/19 13:49	07/01/19 23:56	1634-04-4	
Naphthalene	ND	mg/kg	0.0044	0.0010	1	07/01/19 13:49	07/01/19 23:56	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0044	0.0015	1	07/01/19 13:49	07/01/19 23:56	103-65-1	
Styrene	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0044	0.0018	1	07/01/19 13:49	07/01/19 23:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0044	0.0015	1	07/01/19 13:49	07/01/19 23:56	127-18-4	
Toluene	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0044	0.0019	1	07/01/19 13:49	07/01/19 23:56	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0044	0.0014	1	07/01/19 13:49	07/01/19 23:56	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0044	0.0018	1	07/01/19 13:49	07/01/19 23:56	79-00-5	
Trichloroethene	ND	mg/kg	0.0044	0.0018	1	07/01/19 13:49	07/01/19 23:56	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0044	0.0019	1	07/01/19 13:49	07/01/19 23:56	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0044	0.0014	1	07/01/19 13:49	07/01/19 23:56	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0044	0.0016	1	07/01/19 13:49	07/01/19 23:56	108-67-8	
Vinyl acetate	ND	mg/kg	0.044	0.0077	1	07/01/19 13:49	07/01/19 23:56	108-05-4	
Vinyl chloride	ND	mg/kg	0.0087	0.0016	1	07/01/19 13:49	07/01/19 23:56	75-01-4	
Xylene (Total)	ND	mg/kg	0.0087	0.0031	1	07/01/19 13:49	07/01/19 23:56	1330-20-7	
m&p-Xylene	ND	mg/kg	0.0087	0.0031	1	07/01/19 13:49	07/01/19 23:56	179601-23-1	
o-Xylene	ND	mg/kg	0.0044	0.0017	1	07/01/19 13:49	07/01/19 23:56	95-47-6	
Surrogates									
Toluene-d8 (S)	99	%	70-130		1	07/01/19 13:49	07/01/19 23:56	2037-26-5	
4-Bromofluorobenzene (S)	103	%	70-130		1	07/01/19 13:49	07/01/19 23:56	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-132		1	07/01/19 13:49	07/01/19 23:56	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.012	0.0036	1	07/03/19 12:46	07/03/19 17:11	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	89	%	50-150		1	07/03/19 12:46	07/03/19 17:11	17060-07-0	
Toluene-d8 (S)	99	%	50-150		1	07/03/19 12:46	07/03/19 17:11	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**18.7**	%	0.10	0.10	1		06/26/19 17:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
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ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-8 **Lab ID: 92434654008** Collected: 06/25/19 14:15 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.068J**	mg/kg	0.093	0.0093	1	07/01/19 13:49	07/02/19 00:22	67-64-1	
Benzene	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 00:22	71-43-2	
Bromobenzene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 00:22	108-86-1	
Bromochloromethane	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 00:22	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 00:22	75-27-4	
Bromoform	ND	mg/kg	0.0046	0.0021	1	07/01/19 13:49	07/02/19 00:22	75-25-2	
Bromomethane	ND	mg/kg	0.0093	0.0023	1	07/01/19 13:49	07/02/19 00:22	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.093	0.0027	1	07/01/19 13:49	07/02/19 00:22	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 00:22	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 00:22	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0046	0.0024	1	07/01/19 13:49	07/02/19 00:22	56-23-5	
Chlorobenzene	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 00:22	108-90-7	
Chloroethane	ND	mg/kg	0.0093	0.0022	1	07/01/19 13:49	07/02/19 00:22	75-00-3	
Chloroform	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 00:22	67-66-3	
Chloromethane	ND	mg/kg	0.0093	0.0022	1	07/01/19 13:49	07/02/19 00:22	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 00:22	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0046	0.0033	1	07/01/19 13:49	07/02/19 00:22	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	106-93-4	
Dibromomethane	ND	mg/kg	0.0046	0.0023	1	07/01/19 13:49	07/02/19 00:22	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 00:22	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 00:22	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 00:22	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.0093	0.0033	1	07/01/19 13:49	07/02/19 00:22	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0046	0.0014	1	07/01/19 13:49	07/02/19 00:22	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0046	0.0020	1	07/01/19 13:49	07/02/19 00:22	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0046	0.0013	1	07/01/19 13:49	07/02/19 00:22	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 00:22	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 00:22	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 00:22	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 00:22	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0046	0.0014	1	07/01/19 13:49	07/02/19 00:22	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0046	0.0014	1	07/01/19 13:49	07/02/19 00:22	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 00:22	108-20-3	
Ethylbenzene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 00:22	87-68-3	
2-Hexanone	ND	mg/kg	0.046	0.0036	1	07/01/19 13:49	07/02/19 00:22	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 00:22	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 00:22	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	0.0028	1	07/01/19 13:49	07/02/19 00:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.046	0.0034	1	07/01/19 13:49	07/02/19 00:22	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-8 **Lab ID: 92434654008** Collected: 06/25/19 14:15 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0046	0.0014	1	07/01/19 13:49	07/02/19 00:22	1634-04-4	
Naphthalene	ND	mg/kg	0.0046	0.0011	1	07/01/19 13:49	07/02/19 00:22	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 00:22	103-65-1	
Styrene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 00:22	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 00:22	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 00:22	127-18-4	
Toluene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0046	0.0020	1	07/01/19 13:49	07/02/19 00:22	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 00:22	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 00:22	79-00-5	
Trichloroethene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 00:22	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0046	0.0020	1	07/01/19 13:49	07/02/19 00:22	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 00:22	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 00:22	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 00:22	108-67-8	
Vinyl acetate	ND	mg/kg	0.046	0.0082	1	07/01/19 13:49	07/02/19 00:22	108-05-4	
Vinyl chloride	ND	mg/kg	0.0093	0.0017	1	07/01/19 13:49	07/02/19 00:22	75-01-4	
Xylene (Total)	ND	mg/kg	0.0093	0.0033	1	07/01/19 13:49	07/02/19 00:22	1330-20-7	
m&p-Xylene	ND	mg/kg	0.0093	0.0033	1	07/01/19 13:49	07/02/19 00:22	179601-23-1	
o-Xylene	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 00:22	95-47-6	
Surrogates									
Toluene-d8 (S)	96	%	70-130		1	07/01/19 13:49	07/02/19 00:22	2037-26-5	
4-Bromofluorobenzene (S)	100	%	70-130		1	07/01/19 13:49	07/02/19 00:22	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	70-132		1	07/01/19 13:49	07/02/19 00:22	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.0080	0.0024	1	07/03/19 12:46	07/03/19 17:31	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	91	%	50-150		1	07/03/19 12:46	07/03/19 17:31	17060-07-0	
Toluene-d8 (S)	96	%	50-150		1	07/03/19 12:46	07/03/19 17:31	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.2**	%	0.10	0.10	1		06/26/19 17:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-9 **Lab ID: 92434654009** Collected: 06/25/19 14:55 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.011J**	mg/kg	0.094	0.0094	1	07/01/19 13:49	07/02/19 00:47	67-64-1	
Benzene	ND	mg/kg	0.0047	0.0015	1	07/01/19 13:49	07/02/19 00:47	71-43-2	
Bromobenzene	ND	mg/kg	0.0047	0.0019	1	07/01/19 13:49	07/02/19 00:47	108-86-1	
Bromochloromethane	ND	mg/kg	0.0047	0.0016	1	07/01/19 13:49	07/02/19 00:47	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0047	0.0018	1	07/01/19 13:49	07/02/19 00:47	75-27-4	
Bromoform	ND	mg/kg	0.0047	0.0022	1	07/01/19 13:49	07/02/19 00:47	75-25-2	
Bromomethane	ND	mg/kg	0.0094	0.0024	1	07/01/19 13:49	07/02/19 00:47	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.094	0.0027	1	07/01/19 13:49	07/02/19 00:47	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0047	0.0015	1	07/01/19 13:49	07/02/19 00:47	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0047	0.0019	1	07/01/19 13:49	07/02/19 00:47	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0047	0.0025	1	07/01/19 13:49	07/02/19 00:47	56-23-5	
Chlorobenzene	ND	mg/kg	0.0047	0.0018	1	07/01/19 13:49	07/02/19 00:47	108-90-7	
Chloroethane	ND	mg/kg	0.0094	0.0023	1	07/01/19 13:49	07/02/19 00:47	75-00-3	
Chloroform	ND	mg/kg	0.0047	0.0015	1	07/01/19 13:49	07/02/19 00:47	67-66-3	
Chloromethane	ND	mg/kg	0.0094	0.0023	1	07/01/19 13:49	07/02/19 00:47	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0047	0.0016	1	07/01/19 13:49	07/02/19 00:47	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0047	0.0034	1	07/01/19 13:49	07/02/19 00:47	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	106-93-4	
Dibromomethane	ND	mg/kg	0.0047	0.0024	1	07/01/19 13:49	07/02/19 00:47	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0047	0.0018	1	07/01/19 13:49	07/02/19 00:47	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0047	0.0019	1	07/01/19 13:49	07/02/19 00:47	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0047	0.0016	1	07/01/19 13:49	07/02/19 00:47	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.0094	0.0034	1	07/01/19 13:49	07/02/19 00:47	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0047	0.0014	1	07/01/19 13:49	07/02/19 00:47	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0047	0.0021	1	07/01/19 13:49	07/02/19 00:47	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0047	0.0013	1	07/01/19 13:49	07/02/19 00:47	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0047	0.0018	1	07/01/19 13:49	07/02/19 00:47	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0047	0.0016	1	07/01/19 13:49	07/02/19 00:47	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0047	0.0018	1	07/01/19 13:49	07/02/19 00:47	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0047	0.0016	1	07/01/19 13:49	07/02/19 00:47	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0047	0.0014	1	07/01/19 13:49	07/02/19 00:47	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0047	0.0014	1	07/01/19 13:49	07/02/19 00:47	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0047	0.0016	1	07/01/19 13:49	07/02/19 00:47	108-20-3	
Ethylbenzene	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0047	0.0019	1	07/01/19 13:49	07/02/19 00:47	87-68-3	
2-Hexanone	ND	mg/kg	0.047	0.0037	1	07/01/19 13:49	07/02/19 00:47	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0047	0.0018	1	07/01/19 13:49	07/02/19 00:47	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0047	0.0016	1	07/01/19 13:49	07/02/19 00:47	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	0.0028	1	07/01/19 13:49	07/02/19 00:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.047	0.0035	1	07/01/19 13:49	07/02/19 00:47	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-9 **Lab ID: 92434654009** Collected: 06/25/19 14:55 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0047	0.0014	1	07/01/19 13:49	07/02/19 00:47	1634-04-4	
Naphthalene	ND	mg/kg	0.0047	0.0011	1	07/01/19 13:49	07/02/19 00:47	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0047	0.0016	1	07/01/19 13:49	07/02/19 00:47	103-65-1	
Styrene	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0047	0.0020	1	07/01/19 13:49	07/02/19 00:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0047	0.0018	1	07/01/19 13:49	07/02/19 00:47	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0047	0.0016	1	07/01/19 13:49	07/02/19 00:47	127-18-4	
Toluene	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0047	0.0021	1	07/01/19 13:49	07/02/19 00:47	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0047	0.0015	1	07/01/19 13:49	07/02/19 00:47	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0047	0.0020	1	07/01/19 13:49	07/02/19 00:47	79-00-5	
Trichloroethene	ND	mg/kg	0.0047	0.0020	1	07/01/19 13:49	07/02/19 00:47	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0047	0.0021	1	07/01/19 13:49	07/02/19 00:47	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0047	0.0015	1	07/01/19 13:49	07/02/19 00:47	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0047	0.0019	1	07/01/19 13:49	07/02/19 00:47	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0047	0.0017	1	07/01/19 13:49	07/02/19 00:47	108-67-8	
Vinyl acetate	ND	mg/kg	0.047	0.0083	1	07/01/19 13:49	07/02/19 00:47	108-05-4	
Vinyl chloride	ND	mg/kg	0.0094	0.0017	1	07/01/19 13:49	07/02/19 00:47	75-01-4	
Xylene (Total)	ND	mg/kg	0.0094	0.0034	1	07/01/19 13:49	07/02/19 00:47	1330-20-7	
m&p-Xylene	ND	mg/kg	0.0094	0.0034	1	07/01/19 13:49	07/02/19 00:47	179601-23-1	
o-Xylene	ND	mg/kg	0.0047	0.0018	1	07/01/19 13:49	07/02/19 00:47	95-47-6	
Surrogates									
Toluene-d8 (S)	98	%	70-130		1	07/01/19 13:49	07/02/19 00:47	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1	07/01/19 13:49	07/02/19 00:47	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-132		1	07/01/19 13:49	07/02/19 00:47	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.0092	0.0028	1	07/03/19 12:46	07/03/19 17:50	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%	50-150		1	07/03/19 12:46	07/03/19 17:50	17060-07-0	
Toluene-d8 (S)	97	%	50-150		1	07/03/19 12:46	07/03/19 17:50	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.9**	%	0.10	0.10	1		06/26/19 17:08		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-10 **Lab ID: 92434654010** Collected: 06/25/19 15:25 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.029J**	mg/kg	0.093	0.0093	1	07/01/19 13:49	07/02/19 01:13	67-64-1	
Benzene	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 01:13	71-43-2	
Bromobenzene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 01:13	108-86-1	
Bromochloromethane	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 01:13	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 01:13	75-27-4	
Bromoform	ND	mg/kg	0.0046	0.0021	1	07/01/19 13:49	07/02/19 01:13	75-25-2	
Bromomethane	ND	mg/kg	0.0093	0.0023	1	07/01/19 13:49	07/02/19 01:13	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.093	0.0027	1	07/01/19 13:49	07/02/19 01:13	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 01:13	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 01:13	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0046	0.0024	1	07/01/19 13:49	07/02/19 01:13	56-23-5	
Chlorobenzene	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 01:13	108-90-7	
Chloroethane	ND	mg/kg	0.0093	0.0022	1	07/01/19 13:49	07/02/19 01:13	75-00-3	
Chloroform	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 01:13	67-66-3	
Chloromethane	ND	mg/kg	0.0093	0.0022	1	07/01/19 13:49	07/02/19 01:13	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 01:13	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0046	0.0033	1	07/01/19 13:49	07/02/19 01:13	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	106-93-4	
Dibromomethane	ND	mg/kg	0.0046	0.0023	1	07/01/19 13:49	07/02/19 01:13	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 01:13	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 01:13	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 01:13	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.0093	0.0033	1	07/01/19 13:49	07/02/19 01:13	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0046	0.0014	1	07/01/19 13:49	07/02/19 01:13	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0046	0.0020	1	07/01/19 13:49	07/02/19 01:13	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0046	0.0013	1	07/01/19 13:49	07/02/19 01:13	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 01:13	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 01:13	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 01:13	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 01:13	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0046	0.0014	1	07/01/19 13:49	07/02/19 01:13	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0046	0.0014	1	07/01/19 13:49	07/02/19 01:13	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 01:13	108-20-3	
Ethylbenzene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 01:13	87-68-3	
2-Hexanone	ND	mg/kg	0.046	0.0036	1	07/01/19 13:49	07/02/19 01:13	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 01:13	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 01:13	99-87-6	
Methylene Chloride	ND	mg/kg	0.019	0.0028	1	07/01/19 13:49	07/02/19 01:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.046	0.0034	1	07/01/19 13:49	07/02/19 01:13	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-10 **Lab ID: 92434654010** Collected: 06/25/19 15:25 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0046	0.0014	1	07/01/19 13:49	07/02/19 01:13	1634-04-4	
Naphthalene	ND	mg/kg	0.0046	0.0011	1	07/01/19 13:49	07/02/19 01:13	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 01:13	103-65-1	
Styrene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 01:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 01:13	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0046	0.0016	1	07/01/19 13:49	07/02/19 01:13	127-18-4	
Toluene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0046	0.0020	1	07/01/19 13:49	07/02/19 01:13	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 01:13	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 01:13	79-00-5	
Trichloroethene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 01:13	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0046	0.0020	1	07/01/19 13:49	07/02/19 01:13	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0046	0.0015	1	07/01/19 13:49	07/02/19 01:13	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0046	0.0019	1	07/01/19 13:49	07/02/19 01:13	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0046	0.0017	1	07/01/19 13:49	07/02/19 01:13	108-67-8	
Vinyl acetate	ND	mg/kg	0.046	0.0081	1	07/01/19 13:49	07/02/19 01:13	108-05-4	
Vinyl chloride	ND	mg/kg	0.0093	0.0017	1	07/01/19 13:49	07/02/19 01:13	75-01-4	
Xylene (Total)	ND	mg/kg	0.0093	0.0033	1	07/01/19 13:49	07/02/19 01:13	1330-20-7	
m&p-Xylene	ND	mg/kg	0.0093	0.0033	1	07/01/19 13:49	07/02/19 01:13	179601-23-1	
o-Xylene	ND	mg/kg	0.0046	0.0018	1	07/01/19 13:49	07/02/19 01:13	95-47-6	
Surrogates									
Toluene-d8 (S)	98	%	70-130		1	07/01/19 13:49	07/02/19 01:13	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1	07/01/19 13:49	07/02/19 01:13	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-132		1	07/01/19 13:49	07/02/19 01:13	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.0093	0.0028	1	07/03/19 12:46	07/03/19 18:10	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%	50-150		1	07/03/19 12:46	07/03/19 18:10	17060-07-0	
Toluene-d8 (S)	96	%	50-150		1	07/03/19 12:46	07/03/19 18:10	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**14.0**	%	0.10	0.10	1		06/26/19 17:29		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-11 **Lab ID: 92434654011** Collected: 06/25/19 16:15 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Acetone	**0.061J**	mg/kg	0.11	0.011	1	07/01/19 13:49	07/02/19 01:39	67-64-1	
Benzene	ND	mg/kg	0.0055	0.0018	1	07/01/19 13:49	07/02/19 01:39	71-43-2	
Bromobenzene	ND	mg/kg	0.0055	0.0022	1	07/01/19 13:49	07/02/19 01:39	108-86-1	
Bromochloromethane	ND	mg/kg	0.0055	0.0019	1	07/01/19 13:49	07/02/19 01:39	74-97-5	
Bromodichloromethane	ND	mg/kg	0.0055	0.0021	1	07/01/19 13:49	07/02/19 01:39	75-27-4	
Bromoform	ND	mg/kg	0.0055	0.0025	1	07/01/19 13:49	07/02/19 01:39	75-25-2	
Bromomethane	ND	mg/kg	0.011	0.0028	1	07/01/19 13:49	07/02/19 01:39	74-83-9	
2-Butanone (MEK)	ND	mg/kg	0.11	0.0032	1	07/01/19 13:49	07/02/19 01:39	78-93-3	
n-Butylbenzene	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	104-51-8	
sec-Butylbenzene	ND	mg/kg	0.0055	0.0018	1	07/01/19 13:49	07/02/19 01:39	135-98-8	IK
tert-Butylbenzene	ND	mg/kg	0.0055	0.0022	1	07/01/19 13:49	07/02/19 01:39	98-06-6	
Carbon tetrachloride	ND	mg/kg	0.0055	0.0029	1	07/01/19 13:49	07/02/19 01:39	56-23-5	
Chlorobenzene	ND	mg/kg	0.0055	0.0021	1	07/01/19 13:49	07/02/19 01:39	108-90-7	
Chloroethane	ND	mg/kg	0.011	0.0026	1	07/01/19 13:49	07/02/19 01:39	75-00-3	
Chloroform	ND	mg/kg	0.0055	0.0018	1	07/01/19 13:49	07/02/19 01:39	67-66-3	
Chloromethane	ND	mg/kg	0.011	0.0026	1	07/01/19 13:49	07/02/19 01:39	74-87-3	
2-Chlorotoluene	ND	mg/kg	0.0055	0.0019	1	07/01/19 13:49	07/02/19 01:39	95-49-8	
4-Chlorotoluene	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	106-43-4	
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0055	0.0040	1	07/01/19 13:49	07/02/19 01:39	96-12-8	
Dibromochloromethane	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	106-93-4	
Dibromomethane	ND	mg/kg	0.0055	0.0028	1	07/01/19 13:49	07/02/19 01:39	74-95-3	
1,2-Dichlorobenzene	ND	mg/kg	0.0055	0.0021	1	07/01/19 13:49	07/02/19 01:39	95-50-1	
1,3-Dichlorobenzene	ND	mg/kg	0.0055	0.0022	1	07/01/19 13:49	07/02/19 01:39	541-73-1	
1,4-Dichlorobenzene	ND	mg/kg	0.0055	0.0019	1	07/01/19 13:49	07/02/19 01:39	106-46-7	
Dichlorodifluoromethane	ND	mg/kg	0.011	0.0040	1	07/01/19 13:49	07/02/19 01:39	75-71-8	L1
1,1-Dichloroethane	ND	mg/kg	0.0055	0.0017	1	07/01/19 13:49	07/02/19 01:39	75-34-3	
1,2-Dichloroethane	ND	mg/kg	0.0055	0.0024	1	07/01/19 13:49	07/02/19 01:39	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	75-35-4	IK
cis-1,2-Dichloroethene	ND	mg/kg	0.0055	0.0015	1	07/01/19 13:49	07/02/19 01:39	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0055	0.0021	1	07/01/19 13:49	07/02/19 01:39	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0055	0.0019	1	07/01/19 13:49	07/02/19 01:39	78-87-5	
1,3-Dichloropropane	ND	mg/kg	0.0055	0.0021	1	07/01/19 13:49	07/02/19 01:39	142-28-9	
2,2-Dichloropropane	ND	mg/kg	0.0055	0.0019	1	07/01/19 13:49	07/02/19 01:39	594-20-7	
1,1-Dichloropropene	ND	mg/kg	0.0055	0.0017	1	07/01/19 13:49	07/02/19 01:39	563-58-6	
cis-1,3-Dichloropropene	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0055	0.0017	1	07/01/19 13:49	07/02/19 01:39	10061-02-6	
Diisopropyl ether	ND	mg/kg	0.0055	0.0019	1	07/01/19 13:49	07/02/19 01:39	108-20-3	
Ethylbenzene	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	100-41-4	
Hexachloro-1,3-butadiene	ND	mg/kg	0.0055	0.0022	1	07/01/19 13:49	07/02/19 01:39	87-68-3	
2-Hexanone	ND	mg/kg	0.055	0.0043	1	07/01/19 13:49	07/02/19 01:39	591-78-6	
Isopropylbenzene (Cumene)	ND	mg/kg	0.0055	0.0021	1	07/01/19 13:49	07/02/19 01:39	98-82-8	
p-Isopropyltoluene	ND	mg/kg	0.0055	0.0019	1	07/01/19 13:49	07/02/19 01:39	99-87-6	
Methylene Chloride	ND	mg/kg	0.022	0.0033	1	07/01/19 13:49	07/02/19 01:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	mg/kg	0.055	0.0041	1	07/01/19 13:49	07/02/19 01:39	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434654

Sample: 5-11 **Lab ID: 92434654011** Collected: 06/25/19 16:15 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D/5035A Volatile Organics	Analytical Method: EPA 8260D Preparation Method: EPA 5035A								
Methyl-tert-butyl ether	ND	mg/kg	0.0055	0.0017	1	07/01/19 13:49	07/02/19 01:39	1634-04-4	
Naphthalene	ND	mg/kg	0.0055	0.0013	1	07/01/19 13:49	07/02/19 01:39	91-20-3	
n-Propylbenzene	ND	mg/kg	0.0055	0.0019	1	07/01/19 13:49	07/02/19 01:39	103-65-1	
Styrene	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0055	0.0023	1	07/01/19 13:49	07/02/19 01:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0055	0.0021	1	07/01/19 13:49	07/02/19 01:39	79-34-5	
Tetrachloroethene	ND	mg/kg	0.0055	0.0019	1	07/01/19 13:49	07/02/19 01:39	127-18-4	
Toluene	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	108-88-3	
1,2,3-Trichlorobenzene	ND	mg/kg	0.0055	0.0024	1	07/01/19 13:49	07/02/19 01:39	87-61-6	
1,2,4-Trichlorobenzene	ND	mg/kg	0.0055	0.0018	1	07/01/19 13:49	07/02/19 01:39	120-82-1	
1,1,1-Trichloroethane	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0055	0.0023	1	07/01/19 13:49	07/02/19 01:39	79-00-5	
Trichloroethene	ND	mg/kg	0.0055	0.0023	1	07/01/19 13:49	07/02/19 01:39	79-01-6	
Trichlorofluoromethane	ND	mg/kg	0.0055	0.0024	1	07/01/19 13:49	07/02/19 01:39	75-69-4	
1,2,3-Trichloropropane	ND	mg/kg	0.0055	0.0018	1	07/01/19 13:49	07/02/19 01:39	96-18-4	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0055	0.0022	1	07/01/19 13:49	07/02/19 01:39	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0055	0.0020	1	07/01/19 13:49	07/02/19 01:39	108-67-8	
Vinyl acetate	ND	mg/kg	0.055	0.0097	1	07/01/19 13:49	07/02/19 01:39	108-05-4	
Vinyl chloride	ND	mg/kg	0.011	0.0020	1	07/01/19 13:49	07/02/19 01:39	75-01-4	
Xylene (Total)	ND	mg/kg	0.011	0.0040	1	07/01/19 13:49	07/02/19 01:39	1330-20-7	
m&p-Xylene	ND	mg/kg	0.011	0.0040	1	07/01/19 13:49	07/02/19 01:39	179601-23-1	
o-Xylene	ND	mg/kg	0.0055	0.0021	1	07/01/19 13:49	07/02/19 01:39	95-47-6	
Surrogates									
Toluene-d8 (S)	97	%	70-130		1	07/01/19 13:49	07/02/19 01:39	2037-26-5	
4-Bromofluorobenzene (S)	101	%	70-130		1	07/01/19 13:49	07/02/19 01:39	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-132		1	07/01/19 13:49	07/02/19 01:39	17060-07-0	
8260D MSV SIM Soil	Analytical Method: EPA 8260D Mod. Preparation Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	mg/kg	0.010	0.0031	1	07/03/19 12:46	07/03/19 18:30	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	50-150		1	07/03/19 12:46	07/03/19 18:30	17060-07-0	
Toluene-d8 (S)	99	%	50-150		1	07/03/19 12:46	07/03/19 18:30	2037-26-5	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.2**	%	0.10	0.10	1		06/26/19 17:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434654

QC Batch: 484191 Analysis Method: EPA 8260D
QC Batch Method: EPA 5035A Analysis Description: 8260D MSV 5035A Volatile Organics
Associated Lab Samples: 92434654001, 92434654002, 92434654003, 92434654004, 92434654005, 92434654006, 92434654007, 92434654008, 92434654009, 92434654010, 92434654011

METHOD BLANK: 2616517 Matrix: Solid
Associated Lab Samples: 92434654001, 92434654002, 92434654003, 92434654004, 92434654005, 92434654006, 92434654007, 92434654008, 92434654009, 92434654010, 92434654011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	ND	0.0050	0.0021	07/01/19 20:31	
1,1,1-Trichloroethane	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	
1,1,2,2-Tetrachloroethane	mg/kg	ND	0.0050	0.0019	07/01/19 20:31	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	0.0021	07/01/19 20:31	
1,1-Dichloroethane	mg/kg	ND	0.0050	0.0015	07/01/19 20:31	
1,1-Dichloroethene	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	IK
1,1-Dichloropropene	mg/kg	ND	0.0050	0.0015	07/01/19 20:31	
1,2,3-Trichlorobenzene	mg/kg	ND	0.0050	0.0022	07/01/19 20:31	
1,2,3-Trichloropropane	mg/kg	ND	0.0050	0.0016	07/01/19 20:31	
1,2,4-Trichlorobenzene	mg/kg	ND	0.0050	0.0016	07/01/19 20:31	
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	0.0020	07/01/19 20:31	
1,2-Dibromo-3-chloropropane	mg/kg	ND	0.0050	0.0036	07/01/19 20:31	
1,2-Dibromoethane (EDB)	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	
1,2-Dichlorobenzene	mg/kg	ND	0.0050	0.0019	07/01/19 20:31	
1,2-Dichloroethane	mg/kg	ND	0.0050	0.0022	07/01/19 20:31	
1,2-Dichloropropane	mg/kg	ND	0.0050	0.0017	07/01/19 20:31	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	
1,3-Dichlorobenzene	mg/kg	ND	0.0050	0.0020	07/01/19 20:31	
1,3-Dichloropropane	mg/kg	ND	0.0050	0.0019	07/01/19 20:31	
1,4-Dichlorobenzene	mg/kg	ND	0.0050	0.0017	07/01/19 20:31	
2,2-Dichloropropane	mg/kg	ND	0.0050	0.0017	07/01/19 20:31	
2-Butanone (MEK)	mg/kg	ND	0.10	0.0029	07/01/19 20:31	
2-Chlorotoluene	mg/kg	ND	0.0050	0.0017	07/01/19 20:31	
2-Hexanone	mg/kg	ND	0.050	0.0039	07/01/19 20:31	
4-Chlorotoluene	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	
4-Methyl-2-pentanone (MIBK)	mg/kg	ND	0.050	0.0037	07/01/19 20:31	
Acetone	mg/kg	ND	0.10	0.010	07/01/19 20:31	
Benzene	mg/kg	ND	0.0050	0.0016	07/01/19 20:31	
Bromobenzene	mg/kg	ND	0.0050	0.0020	07/01/19 20:31	
Bromochloromethane	mg/kg	ND	0.0050	0.0017	07/01/19 20:31	
Bromodichloromethane	mg/kg	ND	0.0050	0.0019	07/01/19 20:31	
Bromoform	mg/kg	ND	0.0050	0.0023	07/01/19 20:31	
Bromomethane	mg/kg	ND	0.010	0.0025	07/01/19 20:31	
Carbon tetrachloride	mg/kg	ND	0.0050	0.0026	07/01/19 20:31	
Chlorobenzene	mg/kg	ND	0.0050	0.0019	07/01/19 20:31	
Chloroethane	mg/kg	ND	0.010	0.0024	07/01/19 20:31	
Chloroform	mg/kg	ND	0.0050	0.0016	07/01/19 20:31	
Chloromethane	mg/kg	ND	0.010	0.0024	07/01/19 20:31	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	0.0014	07/01/19 20:31	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434654

METHOD BLANK: 2616517 Matrix: Solid

Associated Lab Samples: 92434654001, 92434654002, 92434654003, 92434654004, 92434654005, 92434654006, 92434654007, 92434654008, 92434654009, 92434654010, 92434654011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	
Dibromomethane	mg/kg	ND	0.0050	0.0025	07/01/19 20:31	
Dichlorodifluoromethane	mg/kg	ND	0.010	0.0036	07/01/19 20:31	
Diisopropyl ether	mg/kg	ND	0.0050	0.0017	07/01/19 20:31	
Ethylbenzene	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	
Hexachloro-1,3-butadiene	mg/kg	ND	0.0050	0.0020	07/01/19 20:31	
Isopropylbenzene (Cumene)	mg/kg	ND	0.0050	0.0019	07/01/19 20:31	
m&p-Xylene	mg/kg	ND	0.010	0.0036	07/01/19 20:31	
Methyl-tert-butyl ether	mg/kg	ND	0.0050	0.0015	07/01/19 20:31	
Methylene Chloride	mg/kg	ND	0.020	0.0030	07/01/19 20:31	
n-Butylbenzene	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	
n-Propylbenzene	mg/kg	ND	0.0050	0.0017	07/01/19 20:31	
Naphthalene	mg/kg	ND	0.0050	0.0012	07/01/19 20:31	
o-Xylene	mg/kg	ND	0.0050	0.0019	07/01/19 20:31	
p-Isopropyltoluene	mg/kg	ND	0.0050	0.0017	07/01/19 20:31	
sec-Butylbenzene	mg/kg	ND	0.0050	0.0016	07/01/19 20:31	IK
Styrene	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	
tert-Butylbenzene	mg/kg	ND	0.0050	0.0020	07/01/19 20:31	
Tetrachloroethene	mg/kg	ND	0.0050	0.0017	07/01/19 20:31	
Toluene	mg/kg	ND	0.0050	0.0018	07/01/19 20:31	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	0.0019	07/01/19 20:31	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	0.0015	07/01/19 20:31	
Trichloroethene	mg/kg	ND	0.0050	0.0021	07/01/19 20:31	
Trichlorofluoromethane	mg/kg	ND	0.0050	0.0022	07/01/19 20:31	
Vinyl acetate	mg/kg	ND	0.050	0.0088	07/01/19 20:31	
Vinyl chloride	mg/kg	ND	0.010	0.0018	07/01/19 20:31	
Xylene (Total)	mg/kg	ND	0.010	0.0036	07/01/19 20:31	
1,2-Dichloroethane-d4 (S)	%	98	70-132		07/01/19 20:31	
4-Bromofluorobenzene (S)	%	101	70-130		07/01/19 20:31	
Toluene-d8 (S)	%	96	70-130		07/01/19 20:31	

LABORATORY CONTROL SAMPLE & LCSD: 2616518 2616519

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	mg/kg	0.05	0.043	0.049	85	98	70-130	14	30	
1,1,1-Trichloroethane	mg/kg	0.05	0.045	0.046	90	92	70-130	2	30	
1,1,2,2-Tetrachloroethane	mg/kg	0.05	0.034	0.043	68	86	55-130	23	30	
1,1,2-Trichloroethane	mg/kg	0.05	0.037	0.043	73	85	70-130	15	30	
1,1-Dichloroethane	mg/kg	0.05	0.047	0.048	94	95	68-130	2	30	
1,1-Dichloroethene	mg/kg	0.05	0.050	0.050	99	100	70-130	0	30	IK
1,1-Dichloropropene	mg/kg	0.05	0.046	0.045	92	89	70-130	2	30	
1,2,3-Trichlorobenzene	mg/kg	0.05	0.045	0.051	91	101	70-130	11	30	
1,2,3-Trichloropropane	mg/kg	0.05	0.036	0.045	71	91	70-130	24	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434654

LABORATORY CONTROL SAMPLE & LCSD: 2616518 2616519

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trichlorobenzene	mg/kg	0.05	0.046	0.048	92	97	70-130	5	30	
1,2,4-Trimethylbenzene	mg/kg	0.05	0.044	0.046	89	93	69-130	4	30	
1,2-Dibromo-3-chloropropane	mg/kg	0.05	0.037	0.049	74	98	57-141	28	30	
1,2-Dibromoethane (EDB)	mg/kg	0.05	0.036	0.043	72	87	70-130	19	30	
1,2-Dichlorobenzene	mg/kg	0.05	0.043	0.048	87	95	70-130	9	30	
1,2-Dichloroethane	mg/kg	0.05	0.040	0.045	80	91	70-130	13	30	
1,2-Dichloropropane	mg/kg	0.05	0.038	0.042	77	84	70-130	9	30	
1,3,5-Trimethylbenzene	mg/kg	0.05	0.045	0.047	90	94	70-130	4	30	
1,3-Dichlorobenzene	mg/kg	0.05	0.044	0.047	88	94	70-130	7	30	
1,3-Dichloropropane	mg/kg	0.05	0.037	0.044	73	87	70-130	18	30	
1,4-Dichlorobenzene	mg/kg	0.05	0.044	0.048	88	96	70-130	9	30	
2,2-Dichloropropane	mg/kg	0.05	0.045	0.047	89	94	70-130	5	30	
2-Butanone (MEK)	mg/kg	0.1	0.071J	0.090J	71	90	60-130		30	
2-Chlorotoluene	mg/kg	0.05	0.044	0.046	87	92	70-130	6	30	
2-Hexanone	mg/kg	0.1	0.071	0.093	71	93	70-132	27	30	
4-Chlorotoluene	mg/kg	0.05	0.044	0.047	89	93	70-130	5	30	
4-Methyl-2-pentanone (MIBK)	mg/kg	0.1	0.069	0.089	69	89	69-130	26	30	
Acetone	mg/kg	0.1	0.076J	0.11	76	105	49-148		30	
Benzene	mg/kg	0.05	0.043	0.045	86	90	70-130	5	30	
Bromobenzene	mg/kg	0.05	0.043	0.047	86	95	70-130	10	30	
Bromochloromethane	mg/kg	0.05	0.043	0.045	86	90	70-130	5	30	
Bromodichloromethane	mg/kg	0.05	0.042	0.046	84	93	70-130	10	30	
Bromoform	mg/kg	0.05	0.036	0.045	72	89	68-136	21	30	
Bromomethane	mg/kg	0.05	0.063	0.058	126	116	60-140	8	30	
Carbon tetrachloride	mg/kg	0.05	0.045	0.047	90	93	70-130	4	30	
Chlorobenzene	mg/kg	0.05	0.043	0.047	86	93	70-130	8	30	
Chloroethane	mg/kg	0.05	0.056	0.054	112	108	51-147	4	30	
Chloroform	mg/kg	0.05	0.043	0.048	87	95	70-130	10	30	
Chloromethane	mg/kg	0.05	0.056	0.056	112	113	48-130	1	30	
cis-1,2-Dichloroethene	mg/kg	0.05	0.045	0.047	89	95	70-130	6	30	
cis-1,3-Dichloropropene	mg/kg	0.05	0.038	0.043	76	86	70-130	12	30	
Dibromochloromethane	mg/kg	0.05	0.036	0.043	73	85	70-130	16	30	
Dibromomethane	mg/kg	0.05	0.037	0.042	74	85	70-130	13	30	
Dichlorodifluoromethane	mg/kg	0.05	0.071	0.072	142	145	49-130	2	30	L1
Diisopropyl ether	mg/kg	0.05	0.040	0.043	79	86	66-130	8	30	
Ethylbenzene	mg/kg	0.05	0.046	0.048	91	96	70-130	5	30	
Hexachloro-1,3-butadiene	mg/kg	0.05	0.046	0.047	93	93	70-130	1	30	
Isopropylbenzene (Cumene)	mg/kg	0.05	0.045	0.047	90	94	70-130	5	30	
m&p-Xylene	mg/kg	0.1	0.087	0.092	87	92	70-130	5	30	
Methyl-tert-butyl ether	mg/kg	0.05	0.041	0.048	82	96	70-130	15	30	
Methylene Chloride	mg/kg	0.05	0.046	0.053	92	106	50-137	14	30	
n-Butylbenzene	mg/kg	0.05	0.049	0.049	97	98	70-130	1	30	
n-Propylbenzene	mg/kg	0.05	0.048	0.050	97	100	70-130	3	30	
Naphthalene	mg/kg	0.05	0.039	0.049	79	97	70-131	21	30	
o-Xylene	mg/kg	0.05	0.045	0.047	89	95	70-130	6	30	
p-Isopropyltoluene	mg/kg	0.05	0.047	0.047	94	95	70-130	1	30	
sec-Butylbenzene	mg/kg	0.05	0.048	0.050	96	101	70-130	5	30	IK

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434654

LABORATORY CONTROL SAMPLE & LCSD: 2616518 2616519

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Styrene	mg/kg	0.05	0.043	0.046	86	92	70-130	7	30	
tert-Butylbenzene	mg/kg	0.05	0.037	0.040	74	79	69-130	8	30	
Tetrachloroethene	mg/kg	0.05	0.048	0.049	95	97	56-130	2	30	
Toluene	mg/kg	0.05	0.044	0.045	87	91	70-130	4	30	
trans-1,2-Dichloroethene	mg/kg	0.05	0.046	0.047	93	93	70-130	0	30	
trans-1,3-Dichloropropene	mg/kg	0.05	0.037	0.042	74	83	70-130	11	30	
Trichloroethene	mg/kg	0.05	0.044	0.046	88	91	70-141	3	30	
Trichlorofluoromethane	mg/kg	0.05	0.053	0.051	107	101	67-130	5	30	
Vinyl acetate	mg/kg	0.1	0.083	0.087	83	87	10-136	5	30	
Vinyl chloride	mg/kg	0.05	0.053	0.053	105	105	67-130	0	30	
Xylene (Total)	mg/kg	0.15	0.13	0.14	88	93	70-130	5	30	
1,2-Dichloroethane-d4 (S)	%				100	100	70-132			
4-Bromofluorobenzene (S)	%				98	100	70-130			
Toluene-d8 (S)	%				100	100	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434654

QC Batch: 484671 Analysis Method: EPA 8260D Mod.
QC Batch Method: EPA 8260D Mod. Analysis Description: 8260D MSV Soil SIM
Associated Lab Samples: 92434654001, 92434654002, 92434654003, 92434654004, 92434654005, 92434654006, 92434654007, 92434654008, 92434654009, 92434654010, 92434654011

METHOD BLANK: 2618539 Matrix: Solid
Associated Lab Samples: 92434654001, 92434654002, 92434654003, 92434654004, 92434654005, 92434654006, 92434654007, 92434654008, 92434654009, 92434654010, 92434654011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	mg/kg	ND	0.010	0.0030	07/03/19 12:13	
1,2-Dichloroethane-d4 (S)	%	87	50-150		07/03/19 12:13	
Toluene-d8 (S)	%	96	50-150		07/03/19 12:13	

LABORATORY CONTROL SAMPLE: 2618540

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	mg/kg	0.04	0.041	103	50-150	
1,2-Dichloroethane-d4 (S)	%			90	50-150	
Toluene-d8 (S)	%			98	50-150	

MATRIX SPIKE SAMPLE: 2618542

Parameter	Units	92434654008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	mg/kg	ND	0.041	0.039	97	50-150	
1,2-Dichloroethane-d4 (S)	%				90	50-150	
Toluene-d8 (S)	%				95	50-150	

SAMPLE DUPLICATE: 2618541

Parameter	Units	92434654005 Result	Dup Result	RPD	Max RPD	Qualifiers
1,4-Dioxane (p-Dioxane)	mg/kg	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	89	90		30	
Toluene-d8 (S)	%	95	96		30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434654

QC Batch: 483455 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92434654001, 92434654002, 92434654003, 92434654004, 92434654005, 92434654006, 92434654007, 92434654008, 92434654009

SAMPLE DUPLICATE: 2613017

Parameter	Units	92434596004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.2	21.5	1	25	

SAMPLE DUPLICATE: 2613018

Parameter	Units	92434543008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	67.3	66.9	1	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434654

QC Batch: 483458
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92434654010, 92434654011

SAMPLE DUPLICATE: 2613035

Parameter	Units	92434372001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	52.6	42.6	21	25	

SAMPLE DUPLICATE: 2613036

Parameter	Units	92434664002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	60.8	62.9	3	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: ROW-603
Pace Project No.: 92434654

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

IK	The recalculated concentration of the calibration standard(s) did not meet method acceptance criteria; this result should be considered an estimated value.
IS	The internal standard response is below criteria. Results may be biased high.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

Pace Analytical Services, LLC
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(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ROW-603
Pace Project No.: 92434654

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92434654001	**5-1**	EPA 5035A	484191	EPA 8260D	484242
92434654002	**5-2**	EPA 5035A	484191	EPA 8260D	484242
92434654003	**5-3**	EPA 5035A	484191	EPA 8260D	484242
92434654004	**5-4**	EPA 5035A	484191	EPA 8260D	484242
92434654005	**5-5**	EPA 5035A	484191	EPA 8260D	484242
92434654006	**5-6**	EPA 5035A	484191	EPA 8260D	484242
92434654007	**5-7**	EPA 5035A	484191	EPA 8260D	484242
92434654008	**5-8**	EPA 5035A	484191	EPA 8260D	484242
92434654009	**5-9**	EPA 5035A	484191	EPA 8260D	484242
92434654010	**5-10**	EPA 5035A	484191	EPA 8260D	484242
92434654011	**5-11**	EPA 5035A	484191	EPA 8260D	484242
92434654001	**5-1**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654002	**5-2**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654003	**5-3**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654004	**5-4**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654005	**5-5**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654006	**5-6**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654007	**5-7**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654008	**5-8**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654009	**5-9**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654010	**5-10**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654011	**5-11**	EPA 8260D Mod.	484671	EPA 8260D Mod.	484679
92434654001	**5-1**	ASTM D2974-87	483455		
92434654002	**5-2**	ASTM D2974-87	483455		
92434654003	**5-3**	ASTM D2974-87	483455		
92434654004	**5-4**	ASTM D2974-87	483455		
92434654005	**5-5**	ASTM D2974-87	483455		
92434654006	**5-6**	ASTM D2974-87	483455		
92434654007	**5-7**	ASTM D2974-87	483455		
92434654008	**5-8**	ASTM D2974-87	483455		
92434654009	**5-9**	ASTM D2974-87	483455		
92434654010	**5-10**	ASTM D2974-87	483458		
92434654011	**5-11**	ASTM D2974-87	483458		

Pace Analytical®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: February 7, 2018 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: H & H

Project #: WO#: 92434654

92434654

Courier: ☐ Commercial ☒ Fed Ex ☐ UPS ☐ USPS ☒ Pace ☐ Other:___ ☐ Client

Custody Seal Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: MB 6.26.19

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Thermometer: ☒ IR Gun ID: 92T048 **Type of Ice:** ☒ Wet ☐ Blue ☐ None

Cooler Temp (°C): 2.1-3.6 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 2.1-3.6

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

				Comments/Discrepancy:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☒ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	4.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☒ N/A	8.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT/SL				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☒ No	☒ N/A	10.
Trip Blank Present?	☒ Yes	☐ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☒ Yes	☐ No	☐ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Client requested samples be split up on different reports. Client requested Parcels IDW soil TCLP VOC & TCLP RCRA 8 metal samples be placed on Lot#.K6.

Person contacted: Alan McCreary / David Graham Date/Time: 6/26 - 6/27

Project Manager SCURF Review: JH **Date:** 6/27/19

Project Manager SRF Review: JH **Date:** 6/27/19

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # **WO# : 92434654**

PM: KRG Due Date: 07/03/19

CLIENT: 92-Hart Hick

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	\				\	\	\	\			\		\	\	\						12				\	\			
2	\				\	\	\	\			\		\	\	\						12				\	\			
3	\				\	\	\	\			\		\	\	\						12				\	\			
4	\				\	\	\	\			\		\	\	\						12				\	\			
5	\				\	\	\	\			\		\	\	\						12				\	\			
6	\				\	\	\	\			\		\	\	\						12				\	\			
7	\				\	\	\	\			\		\	\	\						12				\	\			
8	\				\	\	\	\			\		\	\	\						12				\	\			
9	\				\	\	\	\			\		\	\	\						12				\	\			
10	\				\	\	\	\			\		\	\	\						12				\	\			
11	\				\	\	\	\			\		\	\	\						12				\	\			
12	\				\	\	\	\			\		\	\	\						~~12~~				\	\			

MB 6-26-19

MB 6-26-19

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # **WO#: 92434654**

PM: KRG Due Date: 07/03/19

CLIENT: 92-Hart Hick

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1						1										6													
2									1											12									
3						1										6													
4									2											12									
5									1											12									
6																2													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A — Required Client Information:

Company: Hart & Hickman
Address: 2923 S. Tryon Street
Charlotte, NC 28203
Email: dgraham@harthickman.com
Phone: (704)649-5999 Fax
Requested Due Date:

Section B — Required Project Information:

Report To: David Graham
Copy To: ALAN MCCREARY
DGRAHAM@HARTHICKMAN.COM
Purchase Order #:
Project Name: ROW-603 Soil
Project #:

Section C — Invoice Information:

Attention:
Company Name:
Address:
Pace Quote: 59511
Pace Project Manager: kevin.godwin@pacelabs.com,
Pace Profile #: 1321-18, 19

Regulatory Agency

State / Location
NC

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260/5035	8260 SIM 1,4-Dioxane	RCRA Metals (6010/7471)	8082 PCB	TCLP VOCs 8260	TCLP 8 RCRA Metals	Trip BLANK	Residual Chlorine (Y/N)	92434654
1	S-1	SL		6/15/18	0820				12	2					4	4	4		X	X							001
2	S-2				0910														X	X							002
3	S-3				0940														X	X							003
4	S-4				1015														X	X							004
5	S-5				1052														X	X							005
6	S-6				1150														X	X							006
7	S-7				1345														X	X							007
8	S-8				1415														X	X							008
9	S-9				1455														X	X							009
10	S-10				1525														X	X							010
11	S-11				1615														X	X							011
12	PARCEL 5 IDW SOIL				1635				3	3												X		X	X			012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
CC AMCCREARY@HARTHICKMAN.COM	MH	6/16/18	0940		06/26/19	0940
ON RESULTS		06/26/19	1500	PACE	6.26.19	1500

SAMPLE CONDITIONS

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
3.6	2.1 F	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ALAN MCCREARY
SIGNATURE of SAMPLER:
DATE Signed:

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A – Required Client Information:	Section B – Required Project Information:	Section C – Invoice Information:
Company: Hart & Hickman	Report To: David Graham	Attention:
Address: 2923 S. Tryon Street	Copy To: AMCCREARY@HARTHICKMAN.COM; DGRAHAM@HARTHICKMAN.COM	Company Name:
Charlotte, NC 28203	Purchase Order #:	Address:
Email: dgraham@harthickman.com	Project Name: ROW-603 Soil	Pace Quote: 59511
Phone: (704)649-5999 Fax	Project #:	Pace Project Manager: kevin.godwin@pacelabs.com,
Requested Due Date:		Pace Profile #: 1321-18, 19

Regulatory Agency

State / Location: NC

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260/5035	8260 SIM 1,4-Dioxane	RCRA Metals (6010/7471)	8082 PCB	TCLP VOCs 8260	TCLP 8 RCRA Metals	Trip BLANK	Residual Chlorine (Y/N)	3249465 4
1	PARCEL 5 DECON WATER	WT		6/25/18	1450			17	7			1	6						X	X	X						4 3
2	SED 6-1	SL		↓	1755				3						2	4	4		X	X	X						
3	SW 6-1	WT		↓	1810				7			1	6						X	X	X						
4	7-1 (0-2)	SL		6/26/18	0840				4						2	4	4		X	X	X	X					
5	7-2 (4-6)	SL		↓	0935				3						2	4	4		X	X	X						
6	TRIP BLANK 1	WT		6/25					2										X						X		
7																											
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
PLEASE PLT SED 6-1 & SW 6-1 ON ONE REPORT, 5-1 THROUGH PARCEL 5 DECON WATER ON SECOND REPORT	TEAM	6/26/18	0940		06/26/19	0940
		06/26/18	1500	JAC	6-26-19	1500

PLT 7-1 & 7-2 ON SEPARATE REPORT WITH REST OF 7-# COMING LATER

SAMPLE CONDITIONS			
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
21-3.6	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ALAN MCCREARY

SIGNATURE of SAMPLER: DATE Signed:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

July 15, 2019

David Graham
Hart & Hickman
2923 S. Tryon Street
Charlotte, NC 28203

RE: Project: ROW-603
Pace Project No.: 92434683

Dear David Graham:
Enclosed are the analytical results for sample(s) received by the laboratory between June 26, 2019 and June 28, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
1(704)875-9092
Project Manager

Enclosures

cc: Alan McCreary, Hart & Hickman

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: ROW-603
Pace Project No.: 92434683

Pace Analytical National Certification IDs

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 9980939910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: ROW-603
Pace Project No.: 92434683

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92434654012	**PARCEL 5 IDW SOIL**	Solid	06/25/19 16:35	06/26/19 09:40
92434654013	**PARCEL 5 DECON WATER**	Water	06/25/19 16:50	06/26/19 09:40
92434683004	**PARCEL 7 IDW SOIL**	Solid	06/27/19 17:05	06/28/19 12:49
92434683005	**PARCEL 7 IDW WATER**	Water	06/27/19 17:15	06/28/19 12:49

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: ROW-603
Pace Project No.: 92434683

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92434654012	**PARCEL 5 IDW SOIL**	EPA 6010D	SH1	7	PASI-A
		EPA 7471B	JMW1	1	PASI-A
		ASTM D2974-87	KDF	1	PASI-C
92434654013	**PARCEL 5 DECON WATER**	EPA 6010D	SH1	7	PASI-A
		EPA 7470A	JMW1	1	PASI-A
		EPA 8260D Mod.	LMB	3	PASI-C
		EPA 8260D	ACG	68	PAN
92434683004	**PARCEL 7 IDW SOIL**	EPA 6010D	DS	7	PASI-A
		EPA 7470A	JMW1	1	PASI-A
		ASTM D2974-87	KDF	1	PASI-C
92434683005	**PARCEL 7 IDW WATER**	EPA 6010D	DS	7	PASI-A
		EPA 7470A	JMW1	1	PASI-A
		EPA 8260D	CL	63	PASI-C
		EPA 8260D Mod.	LMB	3	PASI-C

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434683

Sample: PARCEL 5 IDW SOIL **Lab ID: 92434654012** Collected: 06/25/19 16:35 Received: 06/26/19 09:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B								
Arsenic	**1.3**	mg/kg	1.1	0.53	1	07/02/19 10:31	07/02/19 23:30	7440-38-2	
Barium	**74.3**	mg/kg	0.53	0.27	1	07/02/19 10:31	07/02/19 23:30	7440-39-3	
Cadmium	**0.12**	mg/kg	0.11	0.053	1	07/02/19 10:31	07/02/19 23:30	7440-43-9	
Chromium	**19.0**	mg/kg	0.53	0.27	1	07/02/19 10:31	07/02/19 23:30	7440-47-3	
Lead	**16.0**	mg/kg	0.53	0.27	1	07/02/19 10:31	07/02/19 23:30	7439-92-1	
Selenium	**1.1**	mg/kg	1.1	0.53	1	07/02/19 10:31	07/02/19 23:30	7782-49-2	
Silver	ND	mg/kg	0.53	0.27	1	07/02/19 10:31	07/02/19 23:30	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471B Preparation Method: EPA 7471B								
Mercury	**0.033**	mg/kg	0.0053	0.0027	1	06/27/19 12:33	06/28/19 09:39	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.4**	%	0.10	0.10	1		06/26/19 17:30		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434683

Sample: PARCEL 5 DECON WATER **Lab ID: 92434654013** Collected: 06/25/19 16:50 Received: 06/26/19 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Arsenic	**6.5J**	ug/L	10.0	5.0	1	06/27/19 01:10	06/27/19 14:00	7440-38-2	
Barium	**409**	ug/L	5.0	2.5	1	06/27/19 01:10	06/27/19 14:00	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	06/27/19 01:10	06/27/19 14:00	7440-43-9	
Chromium	**166**	ug/L	5.0	2.5	1	06/27/19 01:10	06/27/19 14:00	7440-47-3	
Lead	**22.6**	ug/L	5.0	2.5	1	06/27/19 01:10	06/27/19 14:00	7439-92-1	
Selenium	ND	ug/L	10.0	5.0	1	06/27/19 01:10	06/27/19 14:00	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	06/27/19 01:10	06/27/19 14:00	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	**0.19J**	ug/L	0.20	0.10	1	06/27/19 13:09	06/28/19 10:39	7439-97-6	
8260D MSV SIM	Analytical Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	**382**	ug/L	50.0	28.8	25		06/28/19 14:41	123-91-1	D3
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	50-150		25		06/28/19 14:41	17060-07-0	
Toluene-d8 (S)	107	%	50-150		25		06/28/19 14:41	2037-26-5	
VOA (GC/MS) 8260D	Analytical Method: EPA 8260D Preparation Method: 8260D								
Acetone	**172J**	ug/L	500	100	10	07/07/19 18:02	07/07/19 18:02	67-64-1	J
Benzene	ND	ug/L	10.0	3.31	10	07/07/19 18:02	07/07/19 18:02	71-43-2	
Bromobenzene	ND	ug/L	10.0	3.52	10	07/07/19 18:02	07/07/19 18:02	108-86-1	
Bromochloromethane	ND	ug/L	50.0	5.20	10	07/07/19 18:02	07/07/19 18:02	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	3.80	10	07/07/19 18:02	07/07/19 18:02	75-27-4	
Bromoform	ND	ug/L	10.0	4.69	10	07/07/19 18:02	07/07/19 18:02	75-25-2	
Bromomethane	ND	ug/L	50.0	8.66	10	07/07/19 18:02	07/07/19 18:02	74-83-9	
n-Butylbenzene	ND	ug/L	10.0	3.61	10	07/07/19 18:02	07/07/19 18:02	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	3.65	10	07/07/19 18:02	07/07/19 18:02	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	3.99	10	07/07/19 18:02	07/07/19 18:02	98-06-6	
Carbon disulfide	ND	ug/L	10.0	2.75	10	07/07/19 18:02	07/07/19 18:02	75-15-0	L0
Carbon tetrachloride	ND	ug/L	10.0	3.79	10	07/07/19 18:02	07/07/19 18:02	56-23-5	
Chlorobenzene	ND	ug/L	10.0	3.48	10	07/07/19 18:02	07/07/19 18:02	108-90-7	
Dibromochloromethane	ND	ug/L	10.0	3.27	10	07/07/19 18:02	07/07/19 18:02	124-48-1	
Chloroethane	ND	ug/L	50.0	4.53	10	07/07/19 18:02	07/07/19 18:02	75-00-3	
Chloroform	ND	ug/L	50.0	3.24	10	07/07/19 18:02	07/07/19 18:02	67-66-3	
Chloromethane	ND	ug/L	25.0	2.76	10	07/07/19 18:02	07/07/19 18:02	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	3.75	10	07/07/19 18:02	07/07/19 18:02	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	3.51	10	07/07/19 18:02	07/07/19 18:02	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	50.0	13.3	10	07/07/19 18:02	07/07/19 18:02	96-12-8	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	3.81	10	07/07/19 18:02	07/07/19 18:02	106-93-4	
Dibromomethane	ND	ug/L	10.0	3.46	10	07/07/19 18:02	07/07/19 18:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	10.0	3.49	10	07/07/19 18:02	07/07/19 18:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	2.20	10	07/07/19 18:02	07/07/19 18:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	2.74	10	07/07/19 18:02	07/07/19 18:02	106-46-7	
Dichlorodifluoromethane	ND	ug/L	50.0	5.51	10	07/07/19 18:02	07/07/19 18:02	75-71-8	L0
1,1-Dichloroethane	ND	ug/L	10.0	2.59	10	07/07/19 18:02	07/07/19 18:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	3.61	10	07/07/19 18:02	07/07/19 18:02	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434683

Sample: PARCEL 5 DECON WATER **Lab ID: 92434654013** Collected: 06/25/19 16:50 Received: 06/26/19 09:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
VOA (GC/MS) 8260D	Analytical Method: EPA 8260D Preparation Method: 8260D								
1,1-Dichloroethene	ND	ug/L	10.0	3.98	10	07/07/19 18:02	07/07/19 18:02	75-35-4	L0
cis-1,2-Dichloroethene	ND	ug/L	10.0	2.60	10	07/07/19 18:02	07/07/19 18:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	3.96	10	07/07/19 18:02	07/07/19 18:02	156-60-5	
1,2-Dichloropropane	ND	ug/L	10.0	3.06	10	07/07/19 18:02	07/07/19 18:02	78-87-5	
1,1-Dichloropropene	ND	ug/L	10.0	3.52	10	07/07/19 18:02	07/07/19 18:02	563-58-6	
1,3-Dichloropropane	ND	ug/L	10.0	3.66	10	07/07/19 18:02	07/07/19 18:02	142-28-9	
cis-1,3-Dichloropropene	ND	ug/L	10.0	4.18	10	07/07/19 18:02	07/07/19 18:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	10.0	4.19	10	07/07/19 18:02	07/07/19 18:02	10061-02-6	
2,2-Dichloropropane	ND	ug/L	10.0	3.21	10	07/07/19 18:02	07/07/19 18:02	594-20-7	
Ethylbenzene	ND	ug/L	10.0	3.84	10	07/07/19 18:02	07/07/19 18:02	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	2.56	10	07/07/19 18:02	07/07/19 18:02	87-68-3	
2-Hexanone	ND	ug/L	100	38.2	10	07/07/19 18:02	07/07/19 18:02	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	10.0	3.26	10	07/07/19 18:02	07/07/19 18:02	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	3.50	10	07/07/19 18:02	07/07/19 18:02	99-87-6	
2-Butanone (MEK)	ND	ug/L	100	39.3	10	07/07/19 18:02	07/07/19 18:02	78-93-3	
Methylene Chloride	ND	ug/L	50.0	10.0	10	07/07/19 18:02	07/07/19 18:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	21.4	10	07/07/19 18:02	07/07/19 18:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	3.67	10	07/07/19 18:02	07/07/19 18:02	1634-04-4	
Naphthalene	ND	ug/L	50.0	10.0	10	07/07/19 18:02	07/07/19 18:02	91-20-3	
n-Propylbenzene	ND	ug/L	10.0	3.49	10	07/07/19 18:02	07/07/19 18:02	103-65-1	
Styrene	ND	ug/L	10.0	3.07	10	07/07/19 18:02	07/07/19 18:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	3.85	10	07/07/19 18:02	07/07/19 18:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	1.30	10	07/07/19 18:02	07/07/19 18:02	79-34-5	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	3.03	10	07/07/19 18:02	07/07/19 18:02	76-13-1	
Tetrachloroethene	ND	ug/L	10.0	3.72	10	07/07/19 18:02	07/07/19 18:02	127-18-4	
Toluene	ND	ug/L	10.0	4.12	10	07/07/19 18:02	07/07/19 18:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	2.30	10	07/07/19 18:02	07/07/19 18:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	3.55	10	07/07/19 18:02	07/07/19 18:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	10.0	3.19	10	07/07/19 18:02	07/07/19 18:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	3.83	10	07/07/19 18:02	07/07/19 18:02	79-00-5	
Trichloroethene	ND	ug/L	10.0	3.98	10	07/07/19 18:02	07/07/19 18:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0	12.0	10	07/07/19 18:02	07/07/19 18:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	25.0	8.07	10	07/07/19 18:02	07/07/19 18:02	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	10.0	3.73	10	07/07/19 18:02	07/07/19 18:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	10.0	3.87	10	07/07/19 18:02	07/07/19 18:02	108-67-8	
Vinyl chloride	ND	ug/L	10.0	2.59	10	07/07/19 18:02	07/07/19 18:02	75-01-4	
Xylene (Total)	ND	ug/L	30.0	10.6	10	07/07/19 18:02	07/07/19 18:02	1330-20-7	
Surrogates									
Toluene-d8 (S)	103	%	80.0-120		10	07/07/19 18:02	07/07/19 18:02	2037-26-5	
4-Bromofluorobenzene (S)	109	%	77.0-126		10	07/07/19 18:02	07/07/19 18:02	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70.0-130		10	07/07/19 18:02	07/07/19 18:02	17060-07-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434683

Sample: PARCEL 7 IDW SOIL **Lab ID: 92434683004** Collected: 06/27/19 17:05 Received: 06/28/19 12:49 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Leachate Method/Date: EPA 1311; 07/12/19 22:12 Initial pH: 6.02; Final pH: 4.5								
Arsenic	ND	mg/L	0.050	0.014	1	07/14/19 13:51	07/14/19 23:20	7440-38-2	
Barium	**0.57**	mg/L	0.25	0.0050	1	07/14/19 13:51	07/14/19 23:20	7440-39-3	
Cadmium	ND	mg/L	0.0050	0.0025	1	07/14/19 13:51	07/14/19 23:20	7440-43-9	
Chromium	ND	mg/L	0.050	0.0020	1	07/14/19 13:51	07/14/19 23:20	7440-47-3	
Lead	ND	mg/L	0.025	0.020	1	07/14/19 13:51	07/14/19 23:20	7439-92-1	
Selenium	ND	mg/L	0.10	0.019	1	07/14/19 13:51	07/14/19 23:20	7782-49-2	
Silver	ND	mg/L	0.025	0.00050	1	07/14/19 13:51	07/14/19 23:20	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Leachate Method/Date: EPA 1311; 07/12/19 22:12 Initial pH: 6.02; Final pH: 4.5								
Mercury	ND	mg/L	0.00020	0.00010	1	07/15/19 08:31	07/15/19 12:18	7439-97-6	R1
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.7**	%	0.10	0.10	1		06/29/19 14:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434683

Sample: PARCEL 7 IDW WATER **Lab ID: 92434683005** Collected: 06/27/19 17:15 Received: 06/28/19 12:49 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Arsenic	ND	ug/L	10.0	5.0	1	07/13/19 01:27	07/13/19 17:41	7440-38-2	
Barium	**317**	ug/L	5.0	2.5	1	07/13/19 01:27	07/13/19 17:41	7440-39-3	
Cadmium	ND	ug/L	1.0	0.50	1	07/13/19 01:27	07/13/19 17:41	7440-43-9	
Chromium	**53.8**	ug/L	5.0	2.5	1	07/13/19 01:27	07/13/19 17:41	7440-47-3	
Lead	**9.8**	ug/L	5.0	2.5	1	07/13/19 01:27	07/13/19 17:41	7439-92-1	
Selenium	ND	ug/L	10.0	5.0	1	07/13/19 01:27	07/13/19 17:41	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	07/13/19 01:27	07/13/19 17:41	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	ND	ug/L	0.20	0.10	1	07/15/19 08:31	07/15/19 11:11	7439-97-6	
8260D MSV Low Level	Analytical Method: EPA 8260D								
Acetone	**18.8J**	ug/L	25.0	6.2	1		07/11/19 05:21	67-64-1	
Benzene	ND	ug/L	1.0	0.15	1		07/11/19 05:21	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.22	1		07/11/19 05:21	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.34	1		07/11/19 05:21	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.26	1		07/11/19 05:21	75-27-4	
Bromoform	ND	ug/L	1.0	0.62	1		07/11/19 05:21	75-25-2	
Bromomethane	ND	ug/L	2.0	0.62	1		07/11/19 05:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	3.3	1		07/11/19 05:21	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	0.22	1		07/11/19 05:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		07/11/19 05:21	108-90-7	
Chloroethane	ND	ug/L	1.0	0.49	1		07/11/19 05:21	75-00-3	
Chloroform	ND	ug/L	5.0	2.3	1		07/11/19 05:21	67-66-3	
Chloromethane	ND	ug/L	1.0	0.39	1		07/11/19 05:21	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.20	1		07/11/19 05:21	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.20	1		07/11/19 05:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	0.26	1		07/11/19 05:21	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.41	1		07/11/19 05:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.26	1		07/11/19 05:21	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.46	1		07/11/19 05:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.29	1		07/11/19 05:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.22	1		07/11/19 05:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.26	1		07/11/19 05:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.23	1		07/11/19 05:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.27	1		07/11/19 05:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.34	1		07/11/19 05:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.24	1		07/11/19 05:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.29	1		07/11/19 05:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.25	1		07/11/19 05:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.19	1		07/11/19 05:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.16	1		07/11/19 05:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.27	1		07/11/19 05:21	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.21	1		07/11/19 05:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		07/11/19 05:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.31	1		07/11/19 05:21	10061-02-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: ROW-603
Pace Project No.: 92434683

Sample: PARCEL 7 IDW WATER **Lab ID: 92434683005** Collected: 06/27/19 17:15 Received: 06/28/19 12:49 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260D MSV Low Level	Analytical Method: EPA 8260D								
Diisopropyl ether	ND	ug/L	1.0	0.22	1		07/11/19 05:21	108-20-3	
Ethylbenzene	ND	ug/L	1.0	0.26	1		07/11/19 05:21	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.44	1		07/11/19 05:21	87-68-3	
2-Hexanone	ND	ug/L	5.0	0.57	1		07/11/19 05:21	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	0.21	1		07/11/19 05:21	99-87-6	
Methylene Chloride	ND	ug/L	5.0	3.7	1		07/11/19 05:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	4.5	1		07/11/19 05:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.28	1		07/11/19 05:21	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.35	1		07/11/19 05:21	91-20-3	
Styrene	ND	ug/L	1.0	0.27	1		07/11/19 05:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.34	1		07/11/19 05:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.22	1		07/11/19 05:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		07/11/19 05:21	127-18-4	
Toluene	ND	ug/L	1.0	0.24	1		07/11/19 05:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.34	1		07/11/19 05:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.22	1		07/11/19 05:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.18	1		07/11/19 05:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.24	1		07/11/19 05:21	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.22	1		07/11/19 05:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.31	1		07/11/19 05:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.35	1		07/11/19 05:21	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1.4	1		07/11/19 05:21	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.24	1		07/11/19 05:21	75-01-4	
Xylene (Total)	ND	ug/L	1.0	0.63	1		07/11/19 05:21	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.41	1		07/11/19 05:21	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.22	1		07/11/19 05:21	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		07/11/19 05:21	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		07/11/19 05:21	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		07/11/19 05:21	2037-26-5	
8260D MSV SIM	Analytical Method: EPA 8260D Mod.								
1,4-Dioxane (p-Dioxane)	ND	ug/L	2.0	1.2	1		07/11/19 15:50	123-91-1	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	50-150		1		07/11/19 15:50	17060-07-0	
Toluene-d8 (S)	107	%	50-150		1		07/11/19 15:50	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 486320 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 92434683004

METHOD BLANK: 2625550 Matrix: Water
Associated Lab Samples: 92434683004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	07/15/19 12:08	

METHOD BLANK: 2625551 Matrix: Water
Associated Lab Samples: 92434683004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00010	07/15/19 12:13	

LABORATORY CONTROL SAMPLE: 2626421

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0029	117	80-120	

LABORATORY CONTROL SAMPLE: 2626422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2626423 2626424

Parameter	Units	92434683004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0029	0.0019	115	77	75-125	39	20	R1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 483522 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 92434654013

METHOD BLANK: 2613306 Matrix: Water
Associated Lab Samples: 92434654013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	06/28/19 10:27	

LABORATORY CONTROL SAMPLE: 2613307

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.2	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2613308 2613309

Parameter	Units	92434257001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	1.1	1.1	42	42	75-125	1	25	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 486137 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 92434683005

METHOD BLANK: 2625599 Matrix: Water
Associated Lab Samples: 92434683005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	07/15/19 11:07	

LABORATORY CONTROL SAMPLE: 2625600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.8	111	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2625601 2625602

Parameter	Units	92434683005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.9	3.0	114	119	75-125	4	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 483590 Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B Analysis Description: 7471 Mercury
Associated Lab Samples: 92434654012

METHOD BLANK: 2613703 Matrix: Solid
Associated Lab Samples: 92434654012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.0060	0.0030	06/28/19 09:20	

LABORATORY CONTROL SAMPLE: 2613704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.083	0.086	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2613705 2613706

Parameter	Units	92434543002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.089	0.14	0.14	0.23	0.23	102	100	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 484340
QC Batch Method: EPA 3050B
Analysis Method: EPA 6010D
Analysis Description: 6010 MET
Associated Lab Samples: 92434654012

METHOD BLANK: 2616991 Matrix: Solid
Associated Lab Samples: 92434654012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	0.50	07/02/19 23:21	
Barium	mg/kg	ND	0.50	0.25	07/02/19 23:21	
Cadmium	mg/kg	ND	0.10	0.050	07/02/19 23:21	
Chromium	mg/kg	ND	0.50	0.25	07/02/19 23:21	
Lead	mg/kg	ND	0.50	0.25	07/02/19 23:21	
Selenium	mg/kg	ND	1.0	0.50	07/02/19 23:21	
Silver	mg/kg	ND	0.50	0.25	07/02/19 23:21	

LABORATORY CONTROL SAMPLE: 2616992

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	43.4	87	80-120	
Barium	mg/kg	50	48.0	96	80-120	
Cadmium	mg/kg	50	45.6	91	80-120	
Chromium	mg/kg	50	47.6	95	80-120	
Lead	mg/kg	50	45.5	91	80-120	
Selenium	mg/kg	50	43.1	86	80-120	
Silver	mg/kg	25	22.8	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2616993 2616994

Parameter	Units	92434812001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	2.4	55.1	56	44.7	45.7	77	77	75-125	2	20	
Barium	mg/kg	13.6	55.1	56	66.0	67.2	95	96	75-125	2	20	
Cadmium	mg/kg	0.18	55.1	56	47.4	49.1	86	87	75-125	3	20	
Chromium	mg/kg	77.9	55.1	56	122	127	80	87	75-125	4	20	
Lead	mg/kg	11.4	55.1	56	55.4	57.2	80	82	75-125	3	20	
Selenium	mg/kg	1.8	55.1	56	44.2	45.1	77	77	75-125	2	20	
Silver	mg/kg	ND	27.5	28	24.8	25.7	89	91	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 486318
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010 MET TCLP
Associated Lab Samples: 92434683004

METHOD BLANK: 2625550 Matrix: Water
Associated Lab Samples: 92434683004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.050	0.014	07/14/19 22:48	
Barium	mg/L	0.038J	0.25	0.0050	07/14/19 22:48	
Cadmium	mg/L	ND	0.0050	0.0025	07/14/19 22:48	
Chromium	mg/L	ND	0.050	0.0020	07/14/19 22:48	
Lead	mg/L	ND	0.025	0.020	07/14/19 22:48	
Selenium	mg/L	ND	0.10	0.019	07/14/19 22:48	
Silver	mg/L	ND	0.025	0.00050	07/14/19 22:48	

METHOD BLANK: 2625551 Matrix: Water
Associated Lab Samples: 92434683004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.050	0.014	07/14/19 22:55	
Barium	mg/L	0.046J	0.25	0.0050	07/14/19 22:55	
Cadmium	mg/L	ND	0.0050	0.0025	07/14/19 22:55	
Chromium	mg/L	ND	0.050	0.0020	07/14/19 22:55	
Lead	mg/L	ND	0.025	0.020	07/14/19 22:55	
Selenium	mg/L	ND	0.10	0.019	07/14/19 22:55	
Silver	mg/L	ND	0.025	0.00050	07/14/19 22:55	

LABORATORY CONTROL SAMPLE: 2626416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	2.5	2.5	99	80-120	
Barium	mg/L	2.5	2.6	105	80-120	
Cadmium	mg/L	2.5	2.5	102	80-120	
Chromium	mg/L	2.5	2.6	104	80-120	
Lead	mg/L	2.5	2.4	96	80-120	
Selenium	mg/L	2.5	2.6	104	80-120	
Silver	mg/L	1.2	1.3	103	80-120	

LABORATORY CONTROL SAMPLE: 2626417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	2.5	2.4	97	80-120	
Barium	mg/L	2.5	2.6	103	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

LABORATORY CONTROL SAMPLE: 2626417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	mg/L	2.5	2.5	101	80-120	
Chromium	mg/L	2.5	2.5	102	80-120	
Lead	mg/L	2.5	2.5	99	80-120	
Selenium	mg/L	2.5	2.6	106	80-120	
Silver	mg/L	1.2	1.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2626418 2626419

Parameter	Units	92435536001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	2.5	2.5	2.5	2.5	100	98	75-125	2	20	
Barium	mg/L	0.54	2.5	2.5	3.2	3.2	106	106	75-125	1	20	
Cadmium	mg/L	0.14	2.5	2.5	2.7	2.7	103	103	75-125	0	20	
Chromium	mg/L	ND	2.5	2.5	2.6	2.6	102	103	75-125	1	20	
Lead	mg/L	0.079	2.5	2.5	2.5	2.5	96	96	75-125	1	20	
Selenium	mg/L	ND	2.5	2.5	2.6	2.7	105	106	75-125	0	20	
Silver	mg/L	ND	1.2	1.2	1.3	1.3	103	104	75-125	1	20	

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 483501 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010 MET
Associated Lab Samples: 92434654013

METHOD BLANK: 2613245 Matrix: Water
Associated Lab Samples: 92434654013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	5.0	06/27/19 21:27	
Barium	ug/L	ND	5.0	2.5	06/27/19 21:27	
Cadmium	ug/L	ND	1.0	0.50	06/27/19 21:27	
Chromium	ug/L	ND	5.0	2.5	06/27/19 21:27	
Lead	ug/L	ND	5.0	2.5	06/27/19 21:27	
Selenium	ug/L	ND	10.0	5.0	06/27/19 21:27	
Silver	ug/L	ND	5.0	2.5	06/27/19 21:27	

LABORATORY CONTROL SAMPLE: 2613246

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	473	95	80-120	
Barium	ug/L	500	507	101	80-120	
Cadmium	ug/L	500	503	101	80-120	
Chromium	ug/L	500	509	102	80-120	
Lead	ug/L	500	495	99	80-120	
Selenium	ug/L	500	496	99	80-120	
Silver	ug/L	250	257	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2613247 2613248

Parameter	Units	92434337001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	481	487	95	96	75-125	1	20	
Barium	ug/L	27.0	500	500	534	530	101	101	75-125	1	20	
Cadmium	ug/L	ND	500	500	504	501	101	100	75-125	1	20	
Chromium	ug/L	ND	500	500	511	513	101	102	75-125	0	20	
Lead	ug/L	ND	500	500	498	497	99	99	75-125	0	20	
Selenium	ug/L	ND	500	500	535	534	107	107	75-125	0	20	
Silver	ug/L	ND	250	250	256	254	102	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 486215
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010 MET
Associated Lab Samples: 92434683005

METHOD BLANK: 2626071 Matrix: Water
Associated Lab Samples: 92434683005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	ug/L	ND	10.0	5.0	07/13/19 17:35	
Barium	ug/L	ND	5.0	2.5	07/13/19 17:35	
Cadmium	ug/L	ND	1.0	0.50	07/13/19 17:35	
Chromium	ug/L	ND	5.0	2.5	07/13/19 17:35	
Lead	ug/L	ND	5.0	2.5	07/13/19 17:35	
Selenium	ug/L	ND	10.0	5.0	07/13/19 17:35	
Silver	ug/L	ND	5.0	2.5	07/13/19 17:35	

LABORATORY CONTROL SAMPLE: 2626072

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	451	90	80-120	
Barium	ug/L	500	489	98	80-120	
Cadmium	ug/L	500	482	96	80-120	
Chromium	ug/L	500	489	98	80-120	
Lead	ug/L	500	474	95	80-120	
Selenium	ug/L	500	475	95	80-120	
Silver	ug/L	250	245	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2626073 2626074

Parameter	Units	92436389004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	500	500	482	477	95	94	75-125	1	20	
Barium	ug/L	297	500	500	779	788	96	98	75-125	1	20	
Cadmium	ug/L	ND	500	500	489	491	98	98	75-125	1	20	
Chromium	ug/L	151	500	500	642	649	98	100	75-125	1	20	
Lead	ug/L	ND	500	500	483	488	96	97	75-125	1	20	
Selenium	ug/L	ND	500	500	519	515	102	101	75-125	1	20	
Silver	ug/L	ND	250	250	256	258	103	103	75-125	1	20	

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 485748 Analysis Method: EPA 8260D
QC Batch Method: EPA 8260D Analysis Description: 8260D MSV Low Level
Associated Lab Samples: 92434683005

METHOD BLANK: 2623530 Matrix: Water
Associated Lab Samples: 92434683005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.34	07/10/19 23:51	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.18	07/10/19 23:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.22	07/10/19 23:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.24	07/10/19 23:51	
1,1-Dichloroethane	ug/L	ND	1.0	0.27	07/10/19 23:51	
1,1-Dichloroethene	ug/L	ND	1.0	0.24	07/10/19 23:51	
1,1-Dichloropropene	ug/L	ND	1.0	0.21	07/10/19 23:51	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.34	07/10/19 23:51	
1,2,3-Trichloropropane	ug/L	ND	1.0	0.35	07/10/19 23:51	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.22	07/10/19 23:51	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	0.26	07/10/19 23:51	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.26	07/10/19 23:51	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.29	07/10/19 23:51	
1,2-Dichloroethane	ug/L	ND	1.0	0.34	07/10/19 23:51	
1,2-Dichloropropane	ug/L	ND	1.0	0.19	07/10/19 23:51	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.22	07/10/19 23:51	
1,3-Dichloropropane	ug/L	ND	1.0	0.16	07/10/19 23:51	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.26	07/10/19 23:51	
2,2-Dichloropropane	ug/L	ND	1.0	0.27	07/10/19 23:51	
2-Butanone (MEK)	ug/L	ND	5.0	3.3	07/10/19 23:51	
2-Chlorotoluene	ug/L	ND	1.0	0.20	07/10/19 23:51	
2-Hexanone	ug/L	ND	5.0	0.57	07/10/19 23:51	
4-Chlorotoluene	ug/L	ND	1.0	0.20	07/10/19 23:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	4.5	07/10/19 23:51	
Acetone	ug/L	ND	25.0	6.2	07/10/19 23:51	
Benzene	ug/L	ND	1.0	0.15	07/10/19 23:51	
Bromobenzene	ug/L	ND	1.0	0.22	07/10/19 23:51	
Bromochloromethane	ug/L	ND	1.0	0.34	07/10/19 23:51	
Bromodichloromethane	ug/L	ND	1.0	0.26	07/10/19 23:51	
Bromoform	ug/L	ND	1.0	0.62	07/10/19 23:51	
Bromomethane	ug/L	ND	2.0	0.62	07/10/19 23:51	
Carbon tetrachloride	ug/L	ND	1.0	0.22	07/10/19 23:51	
Chlorobenzene	ug/L	ND	1.0	0.23	07/10/19 23:51	
Chloroethane	ug/L	ND	1.0	0.49	07/10/19 23:51	
Chloroform	ug/L	ND	5.0	2.3	07/10/19 23:51	
Chloromethane	ug/L	ND	1.0	0.39	07/10/19 23:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.29	07/10/19 23:51	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.30	07/10/19 23:51	
Dibromochloromethane	ug/L	ND	1.0	0.41	07/10/19 23:51	
Dibromomethane	ug/L	ND	1.0	0.46	07/10/19 23:51	
Dichlorodifluoromethane	ug/L	ND	1.0	0.23	07/10/19 23:51	

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

METHOD BLANK: 2623530 Matrix: Water
Associated Lab Samples: 92434683005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diisopropyl ether	ug/L	ND	1.0	0.22	07/10/19 23:51	
Ethylbenzene	ug/L	ND	1.0	0.26	07/10/19 23:51	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.44	07/10/19 23:51	
m&p-Xylene	ug/L	ND	2.0	0.41	07/10/19 23:51	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.28	07/10/19 23:51	
Methylene Chloride	ug/L	ND	5.0	3.7	07/10/19 23:51	
Naphthalene	ug/L	ND	1.0	0.35	07/10/19 23:51	
o-Xylene	ug/L	ND	1.0	0.22	07/10/19 23:51	
p-Isopropyltoluene	ug/L	ND	1.0	0.21	07/10/19 23:51	
Styrene	ug/L	ND	1.0	0.27	07/10/19 23:51	
Tetrachloroethene	ug/L	ND	1.0	0.16	07/10/19 23:51	
Toluene	ug/L	ND	1.0	0.24	07/10/19 23:51	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.25	07/10/19 23:51	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.31	07/10/19 23:51	
Trichloroethene	ug/L	ND	1.0	0.22	07/10/19 23:51	
Trichlorofluoromethane	ug/L	ND	1.0	0.31	07/10/19 23:51	
Vinyl acetate	ug/L	ND	2.0	1.4	07/10/19 23:51	
Vinyl chloride	ug/L	ND	1.0	0.24	07/10/19 23:51	
Xylene (Total)	ug/L	ND	1.0	0.63	07/10/19 23:51	
1,2-Dichloroethane-d4 (S)	%	98	70-130		07/10/19 23:51	
4-Bromofluorobenzene (S)	%	101	70-130		07/10/19 23:51	
Toluene-d8 (S)	%	102	70-130		07/10/19 23:51	

LABORATORY CONTROL SAMPLE: 2623531

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	55.0	110	70-130	
1,1,1-Trichloroethane	ug/L	50	53.1	106	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	53.7	107	70-130	
1,1,2-Trichloroethane	ug/L	50	54.8	110	70-130	
1,1-Dichloroethane	ug/L	50	55.4	111	70-130	
1,1-Dichloroethene	ug/L	50	57.1	114	70-130	
1,1-Dichloropropene	ug/L	50	52.2	104	70-130	
1,2,3-Trichlorobenzene	ug/L	50	55.8	112	70-130	
1,2,3-Trichloropropane	ug/L	50	54.6	109	70-130	
1,2,4-Trichlorobenzene	ug/L	50	55.2	110	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	56.8	114	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	54.3	109	70-130	
1,2-Dichlorobenzene	ug/L	50	53.1	106	70-130	
1,2-Dichloroethane	ug/L	50	49.4	99	70-130	
1,2-Dichloropropane	ug/L	50	53.6	107	70-130	
1,3-Dichlorobenzene	ug/L	50	52.2	104	70-130	
1,3-Dichloropropane	ug/L	50	53.8	108	70-131	
1,4-Dichlorobenzene	ug/L	50	51.7	103	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

LABORATORY CONTROL SAMPLE: 2623531

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2-Dichloropropane	ug/L	50	54.6	109	69-130	
2-Butanone (MEK)	ug/L	100	99.0	99	64-135	
2-Chlorotoluene	ug/L	50	52.5	105	70-130	
2-Hexanone	ug/L	100	107	107	66-135	
4-Chlorotoluene	ug/L	50	52.1	104	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	107	107	70-130	
Acetone	ug/L	100	113	113	61-157	
Benzene	ug/L	50	55.5	111	70-130	
Bromobenzene	ug/L	50	53.9	108	70-130	
Bromochloromethane	ug/L	50	54.6	109	70-130	
Bromodichloromethane	ug/L	50	56.9	114	70-130	
Bromoform	ug/L	50	55.4	111	70-130	
Bromomethane	ug/L	50	54.1	108	38-130	
Carbon tetrachloride	ug/L	50	52.0	104	70-130	
Chlorobenzene	ug/L	50	52.9	106	70-130	
Chloroethane	ug/L	50	51.0	102	37-142	
Chloroform	ug/L	50	53.9	108	70-130	
Chloromethane	ug/L	50	52.1	104	48-130	
cis-1,2-Dichloroethene	ug/L	50	54.4	109	70-130	
cis-1,3-Dichloropropene	ug/L	50	59.6	119	70-130	
Dibromochloromethane	ug/L	50	55.9	112	70-130	
Dibromomethane	ug/L	50	54.4	109	70-130	
Dichlorodifluoromethane	ug/L	50	49.3	99	53-134	
Diisopropyl ether	ug/L	50	55.1	110	70-135	
Ethylbenzene	ug/L	50	53.6	107	70-130	
Hexachloro-1,3-butadiene	ug/L	50	54.2	108	68-132	
m&p-Xylene	ug/L	100	108	108	70-130	
Methyl-tert-butyl ether	ug/L	50	54.7	109	70-130	
Methylene Chloride	ug/L	50	54.3	109	67-132	
Naphthalene	ug/L	50	57.5	115	70-130	
o-Xylene	ug/L	50	56.0	112	70-131	
p-Isopropyltoluene	ug/L	50	52.6	105	70-130	
Styrene	ug/L	50	55.1	110	70-130	
Tetrachloroethene	ug/L	50	53.7	107	69-130	
Toluene	ug/L	50	54.9	110	70-130	
trans-1,2-Dichloroethene	ug/L	50	55.7	111	70-130	
trans-1,3-Dichloropropene	ug/L	50	56.8	114	70-130	
Trichloroethene	ug/L	50	53.1	106	70-130	
Trichlorofluoromethane	ug/L	50	48.8	98	63-130	
Vinyl acetate	ug/L	100	111	111	55-143	
Vinyl chloride	ug/L	50	55.8	112	70-131	
Xylene (Total)	ug/L	150	164	110	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			101	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

MATRIX SPIKE SAMPLE: 2624039

Parameter	Units	92435147007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	21.3	107	73-134	
1,1,1-Trichloroethane	ug/L	ND	20	22.8	114	82-143	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.0	105	70-136	
1,1,2-Trichloroethane	ug/L	ND	20	22.0	110	70-135	
1,1-Dichloroethane	ug/L	ND	20	23.1	116	70-139	
1,1-Dichloroethene	ug/L	ND	20	24.1	121	70-154	
1,1-Dichloropropene	ug/L	ND	20	22.9	114	70-149	
1,2,3-Trichlorobenzene	ug/L	ND	20	19.9	99	70-135	
1,2,3-Trichloropropane	ug/L	ND	20	22.3	111	71-137	
1,2,4-Trichlorobenzene	ug/L	ND	20	19.2	96	73-140	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20.0	100	65-134	
1,2-Dibromoethane (EDB)	ug/L	ND	20	21.4	107	70-137	
1,2-Dichlorobenzene	ug/L	ND	20	20.6	103	70-133	
1,2-Dichloroethane	ug/L	ND	20	20.3	102	70-137	
1,2-Dichloropropane	ug/L	ND	20	21.6	108	70-140	
1,3-Dichlorobenzene	ug/L	ND	20	20.5	103	70-135	
1,3-Dichloropropane	ug/L	ND	20	21.7	108	70-143	
1,4-Dichlorobenzene	ug/L	ND	20	20.3	102	70-133	
2,2-Dichloropropane	ug/L	ND	20	21.2	106	61-148	
2-Butanone (MEK)	ug/L	ND	40	42.2	106	60-139	
2-Chlorotoluene	ug/L	ND	20	20.6	103	70-144	
2-Hexanone	ug/L	ND	40	41.9	105	65-138	
4-Chlorotoluene	ug/L	ND	20	21.0	105	70-137	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	43.7	109	65-135	
Acetone	ug/L	ND	40	44.0	110	60-148	
Benzene	ug/L	ND	20	23.1	115	70-151	
Bromobenzene	ug/L	ND	20	20.7	104	70-136	
Bromochloromethane	ug/L	ND	20	23.1	116	70-141	
Bromodichloromethane	ug/L	ND	20	21.1	105	70-138	
Bromoform	ug/L	ND	20	18.9	95	63-130	
Bromomethane	ug/L	ND	20	14.5	73	15-152	v3
Carbon tetrachloride	ug/L	ND	20	21.8	109	70-143	
Chlorobenzene	ug/L	ND	20	21.2	106	70-138	
Chloroethane	ug/L	ND	20	23.9	120	52-163	
Chloroform	ug/L	ND	20	22.7	114	70-139	
Chloromethane	ug/L	ND	20	14.9	75	41-139	
cis-1,2-Dichloroethene	ug/L	ND	20	22.5	113	70-141	
cis-1,3-Dichloropropene	ug/L	ND	20	22.4	112	70-137	
Dibromochloromethane	ug/L	ND	20	18.8	94	70-134	
Dibromomethane	ug/L	ND	20	21.6	108	70-138	
Dichlorodifluoromethane	ug/L	ND	20	19.0	95	47-155	
Diisopropyl ether	ug/L	ND	20	21.6	108	63-144	
Ethylbenzene	ug/L	ND	20	22.1	111	66-153	
Hexachloro-1,3-butadiene	ug/L	ND	20	18.8	94	65-149	
m&p-Xylene	ug/L	ND	40	43.6	109	69-152	
Methyl-tert-butyl ether	ug/L	ND	20	21.0	105	54-156	
Methylene Chloride	ug/L	ND	20	23.2	116	42-159	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
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(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

MATRIX SPIKE SAMPLE: 2624039

Parameter	Units	92435147007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	ND	20	19.3	97	61-148	
o-Xylene	ug/L	ND	20	22.5	113	70-148	
p-Isopropyltoluene	ug/L	ND	20	20.4	102	70-146	
Styrene	ug/L	ND	20	21.6	108	70-135	
Tetrachloroethene	ug/L	ND	20	22.6	113	59-143	
Toluene	ug/L	ND	20	22.4	112	59-148	
trans-1,2-Dichloroethene	ug/L	ND	20	23.5	117	70-146	
trans-1,3-Dichloropropene	ug/L	ND	20	20.3	102	70-135	
Trichloroethene	ug/L	ND	20	22.0	110	70-147	
Trichlorofluoromethane	ug/L	ND	20	20.9	105	70-148	
Vinyl acetate	ug/L	ND	40	41.0	102	49-151	
Vinyl chloride	ug/L	ND	20	21.6	108	70-156	
Xylene (Total)	ug/L	ND	60	66.1	110	63-158	
1,2-Dichloroethane-d4 (S)	%				99	70-130	
4-Bromofluorobenzene (S)	%				102	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 2624038

Parameter	Units	92435147001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

SAMPLE DUPLICATE: 2624038

Parameter	Units	92435147001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	v2
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	98	102			
4-Bromofluorobenzene (S)	%	101	102			
Toluene-d8 (S)	%	100	103			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 483855
QC Batch Method: EPA 8260D Mod.
Analysis Method: EPA 8260D Mod.
Analysis Description: 8260D MSV SIM
Associated Lab Samples: 92434654013

METHOD BLANK: 2615042 Matrix: Water
Associated Lab Samples: 92434654013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	1.2	06/28/19 11:45	
1,2-Dichloroethane-d4 (S)	%	109	50-150		06/28/19 11:45	
Toluene-d8 (S)	%	119	50-150		06/28/19 11:45	

LABORATORY CONTROL SAMPLE: 2615043

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	19.7	99	70-130	
1,2-Dichloroethane-d4 (S)	%			111	50-150	
Toluene-d8 (S)	%			120	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2615044 2615045

Parameter	Units	92434094002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dioxane (p-Dioxane)	ug/L	1110	500	500	1700	1580	118	94	50-150	7	30	
1,2-Dichloroethane-d4 (S)	%						113	111	50-150		30	
Toluene-d8 (S)	%						119	118	50-150		30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 485922 Analysis Method: EPA 8260D Mod.
QC Batch Method: EPA 8260D Mod. Analysis Description: 8260D MSV SIM
Associated Lab Samples: 92434683005

METHOD BLANK: 2624266 Matrix: Water
Associated Lab Samples: 92434683005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	2.0	1.2	07/11/19 16:09	
1,2-Dichloroethane-d4 (S)	%	102	50-150		07/11/19 16:09	
Toluene-d8 (S)	%	107	50-150		07/11/19 16:09	

LABORATORY CONTROL SAMPLE: 2624267

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	20	21.6	108	70-130	
1,2-Dichloroethane-d4 (S)	%			101	50-150	
Toluene-d8 (S)	%			104	50-150	

MATRIX SPIKE SAMPLE: 2624268

Parameter	Units	92436163001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	20	22.0	105	50-150	
1,2-Dichloroethane-d4 (S)	%				101	50-150	
Toluene-d8 (S)	%				106	50-150	

SAMPLE DUPLICATE: 2625703

Parameter	Units	92435886001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,4-Dioxane (p-Dioxane)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	99	98		30	
Toluene-d8 (S)	%	109	106		30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 1307459 Analysis Method: EPA 8260D
QC Batch Method: 8260D Analysis Description: VOA (GC/MS) 8260D
Associated Lab Samples: 92434654013

METHOD BLANK: R3428454-2 Matrix: Water
Associated Lab Samples: 92434654013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acetone	ug/L	ND	50.0	10.0	07/07/19 11:22	
Benzene	ug/L	ND	1.00	0.331	07/07/19 11:22	
Bromobenzene	ug/L	ND	1.00	0.352	07/07/19 11:22	
Bromodichloromethane	ug/L	ND	1.00	0.380	07/07/19 11:22	
Bromochloromethane	ug/L	ND	5.00	0.520	07/07/19 11:22	
Bromoform	ug/L	ND	1.00	0.469	07/07/19 11:22	
Bromomethane	ug/L	ND	5.00	0.866	07/07/19 11:22	
n-Butylbenzene	ug/L	ND	1.00	0.361	07/07/19 11:22	
sec-Butylbenzene	ug/L	ND	1.00	0.365	07/07/19 11:22	
tert-Butylbenzene	ug/L	ND	1.00	0.399	07/07/19 11:22	
Carbon disulfide	ug/L	ND	1.00	0.275	07/07/19 11:22	
Carbon tetrachloride	ug/L	ND	1.00	0.379	07/07/19 11:22	
Chlorobenzene	ug/L	ND	1.00	0.348	07/07/19 11:22	
Dibromochloromethane	ug/L	ND	1.00	0.327	07/07/19 11:22	
Chloroethane	ug/L	ND	5.00	0.453	07/07/19 11:22	
Chloroform	ug/L	ND	5.00	0.324	07/07/19 11:22	
Chloromethane	ug/L	ND	2.50	0.276	07/07/19 11:22	
2-Chlorotoluene	ug/L	ND	1.00	0.375	07/07/19 11:22	
4-Chlorotoluene	ug/L	ND	1.00	0.351	07/07/19 11:22	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.00	1.33	07/07/19 11:22	
1,2-Dibromoethane (EDB)	ug/L	ND	1.00	0.381	07/07/19 11:22	
Dibromomethane	ug/L	ND	1.00	0.346	07/07/19 11:22	
1,2-Dichlorobenzene	ug/L	ND	1.00	0.349	07/07/19 11:22	
1,3-Dichlorobenzene	ug/L	ND	1.00	0.220	07/07/19 11:22	
1,4-Dichlorobenzene	ug/L	ND	1.00	0.274	07/07/19 11:22	
Dichlorodifluoromethane	ug/L	ND	5.00	0.551	07/07/19 11:22	
1,1-Dichloroethane	ug/L	ND	1.00	0.259	07/07/19 11:22	
1,2-Dichloroethane	ug/L	ND	1.00	0.361	07/07/19 11:22	
1,1-Dichloroethene	ug/L	ND	1.00	0.398	07/07/19 11:22	
cis-1,2-Dichloroethene	ug/L	ND	1.00	0.260	07/07/19 11:22	
trans-1,2-Dichloroethene	ug/L	ND	1.00	0.396	07/07/19 11:22	
1,2-Dichloropropane	ug/L	ND	1.00	0.306	07/07/19 11:22	
1,1-Dichloropropene	ug/L	ND	1.00	0.352	07/07/19 11:22	
1,3-Dichloropropane	ug/L	ND	1.00	0.366	07/07/19 11:22	
cis-1,3-Dichloropropene	ug/L	ND	1.00	0.418	07/07/19 11:22	
trans-1,3-Dichloropropene	ug/L	ND	1.00	0.419	07/07/19 11:22	
2,2-Dichloropropane	ug/L	ND	1.00	0.321	07/07/19 11:22	
Ethylbenzene	ug/L	ND	1.00	0.384	07/07/19 11:22	
Hexachloro-1,3-butadiene	ug/L	0.424J	1.00	0.256	07/07/19 11:22	J
2-Hexanone	ug/L	ND	10.0	3.82	07/07/19 11:22	
Isopropylbenzene (Cumene)	ug/L	ND	1.00	0.326	07/07/19 11:22	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

METHOD BLANK: R3428454-2 Matrix: Water
Associated Lab Samples: 92434654013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
p-Isopropyltoluene	ug/L	ND	1.00	0.350	07/07/19 11:22	
2-Butanone (MEK)	ug/L	ND	10.0	3.93	07/07/19 11:22	
Methylene Chloride	ug/L	ND	5.00	1.00	07/07/19 11:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	2.14	07/07/19 11:22	
Methyl-tert-butyl ether	ug/L	ND	1.00	0.367	07/07/19 11:22	
Naphthalene	ug/L	ND	5.00	1.00	07/07/19 11:22	
n-Propylbenzene	ug/L	ND	1.00	0.349	07/07/19 11:22	
Styrene	ug/L	ND	1.00	0.307	07/07/19 11:22	
1,1,1,2-Tetrachloroethane	ug/L	ND	1.00	0.385	07/07/19 11:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.00	0.130	07/07/19 11:22	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.00	0.303	07/07/19 11:22	
Tetrachloroethene	ug/L	ND	1.00	0.372	07/07/19 11:22	
Toluene	ug/L	ND	1.00	0.412	07/07/19 11:22	
1,2,3-Trichlorobenzene	ug/L	0.238J	1.00	0.230	07/07/19 11:22	J
1,2,4-Trichlorobenzene	ug/L	ND	1.00	0.355	07/07/19 11:22	
1,1,1-Trichloroethane	ug/L	ND	1.00	0.319	07/07/19 11:22	
1,1,2-Trichloroethane	ug/L	ND	1.00	0.383	07/07/19 11:22	
Trichloroethene	ug/L	ND	1.00	0.398	07/07/19 11:22	
Trichlorofluoromethane	ug/L	ND	5.00	1.20	07/07/19 11:22	
1,2,3-Trichloropropane	ug/L	ND	2.50	0.807	07/07/19 11:22	
1,2,4-Trimethylbenzene	ug/L	ND	1.00	0.373	07/07/19 11:22	
1,3,5-Trimethylbenzene	ug/L	ND	1.00	0.387	07/07/19 11:22	
Vinyl chloride	ug/L	ND	1.00	0.259	07/07/19 11:22	
Xylene (Total)	ug/L	ND	3.00	1.06	07/07/19 11:22	
Toluene-d8 (S)	%	104	80.0-120		07/07/19 11:22	
4-Bromofluorobenzene (S)	%	104	77.0-126		07/07/19 11:22	
1,2-Dichloroethane-d4 (S)	%	96.9	70.0-130		07/07/19 11:22	

LABORATORY CONTROL SAMPLE: R3428454-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acetone	ug/L	125	120	96.4	19.0-160	
Benzene	ug/L	25.0	26.7	107	70.0-123	
Bromobenzene	ug/L	25.0	24.2	96.7	73.0-121	
Bromodichloromethane	ug/L	25.0	28.2	113	75.0-120	
Bromochloromethane	ug/L	25.0	27.5	110	76.0-122	
Bromoform	ug/L	25.0	24.5	98.0	68.0-132	
Bromomethane	ug/L	25.0	27.5	110	10.0-160	
n-Butylbenzene	ug/L	25.0	30.3	121	73.0-125	
sec-Butylbenzene	ug/L	25.0	28.9	116	75.0-125	
tert-Butylbenzene	ug/L	25.0	27.1	108	76.0-124	
Carbon disulfide	ug/L	25.0	34.9	140	61.0-128	L0
Carbon tetrachloride	ug/L	25.0	28.6	114	68.0-126	
Chlorobenzene	ug/L	25.0	24.6	98.2	80.0-121	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

LABORATORY CONTROL SAMPLE: R3428454-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromochloromethane	ug/L	25.0	25.7	103	77.0-125	
Chloroethane	ug/L	25.0	29.9	120	47.0-150	
Chloroform	ug/L	25.0	26.7	107	73.0-120	
Chloromethane	ug/L	25.0	34.0	136	41.0-142	
2-Chlorotoluene	ug/L	25.0	24.3	97.1	76.0-123	
4-Chlorotoluene	ug/L	25.0	25.4	102	75.0-122	
1,2-Dibromo-3-chloropropane	ug/L	25.0	22.9	91.4	58.0-134	
1,2-Dibromoethane (EDB)	ug/L	25.0	24.9	99.7	80.0-122	
Dibromomethane	ug/L	25.0	26.9	108	80.0-120	
1,2-Dichlorobenzene	ug/L	25.0	26.0	104	79.0-121	
1,3-Dichlorobenzene	ug/L	25.0	25.4	102	79.0-120	
1,4-Dichlorobenzene	ug/L	25.0	25.3	101	79.0-120	
Dichlorodifluoromethane	ug/L	25.0	45.6	183	51.0-149	L0
1,1-Dichloroethane	ug/L	25.0	29.1	116	70.0-126	
1,2-Dichloroethane	ug/L	25.0	24.9	99.7	70.0-128	
1,1-Dichloroethene	ug/L	25.0	31.8	127	71.0-124	L0
cis-1,2-Dichloroethene	ug/L	25.0	26.5	106	73.0-120	
trans-1,2-Dichloroethene	ug/L	25.0	29.5	118	73.0-120	
1,2-Dichloropropane	ug/L	25.0	27.7	111	77.0-125	
1,1-Dichloropropene	ug/L	25.0	30.0	120	74.0-126	
1,3-Dichloropropane	ug/L	25.0	23.7	94.8	80.0-120	
cis-1,3-Dichloropropene	ug/L	25.0	28.2	113	80.0-123	
trans-1,3-Dichloropropene	ug/L	25.0	23.5	94.1	78.0-124	
2,2-Dichloropropane	ug/L	25.0	28.8	115	58.0-130	
Ethylbenzene	ug/L	25.0	25.9	104	79.0-123	
Hexachloro-1,3-butadiene	ug/L	25.0	31.0	124	54.0-138	
2-Hexanone	ug/L	125	111	89.1	67.0-149	
Isopropylbenzene (Cumene)	ug/L	25.0	27.1	109	76.0-127	
p-Isopropyltoluene	ug/L	25.0	28.7	115	76.0-125	
2-Butanone (MEK)	ug/L	125	152	122	44.0-160	
Methylene Chloride	ug/L	25.0	26.2	105	67.0-120	
4-Methyl-2-pentanone (MIBK)	ug/L	125	118	94.1	68.0-142	
Methyl-tert-butyl ether	ug/L	25.0	26.9	108	68.0-125	
Naphthalene	ug/L	25.0	28.3	113	54.0-135	
n-Propylbenzene	ug/L	25.0	26.6	107	77.0-124	
Styrene	ug/L	25.0	26.2	105	73.0-130	
1,1,1,2-Tetrachloroethane	ug/L	25.0	23.9	95.6	75.0-125	
1,1,2,2-Tetrachloroethane	ug/L	25.0	23.3	93.3	65.0-130	
1,1,2-Trichlorotrifluoroethane	ug/L	25.0	27.2	109	69.0-132	
Tetrachloroethene	ug/L	25.0	25.7	103	72.0-132	
Toluene	ug/L	25.0	25.4	101	79.0-120	
1,2,3-Trichlorobenzene	ug/L	25.0	29.4	118	50.0-138	
1,2,4-Trichlorobenzene	ug/L	25.0	30.3	121	57.0-137	
1,1,1-Trichloroethane	ug/L	25.0	28.7	115	73.0-124	
1,1,2-Trichloroethane	ug/L	25.0	24.6	98.4	80.0-120	
Trichloroethene	ug/L	25.0	27.7	111	78.0-124	
Trichlorofluoromethane	ug/L	25.0	28.1	112	59.0-147	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

LABORATORY CONTROL SAMPLE: R3428454-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,3-Trichloropropane	ug/L	25.0	24.0	95.9	73.0-130	
1,2,4-Trimethylbenzene	ug/L	25.0	26.8	107	76.0-121	
1,3,5-Trimethylbenzene	ug/L	25.0	27.3	109	76.0-122	
Vinyl chloride	ug/L	25.0	31.5	126	67.0-131	
Xylene (Total)	ug/L	75.0	78.0	104	79.0-123	
Toluene-d8 (S)	%			95.5	80.0-120	
4-Bromofluorobenzene (S)	%			102	77.0-126	
1,2-Dichloroethane-d4 (S)	%			104	70.0-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 483458
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92434654012

SAMPLE DUPLICATE: 2613035

Parameter	Units	92434372001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	52.6	42.6	21	25	

SAMPLE DUPLICATE: 2613036

Parameter	Units	92434664002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	60.8	62.9	3	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: ROW-603
Pace Project No.: 92434683

QC Batch: 483950
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92434683004

SAMPLE DUPLICATE: 2615554

Parameter	Units	92434683004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.7	21.3	2	25	

SAMPLE DUPLICATE: 2615747

Parameter	Units	92434947001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.1	25.3	1	25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: ROW-603
Pace Project No.: 92434683

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

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

TNI - The NELAC Institute.

LABORATORIES

PAN	Pace Analytical National
PASI-A	Pace Analytical Services - Asheville
PASI-C	Pace Analytical Services - Charlotte

SAMPLE QUALIFIERS

Sample: 92434654013

[1]	Dilution due to foamy matrix.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
J	Analyte detected below the reporting limit, therefore result is an estimate. This qualifier is also used for all TICs.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.
v2	The continuing calibration verification was below the method acceptance limit. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard.
v3	The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have low bias.

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(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ROW-603
Pace Project No.: 92434683

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92434654012	**PARCEL 5 IDW SOIL**	EPA 3050B	484340	EPA 6010D	484491
92434683004	**PARCEL 7 IDW SOIL**	EPA 3010A	486318	EPA 6010D	486336
92434654013	**PARCEL 5 DECON WATER**	EPA 3010A	483501	EPA 6010D	483507
92434683005	**PARCEL 7 IDW WATER**	EPA 3010A	486215	EPA 6010D	486246
92434683004	**PARCEL 7 IDW SOIL**	EPA 7470A	486320	EPA 7470A	486372
92434654013	**PARCEL 5 DECON WATER**	EPA 7470A	483522	EPA 7470A	483622
92434683005	**PARCEL 7 IDW WATER**	EPA 7470A	486137	EPA 7470A	486371
92434654012	**PARCEL 5 IDW SOIL**	EPA 7471B	483590	EPA 7471B	483618
92434683005	**PARCEL 7 IDW WATER**	EPA 8260D	485748		
92434654013	**PARCEL 5 DECON WATER**	EPA 8260D Mod.	483855		
92434683005	**PARCEL 7 IDW WATER**	EPA 8260D Mod.	485922		
92434654013	**PARCEL 5 DECON WATER**	8260D	1307459	EPA 8260D	1307459
92434654012	**PARCEL 5 IDW SOIL**	ASTM D2974-87	483458		
92434683004	**PARCEL 7 IDW SOIL**	ASTM D2974-87	483950		

Pace Analytical®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: February 7, 2018 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: H & H

Project #: WO#: 92434654

92434654

Courier: ☐ Commercial ☒ Fed Ex ☐ UPS ☐ USPS ☒ Pace ☐ Other:___ ☐ Client

Custody Seal Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☐ No

Date/Initials Person Examining Contents: MB 6.26.19

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Thermometer: ☒ IR Gun ID: 92T048 **Type of Ice:** ☒ Wet ☐ Blue ☐ None

Cooler Temp (°C): 2.1-3.6 **Correction Factor:** Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 2.1-3.6

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☐ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

				Comments/Discrepancy:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☒ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	4.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☒ N/A	8.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT/SL				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☒ No	☒ N/A	10.
Trip Blank Present?	☒ Yes	☐ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☒ Yes	☐ No	☐ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Client requested samples be split up on different reports. Client requested Parcels IDW soil TCLP VOC & TCLP RCRA 8 metal samples be placed on hold. KG.

Person contacted: Alan McCreary / David Graham Date/Time: 6/26 - 6/27

Project Manager SCURF Review: JH **Date:** 6/27/19

Project Manager SRF Review: JH **Date:** 6/27/19

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # **WO# : 92434654**

PM: KRG Due Date: 07/03/19

CLIENT: 92-Hart Hick

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1	\				\	\	\	\			\		\	\	\						12				\	\			
2	\				\	\	\	\			\		\	\	\						12				\	\			
3	\				\	\	\	\			\		\	\	\						12				\	\			
4	\				\	\	\	\			\		\	\	\						12				\	\			
5	\				\	\	\	\			\		\	\	\						12				\	\			
6	\				\	\	\	\			\		\	\	\						12				\	\			
7	\				\	\	\	\			\		\	\	\						12				\	\			
8	\				\	\	\	\			\		\	\	\						12				\	\			
9	\				\	\	\	\			\		\	\	\						12				\	\			
10	\				\	\	\	\			\		\	\	\						12				\	\			
11	\				\	\	\	\	5		\		\	\	\						12				\	\			
12	\				\	\	\	\	5		\		\	\	\						~~12~~				\	\			

MB 6-26-19

MB 6-26-19

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # **WO#: 92434654**

PM: KRG Due Date: 07/03/19

CLIENT: 92-Hart Hick

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1						1										6													
2									1											12									
3						1										6													
4									2											12									
5									1											12									
6																2													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page : 1 Of 1

Section A – Required Client Information:		Section B – Required Project Information:		Section C – Invoice Information:	
Company:	Hart & Hickman	Report To:	David Graham	Attention:	
Address:	2923 S. Tryon Street	Copy To:	ALAN MCCREARY	Company Name:	
	Charlotte, NC 28203		DGRAHAM@HARTHICKMAN.COM	Address:	
Email:	dgraham@harthickman.com	Purchase Order #:		Pace Quote:	59511
Phone:	(704)649-5999 Fax	Project Name:	ROW-603 Soil	Pace Project Manager:	kevin.godwin@pacelabs.com,
Requested Due Date:		Project #:		Pace Profile #:	1321-18, 19

Regulatory Agency	
State / Location	
NC	

MATRIX codes: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260/5035	8260 SIM 1,4-Dioxane	RCRA Metals (6010/7471)	8082 PCB	TCLP VOCs 8260	TCLP 8 RCRA Metals	Trip BLANK	Residual Chlorine (Y/N)	92434654
1	S-1	SL		6/25/18	0820				12	2					4	4	2	X	X								001
2	S-2				0910													X	X								002
3	S-3				0940													X	X								003
4	S-4				1015													X	X								004
5	S-5				1052													X	X								005
6	S-6				1150													X	X								006
7	S-7				1345													X	X								007
8	S-8				1415													X	X								008
9	S-9				1455													X	X								009
10	S-10				1525													X	X								010
11	S-11				1615													X	X								011
12	PARCEL 5 IDW SOIL				1635				3	3												X		X	X			012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
CC AMCCREARY@HARTHICKMAN.COM	ALAN MCCREARY HH	6/26/18	0940		06/26/18	0940
ON RESULTS		06/26/18	1500	PACE	6.26.18	1500

SAMPLE CONDITIONS			
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
3.6	2.1 F	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ALAN MCCREARY

SIGNATURE of SAMPLER: [signature] DATE Signed:

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

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Page : 1 Of 1

Section A – Required Client Information:	Section B – Required Project Information:	Section C – Invoice Information:	
Company: Hart & Hickman	Report To: David Graham	Attention:	
Address: 2923 S. Tryon Street	Copy To: AMCCREARY@HARTHICKMAN.COM	Company Name:	Regulatory Agency
Charlotte, NC 28203	DGRAHAM@HARTHICKMAN.COM	Address:	
Email: dgraham@harthickman.com	Purchase Order #:	Pace Quote: 59511	
Phone: (704)649-5999 Fax	Project Name: ROW-603 Soil	Pace Project Manager: kevin.godwin@pacelabs.com,	State / Location
Requested Due Date:	Project #:	Pace Profile #: 1321-18, 19	NC

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260/5035	8260 SIM 1,4-Dioxane	RCRA Metals (6010/7471)	8082 PCB	TCLP VOCs 8260	TCLP 8 RCRA Metals	Trip BLANK	Residual Chlorine (Y/N)	3249465 4
1	PARCEL 5 DECON WATER	WT		6/25/19	1450			17	7			1	6						X	X	X						43
2	SED 6-1	SL		↓	1755				13	3					2	4	4		X	X	X						
3	SW 6-1	WT		↓	1810				7			1	6						X	X	X						
4	7-1 (0-2)	SL		6/26/19	0840				14	4					2	4	4		X	X	X	X					
5	7-2 (4-6)	SL		↓	0935				13	3					2	4	4		X	X	X						
6	TRIP BLANK 1	WT		6/25					2										X						X		
7																											
8																											
9																											
10																											
11																											
12																											

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
PLEASE PLT SED 6-1 &		6/26/19	0940		06/26/19	0940
SW 6-1 ON ONE REPORT,		06/26/19	1500		6-26-19	1500
5-1 THROUGH PARCEL 5 DECON						
LATER ON SECOND REPORT						

PLT 7-1 & 7-2 ON SEPARATE REPORT WITH REST OF 7-# COMING LATER

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ALAN MCCREARY

SIGNATURE of SAMPLER: DATE Signed:

SAMPLE CONDITIONS			
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
21-3.6	Y	N	Y

Pace Analytical®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: February 7, 2018 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: Hart Hick

Project # WO#: 92434683

PM: KRG Due Date: 07/01/19
CLIENT: 92-Hart Hick

Courier: ☐ Commercial ☑ Fed Ex ☐ Pace ☐ UPS ☐ USPS ☐ Other:____ ☑ Client

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

Date/Initials Person Examining Contents: MB 6-28-19

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☐ N/A

Thermometer: ☑ IR Gun ID: 92T048

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp (°C): 5.6 **Correction Factor: Add/Subtract (°C)** 0.0

Cooler Temp Corrected (°C): 5.6

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☑ N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	NS/SL			
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☑ No	☐ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** 7/1/19

Project Manager SRF Review: _____ **Date:** 7/1/19

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

****Bottom half of box is to list number of bottle**

Project # **WO# : 92434683**

PM: KRG Due Date: 07/01/19

CLIENT: 92-Hart Hick

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1									2																				
2						1										6													
3																													
4																													
5																													
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10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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Company:	Hart & Hickman	Report To:	David Graham	Attention:	ACCOUNTSPAYABLE@HARTHICKMAN.COM
Address:	2923 S. Tryon Street	Copy To:	AMCCREARY@HARTHICKMAN.COM DGRAHAM@HARTHICKMAN.COM	Company Name:	SAME
Charlotte, NC 28203		Purchase Order #:		Address:	
Email:	dgraham@harthickman.com	Project Name:	ROW-603 Soil	Pace Quote:	59511
Phone:	(704)649-5999 Fax:	Project #:		Pace Project Manager:	kevin.godwin@pacelabs.com,
Requested Due Date:				Pace Profile #:	1321-18, 19

Regulatory Agency

State / Location: NC

SAMPLE ID
One Character per box. (A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260/5035	8260 SIM 1,4-Dioxane	RCRA Metals (6010/7471)	8082 PCB	TCLP VOCs 8260	TCLP 8 RCRA Metals	Trip BLANK	Residual Chlorine (Y/N)	92434683
1	PARCEL 7 IDW SOIL	SL		6/27/19	1705				2	2													X	X			HOLD! 004
2	PARCEL 7 IDW WATER	WT		↓	1715				7			1	6						X	X	X						HOLD! 005
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
HOLD PENDING DAVID GRAHAM APPROVAL	H&H	6/28/19	1249	PACE	6/28/19	1249	5.6	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: ALAN MCCREARY

SIGNATURE of SAMPLER: DATE Signed: 6/28/19

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Appendix F

Non-Hazardous Waste Disposal Manifests

EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107
www.evocorp.net

NON-HAZARDOUS MATERIALS MANIFEST

Load # _____ Manifest No. 81310

GENERATOR INFORMATION

Generator: NCDOT Parcel 5 Phone: 919-707-6859

Site Address: US Hwy 29

City/State: Greensboro NC Contact: Gordon Box

MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): _____ Material: Water

Empty Weight (lbs): _____ Contaminant: Non-hazardous VOCs

Net Weight (lbs): _____

Quantity 1 Tons (Drums) Pails Sacs Yards Other: _____

TRANSPORTER INFORMATION

Transporter: Evo Corporation Phone: 336-725-5844

Truck #: 215/337 Contact: Tony Disher

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: _____ Date: 8-6-19

FACILITY INFORMATION

Evo Project #: 081912

EVO CORPORATION
1703 Vargrave Street
Winston-Salem, NC 27107

Phone: (336) 725-5844

Contact: Tony Disher

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: _____ Date: 8-6-19

White/Facility Canary/Invoice Goldenrod/Generator Pink/Carrier

336 725 5844 P.002/336 725 5844 P

EVO CORPORATION

1703 Vargrave Street, Winston-Salem, NC 27107
www.evocorp.net

NON-HAZARDOUS MATERIALS MANIFEST

Load # Manifest No. 81309

GENERATOR INFORMATION

Generator: NCDOT Parcel 5 Phone: 919-707-6859

Site Address: US Hwy 29

City/State: Greensboro NC Contact: Gordon Box

MATERIAL DESCRIPTION / QUANTITY / WEIGHT

Gross Weight (lbs): Material: Soil

Empty Weight (lbs): Contaminant: Non-hazardous VOCs

Net Weight (lbs):

Quantity 1 Tons (Drums) Pails Sacs Yards Other:

TRANSPORTER INFORMATION

Transporter: Evo Corporation Phone: 336-725-5844

Truck #: 215/337 Contact: Tony Disher

As the transporter, I certify that the materials described above being shipped under this non-hazardous materials manifest are properly classified, packaged, labeled, secured and are in proper condition for transport in commerce under the applicable regulations governing transportation, and I hereby receive this material for delivery to the facility designate.

Driver Signature: Date: 8-6-14

FACILITY INFORMATION

Evo Project #: 081912

EVO CORPORATION
1703 Vargrave Street
Winston-Salem, NC 27107

Phone: (336) 725-5844

Contact: Tony Disher

I certify that the carrier has delivered the materials described above to this facility, and I hereby accept this material for treatment and/or disposal in a manner that has been authorized by the State of North Carolina.

Facility Signature: Date: 8-6-14

White/Facility Canary/Invoice Goldenrod/Generator Pink/Carrier