

Prepared for:

North Carolina Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, North Carolina, 27699-1589

Preliminary Site Assessment Report

Leslie Sasser Property
Parcel # 31 (a,b,c,d)
2008, 2010, and 2012 N. William Street
Goldsboro, Wayne County, North Carolina
US 117 Alternate from US 70 Bypass to Belfast
TIP Number: U-2714
WBS Element: 38979.1.2



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July 31, 2017

not considered final unless all signatures are completed

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1.0 INTRODUCTION

This report presents the results of a Preliminary Site Assessment (PSA) for the North Carolina Department of Transportation (NCDOT) Parcel 31 (a,b,c,d) (Parcel 31) performed by Apex Companies, LLC (Apex) on behalf of the NCDOT. The subject site of this PSA report will be affected by the widening of the US Highway 117 from US Highway 70 to Belfast Road. The Site is comprised of four parcels and is located at three addresses 2008, 2010 and 2012 North William Street and is identified as Parcel 31, Leslie Sasser Property, within the NCDOT U-2714 design project. The property is located at the southeast corner of the intersection of North William Street and Orange Street in Goldsboro, Wayne County, North Carolina, as shown in the attached Site Location Map (**Figure 1**). The site investigation was conducted in accordance with Apex Company's Technical and Cost proposal dated June 7, 2017.

NCDOT contracted Apex to perform the PSA over the entire Parcel 31 Property due to the potential presence of contamination at the site and the fact that excavation and grading may occur within the area. The PSA was performed to evaluate if soils have been impacted as a result of past and present uses of the property within the proposed investigation area, if buried underground storage tanks (USTs) are present in the area of investigation, and if groundwater is impacted.

The following report presents the results of a ground penetrating radar (GPR) evaluation to identify underground storage tanks (USTs) in the investigation area, and describes the subsurface field investigation at the site. The report includes the evaluation of field screening, as well as field and laboratory analyses with regards to the presence or absence of soil and groundwater contamination within the area of investigation across Parcel 31. **Appendix A** includes a Photograph log for the site.

1.1 Site History

Parcel 31 has been identified with the addresses of 2008, 2010 and 2012 N William Street. Based on a search of the North Carolina Department of Environmental Quality (NCDEQ) UST database registry, no registered tanks were identified for the 2008, 2010 or 2012 N William Street parcels. No visible evidence noted during field activities. However, the geophysical survey did identify three probable USTs on site. Currently the two southernmost sites operate as William Street Self Storage and the two northern most sites operate as My Stuff Your Treasure Antique Store. Apex personnel also reviewed the NCDEQ Incident Management Database and no groundwater incidents are associated with this parcel.

1.2 Site Description

The site is located in a mixed commercial and residential area of Goldsboro in Wayne County. The two southernmost parcels, identified as 2008 North William Street, are currently occupied by William Street Self Storage. The northern parcels, identified as 2010 and 2012 North William Street, are occupied by My Stuff Your Treasure Antique Store. The site is bordered to the north and east by residential properties. Spikes Tavern bordered the property to the south, and North William Street is located to the west, followed by NBA Greenleaf Grace Village. Additionally, the geophysical surveyor, Pyramid Environmental & Engineering, PC, (Pyramid) did identify three GPR anomalies characteristic of USTs in the investigation area.

2.0 GEOLOGY

2.1 Regional Geology

Parcel 31 is located within the Coastal Plain Physiographic Province. The Coastal Plain is the largest physiographic province in the state, covering about 45% of the land area. According to the US Geological Survey Professional Paper 1404-I entitled "Hydrogeologic Framework of the North Carolina Coastal Plain" (Winner and Coble, 1996), the geology consists of an eastward-dipping and eastward-thickening series of sedimentary rocks which range in age from Holocene to Cretaceous. The most common type of sediment types are sand and clay, although a significant amount of limestone occurs in the southern part of the coastal plain. The site overlies the Black Creek Formation. The Black Creek Formation is Late Cretaceous in age and was deposited in a lagoonal to marine environment. It generally consists of thinly laminated gray to black clay with interbedded gray to tan sands. The most notable characteristic of the formation is the high concentration of wood and organic material. Shells and glauconite are also common.

2.2 Site Geology

Site geology was observed through the drilling and sampling of 53 direct push probe soil borings (SB) onsite. **Figure 2** presents the boring locations and site layout. Borings did not exceed a total depth of ten feet below ground surface (bgs) since that depth was the maximum excavation depth for proposed drainage features. Soil consisting predominantly of orange, brown, and black sand and orange to brown silty sand was observed across the parcel. The soils were unconsolidated and as a result the borings often collapsed. Based on a groundwater investigation conducted to the south at 1609 North William Street (parcel 4 of the project), groundwater flows to the east-southeast. Boring logs are presented in **Appendix B**.

3.0 FIELD ACTIVITIES

3.1 Preliminary Activities

Prior to commencing field sampling activities at the site, several tasks were accomplished in preparation for the subsurface investigation. A Health and Safety Plan (HASP) was prepared to include the site-specific health and safety information necessary for the field activities. North Carolina-One Call was contacted on May 31, 2017 to report the proposed drilling activities and notify affected utilities. Apex subcontracted Pyramid to locate subsurface utilities and other subsurface drilling hazards as well as to perform a geophysical survey. Carolina Soil Investigations, LLC (CSI) of Olin, North Carolina was retained by Apex to perform the direct push sampling for soil borings. REDLAB, LLC (REDLAB) provided an ultraviolet fluorescence (UVF) Hydrocarbon Analyzer and Eastern Solutions provided a calibrated Flame Ionization/Photoionization Detector (FID/PID). Boring locations were strategically placed in a pattern within the area of investigation to maximize the opportunity to encounter potentially contaminated soil.

3.2 Site Reconnaissance

Apex personnel performed a site reconnaissance on June 6, 2017. During the site reconnaissance, the area was visually examined for the presence of USTs or areas/obstructions that could potentially affect the subsurface investigation. The proposed boring locations were marked based on the site inspection and geophysical survey results. Apex personnel also used the site visit as an opportunity to contact the property manager/owner to inform them of upcoming field activities.

3.3 Geophysics Survey Results

The geophysical survey of the site was conducted on June 7 and 8, 2017. Pyramid performed an electromagnetic (EM) induction metal survey followed by a GPR survey. A copy of the Geophysical Report is presented in **Appendix C**. Collectively the geophysical survey provided evidence of three probable metallic USTs. EM anomalies were observed on the west side of the north building that were associated with unknown buried metal and were investigated further with the GPR method. Results of GPR scans indicated evidence of three probable USTs. Two probable USTs on the west side of the north building approximately ten feet long and six feet wide and one probable UST located on the southwest corner of the north building eight feet long and six feet wide. The anomaly locations are depicted on **Figure 2**.

3.4 Well Survey

No water supply or groundwater monitoring wells were observed on Parcel 31.

3.5 Soil Sampling

Apex conducted drilling activities at the site on June 14, 2017. Apex drilling subcontractor, CSI, advanced 53 direct push soil borings within the proposed investigation area. These 53 boring locations were placed by the probable UST systems or in a pattern to maximize the likelihood of intercepting potential soil contamination. **Figure 2** presents the Site Map with boring locations and identifications.

The purpose of soil sampling was to determine if a petroleum release has occurred within the investigation area, and if so, to estimate the volume of impacted soil that might require special handling during construction activities.

Soil sampling was performed utilizing hand auger and direct push methods accompanied by field screening with the FID/PID unit and onsite quantitative analyses with the UVF Hydrocarbon Analyzer. One to two intervals of the soil boring, exhibiting the most elevated FID/PID readings, were selected for onsite quantitative analysis of total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAH) in soil using the REDLAB UVF Hydrocarbon Analyzer. The analysis was performed onsite by Kristen Hartsen, a certified REDLAB UVF technician with Apex. The UVF results were generated concurrent with soil boring activities so that rapid assessment could be utilized for strategic boring placement.

3.6 Groundwater Sampling

Apex personnel mobilized to the Site on June 14th, 2017 to obtain groundwater grab samples. Groundwater grab sample locations were chosen based on data generated from the UVF analyzer and on site conditions such as the likely groundwater gradient and UST locations. The soils encountered were very sandy and unconsolidated, and as a result the borings would not stand open. Apex instructed CSI personnel to temporarily install a one-inch diameter 10-slot screen into two of the soil borings for the purposes of collecting a groundwater grab sample. Apex personnel collected groundwater grab samples from borings P31-SB1, P31-SB16 and P31-SB40 for onsite quantitative analysis of TPH using the REDLAB UVF Hydrocarbon Analyzer. The analysis was performed onsite by Kristen Hartsen, a certified REDLAB UVF technician with Apex.

4.0 SAMPLING RESULTS

4.1 Soil Sampling Results

Based on FID/PID field screening and onsite UVF hydrocarbon analysis from the June 2017 soil sampling there is no evidence of significant petroleum hydrocarbon contamination onsite, within the area of investigation.

Elevated FID/PID readings, above ten parts per million (ppm), were observed in the borings conducted at the site above the smear zone. The FID readings ranged from non-detectable to 6.9 ppm and the PID readings ranged from non-detectable to 61.57 ppm. The FID/PID field screening results are provided on the boring logs in **Appendix B**.

Soil concentrations of TPH gasoline range organics (GRO) and diesel range organics (DRO) measured using the onsite UVF unit are presented in **Table 1**, with instrument generated tables and chromatographs in **Appendix D**. **Figure 3** presents the TPH-GRO and TPH-DRO results at each boring.

Based on the UVF analyses, TPH-GRO and TPH-DRO was identified in soils on Parcel 31. TPH-GRO concentrations ranged from below detectable levels to 3.8 milligram per kilogram (mg/kg) (P31-SB3). TPH-DRO concentrations ranged from below detectable levels to 52.2 mg/kg (P31-SB39). TPH-GRO concentrations did not exceed the regulatory action level of 50 mg/kg and the TPH-DRO concentrations did not exceed the regulatory action level of 100 mg/kg.

4.2 Groundwater Sampling Results

Apex personnel collected groundwater grab samples from three soil borings (P31-SB1, P31-SB16 and P31-SB39) for onsite quantitative analysis of TPH using the REDLAB UVF Hydrocarbon Analyzer. Based on the real time UVF analysis of the two groundwater grab samples, groundwater impact is not present on Parcel 31 at significant levels. Water samples P31-SB1-WATER and P31-SB16-WATER both indicated TPH-GRO concentrations of <0.038 milligrams per liter (mg/L) and TPH-DRO concentrations of <0.04 mg/L. Sample P31-SB39-WATER indicated TPH-GRO concentrations 0.82 mg/L and TPH-DRO concentrations of 0.15 mg/L. This boring was located east of a likely UST location. The groundwater UVF results are tabulated in **Table 1**. The instrument generated tables and chromatographs are included in **Appendix D**. Groundwater analytical data are summarized on **Figure 4**.

5.0 CONCLUSIONS

Based on site observations and onsite UVF analysis, no petroleum-impacted soil contamination was identified above the NCDEQ Action level of 50 mg/kg for TPH-GRO or above the NCDEQ Action level of 100 mg/kg for TPH-DRO. The onsite UVF analysis of groundwater did not indicate groundwater contamination to be present at significant concentrations.

The following bulleted summary is based upon Apex's evaluation of field observations and onsite quantitative analyses of samples collected from the Site on June 14, 2017.

- Results of the geophysical survey produced evidence of three anomalies characteristic of USTs. The location of the anomalies are depicted on **Figure 2**.
- Fifty-three soil borings were advanced onsite. Soil samples collected from each boring were analyzed in the field using a REDLAB UVF Hydrocarbon Analyzer.
- Soil samples analyzed using the UVF did not contain either TPH-DRO or TPH-GRO concentrations above their respective NCDEQ Action levels of 100 mg/kg and 50 mg/kg.
- Three groundwater grab samples were collected and analyzed for TPH-DRO and TPH-GRO with the REDLAB UVF Hydrocarbon Analyzer. These samples did not exhibit impact at significant concentrations. The sample collected east of a likely UST was the only sample to contain detectable concentrations of TPH-GRO and TPH-DRO.

6.0 RECOMMENDATIONS

Based on these PSA results, the three probable USTs lie within the proposed ROW. This section of the design project is a fill section however the drainage features are in close proximity to the USTs in the northwestern section of the parcel. Should grading occur during construction activities that encounter the USTs, removal is recommended.

TABLES

Table 1
UVF Onsite Hydrocarbon Analytical Soil and Groundwater Data from June 2017
U-2714, Parcel 31, Leslie Sasser Property
Goldsboro, North Carolina

Sample ID Number	Sample Date	Sample Depth (ft bgs)	GRO (mg/kg) (C5-C10)	DRO (mg/kg) (C10-C35)
SOIL				
NCDEQ Action Level in mg/kg			50	100
P31-SB1	6/14/2017	2	2	0.6
P31-SB2	6/14/2017	2	<0.51	4.5
P31-SB3	6/14/2017	2	3.8	<0.59
P31-SB4	6/14/2017	2	<0.56	<0.56
P31-SB5	6/14/2017	2	<0.53	<0.53
P31-SB6	6/14/2017	2	<0.52	0.69
P31-SB7	6/14/2017	2	<0.49	0.49
P31-SB8	6/14/2017	2	<0.26	<0.26
P31-SB9	6/14/2017	2	<0.49	0.49
P31-SB10	6/14/2017	2	<0.48	<0.48
P31-SB11	6/14/2017	2	<0.49	<0.49
P31-SB12	6/14/2017	2	<0.49	<0.49
P31-SB13	6/14/2017	2	<0.49	<0.49
P31-SB14	6/14/2017	2	<0.52	2.3
P31-SB15	6/14/2017	2	<0.53	<0.53
P31-SB16	6/14/2017	2	<0.27	<0.27
P31-SB17	6/14/2017	2	<0.55	2.4
P31-SB18	6/14/2017	2	<0.51	0.51
P31-SB19	6/14/2017	2	2.5	0.87
P31-SB20	6/14/2017	2	<0.51	1.9
P31-SB21	6/14/2017	2	<0.57	0.57
P31-SB22	6/14/2017	2	<0.5	1
P31-SB23	6/14/2017	2	0.49	0.73
P31-SB24	6/14/2017	2	<0.58	0.58

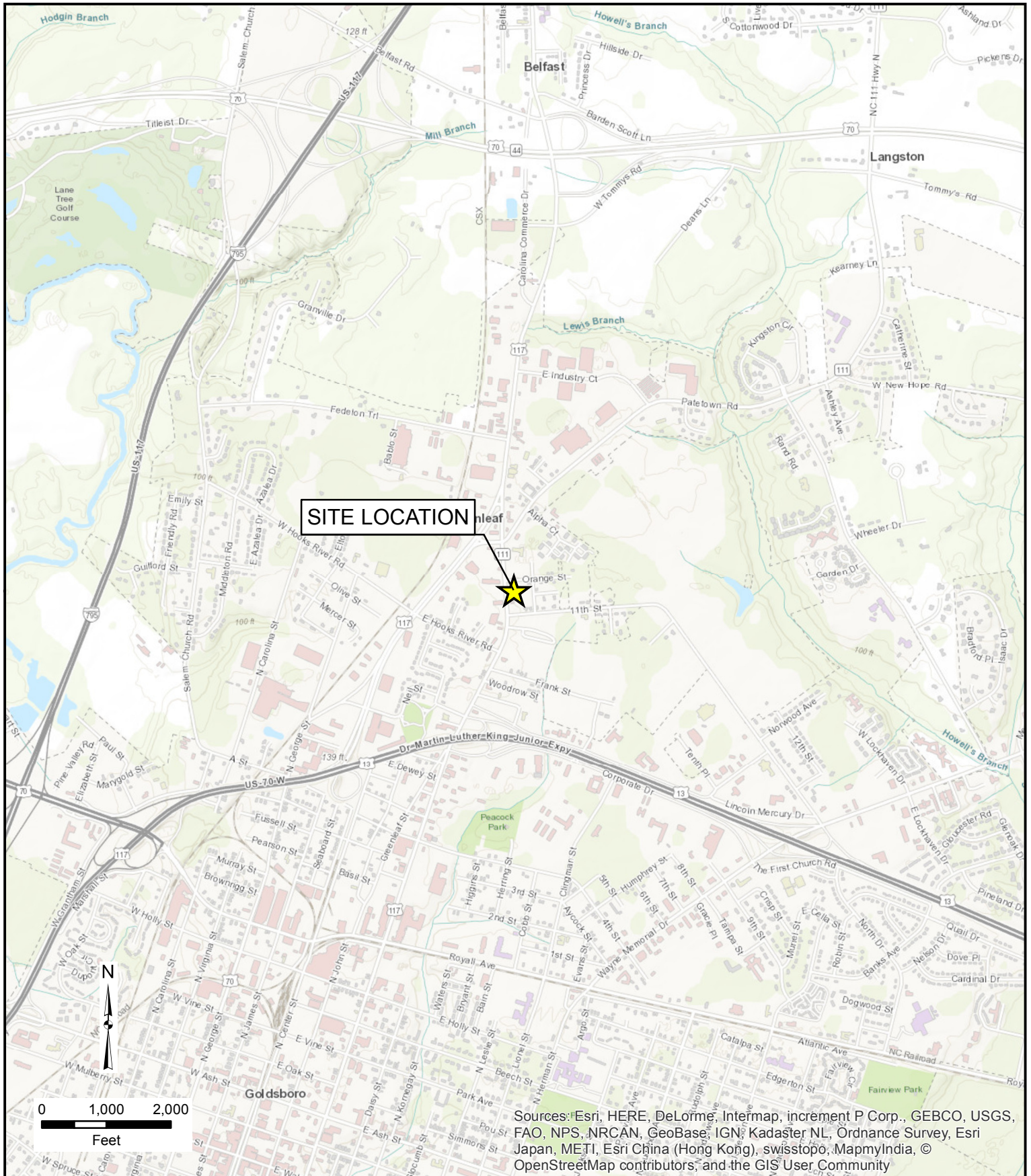
Table 1
UVF Onsite Hydrocarbon Analytical Soil and Groundwater Data from June 2017
U-2714, Parcel 31, Leslie Sasser Property
Goldsboro, North Carolina

Sample ID Number	Sample Date	Sample Depth (ft bgs)	GRO (mg/kg) (C5-C10)	DRO (mg/kg) (C10-C35)
P31-SB25	6/14/2017	2	<0.53	<0.53
P31-SB26	6/14/2017	2	<0.27	<0.27
P31-SB27	6/14/2017	2	<0.59	<0.59
P31-SB28	6/14/2017	2	<0.5	<0.5
P31-SB29	6/14/2017	1.5	<1.1	<1.1
P31-SB30	6/14/2017	1.5	<1	3.4
P31-SB31	6/14/2017	2	<0.98	48.4
P31-SB32	6/14/2017	2	<0.95	<0.95
P31-SB33	6/14/2017	1.5	<0.49	<0.49
P31-SB34	6/14/2017	1.5	<0.53	<0.53
P31-SB35	6/14/2017	1.5	<0.55	0.55
P31-SB36	6/14/2017	1.5	<0.98	10.5
P31-SB37	6/14/2017	2	<1	49.7
P31-SB38	6/14/2017	2	2.1	13.3
P31-SB39	6/14/2017	2	<0.55	52.2
P31-SB40	6/14/2017	2	<0.52	<0.52
P31-SB41	6/14/2017	2	<0.57	<0.57
P31-SB42	6/14/2017	2	<0.55	12.4
P31-SB43	6/14/2017	2	<0.54	9.5
P31-SB44	6/14/2017	2	<0.51	23.1
P31-SB45	6/14/2017	2	<0.52	7.8
P31-SB46	6/14/2017	2	<0.53	<0.53
P31-SB47	6/14/2017	2	<0.52	4.2
P31-SB48	6/14/2017	2	<0.54	5.6
P31-SB49	6/14/2017	2	<0.59	6.5
P31-SB50	6/14/2017	2	<0.53	33.2

Table 1
UVF Onsite Hydrocarbon Analytical Soil and Groundwater Data from June 2017
U-2714, Parcel 31, Leslie Sasser Property
Goldsboro, North Carolina

Sample ID Number	Sample Date	Sample Depth (ft bgs)	GRO (mg/kg) (C5-C10)	DRO (mg/kg) (C10-C35)
P31-SB51	6/14/2017	2	<0.48	19.3
P31-SB52	6/14/2017	2	<0.52	19.7
P31-SB53	6/14/2017	2	<0.48	20.5
GROUNDWATER (mg/L)				
P31-SB1-WATER	6/14/2017	NM	<0.038	<0.04
P31-SB16-WATER	6/14/2017	NM	<0.038	<0.04
P31-SB39-WATER	6/14/2017	NM	0.82	0.15
<p>NOTES: (mg/kg) = Milligrams per kilogram (mg/L) = Milligrams per liter GRO = Gasoline Range Organics DRO = Diesel Range Organics ft bgs = feet below ground surface NM = Not Measured TPH - GRO values in exceedance of NCDEQ Action Level of 50 mg/kg are shown in Bold TPH - DRO values in exceedance of NCDEQ Action Level of 100 mg/kg are shown in Bold</p>				

FIGURES



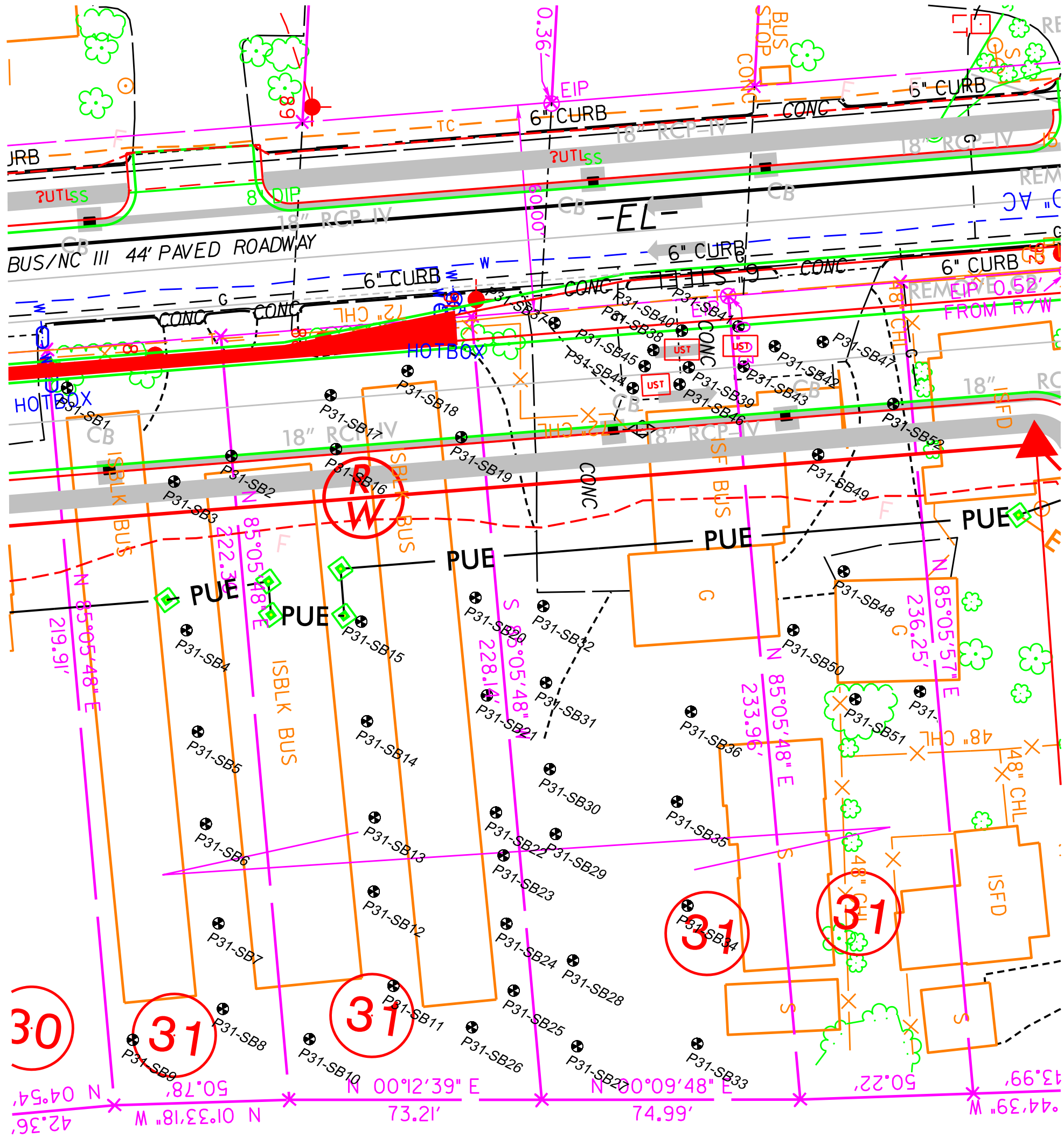
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DRAWN BY: SP
DATE: 7/17/17
SCALE: AS SHOWN
CAD NO.: 510497-003
PRJ NO.: 510497-003

SITE LOCATION MAP
PARCEL #31 (a,b,c,d)
2008, 2008, 2010 & 2012 N. WILLIAM STREET
GOLDSBORO, NORTH CAROLINA



FIGURE

1



LEGEND

	APPROXIMATE LOCATION OF UST
	PROPOSED ROW LINE
	PROPOSED SLOPE STAKES FILL
	PROPOSED SLOPE STAKES CUT
	EXISTING PROPERTY LINE
	SOIL BORING LOCATION

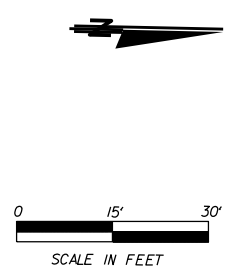
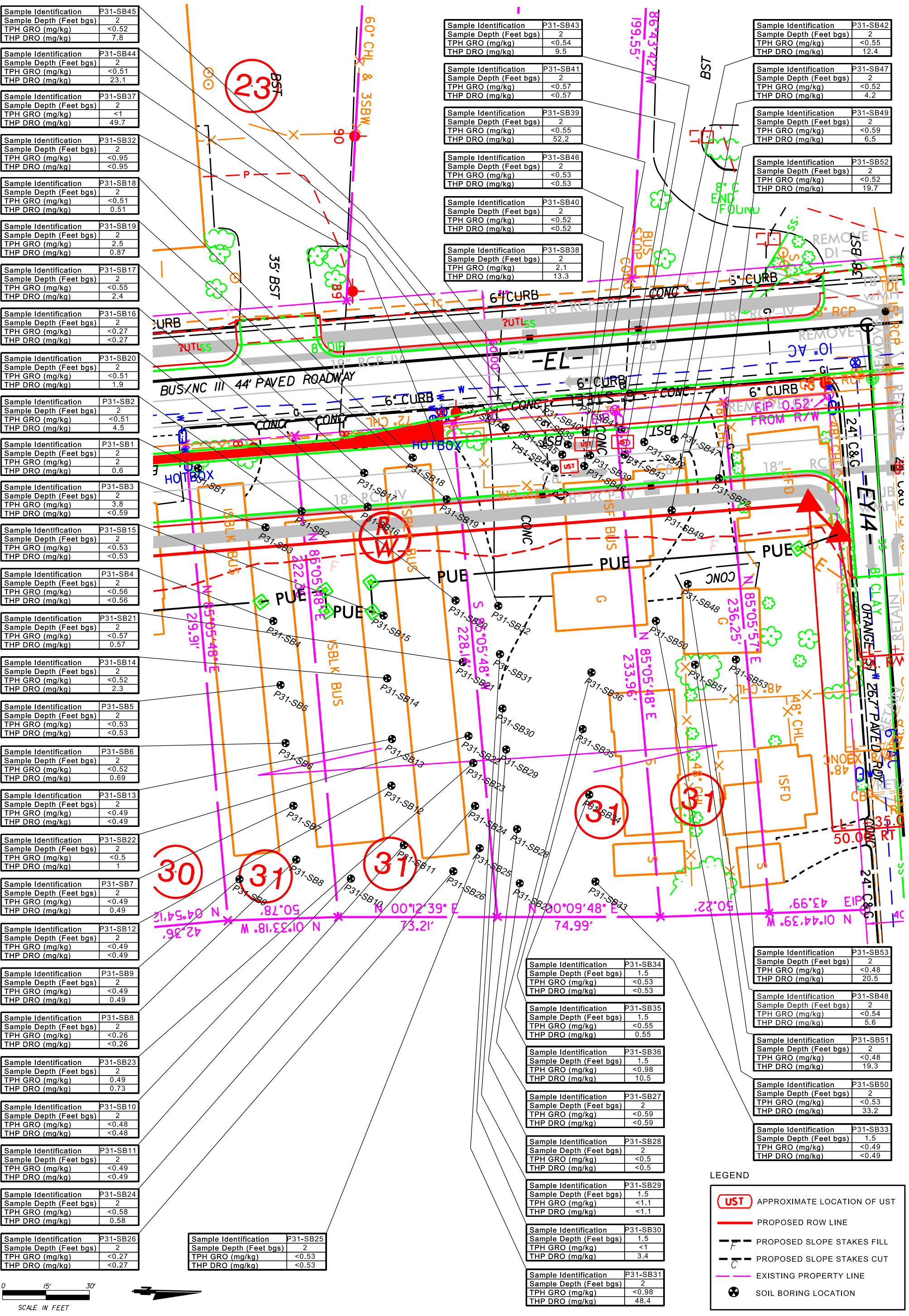
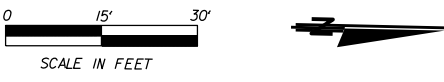


FIGURE 2
PARCEL 31 (a,b,c,d)
SITE MAP WITH SOIL BORING
LOCATIONS



LEGEND

- UST APPROXIMATE LOCATION OF UST
- PROPOSED ROW LINE
- PROPOSED SLOPE STAKES FILL
- PROPOSED SLOPE STAKES CUT
- EXISTING PROPERTY LINE
- SOIL BORING LOCATION



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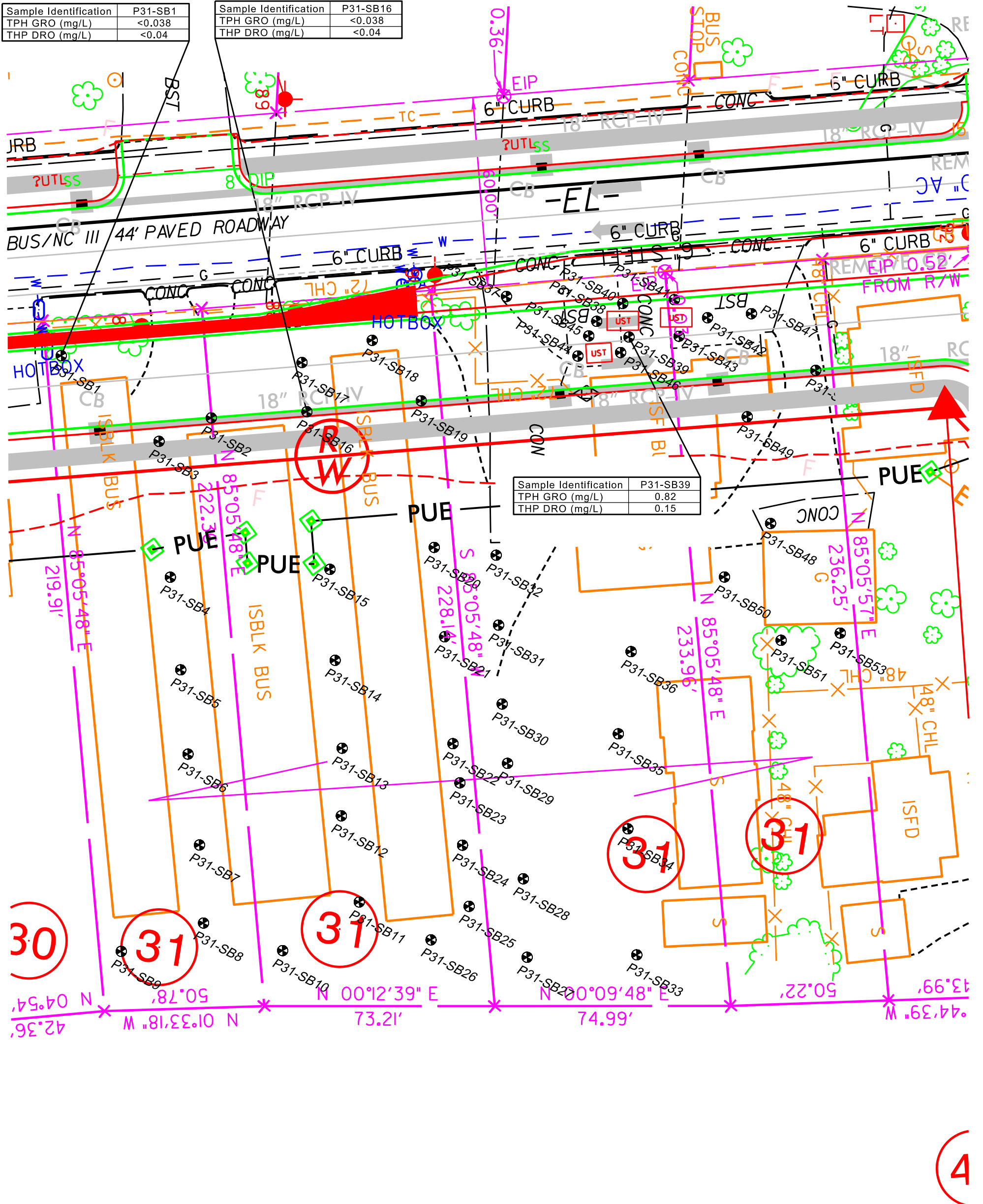
FIGURE 3
PARCEL 31 (a,b,c,d)
ONSITE UVF HYDROCARBON
ANALYSIS RESULTS - SOIL
6/14/17

Date:	7/15/17	GOLDSBORO U-2714		
Proj. #	510497-003			
pc_31_fig 3.dgn		Project Title:		
CAD File:		1" = 40'	MJO	NC DOT
Approx. Scale:		Drawn by:		Client:

Sample Identification	P31-SB1
TPH GRO (mg/L)	<0.038
THP DRO (mg/L)	<0.04

Sample Identification	P31-SB16
TPH GRO (mg/L)	<0.038
THP DRO (mg/L)	<0.04

Sample Identification	P31-SB39
TPH GRO (mg/L)	0.82
THP DRO (mg/L)	0.15



LEGEND	
UST	APPROXIMATE LOCATION OF UST
	PROPOSED ROW LINE
	PROPOSED SLOPE STAKES FILL
	PROPOSED SLOPE STAKES CUT
	EXISTING PROPERTY LINE
	SOIL BORING LOCATION

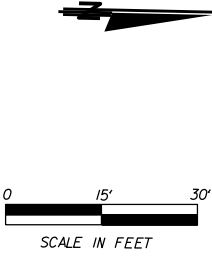


FIGURE 4
PARCEL 31 (a,b,c,d)
ONSITE UVF HYDROCARBON
ANALYSIS RESULTS -
GROUNDWATER 6/14/17

APEX COMPANIES, LLC
 10610 METROMONT PARKWAY
 SUITE 206
 CHARLOTTE, NC 28117
 PHONE: (704) 799-6390

Date:	7/15/17	Project #	GOLDSBORO U-2714
Proj. #	510497-003		
CAD File:	pc_31_fig 4.dgn	Project Title:	
Approx. Scale:	1" = 30'	Drawn by:	MJO
		Client:	NC DOT

APPENDIX A
PHOTOGRAPH LOG



Photo 1

Overview of the site prior to preliminary site assessment activities.



Photo 2

View of drill rig mobbing into place prior to drilling activities.



Photo 3

View of one of the three probable USTs in front of the northwest building.



Photo 4

View of two of the three probable USTs in front of the northwest building.

APPENDIX B
BORING LOGS



Apex Companies, LLC

Boring Log

Boring/Well No.: P31-SB1	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	0.43	3.1	Sample at 2'	Tan Sand, Fine
3				Brown Sand, Medium, Moist
4	0.85	4.7		Smear Zone
5				Orange Sand, Medium, Moist
6	6.9	2.6		Water
7				
8	5.8	4.1		White Sand, Medium
9				
10	5.1	2.5		
Boring terminated at 10 feet				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



Apex Companies, LLC

Boring Log

Boring/Well No.: P31-SB2	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	2.2	6.2	Sample at 2'	Brown Sand, Fine, Dry
3				
4	2.5	5.8		
5				Smear Zone
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



Apex Companies, LLC

Boring Log

Boring/Well No.: P31-SB3	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	1.5	28.1	Sample at 2'	Brown, Silty Sand, Fine, Moist
3				
4	1	7.01		
5				Smear Zone
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



Apex Companies, LLC

Boring Log

Boring/Well No.: P31-SB4	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	0	0.5	Sample at 2'	Orange, Clayey Sand, Medium
3				
4	0	0.8		
5				Black, Silty Sand, Fine
				Smear Zone
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB5	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	0	1.5	Sample at 2'	Orangish-Brown, Silty Sand, Medium
3				
4	0	1		Brown, Silty Sand
5				Smear Zone
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB6	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Gravel
1				Orangish-Brown, Clayey Sand, Medium, Moist
2	0	0	Sample at 2'	
3				
4	0	0		
5				Smear Zone
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB7	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	0	0	Sample at 2'	Orangish-Brown, Clayey Sand, Medium, Moist
3				
4	0	0		
5				Black, Silty Sand
				Smear Zone
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB8	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Gravel
1					Orangish-Brown, Clayey Sand, Medium, Moist
2		0	0	Sample at 2'	
3					
					Smear Zone
4		0	0		Water
5					
					Boring terminated at 5 feet
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB9	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Gravel
1				Tan Sand, Medium, Moist
2	0	0.5	Sample at 2'	Brown, Clayey Sand, Medium, Moist
3				Smear Zone
4	0	0.5		Water, Black, Silty Sand, Fine
5				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB10	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	0	0.8	Sample at 2'	Orange, Silty Sand, Fine, Dry
3				Smear Zone
4	0	0.5		Gray, Clayey, Sandy Silt, Moist
5				Water
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB11	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Gravel
1					Orangish-Brown, Silty Sand, Fine, Dry
2		0	0	Sample at 2'	Tan, Clayey, Silty Sand, Fine, Moist
3					Smear Zone
4		0	0		Water
5					
Boring terminated at 5 feet					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB12	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Gravel
1					Tan, Sandy Silt
2		0	0	Sample at 2'	Orange, Silty Sand, Fine
3					Black Silt
4		0	0		
5					Water
					Boring terminated at 5 feet
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB13	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	0	0	Sample at 2'	Orange, Silty Sand, Fine
3				
4	0	0		Smear Zone
5				Water
6				Boring terminated at 5 feet
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB14	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	0	0	Sample at 2'	Tan, Silty Sand, Fine, Dry
3				
4	0	0		
5				Smear Zone Brown and Black, Sandy Silt Water
6				Boring terminated at 5 feet
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB15	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	0	0	Sample at 2'	Orange, Silty Sand, Fine, Dry
3				Brown and Black, Sandy Silt, Moist
4	0	0		Smear Zone
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB16	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel
2	0	0	Sample at 2'	Orange, Silty Sand, Fine
3				
4	0	0		Brown, Sandy Silt, Moist
5				Water
6	0	0		Tan Sand, Medium
7	0	0		Brown Sand, Medium
8	0	0		White Sand, Fine
9				
10	0	0		
Boring terminated at 10 feet				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB17	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Gravel
1					Brown, Silty Sand, Fine
2		0	0	Sample at 2'	
3					Orange Sand, Medium
4		0	0		Smear Zone
5					
Boring terminated at 5 feet					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB18	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Gravel
1					Tan Silt
					Orange, Sandy Silt
2		0	0	Sample at 2'	Brown Sand, Fine
3					Orange Sand, Medium
4		0	0		Smear Zone
5					Boring terminated at 5 feet
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB19	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Gravel
1					Tan Silt
2		0	0	Sample at 2'	Orange, Sandy Silt
3					Orange Sand, Medium
4		0	0		Smear Zone
5					
Boring terminated at 5 feet					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB20	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel Tan Silt
2	0	0	Sample at 2'	Brown Sand, Fine
3				Black and White Sand, Medium
4	0	0		
5				Smear Zone
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB21	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Gravel
1					Tan Silt, Dry
					Orange Sand, Fine
2		0	0	Sample at 2'	
					Brown Sand, Fine, Moist
3					
4		0	0		
					Smear Zone
5					
Boring terminated at 5 feet					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB22	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel Tan Silt, Dry Orange Sand
2	0	0	Sample at 2'	Black, Silty Sand, Fine, Moist
3				Gray, Silty Sand, Fine
4	0	0		
5				Water
6				Boring terminated at 5 feet
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB23	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel Tan Silt
2	0	0	Sample at 2'	Orange Sand, Fine Black, Silty Sand, Fine
3				Black and White, Silty Sand, Moist
4	0	0		
5				Water
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB24	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Gravel Tan Silt
2	0	0	Sample at 2'	Black, Silty Sand, Fine, Moist
3				Gray, Silty Sand, Fine, Moist Smear
4	0	0		
5				Water
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB25	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Grass Tan Silt
2	0	0	Sample at 2'	Black, Silty Sand, Fine, Moist
3				Gray, Silty Sand, Fine
4	0	0		Smear Zone
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB26	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Orange Sand, Dry, Fine
2	0	0	Sample at 2'	
3				Gray, Clayey Silt
4	0	0		Water
5				Smear
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB27	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Grass
2	0	0	Sample at 2'	Black Silt
3				Black, Clayey Silt
4	0	0		Water
5				Water
6				Boring terminated at 5 feet
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



Apex Companies, LLC

Boring Log

Boring/Well No.: P31-SB28	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Grass
2	0	0	Sample at 2'	Black Silt
3				Smear Zone
4	0	0		Gray, Clayey Silt
5				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB29	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Grass
1					Black Sand, Fine
				Sample at 1.5'	
2		0	0		Gray Sand, Fine
3					
4		0	0		Water
5					
Boring terminated at 5 feet					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



Apex Companies, LLC

Boring Log

Boring/Well No.: P31-SB30	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Grass
1					
				Sample at 1.5'	Black Sand, Fine
2		0	0		
					Gray Sand, Fine
3					
					Water
4		0	0		
5					
					Boring terminated at 5 feet
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB31	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Grass
1				
2	0	0	Sample at 2'	Tan Silt, Dry
3				
4	0	0		Black Sand, Fine, Moist
5				Water
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB32	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Concrete
				Tan Silt, Dry
2	0	0	Sample at 2'	Brown Sand, Fine, Moist
3				
4	0	0		
5				Water
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB33	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Grass
1					Black Sand, Fine
2		0	0	Sample at 1.5'	
3					Water
4		0	0		
5					
					Boring terminated at 5 feet
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB34	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Grass
1				Black Sand, Fine, Moist
2	0	0	Sample at 1.5'	
3				Water
4	0	0		
5				
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB35	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Grass
1				Black Sand, Fine, Moist
2	0	0	Sample at 1.5'	
3				Water
4	0	0		
5				
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB36	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Grass
1				Black Sand, Fine, Moist
			Sample at 1.5'	
2	0	0		Gray Sand, Fine, Moist
3				
4	0	0		Water
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB37	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Concrete
2	0	0	Sample at 2'	Tan Sand, Fine
3				
4	0	0		Orange Sand, Fine
5				Water
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB38	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt
2	0	0	Sample at 2'	Black Sand, Fine, Moist
3				Brown Sand, Fine
4	0	0		Orange Sand, Fine
5				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB39	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt Tan Silt
2	0	0	Sample at 2'	Brown Sand, Fine
3				Orange Sand, Fine
4	0	0		Brown Sand
5				Water
6	3.1	15.9		Yellow Sand
7				
8	2.8	45.1		Gray Sand, Odor
9				
10	5.6	61.57		Boring terminated at 10 feet
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB40	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt
2	0	0	Sample at 2'	Brown Sand, Fine, Moist
3				Orange Sand, Fine
4	0	0		
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB41	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt
2	0	0	Sample at 2'	Tan Sand
3				
4	0	0		Orange Sand
5				Water
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB42	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt
2	0	0	Sample at 2'	Brown Sand
3				
4	0	0		Orange Sand
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB43	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt
2	0	0	Sample at 2'	Tan Sand, Fine
3				
4	0	0		Orange Sand, Fine
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB44	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt
2	0	0	Sample at 2'	Tan Sand, Fine
3				
4	0	0		Orange Sand, Fine
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB45	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt
2	0	0	Sample at 2'	Tan Sand, Fine
3				
4	0	0		Orange Sand, Fine
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB46	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt
2	0	0	Sample at 2'	Tan Sand
3				
4	0	0		Orange Sand
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB47	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Asphalt
2	0	0	Sample at 2'	Tan Sand, Fine
3				
4	0	0		Orange Sand, Fine
5				
6				Boring terminated at 5 feet
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB48	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Grass
1				Tan Silt, Dry
2	0	0	Sample at 2'	Brown Sand
3				
4	0	0		Black Sand
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB49	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Grass
1				Tan Silt, Dry
2	0	0	Sample at 2'	
				Black Sand, Fine, Moist
3				
				Gray Sand, Fine
4	0	0		
				Water
5				
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB50	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Grass
1					Tan Silt, Dry
2		0	0	Sample at 2'	Black Sand, Fine, Moist
3					
4		0	0		Gray Sand, Fine
5					Water
Boring terminated at 5 feet					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



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Boring Log

Boring/Well No.: P31-SB51	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth BLS)	(ft)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
					Grass
1					Black Sand, Fine
2		0	0	Sample at 2'	
3					Gray Sand, Fine
4		0	0		Water
5					
Boring terminated at 5 feet					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



Apex Companies, LLC

Boring Log

Boring/Well No.: P31-SB52	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Grass
2	0	0	Sample at 2'	Black Sand, Fine, Moist
3				Gray Sand, Fine, Moist
4	0	0		
5				Water
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:



Apex Companies, LLC

Boring Log

Boring/Well No.: P31-SB53	Site Name: Parcel 31 - Leslie Sasser Property
Date: 06/14/17	Location: Goldsboro, Wayne County, NC
Job No.: 510497-003	Sample Method: Hand Auger and Direct Push
Apex Rep: Troy L. Holzschuh	Drilling Method: Hand Auger and Direct Push
Drilling Company: Carolina Soil Investigations	Driller Name/Cert #: Danny Summers/2579

Remarks:

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
1				Grass Tan Silt, Dry
2	0	0	Sample at 2'	Black Sand, Fine, Moist
3				Gray Sand, Fine, Moist
4	0	0		
5				Water
Boring terminated at 5 feet				
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:

APPENDIX C
GEOPHYSICAL REPORT



PYRAMID GEOPHYSICAL SERVICES
(PROJECT 2017-156)

GEOPHYSICAL SURVEY

METALLIC UST INVESTIGATION: PARCEL 031 (a, b, c, d) NCDOT PROJECT U-2714

2008, 2010, & 2012 N. WILLIAM STREET, GOLDSBORO, NC

JULY 13, 2017

Report prepared for:

Troy Holzschuh
Apex Companies
10610 Metromont Parkway, Suite 206
Charlotte, North Carolina 28269

Prepared by: _____

Eric C. Cross, P.G.
NC License #2181

Reviewed by: _____

Mike Jones, P.G.
NC License #1168

503 INDUSTRIAL AVENUE, GREENSBORO, NC 27406

P: 336.335.3174 F: 336.691.0648

C257: GEOLOGY C1251: ENGINEERING

GEOPHYSICAL INVESTIGATION REPORT
Parcel 031 (a, b, c, d) – 2008, 2010, & 2012 N. William Street
Goldsboro, Wayne County, North Carolina

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- Figure 2 – Parcel 031 (a, b, c, d) EM61 Results Contour Map
- Figure 3 – Parcel 031 (a, b, c, d) GPR Transect Locations & Images
- Figure 4 – Parcel 031 (a, b, c, d) Locations and Sizes of Probable Metallic USTs
- Figure 5 – Parcel 031 (a, b, c, d) Overlay of EM Survey Boundaries on NCDOT Engineering Plans

LIST OF ACRONYMS

CADD	Computer Assisted Drafting and Design
DF	Dual Frequency
EM.....	Electromagnetic
GPR.....	Ground Penetrating Radar
GPS	Global Positioning System
NCDOT.....	North Carolina Department of Transportation
ROW	Right-of-Way
UST	Underground Storage Tank

EXECUTIVE SUMMARY

Project Description: Pyramid Environmental conducted a geophysical investigation for Apex Companies (Apex) at Parcel 031 (a, b, c, d), located at 2008, 2010, & 2012 N. William Street, Goldsboro, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project U-2714). Apex directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to cover all accessible portions of the parcel due to its designation by the NCDOT as a total take. Conducted from June 7-8, 2017, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

Geophysical Results: Several of the EM anomalies were directly attributed to visible cultural features at the ground surface. Overhead power lines also resulted in some electromagnetic interference in the differential data. EM anomalies were observed on the west side of the north building that were associated with unknown buried metal, and were investigated further by GPR. A total of 5 GPR Transects identified the following:

- Two probable USTs on the west side of the north building, approximately 10 feet long and 6 feet wide.
- One probable UST at the southwest corner of the north building, approximately 8 feet long and 6 feet wide.

Collectively, the geophysical data recorded evidence of three probable metallic USTs at Parcel 031 (a, b, c, d).

INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Apex at Parcel 031 (a, b, c, d), located at 2008, 2010, & 2012 N. William Street, Goldsboro, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project U-2714). Apex directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to cover all accessible portions of the parcel due to its designation by the NCDOT as a total take. Conducted from June 7-8, 2017, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

The site included a self-storage facility and adjacent commercial building surrounded by asphalt and grass areas. It should be noted that a portion of the parcel near the northern boundary was inaccessible by the geophysical equipment due to debris. An aerial photograph showing the survey area boundaries and ground-level photographs are shown in **Figure 1**.

FIELD METHODOLOGY

The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. Pyramid collected the EM data using a Geonics EM61 metal detector integrated with a Trimble AG-114 GPS antenna. The integrated GPS system allows the location of the instrument to be recorded in real-time during data collection, resulting in an EM data set that is geo-referenced and can be overlain on aerial photographs and CADD drawings. A boundary grid was established around the perimeter of the site with marks every 10 feet to maintain orientation of the instrument throughout the survey and assure complete coverage of the area.

According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. Smaller objects (1-foot or less in size) can be

detected to a maximum depth of 4 to 5 feet. The EM61 data were digitally collected at approximately 0.8-foot intervals along north-south trending or east-west trending, generally parallel survey lines spaced five feet apart. The data were downloaded to a computer and reviewed in the field and office using the Geonics NAV61 and Surfer for Windows Version 14.0 software programs.

GPR data were acquired across select EM anomalies on June 8, 2017, using a Geophysical Survey Systems, Inc. (GSSI) UtilityScan DF unit equipped with a dual frequency 300/800 MHz antenna. Data were collected both in reconnaissance fashion as well as along formal transect lines across EM features. The GPR data were viewed in real-time using a vertical scan of 512 samples, at a rate of 48 scans per second. GPR data were viewed down to a maximum depth of approximately 6 feet, based on dielectric constants calculated by the DF unit in the field during the reconnaissance scans. GPR transects across specific anomalies were saved to the hard drive of the DF unit for post-processing and figure generation.

Pyramid’s classifications of USTs for the purposes of this report are based directly on the geophysical UST ratings provided by the NCDOT. These ratings are as follows:


Geophysical Surveys for Underground Storage Tanks on NCDOT Projects			
High Confidence	Intermediate Confidence	Low Confidence	No Confidence
Known UST Active tank - spatial location, orientation, and approximate depth determined by geophysics.	Probable UST Sufficient geophysical data from both magnetic and radar surveys that is characteristic of a tank. Interpretation may be supported by physical evidence such as fill/vent pipe, metal cover plate, asphalt/concrete patch, etc.	Possible UST Sufficient geophysical data from either magnetic or radar surveys that is characteristic of a tank. Additional data is not sufficient enough to confirm or deny the presence of a UST.	Anomaly noted but not characteristic of a UST. Should be noted in the text and may be called out in the figures at the geophysicist’s discretion.

DISCUSSION OF RESULTS

Discussion of EM Results

A contour plot of the EM61 results obtained across the survey area at the property is presented in **Figure 2**. Each EM anomaly is numbered for reference in the figure. The following table presents the list of EM anomalies and the cause of the metallic response, if known:

LIST OF METALLIC ANOMALIES IDENTIFIED BY EM SURVEY

Metallic Anomaly #	Cause of Anomaly	Investigated with GPR
1	Metal walls	
2	Buildings	
3	Three Probable USTs	
4	Chain link fence and overhead power interference	

Several of the EM anomalies (Anomalies 1, 2, 4) were directly attributed to known cultural features such as metal building walls and a chain link fence. Overhead power lines also resulted in some interference in the differential data along the west side of the survey area. Anomaly 3 consisted of high-amplitude features that were associated with unknown buried metal; their size and amplitude were suggestive of large structures such as USTs. These features were investigated further by GPR.

Discussion of GPR Results

Figure 3 presents the locations of the formal GPR transects performed at the property, as well as the transect images. A total of five GPR transects were performed at the site. GPR Transects 1-3 were performed across the west portion of EM Anomaly 3, located on the west side of the north building. These transects recorded two distinct hyperbolic reflectors and two discreet lateral reflectors that were consistent with metallic USTs. Due to the clear

hyperbolic and lateral reflectors, Pyramid is classifying these features as two probable USTs. Both of these probable USTs were approximately 10 feet long and 6 feet wide.

GPR Transects 4-5 were performed across the southeast portion of EM Anomaly 3 at the southwest corner of the building. Transect 3 showed evidence of a clear hyperbolic reflector, suggesting this transect crossed the width of a UST. Transect 4 showed evidence of a discreet lateral reflector that was consistent with the length of a USTs. Pyramid has classified this feature as a probable metallic UST. The probable UST was approximately 8 feet long and 6 feet wide.

Collectively, the geophysical data recorded evidence of three probable metallic USTs at Parcel 031 (a, b, c, d). **Figure 4** shows the locations and sizes of all probable USTs identified by the survey. **Figure 5** provides an overlay of the geophysical survey area onto the NCDOT MicroStation engineering plans (proposed ROW and easements) for reference.

SUMMARY & CONCLUSIONS

Pyramid's evaluation of the EM61 and GPR data collected at Parcel 031 (a, b, c, d) in Goldsboro, North Carolina, provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the accessible portions of the geophysical survey area.
- Several of the EM anomalies were directly attributed to visible cultural features at the ground surface. Overhead power lines also resulted in some electromagnetic interference in the differential data.
- EM anomalies were observed on the west side of the north building that were associated with unknown buried metal, and were investigated further by GPR.
- A total of 5 GPR Transects identified the following:
 - Two probable USTs on the west side of the north building, approximately 10 feet long and 6 feet wide.

- One probable UST at the southwest corner of the north building, approximately 8 feet long and 6 feet wide.
- Collectively, the geophysical data recorded evidence of three probable metallic USTs at Parcel 031 (a, b, c, d).

LIMITATIONS

Geophysical surveys have been performed and this report was prepared for Apex in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR surveys are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained for this project have not conclusively determined the definitive presence or absence of metallic USTs, but the evidence collected is sufficient to result in the conclusions made in this report. Additionally, it should be understood that areas containing extensive vegetation, reinforced concrete, or other restrictions to the accessibility of the geophysical instruments could not be fully investigated.

N ↑


APPROXIMATE BOUNDARIES OF GEOPHYSICAL SURVEY AREA



View of Survey Area
(Facing Approximately North)



View of Survey Area
(Facing Approximately East)

TITLE		PARCEL 031 - GEOPHYSICAL SURVEY BOUNDARIES AND SITE PHOTOGRAPHS	
PROJECT		PARCEL 031 GOLDSBORO, NORTH CAROLINA NCDOT PROJECT U-2714	
		503 INDUSTRIAL AVENUE GREENSBORO, NC 27460 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology	
DATE	6/30/2017	CLIENT	APEX COMPANIES
PYRAMID PROJECT #:	2017-156	FIGURE 1	



EM61 METAL DETECTION RESULTS




EVIDENCE OF THREE PROBABLE METALLIC USTs OBSERVED.

The contour plot shows the differential results of the EM61 instrument in millivolts (mV). The differential results focus on larger metallic objects such as USTs and drums. The EM61 data were collected on June 7, 2017, using a Geonics EM61 instrument. Verification GPR data were collected using a GSSI UtilityScan DF instrument with a dual frequency 300/800 MHz antenna on June 8, 2017.

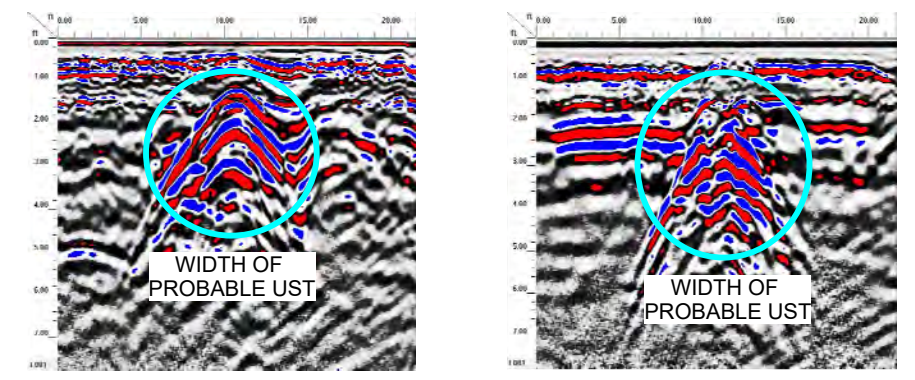
EM61 Metal Detection Response (millivolts)



TITLE		PARCEL 031 - EM61 RESULTS CONTOUR MAP	
PROJECT		PARCEL 031 GOLDSBORO, NORTH CAROLINA NCDOT PROJECT U-2714	
		503 INDUSTRIAL AVENUE GREENSBORO, NC 27460 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology	
DATE	6/30/2017	CLIENT	APEX COMPANIES
PYRAMID PROJECT #:	2017-156	FIGURE 2	

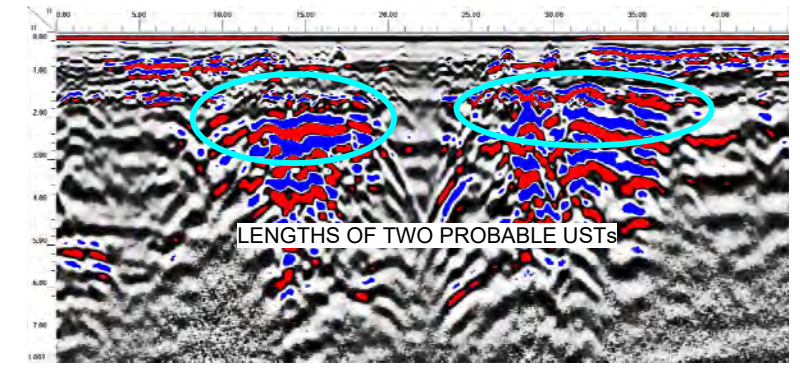


GPR TRANSECT LOCATIONS

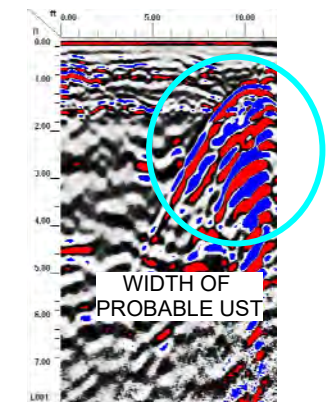


GPR TRANSECT 1 (T1)

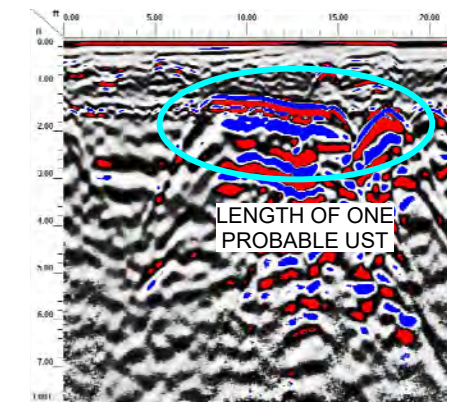
GPR TRANSECT 2 (T2)




GPR TRANSECT 3 (T3)



GPR TRANSECT 4 (T4)



GPR TRANSECT 5 (T5)

TITLE	PARCEL 031 - GPR TRANSECT LOCATIONS AND IMAGES	
PROJECT	PARCEL 031 GOLDSBORO, NORTH CAROLINA NCDOT PROJECT U-2714	
	 503 INDUSTRIAL AVENUE GREENSBORO, NC 27460 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology	
DATE	6/30/2017	CLIENT APEX COMPANIES
PYRAMID PROJECT #:	2017-156	FIGURE 3




LOCATIONS OF PROBABLE METALLIC USTs

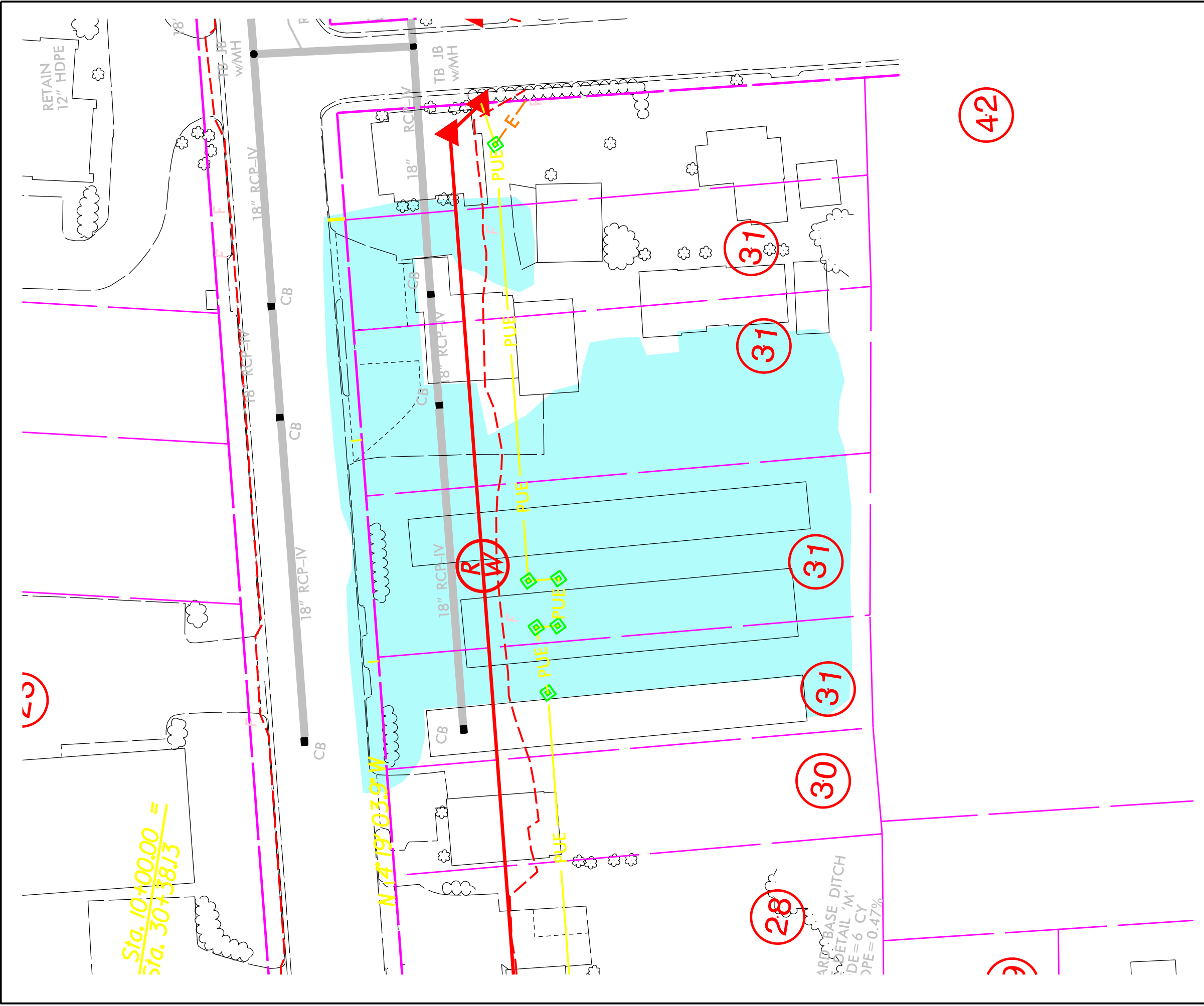


PROBABLE USTs #1 & #2
(FACING APPROXIMATELY NORTHEAST)



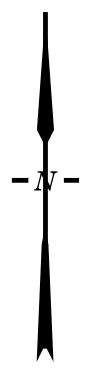
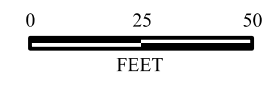
PROBABLE UST #3
(FACING APPROXIMATELY EAST)


TITLE	PARCEL 031 - LOCATIONS AND SIZES OF PROBABLE USTs	
PROJECT	PARCEL 031 GOLDSBORO, NORTH CAROLINA NCDOT PROJECT U-2714	
	 503 INDUSTRIAL AVENUE GREENSBORO, NC 27460 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology	
DATE	6/30/2017	CLIENT APEX COMPANIES
PYRAMID PROJECT #:	2017-156	FIGURE 4



LEGEND

- EXISTING ROW
- EXISTING PROPERTY BOUNDARY
- PROPOSED ROW LINE
- PROPOSED UTILITY EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED SS FILL LINE
- PROPOSED SS CUT LINE
- GEOPHYSICAL SURVEY AREA



TITLE OVERLAY OF GEOPHYSICAL SURVEY BOUNDARIES ON NCDOT ENGINEERING PLANS	
PROJECT PARCEL 031 GOLDSBORO, NORTH CAROLINA NCDOT PROJECT U-2714	
 503 INDUSTRIAL AVENUE GREENSBORO, NC 27406 336.335.3174 (p) 336.691.0648 (f) License # C1251 Eng. / #C257 Geology	
DATE: 6-30-17	REVISION NO. 0
PYRAMID PROJECT NO. 2017-156	FIGURE NO. 5

4.2

31

31

31

31

30

28

Sta. 10+00.00 =
Sta. 30+38.13

N 14° 19' 03.9\"/>

ARTICULAR BASE DITCH
DETAIL 'M'
DE = 6 CY
SLOPE = 0.47%

APPENDIX D
UVF HYDROCARBON ANALYSIS RESULTS



Hydrocarbon Analysis Results

Client: NCDOT
Address: PARCEL 31
 2008-2012 N William St
 Goldsboro, NC

Samples taken Wednesday, June 14, 2017
Samples extracted Wednesday, June 14, 2017
Samples analysed Wednesday, June 14, 2017

Contact: Dennis Li

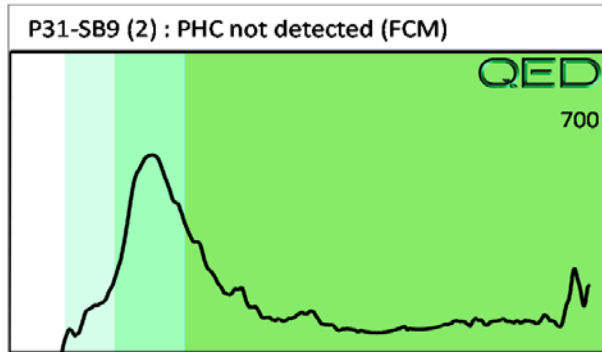
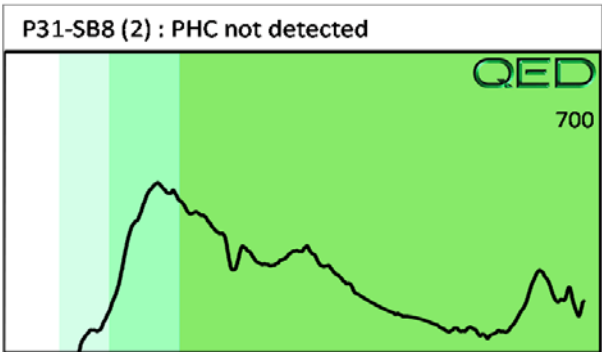
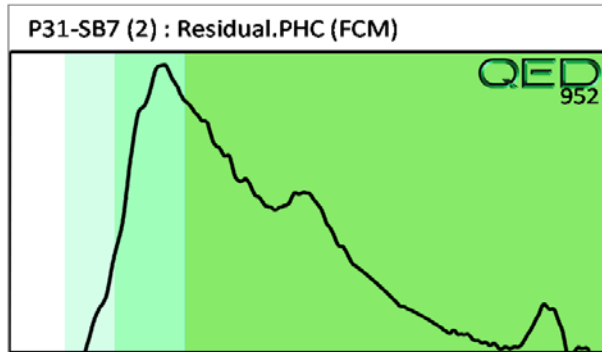
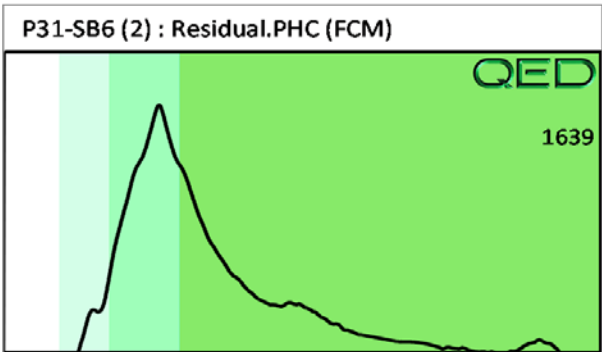
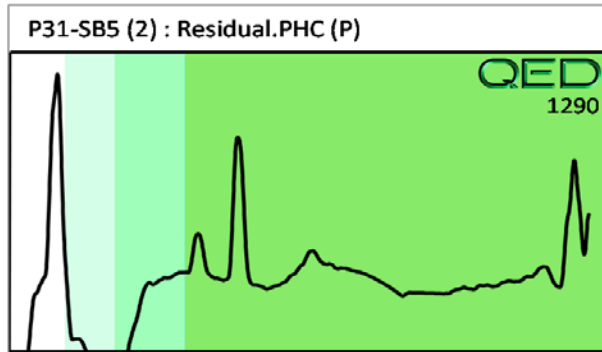
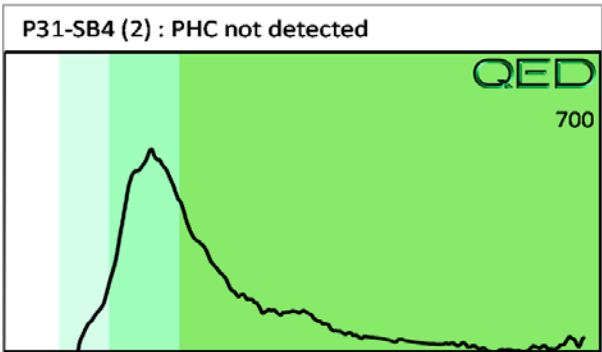
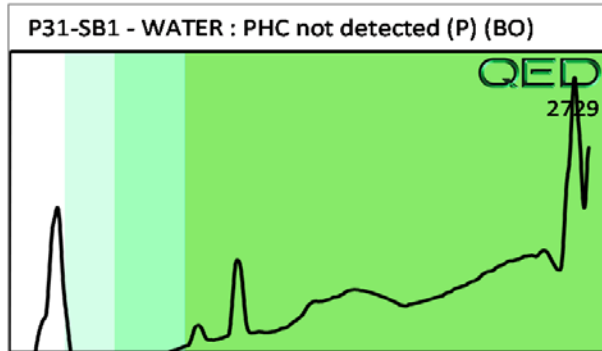
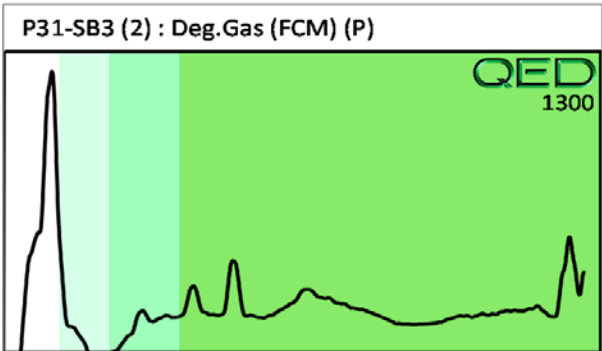
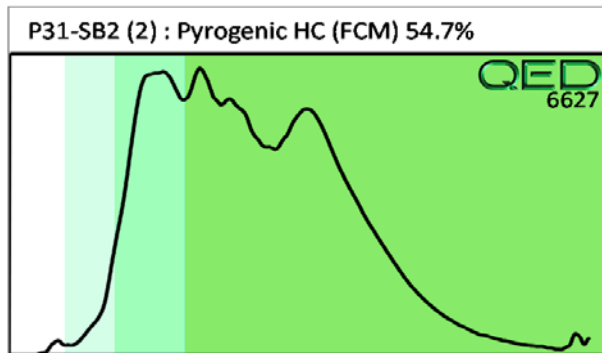
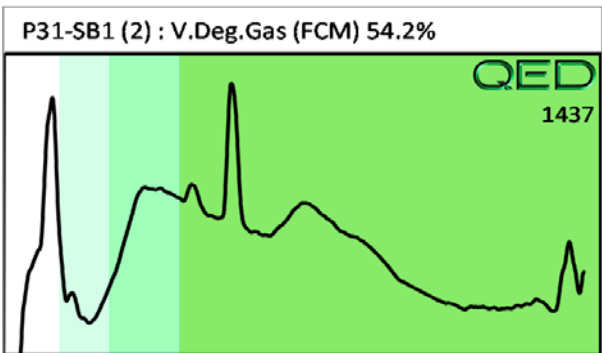
Operator KH

Project: 510497-003

											F03640		
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	P31-SB1 (2)	19.8	<0.5	2	0.6	2.6	0.32	0.06	<0.002	87.5	7.4	5.1	V.Deg.Gas (FCM) 54.2%
s	P31-SB2 (2)	20.5	<1	<0.51	4.5	4.5	4.5	0.48	0.025	0	72.1	27.9	Pyrogenic HC (FCM) 54.7%
s	P31-SB3 (2)	23.6	<0.59	3.8	<0.59	3.8	<0.12	<0.02	<0.002	98.3	0.8	0.9	Deg.Gas (FCM) (P)
W	P31-SB1 - WATER	1.5	<0.038	<0.038	<0.04	<0.038	<0.008	<0.001	<0	0	0	100	PHC not detected (P) (BO)
s	P31-SB4 (2)	22.2	<0.56	<0.56	<0.56	<0.56	<0.11	<0.02	<0.002	0	81.3	18.7	PHC not detected
s	P31-SB5 (2)	21.1	<0.53	<0.53	<0.53	<0.53	<0.11	<0.02	<0.002	0	28.8	71.2	Residual.PHC (P)
s	P31-SB6 (2)	20.8	<0.52	<0.52	0.69	0.69	0.65	0.08	<0.002	0	90.4	9.6	Residual.PHC (FCM)
s	P31-SB7 (2)	19.7	<0.49	<0.49	0.49	0.49	0.34	0.04	<0.002	0	75.5	24.5	Residual.PHC (FCM)
s	P31-SB8 (2)	10.5	<0.26	<0.26	<0.26	<0.26	<0.05	<0.008	<0.001	0	58	42	PHC not detected
s	P31-SB9 (2)	19.5	<0.49	<0.49	0.49	0.49	<0.23	<0.02	<0.002	0	89.7	10.3	PHC not detected (FCM)
Initial Calibrator QC check			OK			Final FCM QC Check			OK			96.5 %	

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





Hydrocarbon Analysis Results

Client: NCDOT
Address: PARCEL 31
 2008-2012 N William St
 Goldsboro, NC

Samples taken
Samples extracted
Samples analysed

Wednesday, June 14, 2017
 Wednesday, June 14, 2017
 Wednesday, June 14, 2017

Contact: Dennis Li

Operator

KH

Project: 510497-003

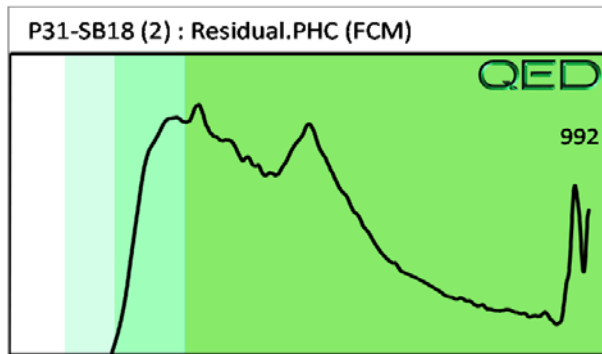
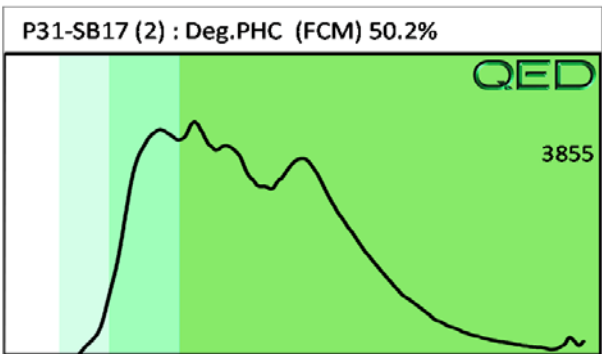
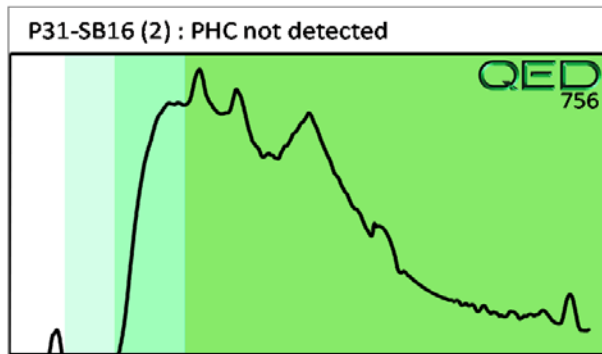
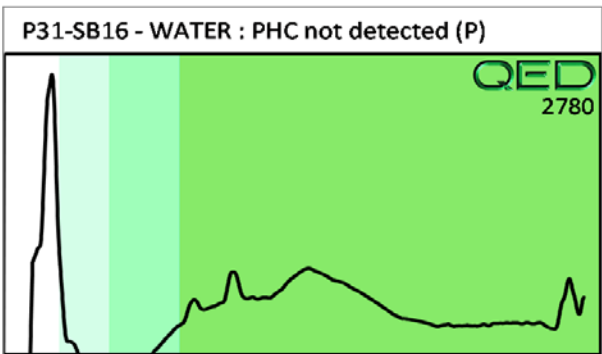
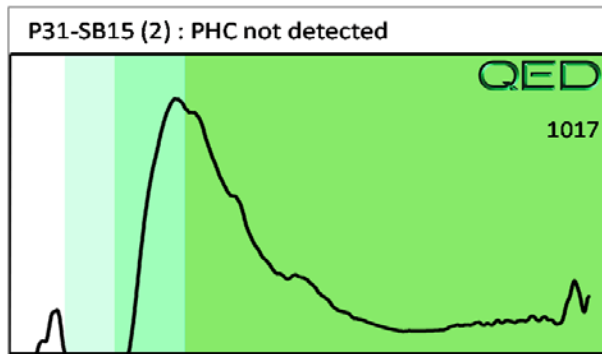
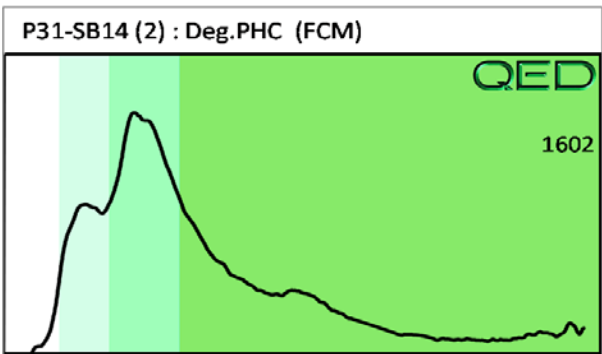
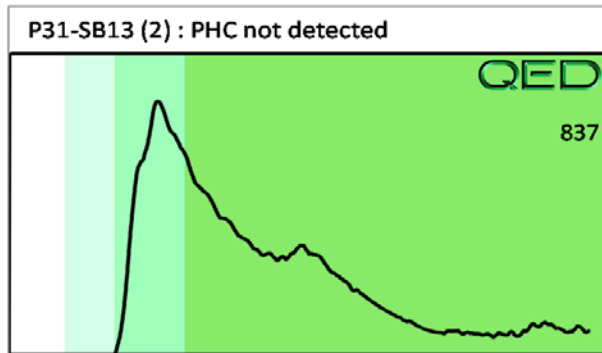
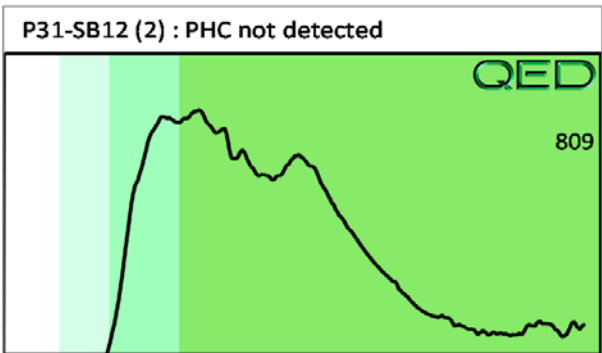
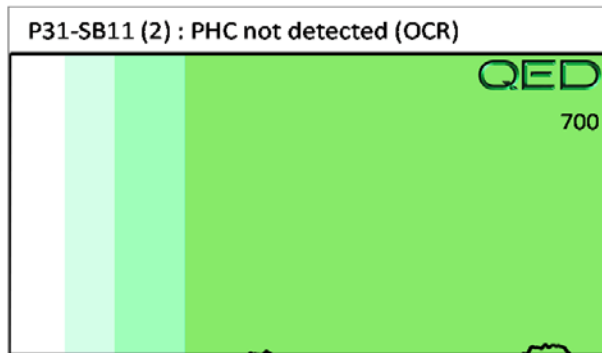
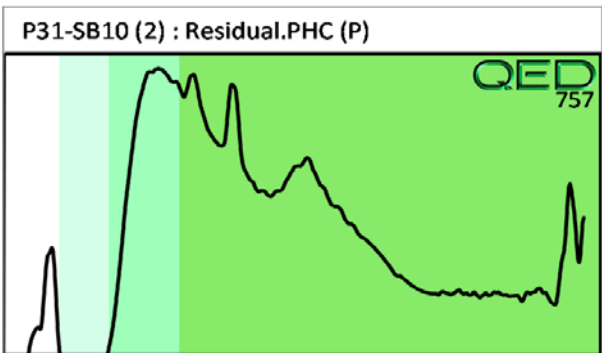
F03640

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	P31-SB10 (2)	19.3	<0.48	<0.48	<0.48	<0.48	<0.19	<0.02	<0.002	0	41.6	58.4	Residual.PHC (P)
s	P31-SB11 (2)	19.4	<0.49	<0.49	<0.49	<0.49	<0.1	<0.02	<0.002	0	0	0	PHC not detected (OCR)
s	P31-SB12 (2)	19.4	<0.49	<0.49	<0.49	<0.49	<0.21	0.02	<0.002	0	40.4	59.6	PHC not detected
s	P31-SB13 (2)	19.5	<0.49	<0.49	<0.49	<0.49	<0.15	<0.02	<0.002	0	39	61	PHC not detected
s	P31-SB14 (2)	20.8	<0.52	<0.52	2.3	2.3	2	0.24	<0.002	0	94.1	5.9	Deg.PHC (FCM)
s	P31-SB15 (2)	21.3	<0.53	<0.53	<0.53	<0.53	<0.19	<0.02	<0.002	0	40.7	59.3	PHC not detected
W	P31-SB16 - WATER	1.5	<0.038	<0.038	<0.04	<0.038	<0.008	<0.001	<0	0	0	100	PHC not detected (P)
s	P31-SB16 (2)	10.8	<0.27	<0.27	<0.27	<0.27	<0.09	<0.01	<0.001	0	20.2	79.8	PHC not detected
s	P31-SB17 (2)	22.0	<0.55	<0.55	2.4	2.4	2.1	0.21	0.002	0	62.5	37.5	Deg.PHC (FCM) 50.2%
s	P31-SB18 (2)	20.5	<0.51	<0.51	0.51	0.51	0.29	0.03	<0.002	0	33.5	66.5	Residual.PHC (FCM)
Initial Calibrator QC check			OK			Final FCM QC Check			OK			106 %	

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





Hydrocarbon Analysis Results

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Samples analysed Wednesday, June 14, 2017

Contact: Dennis Li

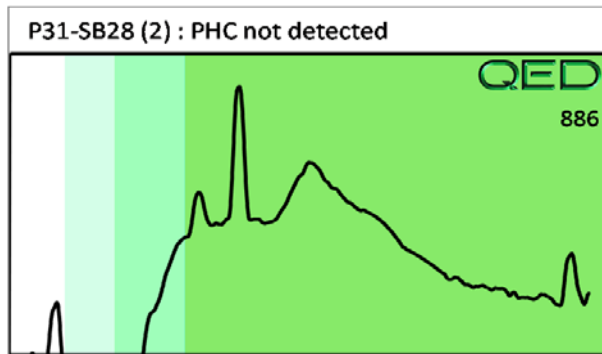
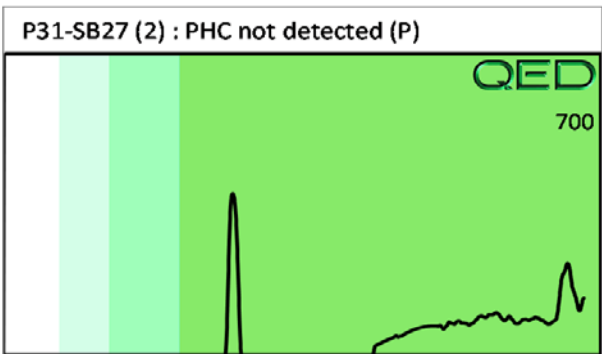
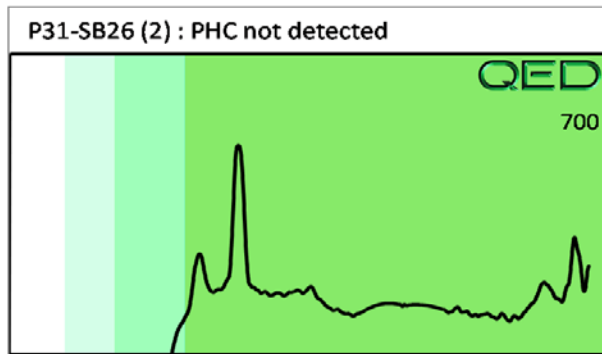
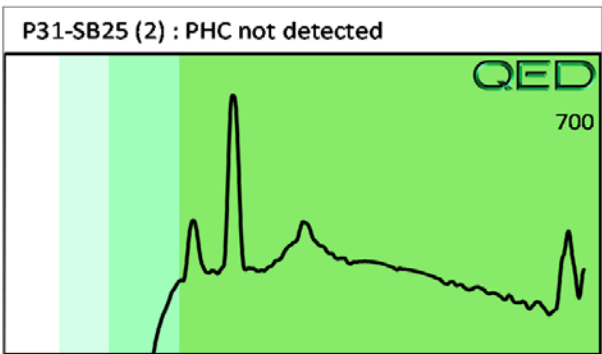
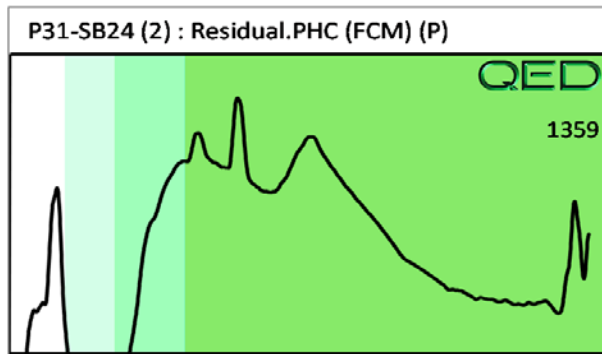
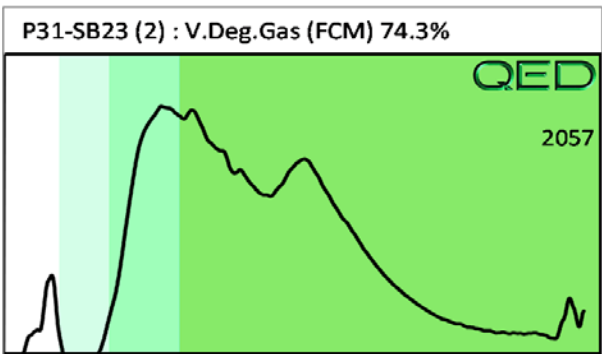
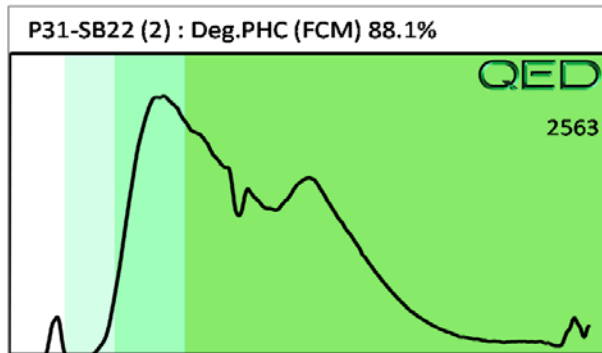
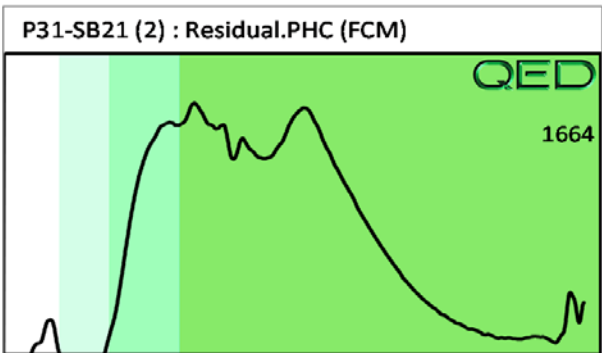
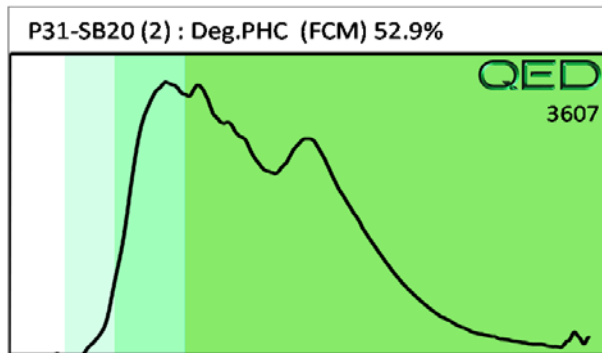
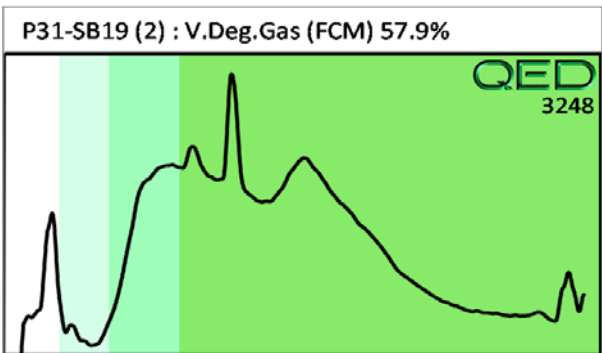
Operator KH

Project: 510497-003

											F03640		
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	P31-SB19 (2)	20.2	<0.5	2.5	0.87	3.37	0.86	0.05	0.002	76.6	9.6	13.7	V.Deg.Gas (FCM) 57.9%
s	P31-SB20 (2)	20.5	<0.51	<0.51	1.9	1.9	1.7	0.18	<0.002	0	62	38	Deg.PHC (FCM) 52.9%
s	P31-SB21 (2)	22.6	<0.57	<0.57	0.57	0.57	0.59	0.07	<0.002	0	38.6	61.4	Residual.PHC (FCM)
s	P31-SB22 (2)	20.0	<0.5	<0.5	1	1	0.87	0.05	<0.002	0	57.7	42.3	Deg.PHC (FCM) 88.1%
s	P31-SB23 (2)	19.7	<0.49	0.49	0.73	1.22	0.67	0.03	0.002	38.5	28.6	32.8	V.Deg.Gas (FCM) 74.3%
s	P31-SB24 (2)	23.2	<0.58	<0.58	0.58	0.58	0.34	0.04	<0.002	0	22.6	77.4	Residual.PHC (FCM) (P)
s	P31-SB25 (2)	21.1	<0.53	<0.53	<0.53	<0.53	<0.11	<0.02	<0.002	0	0	100	PHC not detected
s	P31-SB26 (2)	10.8	<0.27	<0.27	<0.27	<0.27	<0.05	<0.009	0.001	0	0	100	PHC not detected
s	P31-SB27 (2)	23.4	<0.59	<0.59	<0.59	<0.59	<0.12	<0.02	<0.002	0	0	0	PHC not detected (P)
s	P31-SB28 (2)	20.0	<0.5	<0.5	<0.5	<0.5	<0.1	<0.02	<0.002	0	0	100	PHC not detected
Initial Calibrator QC check			OK			Final FCM QC Check			OK			106.1 %	

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

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Contact: Dennis Li

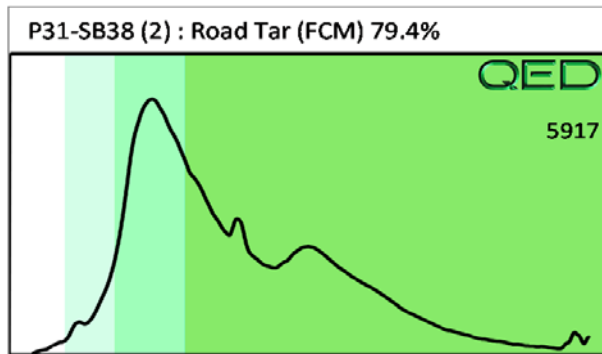
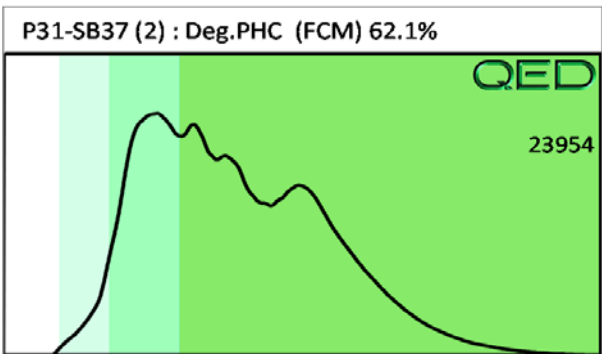
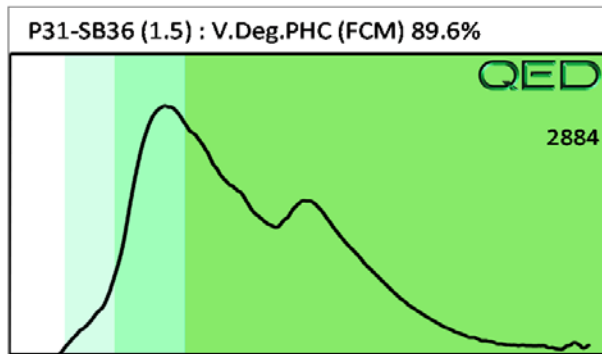
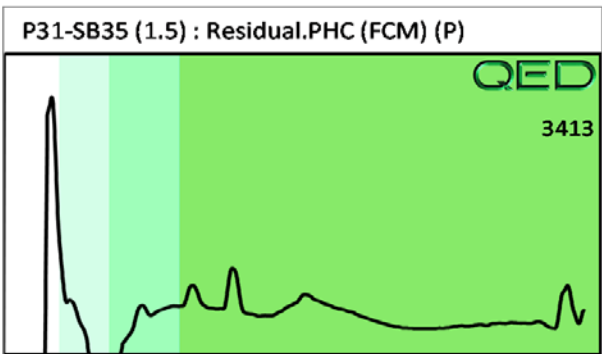
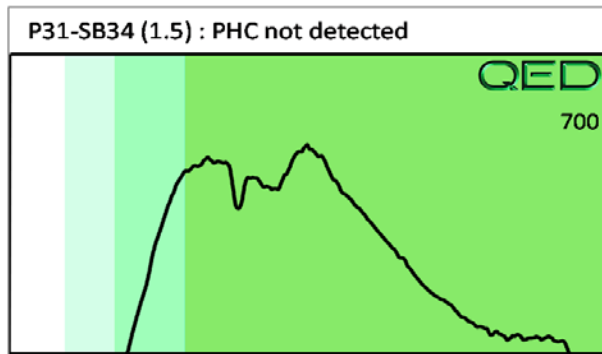
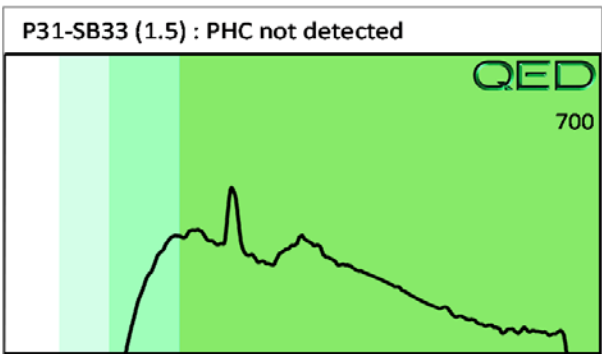
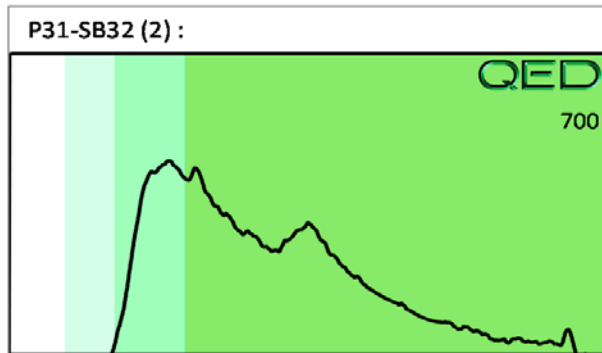
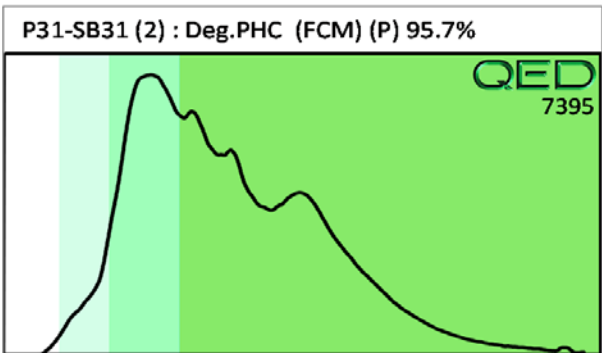
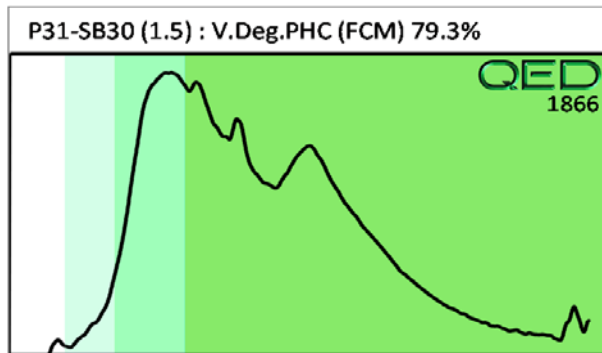
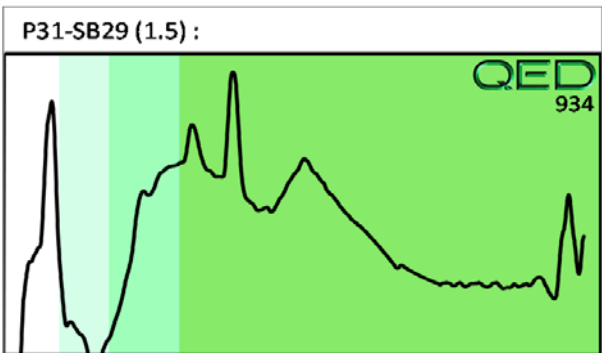
Operator KH

Project: 510497-003

										F03640			
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	P31-SB29 (1.5)	45.5	<1.1	<1.1	<1.1	<1.1	<0.44	<0.05	<0.005	0	35.4	64.6	
s	P31-SB30 (1.5)	41.3	<1	<1	3.4	3.4	2	0.11	0.004	0	68.3	31.7	V.Deg.PHC (FCM) 79.3%
s	P31-SB31 (2)	39.1	<0.98	<0.98	48.4	48.4	12.1	0.56	0.005	0	82.9	17.1	Deg.PHC (FCM) (P) 95.7%
s	P31-SB32 (2)	38.2	<0.95	<0.95	<0.95	<0.95	<0.19	<0.03	<0.004	0	35.8	64.2	
s	P31-SB33 (1.5)	19.5	<0.49	<0.49	<0.49	<0.49	<0.1	<0.02	<0.002	0	22.9	77.1	PHC not detected
s	P31-SB34 (1.5)	21.3	<0.53	<0.53	<0.53	<0.53	<0.11	<0.02	<0.002	0	0	100	PHC not detected
s	P31-SB35 (1.5)	21.8	<0.55	<0.55	0.55	0.55	0.29	0.03	<0.002	0	25.8	74.2	Residual.PHC (FCM) (P)
s	P31-SB36 (1.5)	39.4	<0.98	<0.98	10.5	10.5	3.5	0.19	0.004	0	76.1	23.9	V.Deg.PHC (FCM) 89.6%
s	P31-SB37 (2)	40.0	<1	<1	49.7	49.7	41.6	4.3	0.12	0	79.8	20.2	Deg.PHC (FCM) 62.1%
s	P31-SB38 (2)	52.5	<2.6	2.1	13.3	15.4	10.8	1.2	0.017	17.6	67.7	14.7	Road Tar (FCM) 79.4%
Initial Calibrator QC check										OK			97 %
										Final FCM QC Check			OK

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





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Contact: Dennis Li

Operator KH

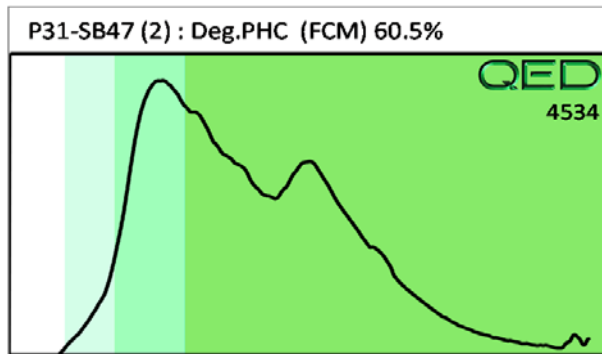
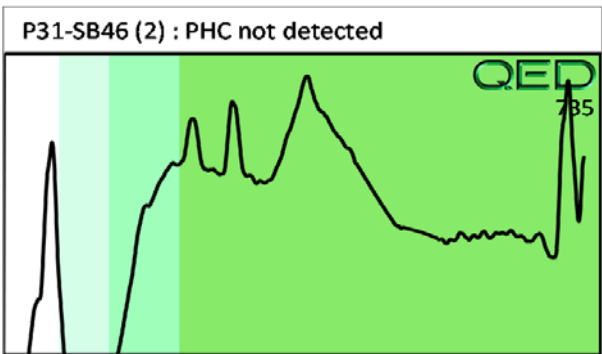
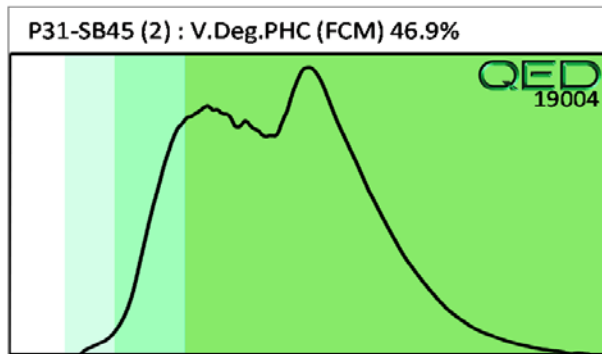
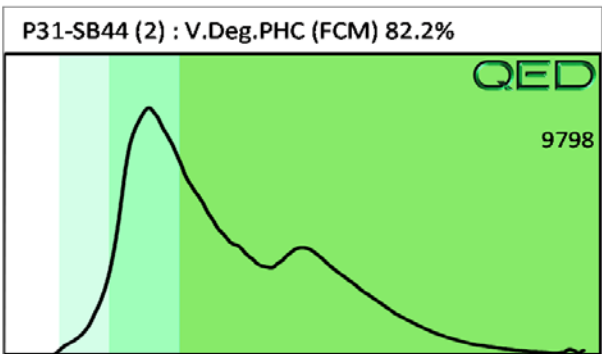
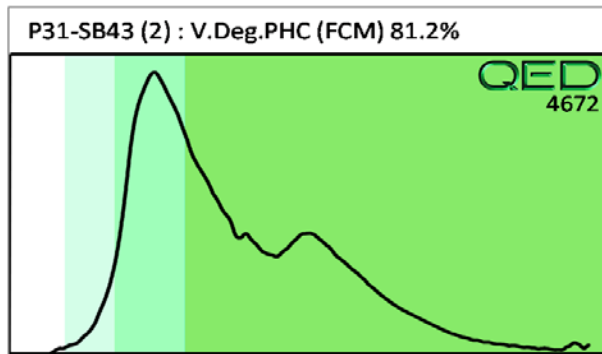
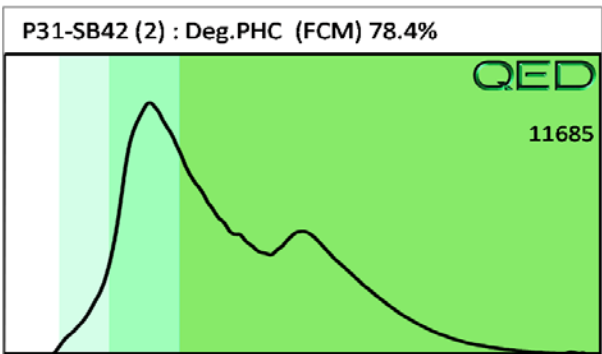
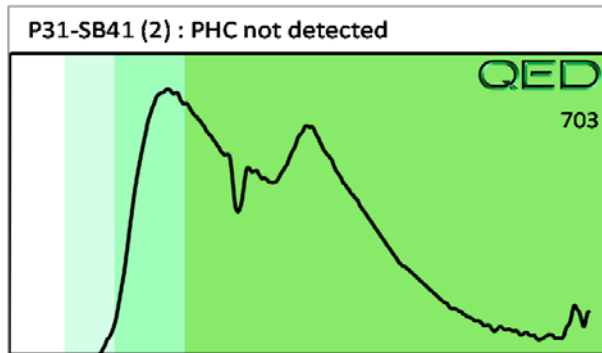
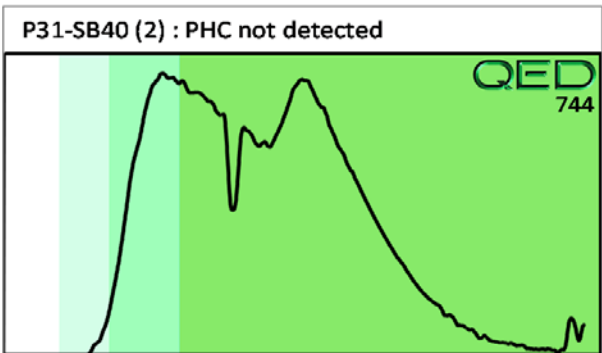
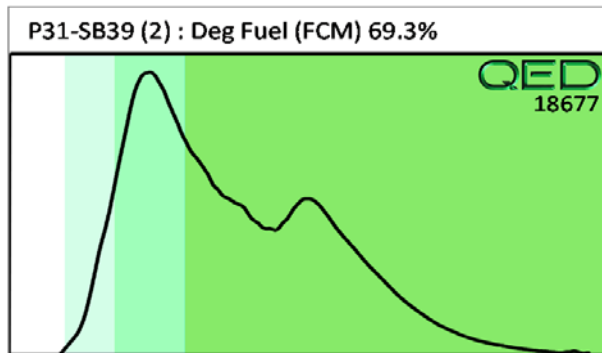
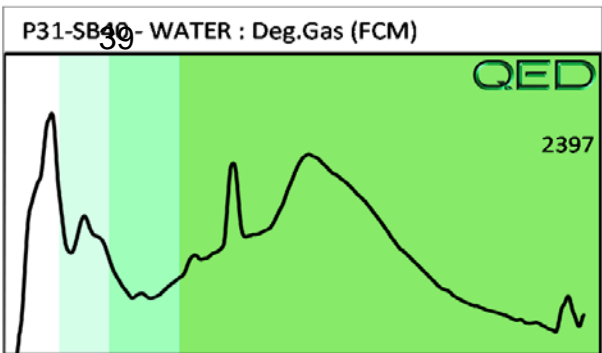
Project: 510497-003

											F03640		
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	
W	P31-SB39 - WATER	1.5	<0.038	0.82	0.15	0.97	0.14	0.02	<0	85.4	13	1.6	Deg.Gas (FCM)
s	P31-SB39 (2)	21.8	<0.55	<0.55	52.2	52.2	25.3	1.2	0.012	0	90.2	9.8	Deg Fuel (FCM) 69.3%
s	P31-SB40 (2)	20.6	<0.52	<0.52	<0.52	<0.52	<0.24	0.03	<0.002	0	50.8	49.2	PHC not detected
s	P31-SB41 (2)	22.8	<0.57	<0.57	<0.57	<0.57	<0.23	0.03	<0.002	0	47.5	52.5	PHC not detected
s	P31-SB42 (2)	21.8	<0.55	<0.55	12.4	12.4	10.1	1.1	0.016	0	82.4	17.6	Deg.PHC (FCM) 78.4%
s	P31-SB43 (2)	21.5	<0.54	<0.54	9.5	9.5	2.7	0.13	0.002	0	79.3	20.7	V.Deg.PHC (FCM) 81.2%
s	P31-SB44 (2)	20.3	<0.51	<0.51	23.1	23.1	6.8	0.31	0.004	0	80.5	19.5	V.Deg.PHC (FCM) 82.2%
s	P31-SB45 (2)	21.0	<0.52	<0.52	7.8	7.8	7.5	0.45	0.005	0	34.2	65.8	V.Deg.PHC (FCM) 46.9%
s	P31-SB46 (2)	21.3	<0.53	<0.53	<0.53	<0.53	<0.16	<0.02	<0.002	0	14.2	85.8	PHC not detected
s	P31-SB47 (2)	20.8	<0.52	<0.52	4.2	4.2	3.5	0.36	0.002	0	77.9	22.1	Deg.PHC (FCM) 60.5%
Initial Calibrator QC check			OK			Final FCM QC Check			OK			97.6 %	

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

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Operator KH

Project: 510497-003

										F03640			
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	P31-SB48 (2)	21.7	<0.54	<0.54	5.6	5.6	4.6	0.49	0.004	0	75.3	24.7	Deg.PHC (FCM) (P) 56.3%
s	P31-SB49 (2)	23.4	<0.59	<0.59	6.5	6.5	6	0.53	0.006	0	84.5	15.5	Deg.PHC (FCM) 70.7%
s	P31-SB50 (2)	21.3	<0.53	<0.53	33.2	33.2	29.8	1.4	0.016	0	78.8	21.2	Deg.PHC (FCM) 83.3%
s	P31-SB51 (2)	19.3	<0.48	<0.48	19.3	19.3	16.4	1.7	0.026	0	73.7	26.3	Deg.PHC (FCM) 52.5%
s	P31-SB52 (2)	20.6	<0.52	<0.52	19.7	19.7	16.5	1.7	0.027	0	77	23	Deg.PHC (FCM) 58.1%
s	P31-SB53 (2)	19.3	<0.48	<0.48	20.5	20.5	17.3	1.8	0.029	0	75.9	24.1	Deg.PHC (FCM) 56.5%
Initial Calibrator QC check			OK			Final FCM QC Check			OK			94.6 %	

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