November 5, 2018



Mr. Cyrus Parker, L.G., P.E. Geotechnical Engineering Unit State of N.C. Department of Transportation – Division of Highways P.O. Box 25201 Raleigh, NC 27611-5201

RE: PRELIMINARY SITE ASSESSMENT OF PARCEL 051 – Revision 1 ESP Project No. CS34.366

WBS:	34839.1.8
TIP:	U-2579AB
County:	Forsyth
Description	: Winston-Salem - Northern Beltway Eastern Section (Future I-74) From I-40 to I-40
	Business/US 421
Parcel No.:	051
Owner:	Jerry M. Pegram
Address:	4314 Kernersville Road, Winston-Salem, NC

Dear Mr. Parker:

ESP Associates, Inc. (ESP) is pleased to submit this report on our Preliminary Site Assessment of the subject parcel. This work was performed in accordance with your Request for Proposal dated April 17, 2018 and our Cost Proposal dated May 3, 2018.

We appreciate the opportunity to assist you during this phase of the project. If you should have any questions concerning this report, or if we may be of further assistance, please contact us.

Sincerely,

ESP Associates, Inc.

Edward D. Billington, PG Senior Geologist/Geophysicist DMN/EDB/CJW



not considered Final unless all signatures are completed

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1.0 INTRODUCTION

The North Carolina Department of Transportation (NCDOT) is planning to construct the Winston-Salem - Northern Beltway Eastern Section (Future I-74) From I-40 to I-40 Business/US 421 (Figure 1). The NCDOT requested that ESP Associates, Inc. (ESP) perform a Preliminary Site Assessment (PSA) of Parcel 051 within the proposed Right of Way (ROW) and/or easement to locate possible underground storage tanks (USTs), sample soil, and delineate potential contaminated soil.

2.0 HISTORY

This parcel is owned by Jerry M. Pegram and is currently occupied by an oil company, consignment shop, and storage facility. The facility is listed in the North Carolina Department of Environmental Quality's (NCDEQ's) UST Section Registry as an active facility with Facility ID #: 0-016313. One diesel UST and one propane aboveground storage tank (AST) are currently in use. There are no known groundwater or soil contamination incidents associated with this facility.

3.0 SITE OBSERVATIONS

During our May 2018 field work, the site was operating as an oil company, consignment shop, and storage facility (Figure 2). The ground in the study area was covered by asphalt, gravel, concrete, and grass.

4.0 METHODS

ESP performed a geophysical study of the area designated by the NCDOT on May 22, 2018. We performed direct-push drilling and sampling of subsurface soils within the proposed easement on September 4, 2018. A photoionization detector (PID) was used to screen subsurface soils in the field and select soil samples to send for laboratory analysis.

4.1 Geophysics

ESP performed a metal detector study over the accessible areas of the site using a Geonics EM61 MK2 with a line spacing of about three feet (Figures 3 and 4). Location control was provided in real-time using a differential global positioning system (DGPS). We collected ground-penetrating radar (GPR) data over selected EM61 anomalies using our Sensors and Software Noggin 250 GPR system. The GPR data were collected using a line spacing of one to two feet.

4.2 Borings

ESP performed direct-push drilling activities within the easement of Parcel 051 using a subcontractor, SAEDACCO of Fort Mill, South Carolina. The owner, Mr. Pegram, provided

permission for us to be on site. Mr. Pegram's geologist, Mr. Joseph Best, PG, was present during the drilling and split soil samples with us. Prior to drilling, ESP's utility locating crew marked the private utilities on Parcel 051.

Five borings were drilled, designated B51-1 through B51-5 (Figure 3). The soil borings were advanced using a GeoProbe 7822DT drill rig. Continuous soil samples were obtained to a depth of approximately ten feet using five-foot long Macro Cores®. All soil cores had a recovery of five feet. The sampling equipment was decontaminated prior to drilling and between borings by the driller using a Liquinox® detergent solution.

4.3 Soil Sample Protocol

Representative soil samples were taken from the Macro Core tubes at approximate one-foot intervals by the ESP field geologist while wearing nitrile disposable gloves. Each sample was placed in a sealed plastic bag and then kept in a sunny area for at least 5 minutes prior to measuring volatile organic compound (VOC) levels in the head space with the PID. The soil samples obtained had PID readings of less than 10 parts per million (ppm) (Table 1).

Soil samples selected for laboratory analysis were Sample S-9 (corresponding depth of 9.0-9.5 feet) from all borings. For each selected sample, an approximate 10-gram soil sample was collected from the Macro-Core tube using a Terra Core Sampler and placed into a laboratory-supplied 40-milliliter volatile organic analysis (VOA) vial containing methanol. Once sealed, the vial was labeled with the sample identification number and then shaken vigorously for about one minute. The samples were packed on ice and sent via overnight delivery to RED Lab, LLC (RED Lab), located in Wilmington, North Carolina, following proper chain-of-custody procedures (Appendix C).

RED Lab used a QED Hydrocarbon Analyzer to quantitatively analyze the soil samples using the ultraviolet fluorescence (UVF) method for benzene, toluene, ethylbenzene, and xylene (BTEX); gasoline range organics (GRO); diesel range organics (DRO); total petroleum hydrocarbons (TPH); total aromatics; polycyclic aromatic hydrocarbons (PAHs); and benzo(a)pyrene (BaP).

4.4 Groundwater

Groundwater was not encountered in the five borings drilled on the site.

5.0 **RESULTS**

5.1 Geophysics

The EM61 early time gate data show the response from both shallow and deeper metallic objects (Figure 3). The differential response reduces the effect of shallow anomalies and emphasizes

anomalies from larger and more deeply buried metallic objects, such as USTs (Figure 4). The EM61 differential results indicated one anomaly (response above background) that did not correspond to known site features.

GPR data were collected over the EM61 anomaly. The GPR data collected did not indicate the presence of unknown USTs within the study area.

The EM61 early time gate response and differential response are shown on the plan sheet on Figures 5 and 6, respectively.

5.2 Sample Data

The soil sample UVF hydrocarbon analysis results for BTEX, GRO, DRO, and PAHs are presented in Table 2. The RED Lab laboratory report, which includes results for TPH, total aromatics, and BaP, is provided in Appendix B. Values are provided in milligrams per kilogram(mg/kg or ppm).

5.3 Sample Observations

The results of the laboratory testing indicated that BTEX, PAHs, and GRO were below the detection limits for all samples. DRO was detected in 1 of the 5 soil samples tested but below the NCDEQ action level of 100 ppm. The highest DRO reading was 0.9 ppm in Sample S-9 (9.0-9.5 feet) from Boring B51-2.

6.0 CONCLUSIONS

6.1 Interpretation of Results

The results of the PSA for Parcel 051 of NCDOT Project U-2579AB do not indicate the presence of abandoned USTs. No petroleum hydrocarbon soil contamination at or above NCDEQ action levels was detected within the proposed construction easement on Parcel 051.

6.2 Geophysics

The geophysical data do not indicate the presence of abandoned USTs.

6.3 Soil

The results of the PID field screening readings and off-site UVF hydrocarbon analyses do not indicate the presence of contaminated soil at or above the NCDEQ action levels within the proposed construction easement on Parcel 051 (Figure 7).

7.0 **RECOMMENDATIONS**

The known UST should be removed prior to property acquisition. Other than the known UST, no limitations on construction activities or special handling of excavated soil are recommended for Parcel 051.

8.0 LIMITATIONS

ESP's professional services have been performed, findings obtained, and recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. ESP is not responsible for the independent conclusions, opinions, or recommendations made by others based on the data presented in this report.

The passage of time may result in a change in the environmental characteristics at this site and surrounding properties. ESP does not warrant against future operations or conditions, or against operations or conditions present of a type or at a location not investigated. ESP does not assume responsibility for other environmental issues that may be associated with the subject site.

TABLES

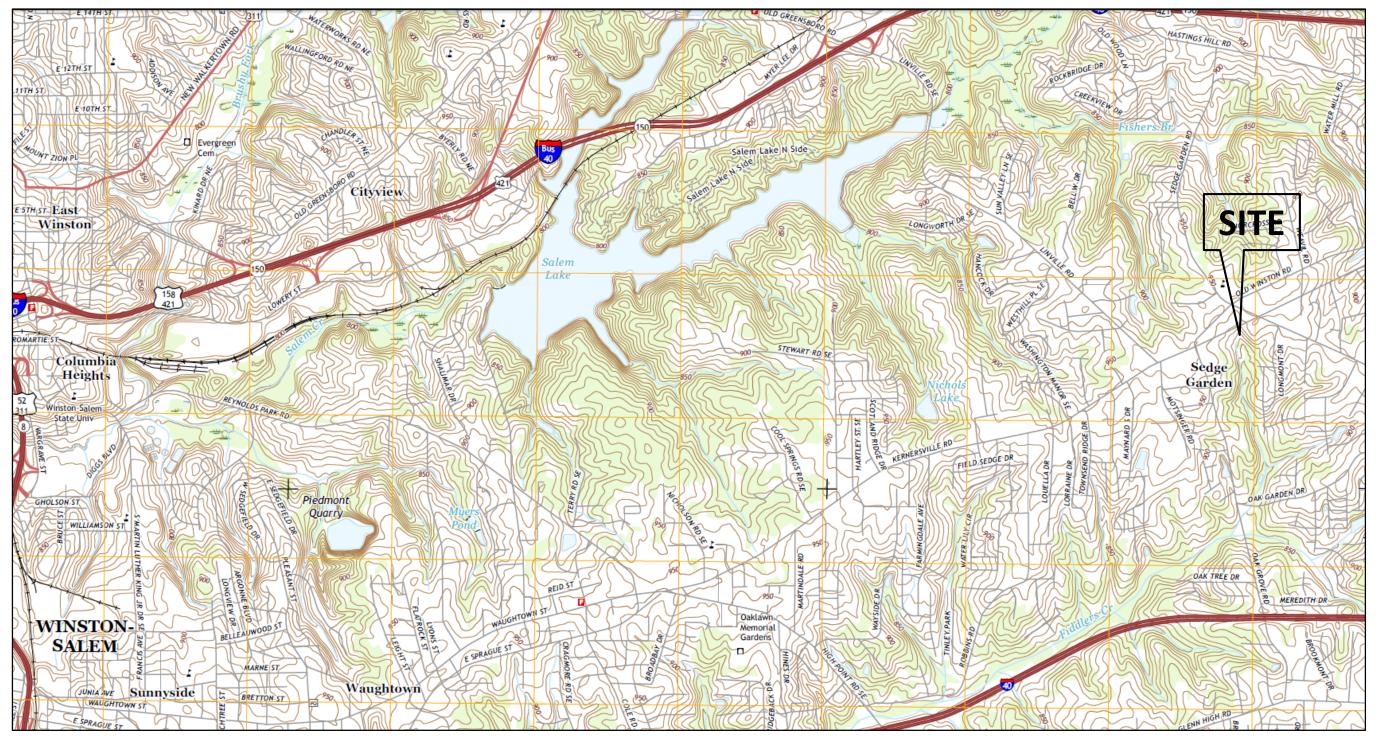
TABLE 1SOIL SAMPLE PID READINGS

Boring	Sample Depth Range with PID > 10 ppm (feet bgs)	Maximum PID Reading (ppm) and Sample Depth (feet bgs)
B51-1	none	0.6 (5.0-5.5)
B51-2	none	0.4 (5.0-5.5)
B51-3	none	0.4 (6.0-6.5)
B51-4	none	0.7 (8.0-8.5)
B51-5	none	0.8 (5.0-5.5)

Boring	Sample ID (depth in feet bgs)	Date Collected	BTEX (C6-C9) (mg/kg)	GRO (C5-C10) (mg/kg)	DRO (C10-C35) (mg/kg)	PAHs (mg/kg)
B51-1	S-9 (9.0-9.5)	9/10/18	< 0.21	<0.21	< 0.21	< 0.07
B51-2	S-9 (9.0-9.5)	9/10/18	<0.5	<0.5	0.9	<0.16
B51-3	S-9 (9.0-9.5)	9/10/18	<0.54	<0.54	<0.54	<0.17
B51-4	S-9 (9.0-9.5)	9/10/18	<0.56	<0.56	<0.56	<0.18
B51-5	S-9 (9.0-9.5)	9/10/18	<0.64	<0.64	<0.64	<0.2

TABLE 2SOIL SAMPLE UVF RESULTS SUMMARY

FIGURES



From: USGS US Topo 7.5 - minute map for WINSTON-SALEM EAST, NC Date: 2016, Scale: 1:24,000

	CS34.366 ALE AS SHOWN	FIGURE 1 – PARCEL 051, JE SITE VICINITY
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BY	DMN	FORSYTH COUNTY, NOR

IERRY M. PEGRAM Y MAP

RN BELTWAY EASTERN SECTION -40 BUSINESS/US421 RTH CAROLINA



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a. Photo from east side of site looking west.



c. Photo of propane AST looking south.



b. Photo from north side of site looking south.



d. Photo of marked known UST.

PROJECT NO. CS34.366 SCALE	FIGURE 2 – PARCEL 051, JI
AS SHOWN	SITE PHOTOGI
DATE 11/6/18	U-2579AB, WINSTON SALEM – NORTHERI
BY DMN	(FUTURE I-74) FROM I-40 TO I-4 FORSYTH COUNTY, NOR

JERRY M. PEGRAM GRAPHS

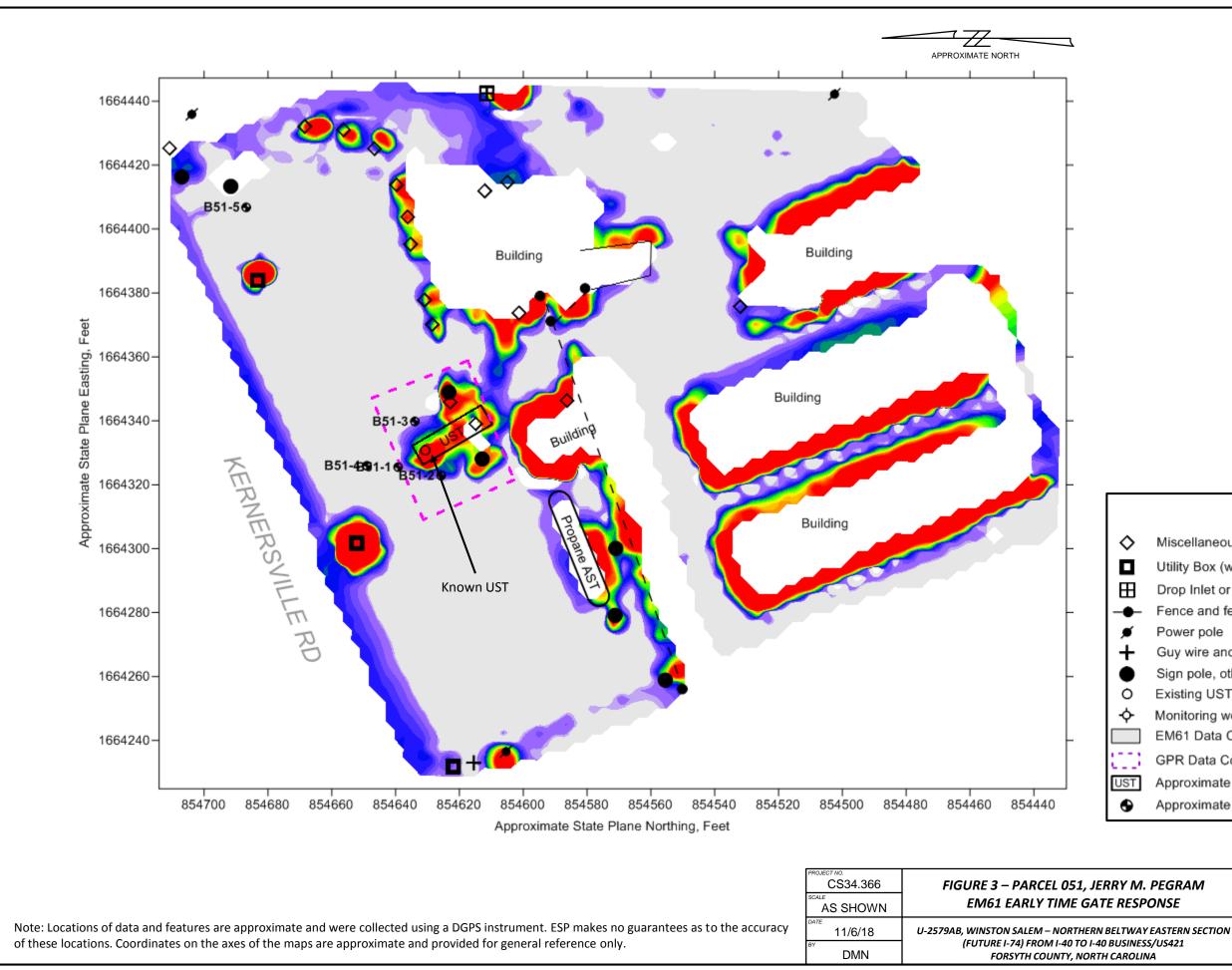
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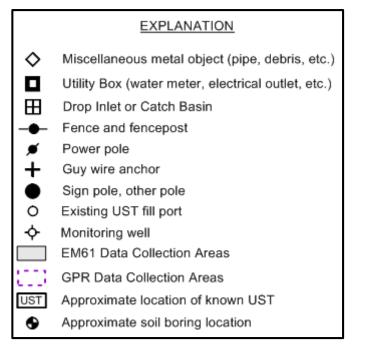
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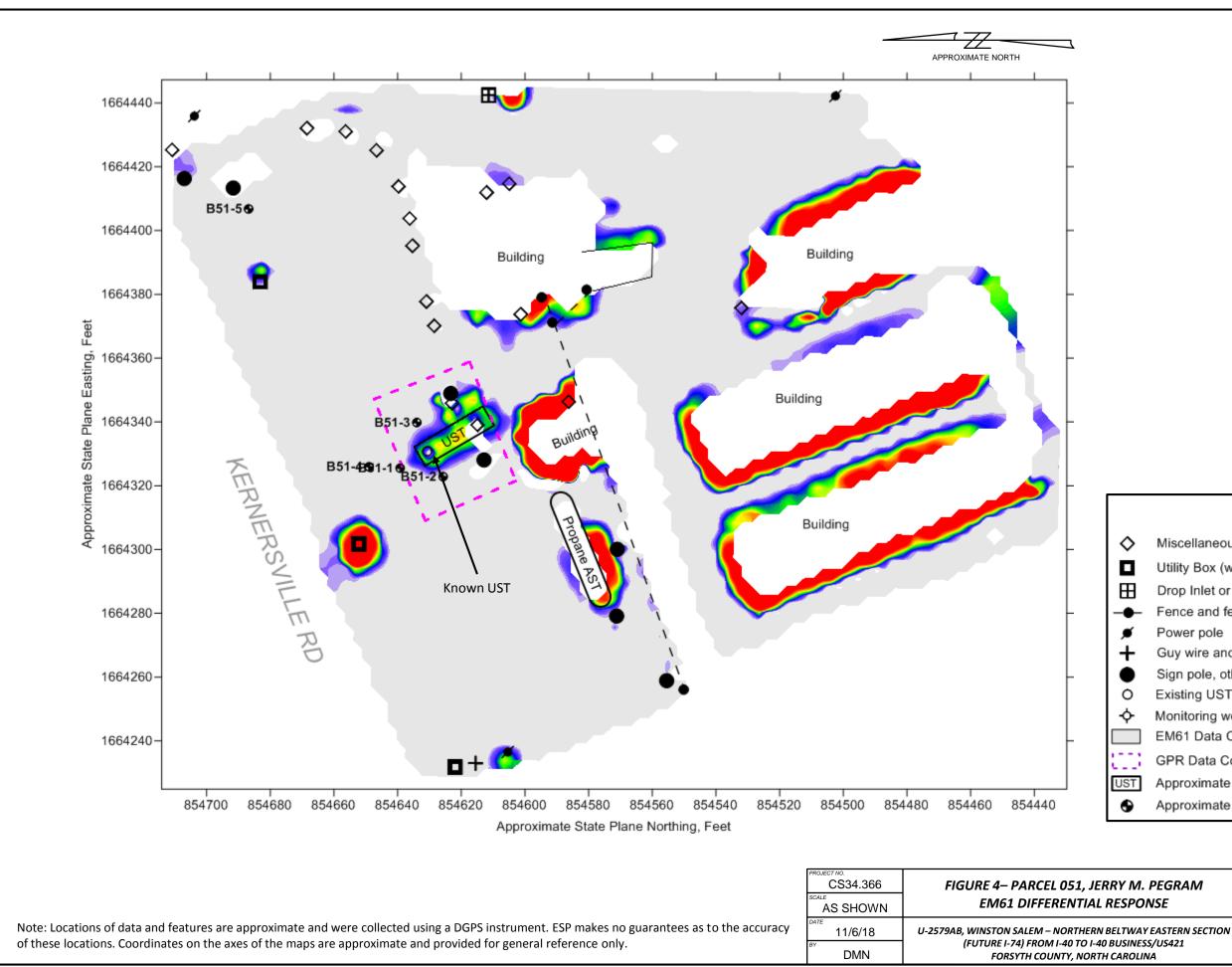




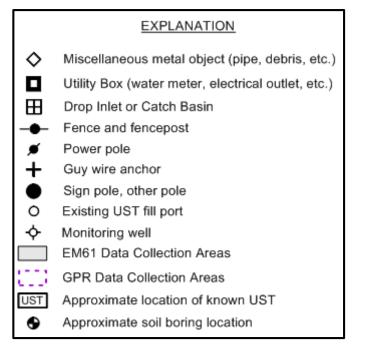


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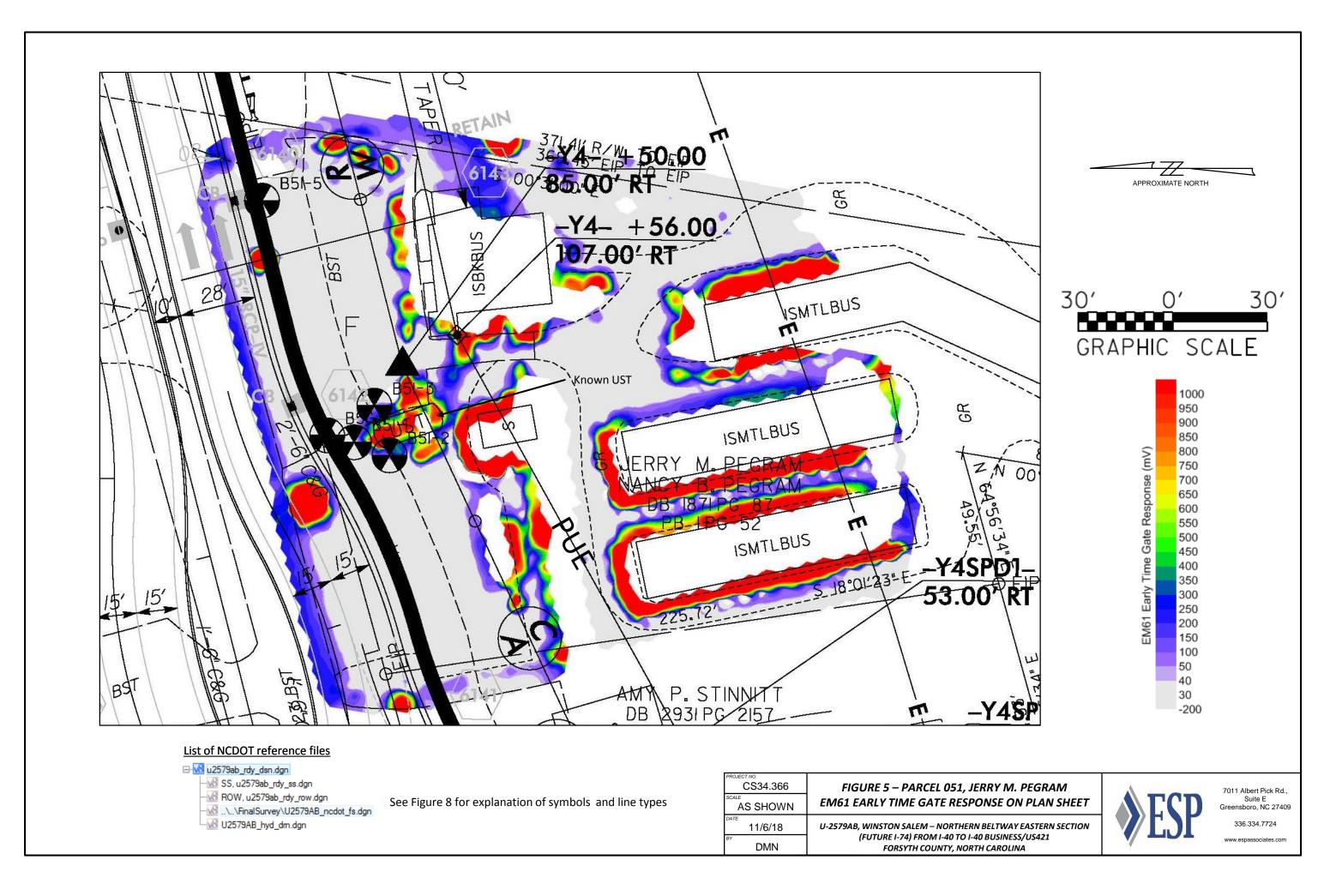
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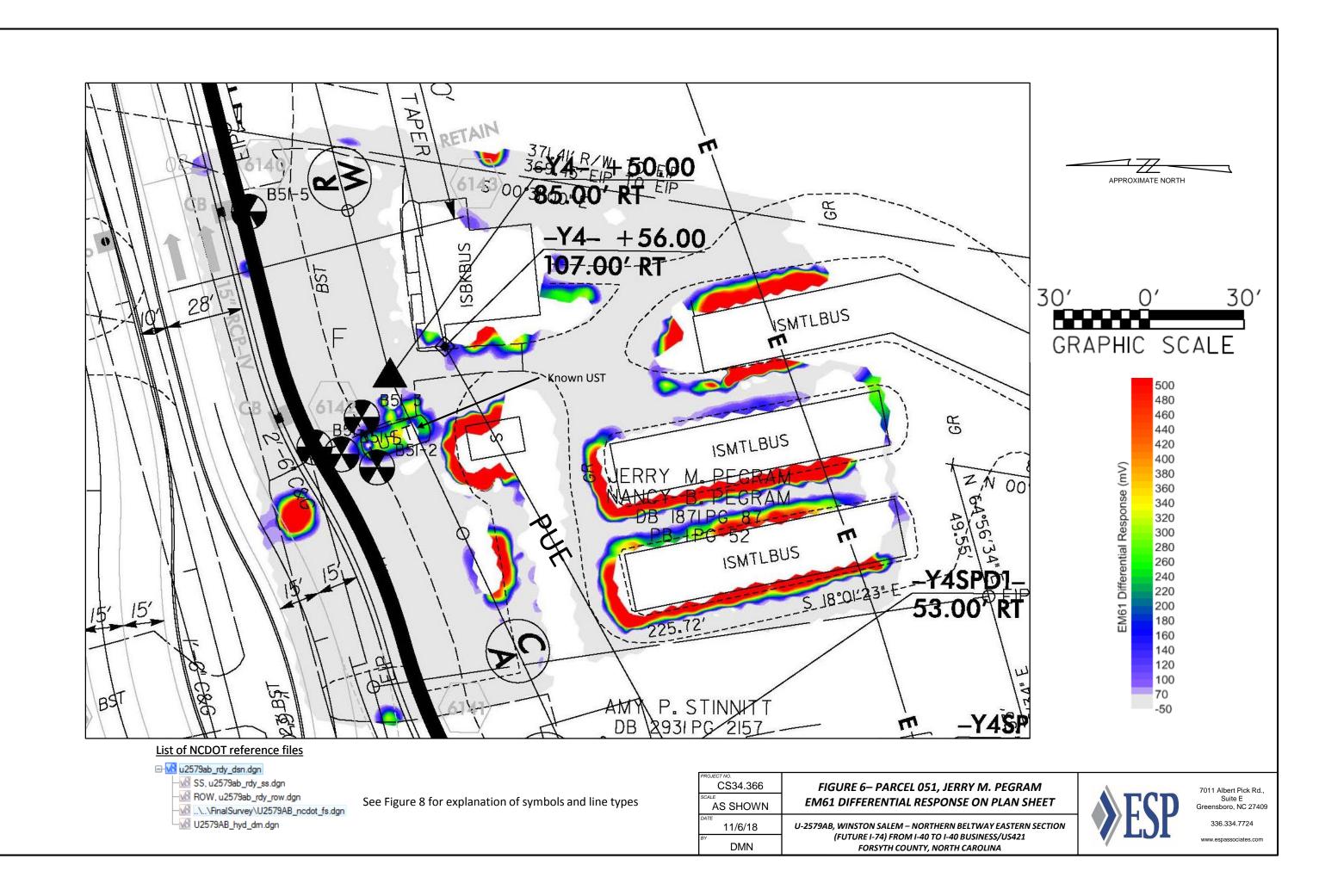


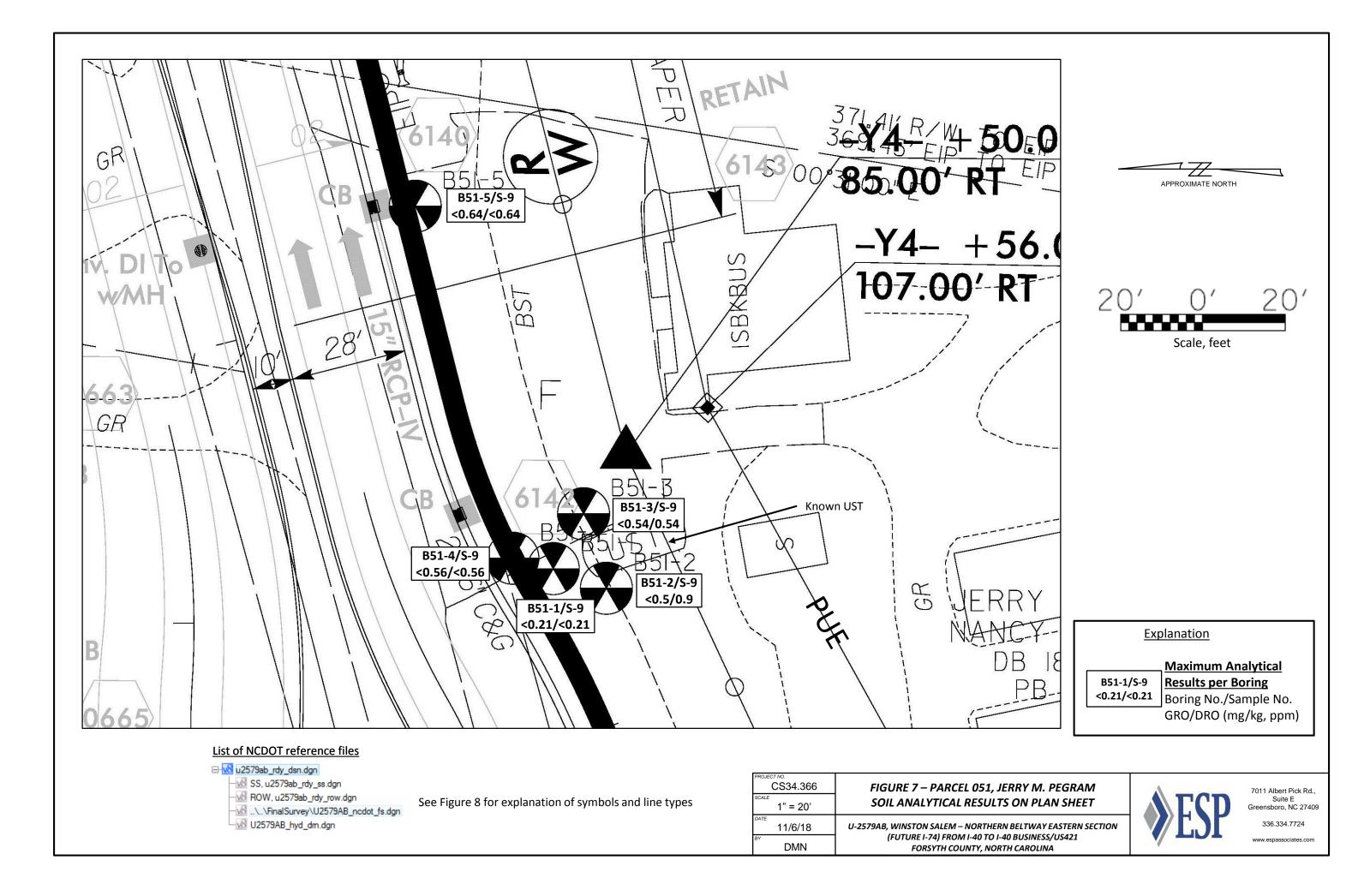


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Camery Existing Curb Fisting Curb SS Forced Main I Building Proposed Slope Stakes Cut Image: State S		Existing Edge of Pavement		U/G Power Line LOS D (S.U.E.*)	·•	
Building Proposed Slope Stokes Cut Fishing Telephone Pole SS Forced Main I School Proposed Slope Stokes Fill Proposed Slope Stokes Fill Proposed Telephone Pole MISCELLANEOUS: HYDROLOGY: Proposed Guiderail Proposed Guiderail II Utility Pole II Hydro, Pool or Reservoir Proposed Cub B Guiderail Froposed Cub B Guiderail II Utility Coated Oc Jurisdictional Stream II Proposed Cub B Guiderail III Utility Coated Oc Buffer Zone 1 Froposed Cub B Guiderail III Utility Unknown U UG Telephone Cable LOS B (S.U.E.*) Utility Unknown U Buffer Zone 2 Fiz 2 VEGETATION: Single Tree III Ud Telephone Codult LOS B (S.U.E.*) Ud G Telephone Codult LOS B (S.U.E.*) Ud G Telephone Codult LOS D (S.U.E.*) III du data Guadraid Wetland Hedge Woods Line III Woods Line IIII du data Guadraid IIII du data Guadraid IIII du data Guadraid IIIIIIII du data Guadraid IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		Entering Cone		TELEPHONE:		
School Proposed Slope Stakes Fill Proposed Slope Stakes Fill Proposed Telephone Pole O Church Proposed Curb Ramp III Proposed Curb Ramp III Utility Pole Dam HYDROLOGY: Proposed Guardrail III Utility Pole III Stream or Body of Water Proposed Guardrail IIII Utility Pole IIII Utility Pole Jurisdictional Stream Jurisdictional Stream Jurisdictional Stream Jurisdictional Stream IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		Proposed Slope Stakes Cut	£	Existing Telephone Pole	. 	
Church Proposed Curb Ramp Image: Construction of the construction		Proposed Slope Stakes Fill	Ľ			55 Forcea Main I
Dam Existing Metal Guardrail Image: Construction of Body of Water Image: Construction of Body of Body of Water Image: Construction of Body of B	Church	Proposed Curb Ramp	CR		. n	MISCELLANEOUS:
AmpRoducts: Proposed Guardrail Image: Construction of the serve in the ser		Existing Metal Guardrail	<u> </u>		. m	Utility Pole —
Sheath of Body of Water Existing Cable Guiderail Image: Cable Guiderail <t< td=""><td></td><td>Proposed Guardrail</td><td></td><td></td><td></td><td>Utility Pole with B</td></t<>		Proposed Guardrail				Utility Pole with B
Hydro, Pool or Keservoir Proposed Cable Guiderail Image: Cable Guiderail <	-	Existing Cable Guiderail	<u> </u>			Utility Located Ob
Jurisdictional Stream _js Equality Symbol Image: Construction of the		Proposed Cable Guiderail				Utility Traffic Sian
Buffer Zone 1 Buffer Zone 2 Pavement Removal Pavem		Equality Symbol	•			
Flow Arrow VEGETATION: U/G Telephone Conduit LOS B (S.U.E.*) U/G Telephone Conduit LOS B (S.U.E.*) Disappearing Stream Single Tree I/G Telephone Conduit LOS C (S.U.E.*) A/G Tank; Water, Spring I/G Telephone Conduit LOS D (S.U.E.*) I/G Te		Pavement Removal				
Flow Arrow Single Tree Single Tree UG Telephone Conduit LOS D (S.U.E.*) AG Tank; Water, Disappearing Stream Single Shrub o UG Telephone Conduit LOS D (S.U.E.*) AG Tank; Water, Vetland Hedge Woods Line Woods Line UG Fiber Optics Cable LOS D (S.U.E.*) Image: Conduit LOS D (S.U.E.*)		VEGETATION:				Underground Stor
Spring Single Shrub Image: Single Shrub Image		Single Tree	÷			5
Wetland + Proposed Lateral, Tail, Head Ditch Woods Line Woods Line - W						
Proposed Lateral, Tail, Head Ditch Woods Line Image: Contraction of the contrest of the contraction of the contraction of the contraction of t						
Proposed Lateral, Tail, Head Ditch Fiber Optics Cable LOS C (S.U.E.*) Fider of Information		-	- <u></u>			
	raise sump —					

PROJECT NO. CS34.366	FIGURE 8
scale N/A	LEGEND FOR PLAN SHE
DATE 11/6/18	U-2579AB, WINSTON SALEM – NORTHERN B
DMN	(FUTURE I-74) FROM I-40 TO I-40 E FORSYTH COUNTY, NORTH

PROJECT	REFERENCE NO. SHEET NO.
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nt	•
Line LOS B (S.U.E*)	
Line LOS C (S.U.E*)	
Line LOS D (S.U.E*)	
nd Water Line	A/G Water
	8
ole Hand Hole	E
ole LOS B (S.U.E.*)	n
ole LOS C (S.U.E.*)	nn
ble LOS D (S.U.E.*)	Tr
Optic Cable LOS B (S.U.E.*)	
Optic Cable LOS C (S.U.E.*)	
Optic Cable LOS D (S.U.E.*)	
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ne LOS C (S.U.E.*)	
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nd Gas Line	A70 005
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y Sewer Line	
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Nain Line LOS C (S.U.E.*)	Pss
Nain Line LOS D (S.U.E.*)	
DUS:	
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ed Object	0
Signal Box	5
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Vater, Gas, Oil	
d Storage Tank, Approx. Loc. ——	
Vater, Gas, Oil	
nental Boring	
e LOS A (S.U.E.*)	Θ
According to Utility Records —	-
mation	E.O.I.
	2.01.

8 HEET FIGURES

RN BELTWAY EASTERN SECTION -40 BUSINESS/US421 RTH CAROLINA



7011 Albert Pick Rd., Suite E Greensboro, NC 27409

336.334.7724

www.espassociates.com

APPENDIX A SOIL BORING LOGS

	FCP			FIE		DRING			BORING NO.
			DOT U-2579.						
	IECT NAME: ATION:	SW of UST		AB PSA		PR0	DJ. NO.: <u>CS34.366</u>	<u>.</u>	B51-1
	OF BORING		Direct Pus	sh	DATE S	STARTED: 9/4/	18	SHEE	T: 1 of 1
	ING FIRM:		SAEDACC			FINISHED: 9/4/		TOTAL DEPTH	
DRILI			Brian Ewir Geoprobe 782			METHOD: <u>5' M</u> GGED BY: D		DEPTH TO GW COMMEN	
	_ RIG:		-				. Nance		I
DEPTH (ft)	SAMPLE NO.	SAMPLE DEPTH (ft)	PID READING (ppm)			FIELD CLASSIF PHYSICAL DE			REMARKS
				0.0-0.8 0.8-1.9	Gravel Orange-b	prown sandy s	ilt w/ clav		Core 1 Rec 5.0'/5.0'
•	0.4		0.0		5-	,			
_1	S-1	1.0-1.5	0.6						
-				1.9-10.0	Orange-b	prown clayey s	silt		
2	S-2	2.0-2.5	0.4						
	0.0		0.0						
3	S-3	3.0-3.5	0.3						
-									
4	S-4	4.0-4.5	0.2						Core 2 Rec 5.0'/5.0'
	S-5		0.6						
_5	3-5	5.0-5.5	0.0						
6	S-6	6.0-6.5	0.5						
	S-7	7075	0.4						
_7	3-7	7.0-7.5	0.4						
8	S-8	8.0-8.5	0.4						
	S-9	0.0.0.5	0.3						
9 (3-9	9.0-9.5	0.3						
10		Sam	ple selected	for laborato	ry analysis				
•			+						
11									
_11									
•			+						
12									
ŀ			+						
10									
13									
•									
14									
ŀ									
15	1		1	1					

	FSP			FIELD BORING LOG	BORING NO.
	ECT NAME:	NCD SW of UST	OT U-2579/		B51-2
TYPE	OF BORING LING FIRM: LER:		Direct Pus SAEDACC Brian Ewin eoprobe 782	O DATE FINISHED: 9/4/18 TOTAL DEPTH: g SAMPLE METHOD: 5' Macro Core DEPTH TO GW:	: 10.0 ft Dry ft
DEPTH (ft)	SAMPLE NO.	SAMPLE DEPTH (ft)	PID READING (ppm)	FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION	REMARKS
				0.0-0.4 Gravel 0.4-5.5 Orange-brown sandy, clayey silt	Core 1 Rec 5.0'/5.0'
1	S-1	1.0-1.5	0.1		
2	S-2	2.0-2.5	0.1		
•					
3	S-3	3.0-3.5	0.1		
•					
4	S-4	4.0-4.5	0.2		Core 2 Rec 5.0'/5.0'
· · · · · · · · · · · · · · · · · · ·					
5	S-5	5.0-5.5	0.4	5.5-10.0 Orange-brown sandy silt	
6	S-6	6.0-6.5	0.0		
7	S-7	7.0-7.5	0.2		
a					
8	S-8	8.0-8.5	0.3		
•					
9 (S-9	9.0-9.5	0.3		
•					
10		Samp	le selected	for laboratory analysis	
<u>11</u>					
•					
12					
-					
13					
•					
14					
					······································
15					

	FSP			FIELD BORING LOG	BORING NO.
	ECT NAME:	NCE NE of UST	OOT U-2579/		B51-3
			Direct Pus SAEDACC Brian Ewin eoprobe 782	DATE FINISHED: 9/4/18 TOTAL DEPTH: SAMPLE METHOD: 5' Macro Core DEPTH TO GW:	
DEPTH (ft)	SAMPLE NO.	SAMPLE DEPTH (ft)	PID READING (ppm)	FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION	REMARKS
				0.0-1.0 Asphalt 1.0-10.0 Orange-brown clayey silt	Core 1 Rec 5.0'/5.0'
1	S-1	1.0-1.5	0.2		
2	S-2	2.0-2.5	0.3		
_3	S-3	3.0-3.5	0.3		
4	S-4	4.0-4.5	0.2		Core 2 Rec 5.0'/5.0'
_5	S-5	5.0-5.5	0.3		
6	S-6	6.0-6.5	0.4		
7	S-7	7.0-7.5	0.2		
8	S-8	8.0-8.5	0.2		·
9 (S-9	9.0-9.5	0.1		
<u>10</u>		Sam	le selected	for laboratory analysis	
11					
12					
13					
14					
15					

	FSP			FIFI	D BORING LOG		BORING NO.
	IECT NAME:		DOT U-2579		PROJ. NO.: CS34.366		B51-4
	TION: OF BORING	Center of p	Direct Pus	sh	DATE STARTED: 9/4/18	SHEET:	1 of 1
	_ING FIRM:	<u>-</u>	SAEDACC		DATE FINISHED: 9/4/18	TOTAL DEPTH:	
DRILI			Brian Ewir		SAMPLE METHOD: 5' Macro Core	DEPTH TO GW:	
DRILI	_ RIG:		Geoprobe 782	22 DT	LOGGED BY: D. Nance	COMMENT:	
DEPTH (ft)	SAMPLE NO.	SAMPLE DEPTH (ft)	PID READING (ppm)		FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION		REMARKS
-				0.0-0.6 0.6-10.0	Asphalt Orange-brown sandy, clayey silt		Core 1 Rec 5.0'/5.0'
	C 1	4045	0.6		<u> </u>		
_1	S-1	1.0-1.5	0.6				
2	S-2	2.0-2.5	0.4				
3	S-3	3.0-3.5	0.1				
		0.0-0.0					
•							
4	S-4	4.0-4.5	0.1				Core 2 Rec 5.0'/5.0'
·			_				
5	S-5	5.0-5.5	0.2				
·							
-	S-6	6.0-6.5	0.3				
_6	3-0	0.0-0.5	0.3				
·							
7	S-7	7.0-7.5	0.6				
·							
8	S-8	8.0-8.5	0.7				
·							
9 (S-9	9.0-9.5	0.6				
•							
10		Sam	ple selected	for laboratory	analysis		
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İ ——							
15							

Ň	FSP			FIFI	D BORIN	GIOG		BORING NO.
	IECT NAME:		DOT U-2579A	AB PSA		PROJ. NO.: <u>CS34.366</u>		B51-5
TYPE DRILI DRILI	OF BORING):	Direct Pus SAEDACC Brian Ewin eoprobe 782	h O g	DATE STARTED: DATE FINISHED: SAMPLE METHOD: LOGGED BY:	9/4/18 5' Macro Core	SHEET: TOTAL DEPTH: DEPTH TO GW: COMMENT:	10.0 ft Dry ft
DEPTH (ft)	SAMPLE NO.	SAMPLE DEPTH (ft)	PID READING (ppm)		FIELD CLA	ASSIFICATION AND AL DESCRIPTION	_	REMARKS
- <u> </u>				0.0-1.2 1.2-10.0	Asphalt Red-brown sandy,	, silty clay		Core 1 Rec 5.0'/5.0'
1	S-1	1.0-1.5	0.6					
2	S-2	2.0-2.5	0.7					
3	S-3	3.0-3.5	0.5					
4	S-4	4.0-4.5	0.5					Core 2 Rec 5.0'/5.0'
5	S-5	5.0-5.5	0.8					
6	S-6	6.0-6.5	1.1					
7	S-7	7.0-7.5	1.2					
8	S-8	8.0-8.5	1.0					
9 (S-9	9.0-9.5	0.6					
<u>10</u>		Sam	ple selected	for laborator	y analysis			
11								
12								
13								
·								
14								
15								

APPENDIX B

RED LAB LABORATORY TESTING REPORT

Q	ED										_	ſ	QROS
				Hydroca	arbon An	alysis Ro	esults						
Address:	lient: ESP ASSOCIATES, INC. ddress: 7011 ALBERT PICK ROAD SUITE E GREENSBORO NC 27409								San Sample Sampl		acted		Monday, September 10, 2018 Monday, September 10, 2018 Wednesday, September 12, 201
Contact:	DILLON NANCE									Ор	erator		NICK HENDRIX
Project:	U-2579 AB												U0090
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	c	% Ratios	;	HC Fingerprint Match
										C5 - C10	C10 - C18	C18	
S	B51-5 (S-9)	25.5	<0.64	<0.64	<0.64	<0.64	<0.13	<0.2	<0.025	0	0	0	PHC not detected
S	B51-4 (S-9)	22.2	<0.56	<0.56	<0.56	<0.56	<0.11	<0.18	<0.022	0	0	0	PHC not detected
S	B51-3 (S-9)	21.4	<0.54		<0.54	<0.54	<0.11	<0.17	<0.021	0		0	PHC not detected,(BO)
S	B51-2 (S-9)	20.0		<0.5	0.9	0.9	<0.1	<0.16	<0.02	0	100		Deg.Fuel 51%,(FCM)
S	B51-1 (S-9)	8.2	<0.21	<0.21	<0.21	<0.21	<0.04	<0.07	<0.008	0	0	100	,(FCM),(BO),(P)
	Initial	Calibrator	QC check	OK					Final FC	CM QC	Check	OK	96.4
Abbreviation 3 = Blank Di	on values in mg/kg for soil samples and mg ns :- FCM = Results calculated using Funda rift : (SBS)/(LBS) = Site Specific or Library I timated aromatic carbon number proportion	amental Calib Background S	ration Mode Subtraction a	: % = confide	nce of hydroc Ilt : (BO) = Ba	arbon identific ckground Org	cation : (PFM) = anics detected	= Poor Finge : (OCR) = 0	erprint Match	1 : (T) = ⁻ ange : (N	Turbid : (P) = Pai	rticulate detected

APPENDIX C CHAIN-OF-CUSTODY FORM

Client Name:	ESP Aggricules, FAC
Address:	FOILAIbert Pick Rd: Ste E Greensler, NC 27409
Contact:	Dillon Nonce
Project Ref.:	11-2579AB
Email:	d.nance@espassociates.com
Phone #:	336-404-3117
Collected by:	D. Nance



RAPID ENVIRONMENTAL DIAGNOSTICS

CHAIN OF CUSTODY AND ANALYTICAL

REQUEST FORM

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

Each sample will be analyzed for BTEX, GRO, DRO, TPH, PAH total aromatics and BaP

ample Collection	TAT Rec	quested	Matrix	Samp	D	UVF	GC BTEX	Total Wt.	Tare Wt.	Sample Wt.
Date/Time	24 Hour	48 Hour	(S/W)	-						
9/10/18		V	5	B36-5 5-	7	V		50.5	44.2	6.3
1)	1	B36-4 5-	9	1		50.5	44.1	6.4
				B36-3 5-1				530	44.1	8.9
				B36-2 5-0				48.4	44.0	4.4
				B36-1 5-9				50,4	44.3	61
				B60-4 5-1				51.2	44.3	6.9
				B60-3 5-7				51.7	44.4	7.3
				B60-2 5-8				49.6	44.3	5.3
				B60-1 5-1				51.2	44.5	6.7
				850-5 6-	8			50,5	44.3	6.2
				B50-4 5-10				49.3	44.0	5.3
				B50-3 5-9				46.0	44.0	2.6
				850-2 5-0				50.7	44.2	2.6
				B50-1 5-9				49.9	43.9	6.0
				B51-5 5-9				49.5	44.0	5.5
				B51-4 5-9	,			50.3	44.0	6.3
				1351-3 5-9				47.1	44.3	2.8
			1	B61-2 5-9				48.2	44.2	40
V		V		BEI-1 5-9		V		53.7	44.0	9.7
omments:	ost sa	nples u	nderwa	largely shaffe		(sentati	20	R	ED Lab USE	ONLY
	uished by		Date	e/Time	Accepted by		Date/Time	1	5	
DiNa			9/10/	j	N/	1 9/1	Date/Time	1	(\mathbf{a})	
	uished by			e/Time	Accepted by	1.2	Date/Time	1	(17)	
Kenne			- Sur					1	\smile	