October 1, 2019
Kleinfelder File No. RAL19R101914

Mr. John L. Pilipchuk, LG., PE
North Carolina Department of Transportation
State Geotechnical Engineer
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

SUBJECT: Preliminary Site Assessment Report
Parcel 29, Sam Lem
WBS Element No. 54035.1.1, TIP No. U-5757
NC 8 (Winston Road) from 9th Street to SR 1408 (Biesecker Rd) in Lexington. Widen to multi lanes
Kleinfelder Project No. 20201105.001A

Dear Mr. Pilipchuk,

Kleinfelder is pleased to provide its report detailing the activities conducted as part of the preliminary site assessment for the subject project.

Kleinfelder appreciates the opportunity to be of service to you. Should you have questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely,
KLEINFELDER, INC.

Abigail R. Shurtleff
Environmental Staff Professional

Michael J Burns, PG
Environmental Program Manager

ARS/MJB:asp

KLEINFELDER 3200 Gateway Centre Blvd. Suite 100, Morrisville, NC 27560 **p |** 919.755.5011 **f |** 919.755.1414

PRELIMINARY SITE ASSESSMENT REPORT
PARCEL 29 SAM LEM
PARCEL 1100900000002A
LEXINGTON, DAVIDSON COUNTY, NORTH CAROLINA

NCDOT WBS ELEMENT 54035.1.1
STATE PROJECT U-5757
NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408 (BIESECKER RD) IN LEXINGTON. WIDEN TO MULTI LANES

KLEINFELDER PROJECT NO. 20201105.001A

OCTOBER 1, 2019

A Report Prepared for:

Mr. John L. Pilipchuk, LG., PE
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Reviewed by:

Michael J. Burns, PG
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KLEINFELDER
3200 Gateway Centre Blvd. | Suite 100
Raleigh, North Carolina 27560
P | 919.755.5011

October 1, 2019

Kleinfelder Project No. 20201105.001A

PRELIMINARY SITE ASSESSMENT REPORT

Site Name and Location:	Parcel 29 1306 Winston Road Lexington, Davidson County, North Carolina
Latitude and Longitude:	35.843458°N, -80.253800°W
County Parcel Number	1100900000002A
Facility ID Number:	N/A
Leaking UST Incident:	N/A
State Project No.:	U-5757
NCDOT Project No.:	NCDOT WBS Element 54035.1.1
Description:	NC 8 (Winston Rd) from 9th Street to SR 1408 (Biesecker Rd) in Lexington. Widen to multi lanes
Date of Report:	October 1, 2019
Consultant:	Kleinfelder, Inc. 3200 Gateway Center Boulevard | Suite 100 Morrisville, North Carolina 27560 Corporate Geology License No. C-521 Corporate Licensure for Engineering F-1312

SEAL AND SIGNATURE OF CERTIFYING LICENSED GEOLOGIST

I, Michael J Burns, a Licensed Geologist for Kleinfelder, Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

DocuSigned by:
7E53DC44AC794CA...

Michael J Burns, LG
NC License No. 1645 10/7/2019

NORTH CAROLINA LICENSED SEAL 1645 GEOLOGIST MICHAEL JAMES BURNS

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PARCEL 1100900000002A
LEXINGTON, DAVIDSON COUNTY, NORTH CAROLINA

NCDOT WBS ELEMENT 54035.1.1
STATE PROJECT U-5757
NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408 (BIESECKER RD) IN LEXINGTON.
WIDEN TO MULTI LANES

1 INTRODUCTION

Kleinfelder, Inc. (Kleinfelder) has prepared this Preliminary Site Assessment (PSA) report to document assessment activities performed on a parcel known by the Davidson County, NC Tax Assessor's Office as Parcel Number 1100900000002A and by the NCDOT as Parcel 29 (the assessment area is hereafter referred to as the "Project Study Area"). The Project Study Area consists of the western and central portions of Parcel 29. Parcel 29 is currently a vacant lot located southeast of the intersection of NC Highway 8 (Winston Road) and Rainbow Street in the Town of Lexington, Davidson County, North Carolina (Figure 1).

Based on information provided in the Hazardous Materials Survey Report, dated February 28, 2018, prepared by Kleinfelder for SEPI Engineering & Construction, the parcel is currently a vacant lot with an asphalt area and concrete slab. Historically, it had been used as a car wash with possible use of an oil water separator. As such, the purpose of the PSA was to evaluate whether unknown USTs or contaminated soil are present in the Project Study Area that may result in increased project costs and future liability if acquired by the NCDOT.

1.1 SITE DESCRIPTION

Parcel 29 has a listed owner of Sam Lem. The parcel does not have a listed street address. The parcel consists of a vacant lot with a paved asphalt area in the western portion of the site, a concrete slab in the central portion of the site, and a kudzu-covered vegetated slope in the eastern portion of the site. The parcel is bounded a commercial restaurant and associated paved asphalt parking areas to the north; by forested and vegetated land to the east, beyond which are residential homes; by a food market and convenience store with associated paved asphalt parking areas to the south; and by NC Highway 8 (Winston Road) to the west, beyond which is a food market and residential homes. Photographs of the Project Study Area are provided in Appendix A.

1.2 SCOPE OF WORK

Kleinfelder conducted this PSA in accordance with the NCDOT's May 24, 2019, Request for Technical and Cost Proposal (RFP) and Kleinfelder's June 18, 2019 Technical and Cost Proposal. The NCDOT granted a formal Notice to Proceed on June 27, 2019.

2 HISTORY

2.1 PARCEL USAGE

The parcel is currently occupied by a vacant lot, with a paved asphalt area in the western portion of the site, a concrete slab in the central portion of the site, and a kudzu-covered vegetated slope in the eastern portion of the site.

The February 2018 Hazardous Materials Survey Report identifies the parcel as Parcel 41 (since changed to Parcel 29) located just north of the current 1307 Winston Road, though historically the parcel itself may have been associated with the 1307 Winston Road address. This report found no (0) records of USTs for the parcel; however, orphan USTs and the potential for petroleum contaminated soil from former use of the parcel as a car wash are mentioned in the report.

Kleinfelder conducted historical research to determine whether additional environmental listings were identified for Parcel 29, and identified a former car wash which operated on site from 1974 to 1998. This car wash may have operated an oil/water separator on-site.

No records of registered USTs and/or UST closure activities were reported for the site in the North Carolina Department of Environmental Quality (NCDEQ) UST database. The site had no other associated database listings on the NCDEQ online Division of Waste Management Site Locator Tool.

2.2 FACILITY ID NUMBERS

Kleinfelder reviewed the NCDEQ UST database for Parcel 29. The parcel was not listed in the database at the time of this report.

2.3 GROUNDWATER INCIDENT NUMBERS

No known groundwater incident numbers are associated with Parcel 29 at this time.

3 OBSERVATIONS

3.1 GROUNDWATER MONITORING WELLS

No groundwater monitoring wells were observed on Parcel 29 at the time of site exploration, August 6, 2019.

3.2 ACTIVE USTS

No indication of the active use of USTs at Parcel 29 was observed at the time of site exploration, August 6, 2019.

3.3 OTHER FEATURES APPARENT BEYOND PROJECT STUDY AREA

The Project Study Area consisted of the western and central portions of the parcel. There were no features of concern observed in the kudzu-covered vegetated slope on the eastern portion of the parcel within the Project Study Area or beyond the Project Study Area.

4 METHODS

4.1 PROPERTY OWNER CONTACTS

As part of Kleinfelder's scope of work, the listed property owner was contacted about the work schedule for the field work and the type of work being performed. The owner did not express any concern or special conditions associated with the work being performed.

4.2 HEALTH AND SAFETY

Prior to commencing the field work, Kleinfelder personnel developed a Site-Specific Health and Safety Plan (HASP) covering activities to be performed. The site-specific HASP was discussed with all Kleinfelder personnel involved with the project and at a daily on-site "tail gate" safety meetings with subcontractors and sub consultants. In addition to the HASP, Kleinfelder utilized its comprehensive Corporate Health and Safety Program, targeted to address those specific and critical tasks that involve Kleinfelder personnel and subcontractors. The Loss Prevention System (LPS™), a behavior-based program, is Kleinfelder's company-wide safety system implemented and embraced by all levels of the company.

4.3 GEOPHYSICAL INVESTIGATION

Pyramid Environmental & Engineering, P.C (Pyramid) conducted a geophysical investigation in the Project Study Area between July 15 and 16, 2019. Pyramid utilized electromagnetic (EM) induction technology and ground penetrating radar (GPR) to locate potential geophysical anomalies and potential USTs within the Project Study Area.

There were no EM responses that were not associated with known utilities, vehicles, or other previously known conditions. Two water meters were located in the southern portion of the parcel. Reinforced concrete was detected underneath the concrete pad in the central portion of the parcel.

A copy of the Pyramid Geophysical Investigation Report, detailing the field methodology, is included in Appendix B.

4.4 SOIL ASSESSMENT

The scope of work for the soil assessment was to evaluate the presence of soil contamination along the existing right-of-way and/or easement to evaluate whether known impact is present in this area and maybe migrating off-site. The soil borings were planned to be advanced to maximum depths of 10 to 15 feet below the ground surface (bgs) unless groundwater was encountered.

Field screening using a photo ionization detector (PID) was to be conducted at 1-foot intervals beginning at 0 foot to 1 foot. The soil sample with the highest PID reading above background or the sample from the maximum drilled depth would be selected for on-site laboratory analyses.

Prior to the drilling activities, public utilities were marked by NC One Call and private utilities were marked by Pyramid. A water meter was observed by Kleinfelder personnel at the time of site exploration, August 6, 2019, and is displayed in Figure 3.

Kleinfelder subcontracted Quantex, Inc. (Quantex) to perform the drilling on-site on August 6, 2019. Quantex advanced seven soil borings (P29-B1 to P29-B7) by direct-push technology from the ground surface to boring termination at locations specified by Kleinfelder. Borings P29-B1, P29-B2, P29-B3, and P29-B7 were drilled to 10 feet bgs. Borings P29-B4, P29-B5, and P29-B-6 were drilled to 15 feet bgs. The soil boring locations were identified in the field using a GPS. The soil boring locations are shown on Figure 2. The borings were located within the public utility easement along Winston Road and the parcel boundaries. Soil samples were collected by driving Macro Core™ samplers in 5-foot intervals. Each soil core was cut open, the soil samples were classified, and the soil was divided into 1-foot sections. Each 1-foot section was screened in the field using a PID. The PID readings are summarized in Table 1.

Soils from Parcel 29 generally consisted of a poorly compacted silty and sandy fill within the upper 5 feet, underlain primarily by a silty clay. However, soil boring P29-B1 returned a sliver of purple and brown woody debris from 7 to 10 feet bgs, which emitted a creosote odor. Soil borings P29-B4, P29-B6, and P29-B7 each returned a layer of suspected solidified creosote, varying in length, from between 6 and 13 feet bgs. Groundwater was not encountered in any of the borings at the termination depths of 10 or 15 feet bgs. Copies of the boring logs are included in Appendix C.

4.5 SOIL ANALYSIS

The PID readings from soil borings advanced were noted to be low; however, creosote odors were detected in multiple soil borings. Therefore, based on the PID data and visual/olfactory observations, one of the samples from borings P29-B2 and P-29-B6, two of the samples from borings P29-B1, P29-B3, P29-B5, and P29-B7, and four samples from P29-B4 were selected for on-site laboratory analysis.

The samples were analyzed by RED Lab, LLC utilizing ultraviolet fluorescence (UVF) methodology to provide real-time analytical results of Total Petroleum Hydrocarbons (TPH), Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and benzene, toluene,

ethylbenzene, and total xylenes (BTEX). The UVF method was selected because of the possible use of petroleum products on Parcel 29. The UVF analysis also provided data regarding Environmental Protection Agency 16 total Polycyclic Aromatic Hydrocarbons (PAHs), and Benzo(a)pyrene (BaP). Due to the low PID readings, samples were not analyzed per EPA Method 8260.

5 RESULTS

5.1 GEOPHYSICAL INVESTIGATION

The EM and GPR surveys did not identified unknown geophysical anomalies within the Project Study Area.

5.2 SOIL SAMPLING DATA

The UVF analysis of soil samples indicated the presence of petroleum impact, TPH DRO, in soil borings P29-B1 (7 feet bgs), P29-B4 (10 and 13 feet bgs), P29-B5 (15 feet bgs), and P29-B6 (10 feet bgs) which exceeded the NCDEQ Action Limit. The fingerprint for each of these detections was noted to be Light Coal Tar, consistent with the olfactory observations of creosote odors and visual observations of woody debris. The shallowest observation of this treated-wood debris, however, is at approximately 6 feet bgs. As such, shallow soil impact (from ground surface to 6 feet bgs) above NCDEQ Action Limits does not appear to be present within the existing right-of-way and the parcel boundaries. A summary of soil sample analytical results is presented in Table 2. The laboratory results associated with each soil boring are presented on Figure 3. The laboratory report and graphs are included in Appendix D.

5.3 SAMPLE OBSERVATIONS

Soils were observed for any obvious evidence of contamination. Olfactory evidence of creosote contamination was noted in soil borings P29-B1, P29-B4, P29-B5, P29-B6, and P29-B7. Visual evidence of treated-wood debris was noted in soil boring P29-B1 and solidified creosote was observed in soil borings P29-B4, P29-B6, and P29-B7.

5.4 QUANTITY CALCULATIONS

Kleinfelder identified wood-treated debris and associated light coal tar contamination within the current right-of-way and the parcel boundaries. The approximate extent of the wood-treated debris and creosote is shown on Figure 3. An additional soil boring south of P29-B6 was not attempted due to the discovery of a water meter and intervening marked and/or suspected utilities. As such, soil boring P28-B2 was utilized to determine the southerly extent of soil contamination. A north to south cross section is shown in Figure 5, a west to east cross section is shown on Figure 6, and a map depicting the cross sections is shown on Figure 4. The contamination ranged from approximately 6 feet bgs at the shallowest to boring termination at 15 feet bgs. Based on the results of this investigation, below is the estimated quantity of impacted soil on-site:

(Figure 5) North to South Cross Section – Approximately 40-ft wide (6’ to 13’ bgs)

(Figure 6) West to East Cross Section – Approximately 85-ft long (6.5’ to 15’ bgs)

Average thickness = 7.75-ft

Total = 658.75 Tons Light Coal Tar Contaminated Soil + Woody Debris

6 CONCLUSIONS

Based on results of the EM/GPR survey, soil assessment and field observations, Kleinfelder has reached the following conclusions:

- The GPR and EM investigation did not identify unknown features.
- The site has no NCDEQ database listings. However, the site operated as a car wash from approximately 1974 to 1998, and may have utilized an oil/water separator.
- Soil impact above the NCDEQ Action Limit for TPH DRO, was detected in borings advanced in the vicinity of the reinforced concrete pad within the public utility easement and the southern parcel boundary. The chemical fingerprint for this impact was identified as Light Coal Tar, and olfactory observations of creosote odors was detected as well as visual observations of woody debris. This suggests the most likely source of the soil impact is buried creosote-treated woody debris. The shallowest occurrence of this debris was noted at approximately 6-ft bgs and the deepest at boring termination, 15-ft bgs.
- The approximate quantity of impacted soil and treated-wood debris is estimated at 658.75 tons.
- Shallow soil impact (from 0 to 6 feet bgs) above the NCDEQ Action Limits for TPH GRO and TPH DRO was not detected in soil borings advanced within the public utility easement and the parcel boundaries.
- Groundwater was not encountered in the soil borings at termination depth of either 10 or 15 feet bgs.
- About 660 tons of light coal tar contaminated soil + woody debris was identified in portions of the project study area at depths beginning at 6 feet.

7 RECOMMENDATIONS

Based on results of this Preliminary Site Assessment, Kleinfelder recommends that if debris is encountered during construction, excavation of identified creosote-treated wood debris and light coal tar contaminated soil be performed within the Project Study Area on Parcel 29 in Lexington, Davidson County, North Carolina.

8 LIMITATIONS

Kleinfelder's work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of its profession practicing in the same locality, under similar conditions and at the date the services are provided. Kleinfelder's conclusions, opinions and recommendations will be based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, Kleinfelder's clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface studies or field tests, should be performed to reduce uncertainties. Acceptance of this report will indicate that NCDOT has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may have been discovered. Kleinfelder assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this report should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, or generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order. NCDOT is solely responsible for directing notification of all governmental agencies, and the public at large, of the existence, release, treatment or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. NCDOT is responsible for directing all arrangements to lawfully store, treat,

recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

TABLES

Table 1: Soil Sample Screening Results

Date	Sample ID	Depth (ft)	PID Reading	Notes
8/6/2019	U5757-P29-B1	1	NR	
		2	0.3	
		3	1.2	
		4	1.2	UVF Analysis
		5	1.8	
		6	2.1	
		7	1.9	UVF Analysis
		8	2.3	
		9	1.9	
		10	1.1	
8/6/2019	U5757-P29-B2	1	0.5	
		2	0.6	
		3	1.0	
		4	0.6	
		5	0.7	
		6	1.1	
		7	2.1	UVF Analysis
		8	1.1	
		9	0.6	
		10	0.6	
8/6/2019	U5757-P29-B3	1	NR	
		2	0.6	
		3	1.4	UVF Analysis
		4	1.8	
		5	3.2	
		6	1.9	
		7	2.5	
		8	3.2	
		9	1.7	
		10	0.8	UVF Analysis
8/6/2019	U5757-P29-B4	1	NR	
		2	0.7	
		3	NR	
		4	1.5	
		5	1.8	
		6	3.2	UVF Analysis
		7	1.6	
		8	1.7	
		9	8.2	
		10	5.2	UVF Analysis
		11	0.2	
		12	12.2	
		13	1.6	UVF Analysis
		14	1.1	
		15	0.8	UVF Analysis
8/6/2019	U5757-P29-B5	1	NR	
		2	1.5	
		3	NR	
		4	NR	
		5	1.6	
		6	NR	
		7	NR	
		8	NR	
		9	NR	
		10	1.4	UVF Analysis
		11	NR	
		12	NR	
		13	1.1	
		14	0.4	
		15	1.7	UVF Analysis
8/6/2019	U5757-P29-B6	1	0.9	
		2	NR	
		3	2.3	
		4	2.0	
		5	2.0	
		6	NR	
		7	2.2	
		8	2.3	
		9	3.7	
		10	9.0	UVF Analysis
		11	NR	
		12	NR	
		13	NR	
		14	NR	
		15	1.1	
8/6/2019	U5757-P29-B7	1	2.3	
		2	2.1	
		3	1.4	
		4	1.6	
		5	1.8	
		6	1.2	
		7	1.6	UVF Analysis
		8	0.9	UVF Analysis
		9	0.6	
		10	0.8	

Notes:
1) PID = Photoionization Detector
2) PID readings in parts per million (ppm)
3) NR = no recovery

TABLE 2: Soil Sample Analytical Summary

Parameter	Analytical Results														Comparison Criteria		
	Soil Sample Results																
Sample ID	P29-B1-4	P29-B1-7	P29-B2-7	P29-B3-3	P29-B3-10	P29-B4-6	P29-B4-10	P29-B4-13	P29-B4-15	P29-B5-15	P29-B5-10	P29-B6-10	P29-B7-7	P29-B7-8	State Action Limit	Protection of Groundwater	Residential Health
PID Reading (ppm)	1.2	1.9	2.1	1.4	0.8	3.2	5.2	1.6	0.8	1.4	1.7	9.0	1.6	0.9			
Collection Depth (ft bgs)	4	7	7	3	10	6	10	13	15	15	10	10	7	8			
Collection Date	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19	8/6/19			
UVF Method																	
Diesel Range Organics	**22.9**	**944.4**	**27.1**	**5.2**	**3.4**	**19.1**	**4880**	**141.5**	**2.7**	**598.5**	**1.3**	**13941**	**56.8**	**3.4**	100	--	--
Gasoline Range Organics	**1.4**	<104.6	<0.61	**2**	<0.69	**2.3**	<134	<7.8	<0.48	<8.5	<0.66	<402.7	<21	**3.7**	50	--	--

Notes:
Results displayed in milligram per kilogram (mg/kg)
ft bgs = Feet below ground surface
Bold = Above Laboratory Detection Limit
Highlight = Above State Action Limit
UVF = Ultraviolet Flouresence

FIGURES

PROJECT REFERENCE NO.	SHEET
U–5757–P29	1

SITE LOCATION MAP

0 1500 3000

FEET

P29

BM806

Erlanger

STREET

PROJECT REFERENCE NO.	SHEET
U-5757-P29	2

SITE PLAN

0 20 40

FEET

LEGEND

P29B1 SOIL SAMPLE LOCATIONS

P29B2
P29B7
P29B3
P29BI
P29B4
P29B5
P29B6

PUE
PUE
PUE

RW

F

6" CURB
6" CURB
RR SPIKE

ISFD BUS

66'

29
36
28

SAM L
DB 1796 PG 214
PB 36 PG 39

NC GRID
NAD 83 NA 2011

N

PROJECT REFERENCE NO.	SHEET
U-5757-P29	3
SOIL SAMPLE ANALYTICAL RESULTS	

0 20 40
FEET

N
NC GRID
NAD 83 NA 2011

LEGEND

P29B1 — SOIL SAMPLE LOCATIONS

AREA OF KNOWN SOIL CONTAMINATION

AREA OF SUSPECTED SOIL CONTAMINATION

SOIL SAMPLE RESULTS

	DRO	GRO
P29-B1-4	22.9	1.4
P29-B1-7	**944.4**	<104.6
P29-B2-7	27.1	<0.61
P29-B3-3	5.2	2.0
P29-B3-10	3.4	<0.69
P29-B4-6	19.1	2.3
P29-B4-10	**4880**	<134
P29-B4-13	**141.5**	<7.8
P29-B4-15	2.7	<0.48
P29-5-10	**598.5**	<8.5
P29-5-15	1.3	<0.66
P29-B6-10	**13941**	<402.7
P29-B7-7	56.8	<21
P29-B7-8	3.4	3.7
P28-B2-4	5.8	4.9
P28-B2-8	0.33	<0.33

NOTES:
1) All results reported in mg/kg
2) DRO = Diesel Range Organics
3) GRO = Gasoline Range Organics
4) Bold concentrations exceed the NCDEQ TPH Action Limit

P29B2 P29B7 P29B3 P29BI P29B4 P29B5 P29B6 P28B2

SUSPECTED WATER LINE
WATER METER FOUND
UNKNOWN MARKED UTILTIES
RR SPIKE
PUE
RW
29
36
28
SAM LEM DB 1795 PG 214 PB 36 PG 39
KHORN KHUTH DB 1762 PG 869 PB 49 PG 51

PROJECT REFERENCE NO.	SHEET
U-5757-P29	4

CROSS SECTION LOCATIONS

0 20 40

FEET

LEGEND

P29B1 SOIL SAMPLE LOCATIONS

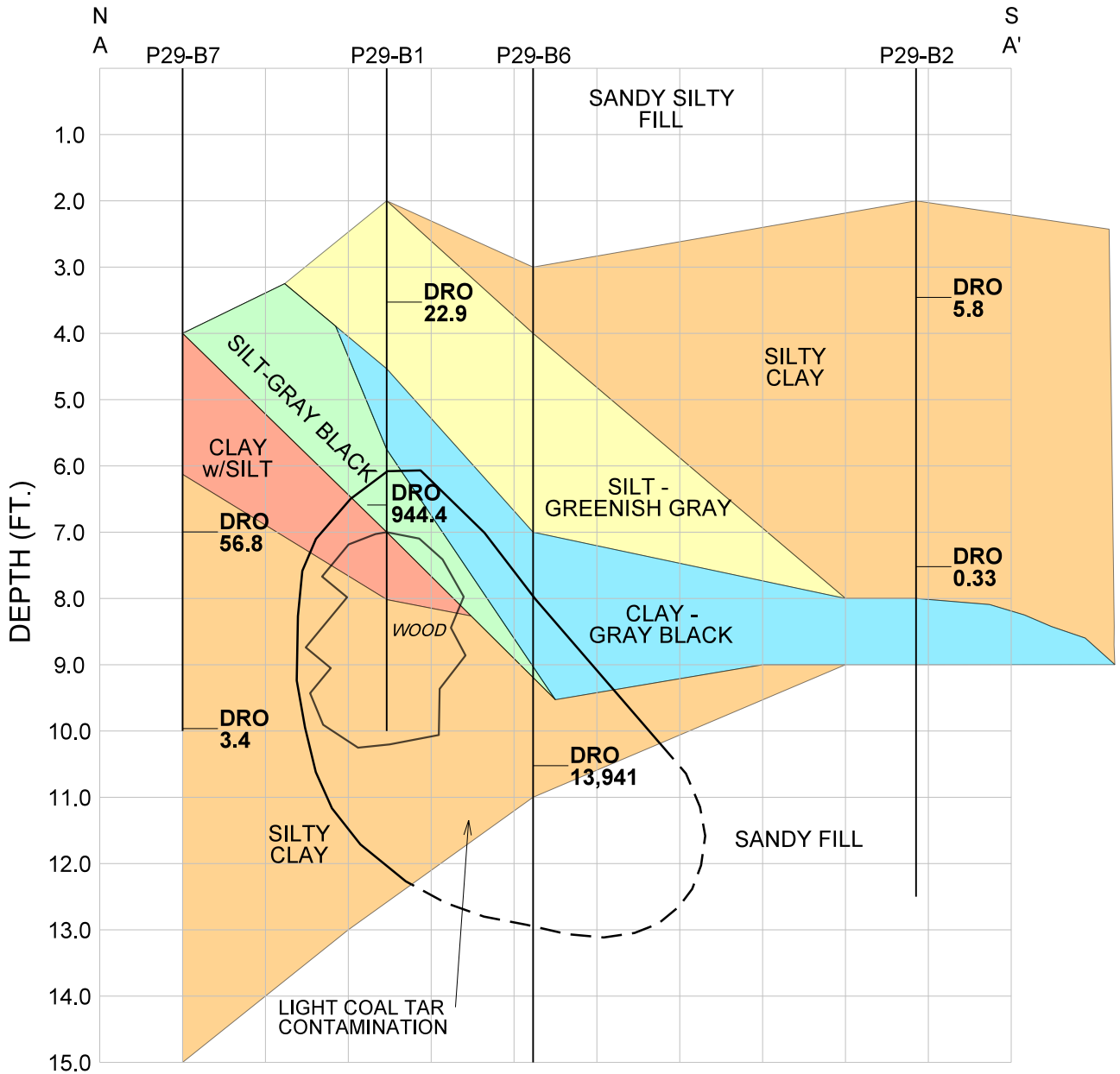
CROSS SECTION

P29B2
P29B7
P29B3
P29BI
P29B4
P29B5
P29B6
P28B2
A
A'
B
B'
PUE
RW
F
29
36
28
ISFD BUS
6" CURB
RR SPIKE
NC GRID
NAD 83 NA 2011

PROJECT REFERENCE NO.	FIGURE NO.
U-5757-P29	5

NORTH TO SOUTH CROSS SECTION
LIGHT COAL TAR CONTAMINATION

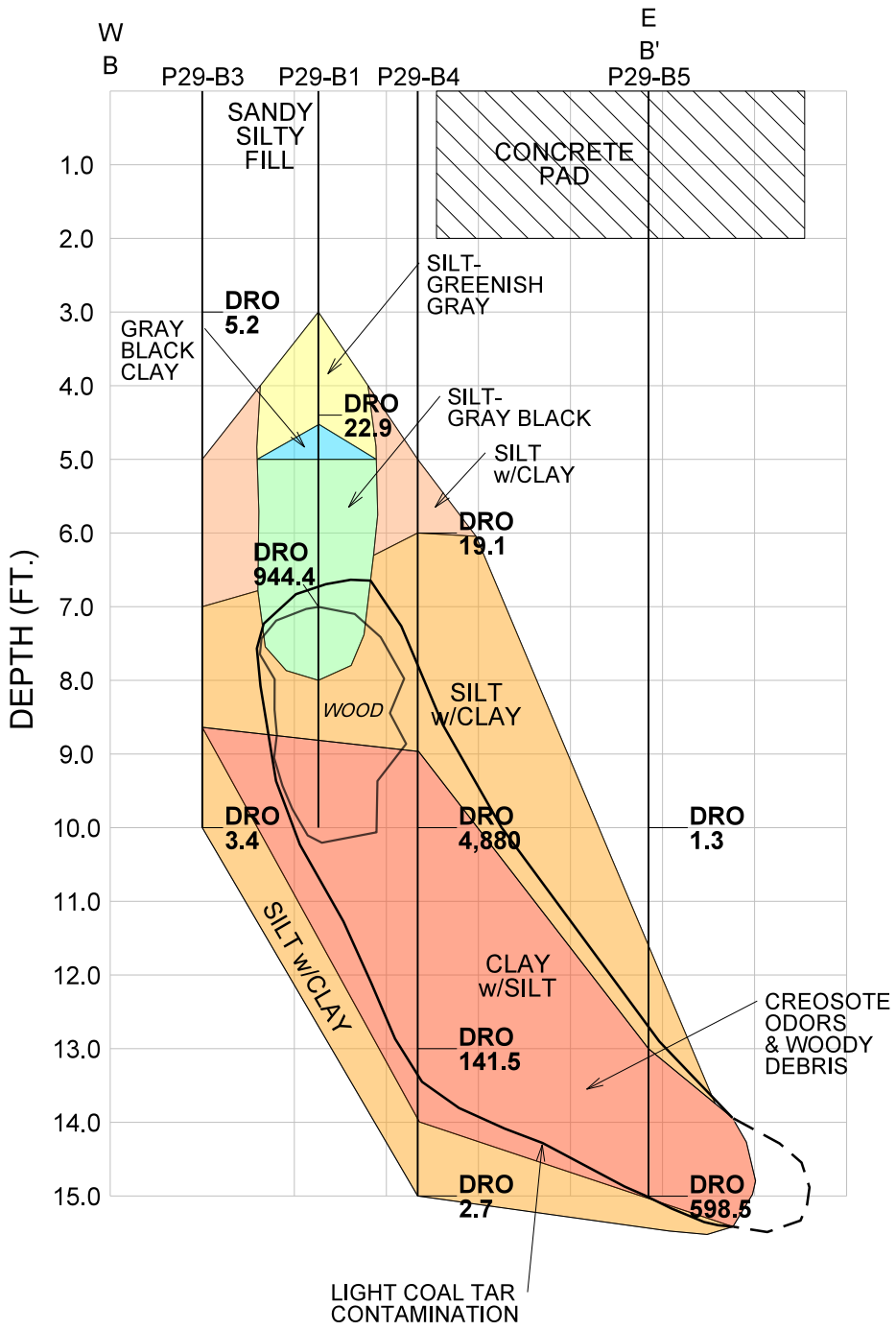
0 20 40
FEET



PROJECT REFERENCE NO.	FIGURE NO.
U-5757-P29	6

WEST TO EAST CROSS SECTION
LIGHT COAL TAR CONTAMINATION

0 20 40
FEET



APPENDIX A
SITE PHOTOGRAPHS

View facing south-southeasterly of the central portion of Parcel 29, the former car wash.

View facing northwesterly of the central portion of Parcel 29.

Original in Color

KLEINFELDER *Bright People. Right Solutions.* www.kleinfelder.com	PROJECT NO:20201105.001A DRAWN: September 2019 DRAWN BY: ARS CHECKED BY: MB FILE NAME: Photo Pages	**SITE PHOTOGRAPHS** Preliminary Site Assessment Report U-5757-P29 Lexington, Davidson County, North Carolina	FIGURE **A-1**

View facing northerly from the western portion of Parcel 29 toward Parcel 37.

Original in Color

View facing northerly from the western portion of Parcel 26 toward Parcels 28 and 29.

KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com	PROJECT NO:20201105.001A DRAWN: September 2019 DRAWN BY: ARS CHECKED BY: MB FILE NAME: Photo Pages	**SITE PHOTOGRAPHS** Preliminary Site Assessment Report U-5757-P29 Lexington, Davidson County, North Carolina	FIGURE **A-2**

APPENDIX B

GEOPHYSICAL SURVEY REPORT

PYRAMID GEOPHYSICAL SERVICES
(PROJECT 2019-211)

GEOPHYSICAL SURVEY

METALLIC UST INVESTIGATION:
PARCEL 29
NCDOT PROJECT U-5757 (54035.1.1)

VACANT LOT NORTH OF 1307 WINSTON ROAD, LEXINGTON, NC

August 20, 2019

Report prepared for: **Michael Burns, P.G.**
Kleinfelder, Inc.
3500 Gateway Center Boulevard, Suite 200
Morrisville, NC 27560

Prepared by: _____

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

Reviewed by: _____

Douglas A. Canavello, P.G.
NC License #1066

503 INDUSTRIAL AVENUE, GREENSBORO, NC 27406
P: 336.335.3174 F: 336.691.0648
C257: GEOLOGY C1251: ENGINEERING

GEOPHYSICAL INVESTIGATION REPORT
Parcel 29 - Vacant Lot North of 1307 Winston Road
Lexington, Davidson County, North Carolina

Table of Contents

Figures

Appendices

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 Kleinfelder, Inc. at Parcel 29 located at the Vacant Lot North of 1307 Winston Road in Lexington, NC. The survey was part of an NCDOT Right-of-Way (ROW) investigation (NCDOT Project U-5757). The survey was designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. Conducted from July 15-16, 2019, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

Geophysical Results: The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. A total of eight EM anomalies were identified. The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface. Several EM anomalies were associated with reinforced concrete, suspected buried metallic debris and/or a utility, and interference from a vehicle. These EM anomalies were investigated further with GPR and showed no evidence of significant structures such as USTs. Collectively, the geophysical data did not record any evidence of unknown metallic USTs at Parcel 29.

INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Kleinfelder, Inc. at Parcel 29 located at the Vacant Lot North of 1307 Winston Road in Lexington, NC. The survey was part of an NCDOT Right-of-Way (ROW) investigation (NCDOT Project U-5757). The survey was designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. Conducted from July 15-16, 2019, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

The site included a vacant lot with asphalt and concrete surfaces. 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-MK2 (EM61) metal detector integrated with a Geode External GPS/GLONASS receiver. 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 15.0 software programs.

GPR data were acquired across select EM anomalies on July 16, 2019, 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	Water Meters	
2	Sign	
3	Surface Metal	
4	Suspected Buried Metal/Suspected Utility	✓
5	Reinforced Concrete	✓
6	Suspected Metallic Debris	✓
7	Vehicle	✓
8	Sign	

The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface including water meters, signs, surface metal, and a vehicle. EM Anomalies 4 and 6 were suspected to be the result of buried metallic debris and/or a suspected utility and were investigated further with GPR. EM Anomaly 5 was suspected to be the result of reinforced concrete and was investigated further with GPR. EM Anomaly 7 was suspected to be associated with interference from a vehicle and was investigated further with GPR to verify that no buried structures were obscured by the interference.

Discussion of GPR Results

Figure 3 presents the locations of the formal GPR transects performed at the property as well as select transect images. All of the transect images are included in **Appendix A**. A total of seven formal GPR transects were performed at the site.

GPR Transects 1-4 were performed across areas associated suspected to contain reinforced concrete (EM Anomaly 5). These transects confirmed metal reinforcement in the concrete on the central and eastern portions of the site. No evidence of any buried structures such as USTs was observed.

GPR Transects 5 and 6 were performed across EM Anomalies 4 and 6. These transects recorded smaller hyperbolic reflectors typical of buried metallic debris and/or a partially obscured utility.

GPR Transect 7 were performed across an area associated with interference from a vehicle (EM Anomaly 7). No evidence of any significant structures was observed, verifying that the EM anomaly was the result of interference from the vehicle.

Collectively, the geophysical data did not record any evidence of unknown metallic USTs at Parcel 29. **Figure 4** provides an overlay of the metal detection results on the NCDOT MicroStation engineering plans for reference.

SUMMARY & CONCLUSIONS

Pyramid's evaluation of the EM61 and GPR data collected at Parcel 29 in Lexington, 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.
- The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface.
- Several EM anomalies were associated with reinforced concrete, suspected buried metallic debris and/or a utility, and interference from a vehicle. These EM anomalies were investigated further with GPR and showed no evidence of significant structures such as USTs.
- Collectively, the geophysical data did not record any evidence of unknown metallic USTs at Parcel 29.

LIMITATIONS

Geophysical surveys have been performed and this report was prepared for Kleinfelder 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.

APPROXIMATE BOUNDARIES OF GEOPHYSICAL SURVEY AREA

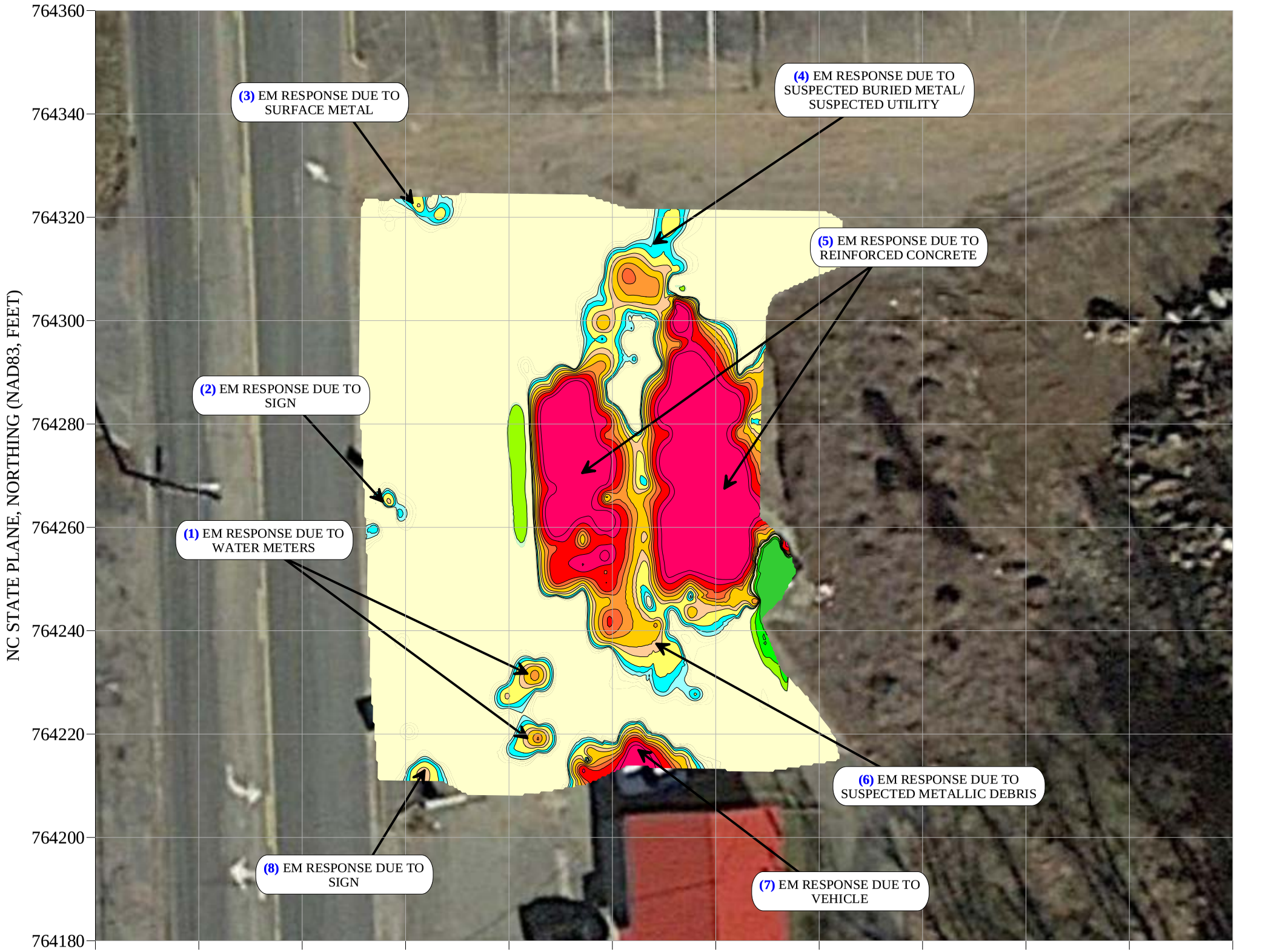
View of Survey Area
(Facing Approximately North)

View of Survey Area
(Facing Approximately South)

N

PYRAMID GEOPHYSICS 503 INDUSTRIAL AVENUE GREENSBORO, NC 27406 (336) 335-3174 (p) (336) 691-0648 (f) License # C1251 Eng. / License # C257 Geology	PROJECT PARCEL 29 LEXINGTON, NORTH CAROLINA NCDOT PROJECT U-5757	TITLE PARCEL 29 - GEOPHYSICAL SURVEY BOUNDARIES AND SITE PHOTOGRAPHS	DATE 7/19/2019 PYRAMID PROJECT #: 2019-211	CLIENT KLEINFELDER **FIGURE 1**

EM61 METAL DETECTION RESULTS



NO EVIDENCE OF METALLIC USTs WAS 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 EM data were collected on July 15, 2019, using a Geonics EM61-MK2 instrument. Verification GPR data were collected using a GSSI UtilityScan DF instrument with a dual frequency 300/800 MHz antenna on July 16, 2019.

EM61 Metal Detection Response (millivolts)

1000 750 500 400 300 200 150 100 75 60 50 40 30 -90 -100 -200 -400 -5000

N

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GREENSBORO, NC 27406
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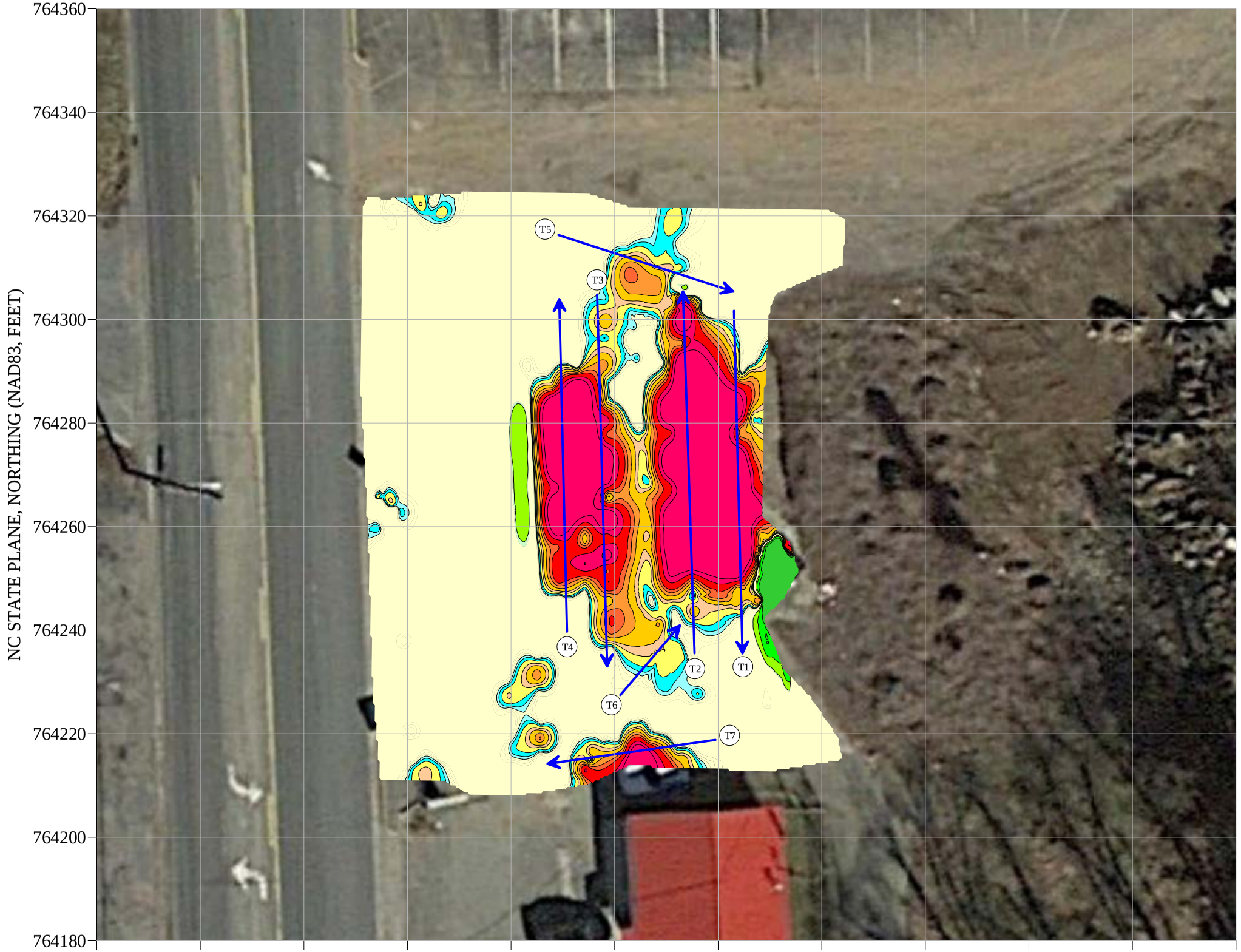
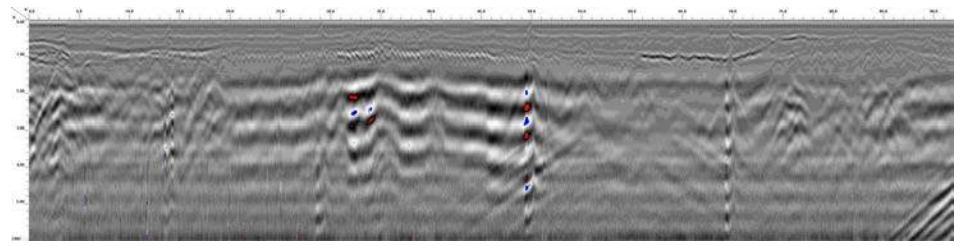
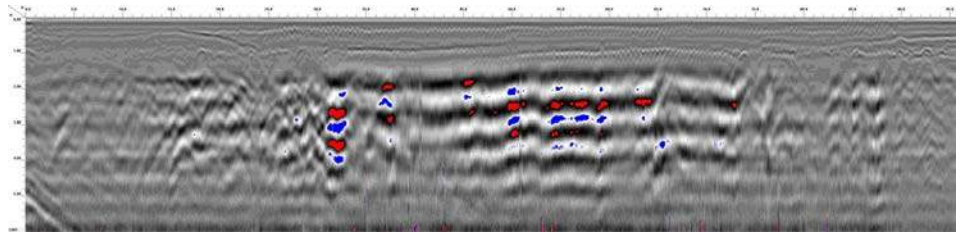
PROJECT: PARCEL 29 LEXINGTON, NORTH CAROLINA NCDOT PROJECT U-5757	TITLE: PARCEL 29 - EM61 METAL DETECTION CONTOUR MAP	DATE: 7/19/2019 PYRAMID PROJECT #: 2019-211	CLIENT: KLEINFELDER **FIGURE 2**

LOCATIONS OF GPR TRANSECTS

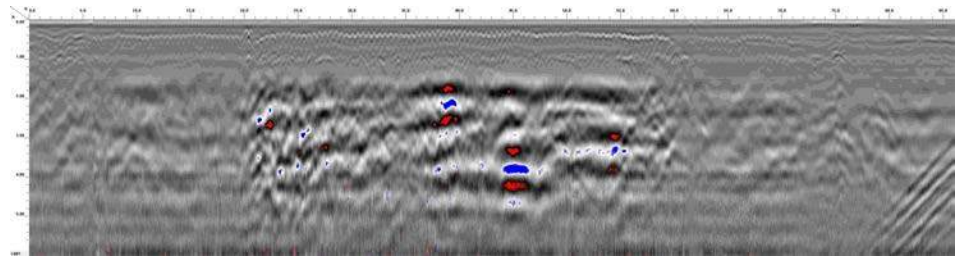




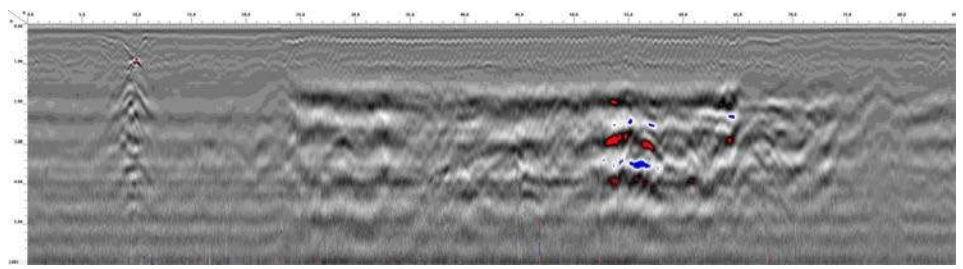
GPR TRANSECT 1 (T1)



GPR TRANSECT 2 (T2)



GPR TRANSECT 3 (T3)



GPR TRANSECT 4 (T4)

N

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PROJECT	PARCEL 29 LEXINGTON, NORTH CAROLINA NCDOT PROJECT U-5757
TITLE	PARCEL 29 - GPR TRANSECT LOCATIONS AND SELECT IMAGES
DATE	7/19/2019
PYRAMID PROJECT #:	2019-211
CLIENT	KLEINFELDER
	FIGURE 3

LEGEND

- EXISTING ROW
- EXISTING PROPERTY BOUNDARY
- PROPOSED ROW LINE
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT UTILITY
- PROPOSED SS CUT LINE
- PROPOSED SS FILL LINE

EM61 Metal Detection Response (millivolts)

1000 750 500 400 300 200 150 100 75 60 50 40 30 -90 -100 -200 -400 -5000

N

0 15 30
FEET

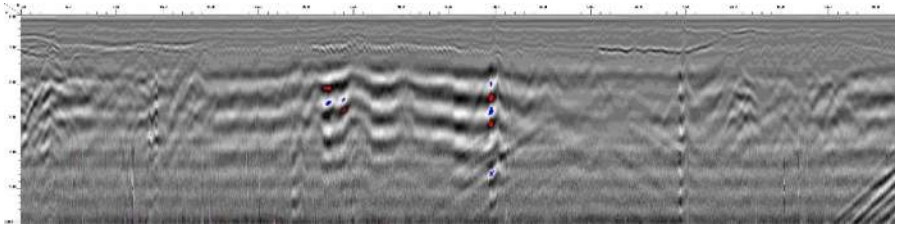
TITLE
OVERLAY OF METAL DETECTION RESULTS ON NCDOT ENGINEERING PLANS

PROJECT
PARCEL 29
LEXINGTON, NORTH CAROLINA
NCDOT PROJECT U-5757

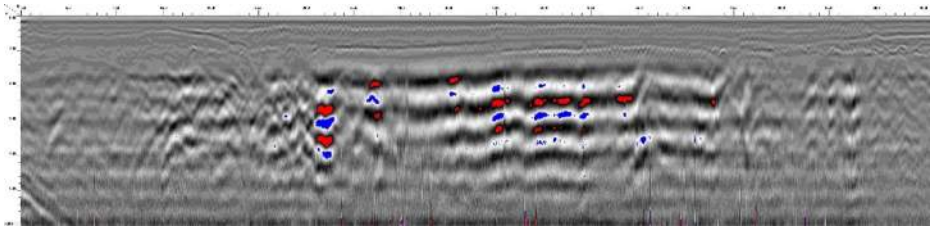
PYRAMID GEOPHYSICS
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
336.335.3174 (p) 336.691.0648 (f)
License # C1251 Eng. / #C257 Geology

DATE: 08-13-2019	REVISION NO. 0
PYRAMID PROJECT NO. 2019-211	FIGURE NO. 4

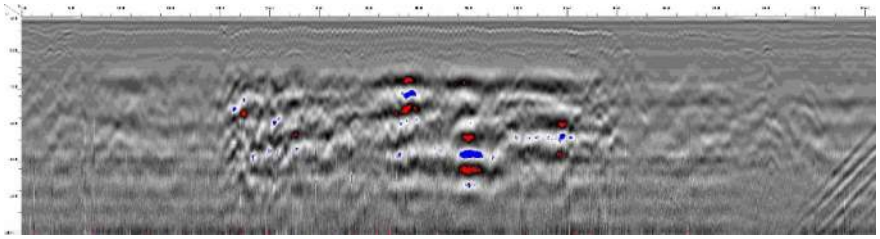
Appendix A – GPR Transect Images



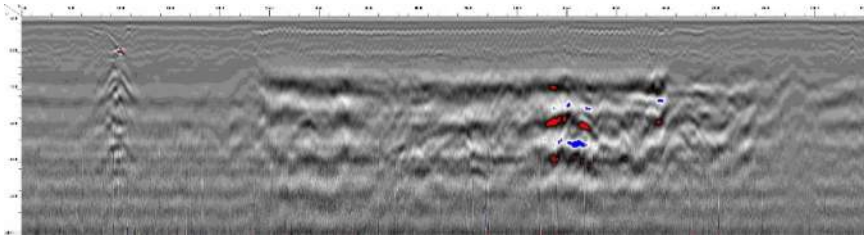
GPR TRANSECT 1



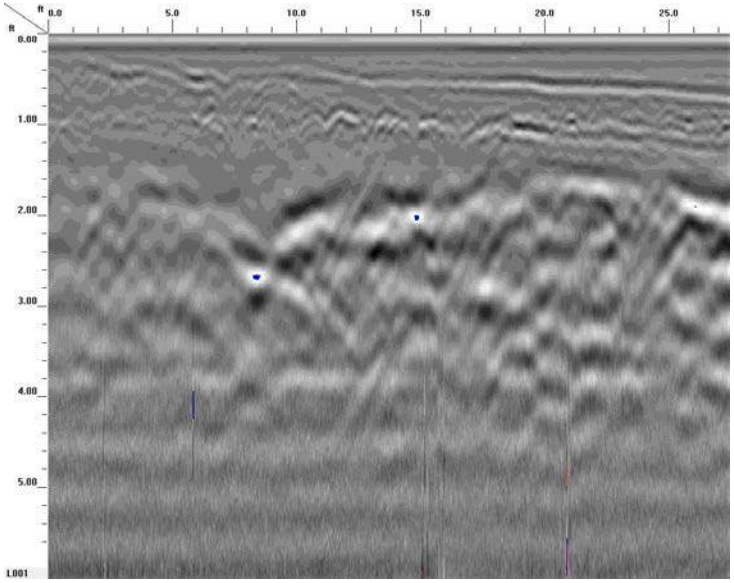
GPR TRANSECT 2



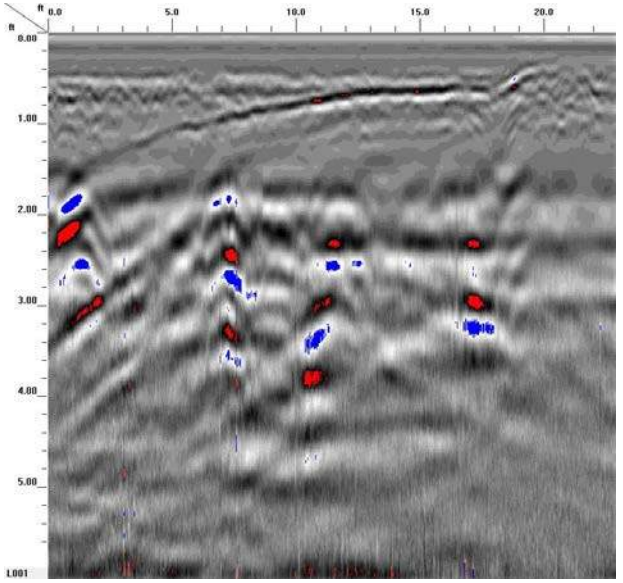
GPR TRANSECT 3



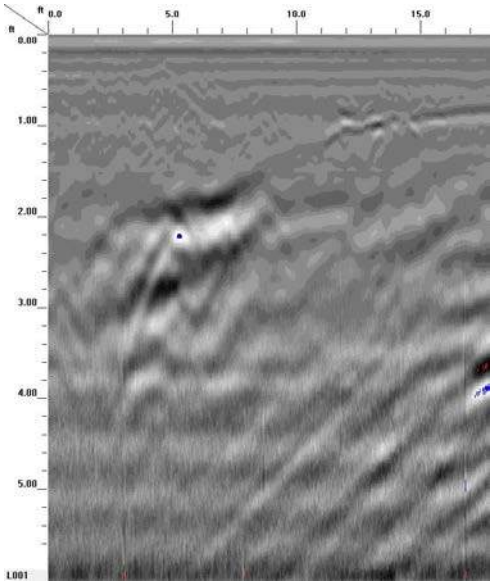
GPR TRANSECT 4



GPR TRANSECT 5



GPR TRANSECT 7



GPR TRANSECT 6

APPENDIX C
BORING LOGS

Date Begin - End:	8/06/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	85°F Clear	**Borehole Diameter:**	

BORING LOG P29-B1

FIELD EXPLORATION

Latitude: 35.84349° N
Longitude: -80.25366° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
					0.3		**SILT**: light gray and light brown, dry to moist, trace sand
					1.2		**SILT**: greenish gray, dry to moist
	Direct Push Sleeves		P29-B1-4		1.2		
							CLAY with Silt: greenish gray and greenish black, moist
					1.8		**SILT**: greenish black and dark gray, odor, dry to moist, trace organic
5					2.1		
			P29-B1-7		1.9		
							WOOD DEBRIS: Puple and brown, odor
					2.3		
					1.9		
					1.1		
10							

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 10 meters.
The boring was backfilled with excavated material

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PROJECT NO.: 20201105.001A	BORING LOG P29-B1		
DRAWN BY: A SHURTLEFF	NCDOT: U-5757 Biesecker Road Lexington, NC	1	
CHECKED BY: M BURNS			
DATE: 9/22/2019		PAGE: 1 of 1	

Date Begin - End:	8/06/2019	**Drilling Company:**	Quantex	**BORING LOG P29-B2**	
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C		
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe		
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column		
Weather:	85°F Clear	**Borehole Diameter:**			

FIELD EXPLORATION

Latitude: 35.84349° N
Longitude: -80.25366° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
					0.5		**SILT**: light gray and light brown, dry to moist, trace sand
					0.6		**SAND**: light gray and white, dry to moist
					1.0		
					0.6		**CLAY with Silt**: red, dry to moist
					0.7		**SILT with Clay**: reddish yellow and red, dry to moist
5	Direct Push Sleeves		P29-B2-7		1.1		
					2.1		
					1.1		**SILT**: gray and light brown, moist
					0.6		**SILT with Clay**: reddish brown and brown, dry to moist
10					0.6		

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 10 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 9/22/2019

BORING LOG P29-B2

NCDOT: U-5757
Biesecker Road
Lexington, NC

2

PAGE: 1 of 1

Date Begin - End:	8/06/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	85°F Clear	**Borehole Diameter:**	

BORING LOG P29-B3

FIELD EXPLORATION

Latitude: 35.84349° N
Longitude: -80.25366° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
					0.6		**SAND with Silt**: light brown and white, dry to moist
			P29-B3-3		1.4		
					1.8		**SAND**: light gray and white, dry to moist
					3.2		
5	Direct Push Sleeves				1.9		**SILT with Clay**: dark gray and red, dry to moist
					2.5		
					3.2		**SILT with Clay**: brown and light brown, weak odor, moist
					1.7		**SILT with Clay**: reddish yellow and red, dry to moist
			P29-B3-10		0.8		
10							

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 10 meters.
The boring was backfilled with excavated material

KLEINFELDER
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PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 9/22/2019

BORING LOG P29-B3

NCDOT: U-5757
Biesecker Road
Lexington, NC

3

PAGE: 1 of 1

Date Begin - End:	8/06/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	85°F Clear	**Borehole Diameter:**	

BORING LOG P29-B4

FIELD EXPLORATION

Latitude: 35.84349° N
Longitude: -80.25366° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
	Direct Push Sleeves				0.7		**SAND with Silt**: light brown and white, dry to moist
					1.5		**SAND**: light gray and white, dry to moist
					1.8		
5							**SILT with Clay**: dark gray and red, dry to moist
			P29-B4-6		3.2		**SILT with Clay**: brown and light brown, weak odor, moist
					1.6		
					1.7		
					8.2		
10			P29-B4-10		5.2		Solidified Creosote black, strong odor
					0.2		
					12.2		
			P29-B4-13		1.6		**CLAY with Silt**: gray and light brown, dry to moist
					1.1		
			P29-B4-15		0.8		**SILT with Clay**: reddish yellow and red, dry to moist
15							

The borehole was terminated at approximately 15 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 10 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 9/22/2019

BORING LOG P29-B4

NCDOT: U-5757
Biesecker Road
Lexington, NC

4

PAGE: 1 of 1

Date Begin - End:	8/06/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	90°F Clear	**Borehole Diameter:**	

BORING LOG P29-B5

FIELD EXPLORATION

Latitude: 35.84349° N
Longitude: -80.25366° E
Surface Condition: Concrete

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							CONCRETE
							SAND with Silt: dark gray, dry to moist
					1.5		**CONCRETE**
							No Recovery; Loose Fill
					1.6		
5							**SILT**: red, dry to moist, Micaceous
	Direct Push Sleeves						No Recovery; Loose Fill
			P29-B5-10		1.4		
10							**CLAY with Silt**: dark reddish brown and brown, dry to moist
							No Recovery; Loose Fill
					1.1		
					0.4		**SILT**: gray and brown, dry to moist, trace sand
			P29-B5-15		1.7		**CLAY with Silt**: brown and red, strong odor, dry to moist, Creosote present
15							

The borehole was terminated at approximately 15 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 10 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 9/22/2019

BORING LOG P29-B5

NCDOT: U-5757
Biesecker Road
Lexington, NC

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PAGE: 1 of 1

Date Begin - End:	8/06/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	85°F Clear	**Borehole Diameter:**	

BORING LOG P29-B6

FIELD EXPLORATION

Latitude: 35.84349° N
Longitude: -80.25366° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
	Direct Push Sleeves				0.9		**SAND with Silt**: light brown and white, dry to moist
					2.3		
							CLAY with Silt: red
					2.0		
5					2.0		**SILT**: greenish gray, dry to moist, trace sand
					2.2		
							CLAY with Silt: greenish gray and greenish black, moist
					2.3		
					3.7		
			P29-B6-10				
10					9.0		Solidified Creosote black and dark gray, strong odor, dry to moist, trace organic
							Fill **SAND**: white
					1.1		
15							

The borehole was terminated at approximately 15 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 10 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 9/22/2019

BORING LOG P29-B6

NCDOT: U-5757
Biesecker Road
Lexington, NC

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PAGE: 1 of 1

Date Begin - End:	8/06/2019	**Drilling Company:**	Quantex	**BORING LOG P29-B7**	
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C		
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe		
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column		
Weather:	85°F Clear	**Borehole Diameter:**			

FIELD EXPLORATION

Latitude: 35.84349° N
Longitude: -80.25366° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
					2.3		**SAND with Silt**: light brown and white, dry to moist
					2.1		
					1.4		**SILT**: bluish gray and white, dry to moist, trace sand
					1.6		
					1.8		**CLAY with Silt**: dark brown and red, dry to moist
5	Direct Push Sleeves				1.2		
			P29-B7-7		1.6		Solidified Creosote black, strong odor
			P29-B7-8		0.9		**SILT with Clay**: reddish yellow and red, weak odor, moist
					0.6		
					0.8		**SILT with Clay**: reddish yellow and red, dry to moist
10							

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 10 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 9/22/2019

BORING LOG P29-B7

NCDOT: U-5757
Biesecker Road
Lexington, NC

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PAGE: 1 of 1

APPENDIX D

ANALYTICAL REPORT AND GRAPHS

QED

AQROS

Hydrocarbon Analysis Results

Client: KLEINFELDER
Address:

Samples taken Tuesday, August 6, 2019
Samples extracted Tuesday, August 6, 2019
Samples analysed Tuesday, August 6, 2019

Contact: ABIGAIL SHURTLEFF

Operator CAROLINE STEVENS

Project: NCDOT U-5757

U00904

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
										C5 - C10	C10 - C18	C18	
s	P26-B5-5	19.4	<0.49	3.7	91.3	95	12.9	0.51	<0.019	73.4	19.8	6.7	Deg.Fuel 85.3%,(FCM)
s	P26-B5-9	15.3	<0.38	<0.38	2	2	1.3	<0.12	<0.015	0	76.6	23.4	Deg Fuel 90.2%,(FCM)
s	P28-B1-5	30.2	<0.76	<0.76	41.7	41.7	20.9	0.88	<0.03	0	70.9	29.1	Deg.PHC 75.2%,(FCM),(BO)
s	P28-B1-8	20.6	<0.52	<0.52	10.2	10.2	6.9	0.27	<0.021	0	66	34	Deg.Fuel 89.5%,(FCM)
s	P26-B6-5	423.0	<10.6	<10.6	74.3	74.3	73.8	<3.4	<0.42	17.1	44.6	38.3	V.Deg.PHC 74.4%,(FCM)
s	P26-B6-8	21.7	<0.54	4.3	5.4	9.7	3.7	<0.17	<0.022	77.3	16.9	5.8	Deg Fuel 92.1%,(FCM),(BO)
s	P28-B2-4	24.1	<0.6	4.9	5.8	10.7	3.6	<0.19	<0.024	75.8	15.9	8.3	Deg Fuel 71.5%,(FCM)
s	P28-B2-8	13.2	<0.33	<0.33	0.33	0.33	0.21	<0.11	<0.013	0	59.8	40.2	V.Deg.PHC 61.3%,(FCM),(BO)
s	P29-B1-4	20.0	<0.5	1.4	22.9	24.3	11.3	0.49	<0.02	15	62.5	22.5	Deg.PHC 78%,(FCM),(BO)
s	P29-B1-7	4185.0	<104.6	<104.6	944.4	944.4	827.7	250.9	<4.2	0	60	40	Light Coal Tar 64.6%,(FCM)

Initial Calibrator QC check OK

Final FCM QC Check OK 105.6 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

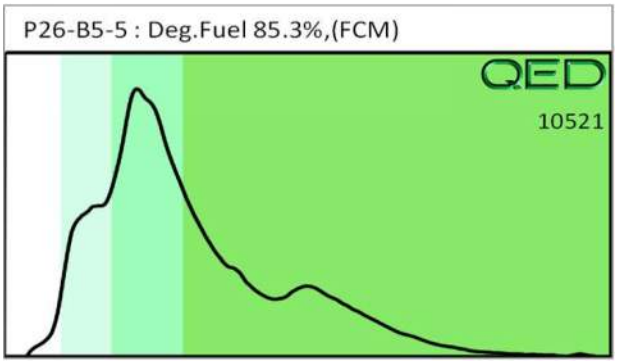
Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

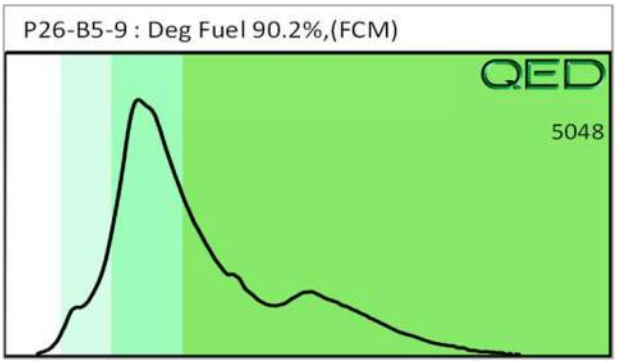
B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modifed Result.

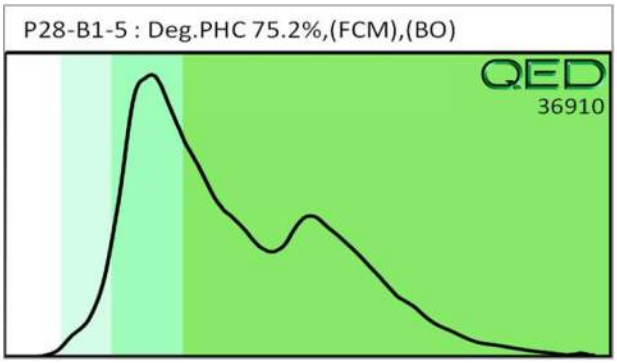
% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**

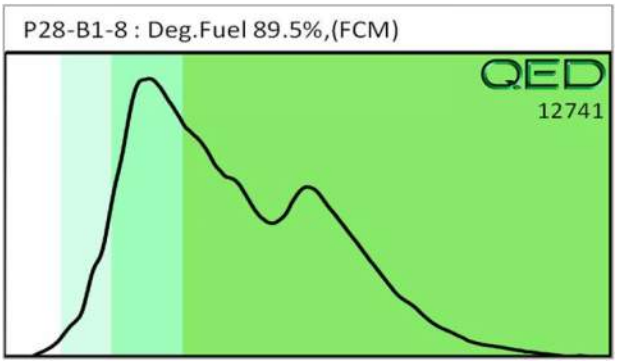
QED Hydrocarbon Fingerprints

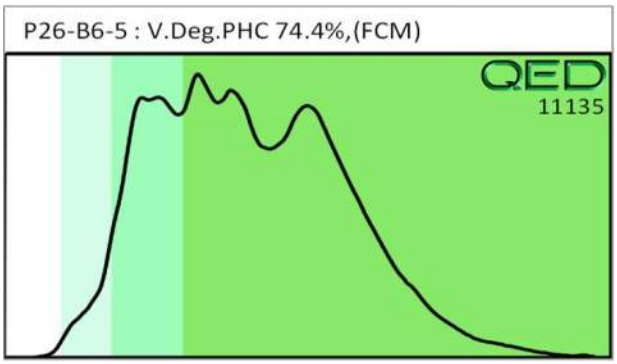
Project: NCDOT U-5757 Tuesday, August 6, 2019

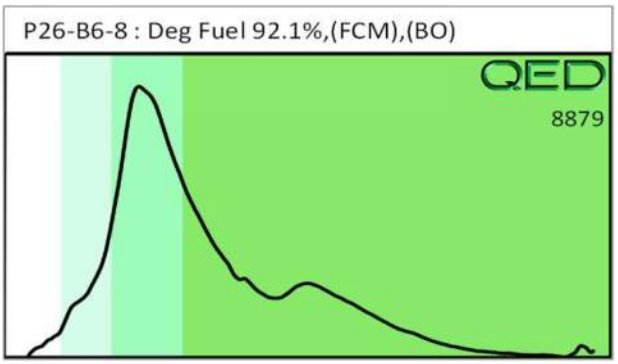


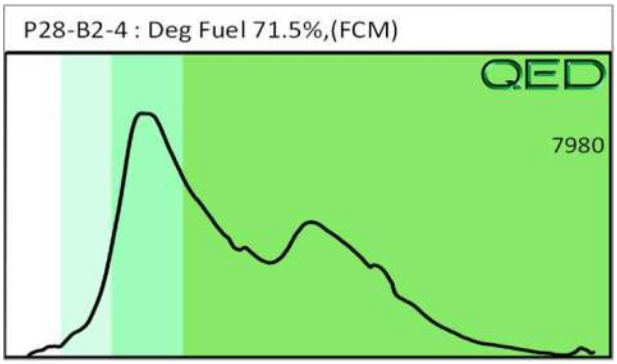


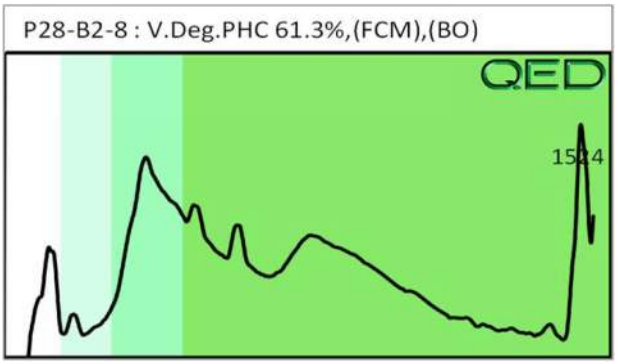


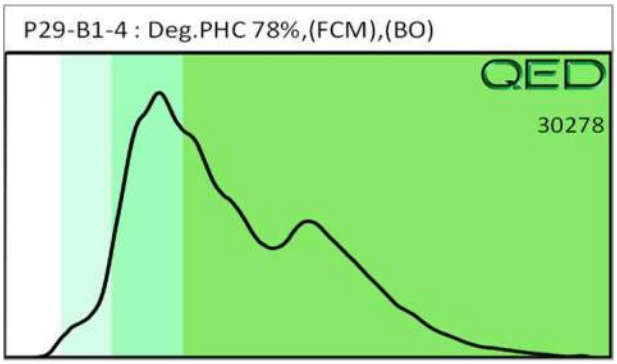


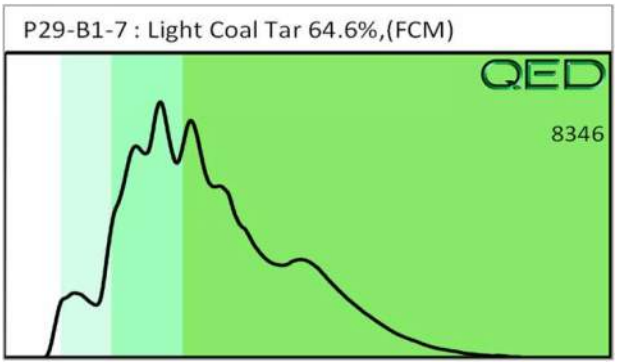












QED

AQROS

Hydrocarbon Analysis Results

Client: KLEINFELDER
Address:

Samples taken Tuesday, August 6, 2019
Samples extracted Tuesday, August 6, 2019
Samples analysed Tuesday, August 6, 2019

Contact: ABIGAIL SHURTLEFF

Operator CAROLINE STEVENS

Project: NCDOT U-5757

U00904

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
										C5 - C10	C10 - C18	C18	
s	P29-B2-7	24.5	<0.61	<0.61	27.1	27.1	15.2	0.64	<0.025	0	67.7	32.3	Deg.PHC 77%,(FCM),(BO)

Initial Calibrator QC check OK

Final FCM QC Check OK 103.9 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

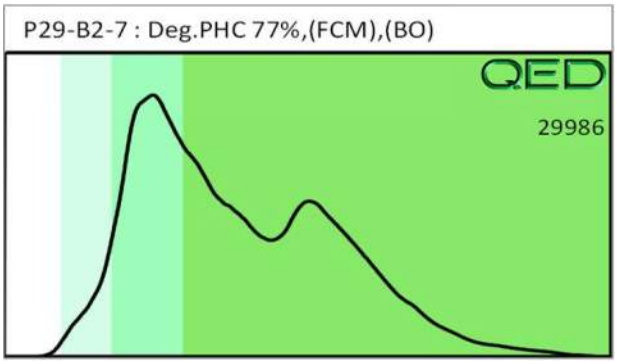
Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modifed Result.

% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**

QED Hydrocarbon Fingerprints

Project: NCDOT U-5757 Tuesday, August 6, 2019



QED

QROS

Hydrocarbon Analysis Results

Client: KLEINFELDER
Address:

Samples taken Tuesday, August 6, 2019
Samples extracted Tuesday, August 6, 2019
Samples analysed Tuesday, August 6, 2019

Contact: ABIGAIL SHURTLEFF

Operator CAROLINE STEVENS

Project: NCDOT U-5757

U00904

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
										C5 - C10	C10 - C18	C18	
s	P29-B3-3	20.3	<0.51	2	5.2	7.2	3	<0.16	<0.02	59.3	29.2	11.6	Deg Fuel 75.9%,(FCM)
s	P29-B3-10	27.7	<0.69	<0.69	3.4	3.4	1.5	<0.22	<0.028	0	65.2	34.8	Deg.PHC 83.9%,(FCM),(P)
s	P29-B4-6	22.2	<0.56	2.3	19.1	21.4	10	0.42	<0.022	29.2	52.3	18.5	Deg.PHC 82.3%,(FCM),(BO)
s	P29-B4-10	5359.0	<134	<134	4880	4880	4268	1290	8.4	0	53.9	46.1	Light Coal Tar 66.1%,(FCM)
s	P29-B4-13	310.0	<7.8	<7.8	141.5	141.5	124.8	35.4	0.93	0	49.8	50.2	Light Coal Tar 59.7%,(FCM)
s	P29-B4-15	19.3	<0.48	<0.48	2.7	2.7	2.4	0.68	0.024	0	50.6	49.4	Light Coal Tar 47.2%,(FCM)
s	P29-B5-15	338.0	<8.5	<8.5	598.5	598.5	143	5.7	<0.34	0	75	25	Deg.Fuel 80.6%,(FCM)
s	P29-B5-10	26.5	<0.66	<0.66	1.3	1.3	0.68	<0.21	<0.027	0	54.6	45.4	V.Deg.PHC 91.5%,(FCM),(BO)
s	P29-B6-10	16106.0	<402.7	<402.7	13941	13941	12188	3436	24.2	0	61.6	38.4	Light Coal Tar 66.4%,(FCM)
s	P29-B7-7	840.0	<21	<21	56.8	56.8	28.5	<6.7	<0.84	0	60	40	V.Deg.PHC 90.2%,(FCM),(P)

Initial Calibrator QC check OK

Final FCM QC Check OK 100.9 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

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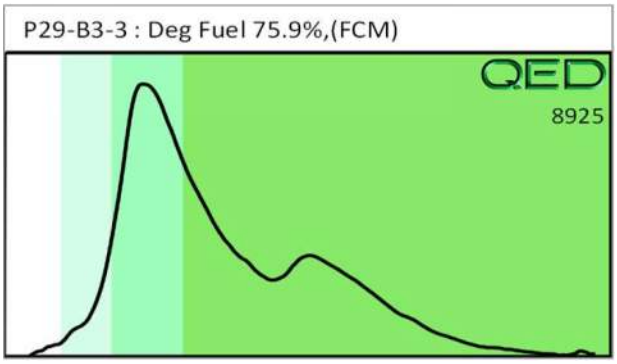
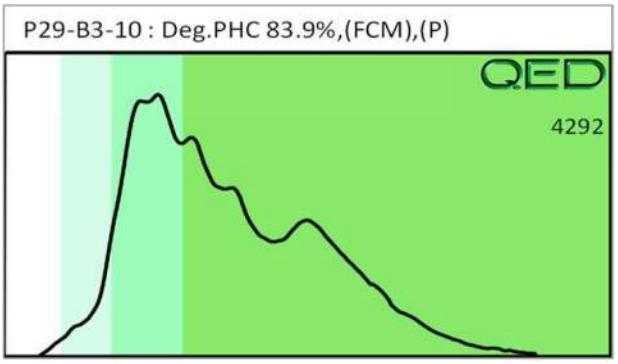
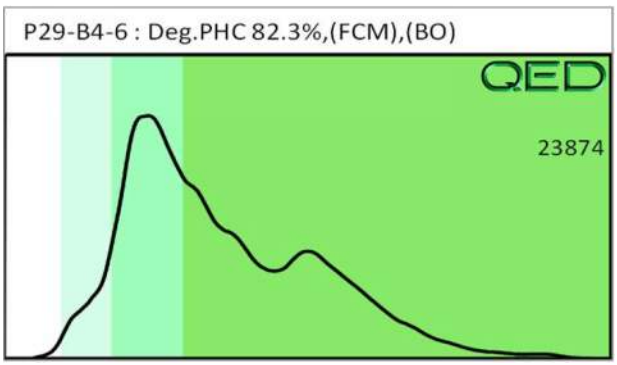
% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**

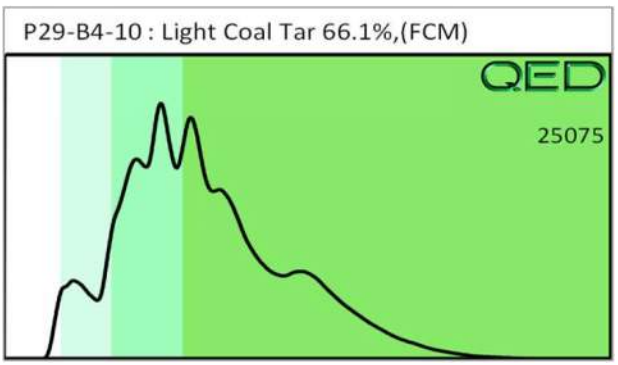
QED Hydrocarbon Fingerprints

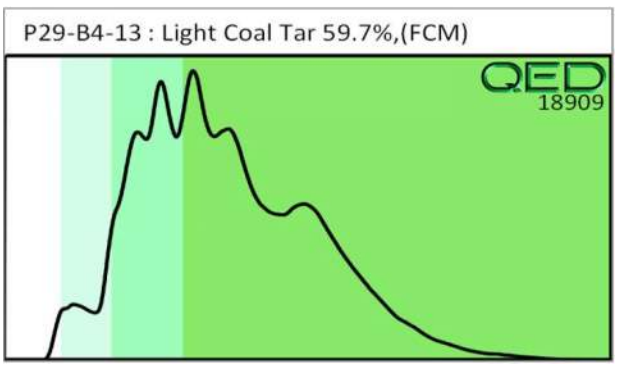
Project: NCDOT U-5757 Tuesday, August 6, 2019

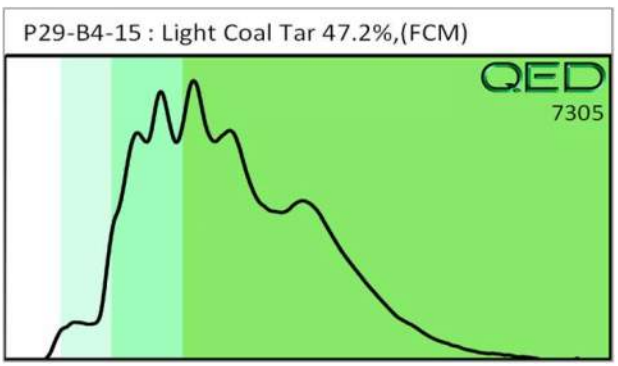


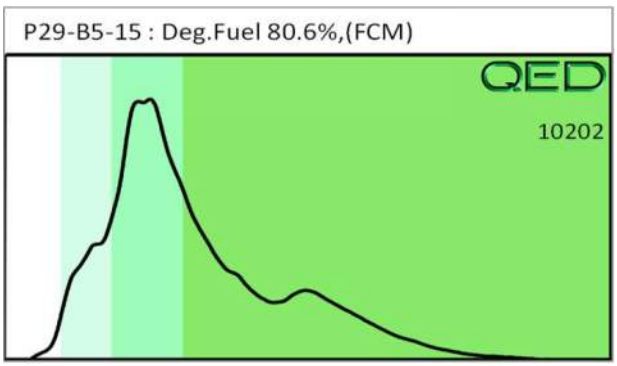


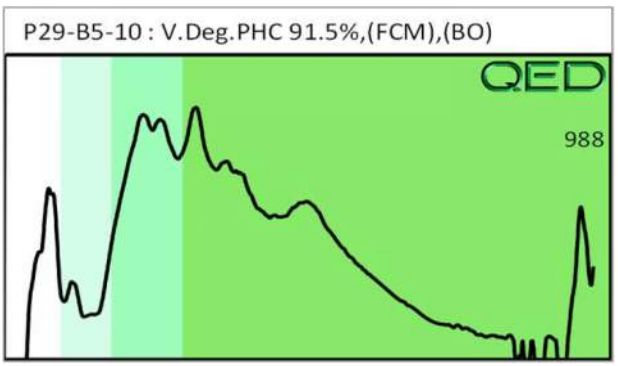


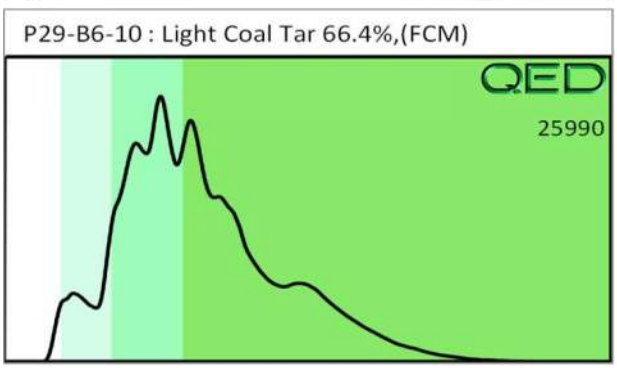


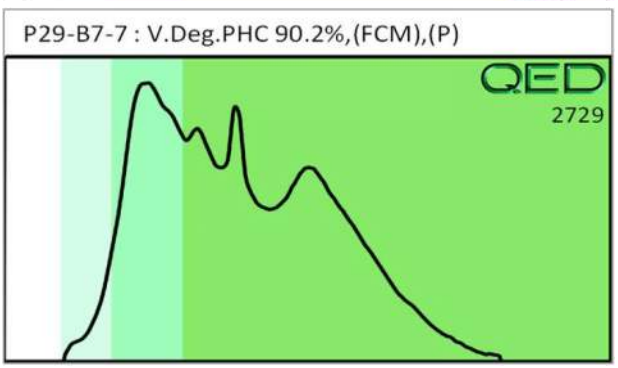












QED

AQROS

Hydrocarbon Analysis Results

Client: KLEINFELDER
Address:

Samples taken Tuesday, August 6, 2019
Samples extracted Tuesday, August 6, 2019
Samples analysed Tuesday, August 6, 2019

Contact: ABIGAIL SHURTLEFF

Operator CAROLINE STEVENS

Project: NCDOT U-5757

U00904

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
										C5 - C10	C10 - C18	C18	
s	P29-B7-8	48.8	<1.2	3.7	3.4	7.1	1.6	<0.39	<0.049	78.5	13.5	8	Deg.PHC 75.1%,(FCM)
s	P37-B1-7	50.0	<1.3	<1.3	<1.3	<1.3	<0.25	<0.4	<0.05	0	46.1	53.9	Residual HC,(OCR)
s	P37-B2-5	25.6	<0.64	<0.64	1.3	1.3	1.3	<0.2	<0.026	41	27.2	31.8	V.Deg.PHC 72.8%,(FCM),(P)
s	P37-B2-10	22.7	<0.57	<0.57	4	4	3.1	<0.18	<0.023	0	57.1	42.9	V.Deg.PHC 75.9%,(FCM),(P)

Initial Calibrator QC check OK

Final FCM QC Check OK 98.7 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

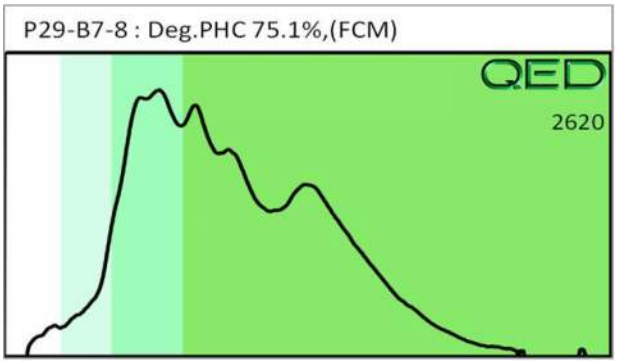
Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

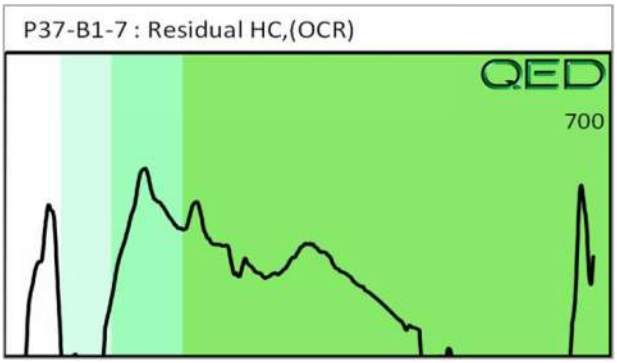
B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modifed Result.

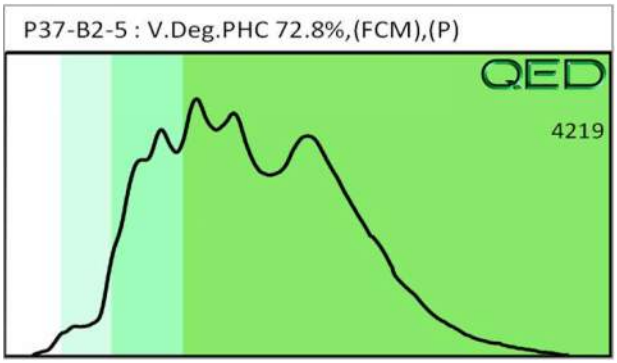
% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**

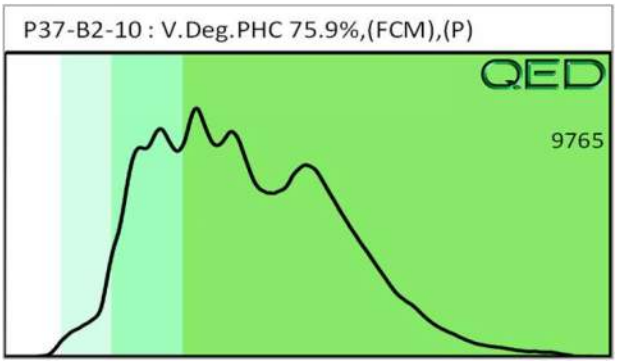
QED Hydrocarbon Fingerprints

Project: NCDOT U-5757 Tuesday, August 6, 2019









KLEINFELDER
Bright People. Right Solutions.

September 30, 2019
Kleinfelder File No. 20201105.001A

Mr. John L. Pilipchuk, LG., PE
North Carolina Department of Transportation
State Geotechnical Engineer
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

SUBJECT: Preliminary Site Assessment Report
Parcel 37, Speedy's Barbeque, Inc.
WBS Element No. 54035.1.1, TIP No. U-5757
NC 8 (Winston Road) from 9th Street to SR 1408 (Biesecker Rd) in Lexington. Widen to multi lanes
Kleinfelder Project No. 20201105.001A

Dear Mr. Pilipchuk,

Kleinfelder is pleased to provide its report detailing the activities conducted as part of the preliminary site assessment for the subject project.

Kleinfelder appreciates the opportunity to be of service to you. Should you have questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely,
KLEINFELDER, INC.

Abigail R. Shurtleff
Environmental Staff Professional

Michael J Burns, PG
Environmental Program Manager

ARS/MJB:asp

KLEINFELDER 3200 Gateway Centre Blvd. Suite 100, Morrisville, NC 27560 **p |** 919.755.5011 **f |** 919.755.1414

PRELIMINARY SITE ASSESSMENT REPORT
PARCEL 37, SPEEDY'S BARBEQUE, INC.
PARCEL 1100800000011
1315 WINSTON ROAD
LEXINGTON, DAVIDSON COUNTY, NORTH CAROLINA

NCDOT WBS ELEMENT 54035.1.1
STATE PROJECT U-5757
NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408 (BIESECKER RD) IN LEXINGTON. WIDEN TO MULTI LANES

KLEINFELDER PROJECT NO. 20201105.001A

SEPTEMBER 30, 2019

A Report Prepared for:

Mr. John L. Pilipchuk, LG., PE
North Carolina Department of Transportation
State Geotechnical Engineer
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

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Prepared by:

Abigail R. Shurtleff
Environmental Staff Professional

Reviewed by:

Michael J. Burns, PG
Environmental Program Manager

KLEINFELDER
3200 Gateway Centre Blvd. | Suite 100
Raleigh, North Carolina 27560
P | 919.755.5011

September 30, 2019

Kleinfelder Project No. 20201105.001A

PRELIMINARY SITE ASSESSMENT REPORT

Site Name and Location:	Parcel 37 1315 Winston Road Lexington, Davidson County, North Carolina
Latitude and Longitude:	35.843799°N, -80.253760°W
County Parcel Number	1100800000011
Facility ID Number:	N/A
Leaking UST Incident:	N/A
State Project No.:	U-5757
NCDOT Project No.:	NCDOT WBS Element 54035.1.1
Description:	NC 8 (Winston Rd) from 9th Street to SR 1408 (Biesecker Rd) in Lexington. Widen to multi lanes
Date of Report:	September 30, 2019
Consultant:	Kleinfelder, Inc. 3200 Gateway Center Boulevard | Suite 100 Morrisville, North Carolina 27560 Corporate Geology License No. C-521 Corporate Licensure for Engineering F-1312

SEAL AND SIGNATURE OF CERTIFYING LICENSED GEOLOGIST

I, Michael J Burns, a Licensed Geologist for Kleinfelder, Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

DocuSigned by:
7E53DC44AC794CA...

10/28/2019

Michael J Burns, LG
NC License No. 1645

NORTH CAROLINA LICENSED SEAL 1645 GEOLOGIST MICHAEL JAMES BURNS

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PRELIMINARY SITE ASSESSMENT
PARCEL 37, SPEEDY'S BARBEQUE, INC.
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LEXINGTON, DAVIDSON COUNTY, NORTH CAROLINA

NCDOT WBS ELEMENT 54035.1.1
STATE PROJECT U-5757
NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408 (BIESECKER RD) IN LEXINGTON. WIDEN TO MULTI LANES

1 INTRODUCTION

Kleinfelder, Inc. (Kleinfelder) has prepared this Preliminary Site Assessment (PSA) report to document assessment activities performed on a parcel known by the Davidson County, NC Tax Assessor's Office as Parcel Number 1100800000011 and by NCDOT as Parcel 37 (the assessment area is hereafter referred to as the "Project Study Area"). The Project Study Area consists of the western portion of Parcel 37 along NC Highway 8 (Winston Road). Parcel 37 is currently used as an annex building of the Speedy's Barbeque restaurant located on the north adjacent parcel. Parcel 37 is located northeast of the intersection of NC Highway 8 (Winston Road) and Rainbow Street, in the Town of Lexington, Davidson County, North Carolina (Figure 1).

Based on information provided in the Hazardous Materials Survey Report, dated February 28, 2018, prepared by Kleinfelder for SEPI Engineering & Construction, the parcel is currently owned by Speedy's Barbeque, Inc. and has no listed underground storage tanks (USTs). However, the parcel was formerly utilized as an automotive repair facility. As such, the purpose of the PSA was to evaluate whether unknown USTs or contaminated soil are present in the Project Study Area that may result in increased project costs and future liability if acquired by the NCDOT.

1.1 SITE DESCRIPTION

Parcel 37 has a listed owner of Speedy's Barbeque, Inc. The parcel has a listed street address of 1315 Winston Road. The parcel consists of an active storage building in the western portion of the parcel, asphalt paved parking areas in the majority of the central and western portions of the parcel, and a vegetated kudzu-covered slope in the eastern portion of the parcel. The parcel is bounded by Speedy's Barbeque restaurant to the north; by forested land to the east, beyond which are residential properties; by a vacant asphalt and concrete lot to the south, beyond which

are a food market and convenience store; and by Winston Road to the west, beyond which are residential properties. The parcel is currently the location of a storage annex building for Speedy's Barbeque. Photographs of the Project Study Area are provided in Appendix A.

1.2 SCOPE OF WORK

Kleinfelder conducted this PSA in accordance with the NCDOT's May 24, 2019, Request for Technical and Cost Proposal (RFP) and Kleinfelder's June 18, 2019 Technical and Cost Proposal. The NCDOT granted a formal Notice to Proceed on June 27, 2019.

2 HISTORY

2.1 PARCEL USAGE

The majority of the parcel consists of a commercial annex building and paved asphalt parking areas utilized by Speedy's Barbeque. The eastern portion of the parcel is occupied by a vegetated kudzu-covered slope. At the time of site exploration, August 6, 2019, Kleinfelder personnel observed the use of this slope for the deposition of what appeared to be concrete construction debris from multiple dump trucks.

The February 2018 Hazardous Materials Survey Report identifies the parcel as Parcel 44 (since changed to Parcel 37). This report indicates no records of USTs for the parcel; however, orphan USTs and the potential for petroleum contaminated soil from the former use of the parcel as an automotive repair facility are mentioned in the report.

Kleinfelder conducted historical research to determine whether additional environmental listings were identified for Parcel 37 and to review report documents associated with the parcel. The following are the results of the additional research:

- The site was listed as Mitch Harb's Tires in 1986, Wayne's recapping in 1974 and 1977, Bernett's Garage and Radiator in 1959, 1960, 1966, and 1970.
- The site has been developed with the current building since at least 1964. A previous building on the site dated back to the early 1950's.
- The site was undeveloped prior to 1948.
- No other listings for Parcel 37 were identified on any of the available North Carolina Department of Environmental Quality (NCDEQ) pollution incident databases.

2.2 FACILITY ID NUMBERS

Kleinfelder reviewed the NCDEQ UST database for Parcel 37. The parcel did not have any USTs identified in the database at the time of this report.

2.3 GROUNDWATER INCIDENT NUMBERS

No known groundwater incident numbers are associated with Parcel 37 at this time.

3 OBSERVATIONS

3.1 GROUNDWATER MONITORING WELLS

No groundwater monitoring wells were observed on Parcel 37 at the time of site exploration, August 6, 2019.

3.2 ACTIVE USTS

No indication of the active use of USTs at Parcel 37 was observed at the time of site exploration, August 6, 2019.

3.3 OTHER FEATURES APPARENT BEYOND PROJECT STUDY AREA

The Project Study Area consisted of the western portion of the parcel area. There were no features of concern observed in paved asphalt parking lot of the Project Study Area or on the vegetated slope beyond the Project Study Area. Kleinfelder personnel observed the use of this slope for the deposition of what appeared to be concrete construction debris from multiple dump trucks. The interior of the Parcel 37 building could not be observed at the time of the PSA. It is unknown whether hydraulic lifts exist inside the building.

4 METHODS

4.1 PROPERTY OWNER CONTACTS

As part of Kleinfelder's scope of work, the listed property owner was contacted about the work schedule for the field work and the type of work being performed. The owner did not express any concern or special conditions associated with the work being performed.

4.2 HEALTH AND SAFETY

Prior to commencing the field work, Kleinfelder personnel developed a Site-Specific Health and Safety Plan (HASP) covering activities to be performed. The site-specific HASP was discussed with all Kleinfelder personnel involved with the project and at a daily onsite "tail gate" safety meetings with subcontractors and sub consultants. In addition to the HASP, Kleinfelder utilized its comprehensive Corporate Health and Safety Program, targeted to address those specific and critical tasks that involve Kleinfelder personnel and subcontractors. The Loss Prevention System (LPS™), a behavior-based program, is Kleinfelder's company-wide safety system implemented and embraced by all levels of the company.

4.3 GEOPHYSICAL INVESTIGATION

Pyramid Environmental & Engineering, P.C (Pyramid) conducted a geophysical investigation in the Project Study Area between July 15 and 16, 2019. Pyramid utilized electromagnetic (EM) induction technology and ground penetrating radar (GPR) to locate potential geophysical anomalies and potential USTs within the Project Study Area.

There were no EM responses that were not associated with known utilities, vehicles, or other previously known conditions.

A copy of the Pyramid Geophysical Investigation Report, detailing the field methodology, is included in Appendix B.

4.4 SOIL ASSESSMENT

The scope of work for the soil assessment was to evaluate the presence of soil contamination along the existing right of way and/or easement to evaluate whether known impact is present in this area and may be migrating offsite. The soil borings were planned to be advanced to maximum depths of 10 feet below the ground surface (bgs) unless groundwater was encountered. Field

screening using a photo ionization detector (PID) was to be conducted at 1-foot intervals beginning at 0 foot to 1 foot. The soil sample with the highest PID reading above background or the sample from the maximum drilled depth would be selected for on-site laboratory analyses.

Prior to the drilling activities, public utilities were marked by NC One Call and private utilities were marked by Pyramid.

Kleinfelder subcontracted Quantex, Inc. (Quantex) to perform the drilling onsite on August 6, 2019. Quantex advanced two (2) soil borings (P37-B1 and P37-B2) by direct-push technology from the ground surface to boring termination (10 feet bgs) at locations specified by Kleinfelder. The soil boring locations were identified in the field using a GPS. The soil boring locations are shown on Figure 2. The borings were located within the right-of-way along NC Highway 8 (Winston Road) and the western parcel boundary. Soil samples were collected by driving Macro Core™ samplers in 5-foot intervals. Each soil core was cut open, the soil samples were classified, and the soil was divided into 1-foot sections. Each 1-foot section was screened in the field using a PID. The PID readings are summarized in Table 1.

Soils from Parcel 37 generally consisted of a silty sand in the upper foot, underlain by a silty clay, underlain by silt. Groundwater was not encountered in any of the borings at the termination depth of 10 feet bgs. Copies of the boring logs are included in Appendix C.

4.5 SOIL ANALYSIS

The PID readings from soil borings advanced were noted to be low. Based on the PID data and visual observations, one (1) sample from P37-B1 and two (2) samples from P37-B2 were selected for on-site laboratory analysis.

The samples were analyzed by RED Lab, LLC utilizing ultraviolet fluorescence (UVF) methodology to provide real-time analytical results of Total Petroleum Hydrocarbons (TPH), Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and benzene, toluene, ethylbenzene, and total xylenes (BTEX). The UVF method was selected because of the known historical use of petroleum products on Parcel 37. The UVF analysis also provided data regarding Environmental Protection Agency 16 total Polycyclic Aromatic Hydrocarbons (PAHs), and Benzo(a)pyrene (BaP). Due to the low PID readings, samples were not analyzed per EPA Method 8260.

5 RESULTS

5.1 GEOPHYSICAL INVESTIGATION

The EM and GPR surveys did not identified unknown geophysical anomalies within the Project Study Area.

5.2 SOIL SAMPLING DATA

The UVF analysis of soil samples indicated no shallow soil impact above NCDEQ Action Limits was present within the existing right of way and the western parcel boundary. A summary of soil sample analytical results is presented in Table 2. The laboratory results associated with each soil boring are presented on Figure 3. The laboratory report and graphs are included in Appendix D.

5.3 SAMPLE OBSERVATIONS

Soils were observed for any obvious evidence of contamination. No visual or olfactory evidence of contamination was noted in any of the soil samples from the borings.

5.4 QUANTITY CALCULATIONS

Kleinfelder did not identify soil impact in the current right of way, nor have previous assessments identified quantifiable soil impact on Parcel 37.

6 CONCLUSIONS

Based on results of the EM/GPR survey, soil assessment and field observations, Kleinfelder has reached the following conclusions:

- The GPR and EM investigation did not identify unknown features.
- Parcel 37 is not listed on the NCDEQ UST database, nor are any groundwater incident numbers known to be associated with Parcel 37 at this time.
- No soil impact above the NCDEQ Action Limits for TPH GRO and DRO was detected in borings advanced along NC Highway 8 (Winston Road) and the western parcel boundary.
- Groundwater was not encountered in the soil borings at a depth of 10 feet bgs.
- The interior of the building could not be observed for the presence of hydraulic lifts.

7 RECOMMENDATIONS

Based on results of this Preliminary Site Assessment, Kleinfelder recommends no additional sampling or special handling of soils be performed within the Project Study Area on Parcel 37 in Lexington, Davidson County, North Carolina.

8 LIMITATIONS

Kleinfelder's work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of its profession practicing in the same locality, under similar conditions and at the date the services are provided. Kleinfelder's conclusions, opinions and recommendations will be based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, Kleinfelder's clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface studies or field tests, should be performed to reduce uncertainties. Acceptance of this report will indicate that NCDOT has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may have been discovered. Kleinfelder assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this report should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, or generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order. NCDOT is solely responsible for directing notification of all governmental agencies, and the public at large, of the existence, release, treatment or disposal of any hazardous materials observed at the project site, either before or during performance of

Kleinfelder's services. NCDOT is responsible for directing all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

TABLES

Table 1: Soil Sample Screening Results

Date	Sample ID	Depth (ft)	PID Reading	Notes
8/6/2019	U5757-P37-B1	1	1.2	
		2	1.3	
		3	1.0	
		4	1.2	
		5	1.1	
		6	1.3	
		7	1.5	UVF Analysis
		8	1.5	
		9	0.9	
		10	0.4	
8/6/2019	U5757-P37-B2	1	NR	
		2	0.2	
		3	NR	
		4	NR	
		5	1.3	UVF Analysis
		6	NR	
		7	NR	
		8	NR	
		9	NR	
		10	0.6	UVF Analysis

Notes:
1) PID = Photoionization Detector
2) PID readings in parts per million (ppm)
3) NR = no recovery

TABLE 2: Soil Sample Analytical Summary

Parameter	Analytical Results			Comparison Criteria		
	Soil Sample Results					
Sample ID	P37-B1-7	P37-B2-5	P37-B2-10	State Action Limit	Protection of Groundwater	Residential Health
PID Reading (ppm)	1.50	1.30	0.60			
Collection Depth (ft bgs)	7	5	10			
Collection Date	8/6/19	8/6/19	8/6/19			
UVF Method						
Diesel Range Organics	<1.3	**1.3**	**4**	100	--	--
Gasoline Range Organics	<1.3	<0.64	<0.57	50	--	--

Notes:

Results displayed in milligram per kilogram (mg/kg)

ft bgs = Feet below ground surface

Bold = Above Laboratory Detection Limit

UVF = Ultraviolet Flouresence

FIGURES

PROJECT REFERENCE NO.	SHEET
U–5757–P37	1

SITE LOCATION MAP

0 1500 3000

FEET

P37

BM806

Erlanger

STREET

PROJECT REFERENCE NO.	SHEET
U-5757-P37	2

SITE PLAN

0 20 40

FEET

LEGEND

P37B1 SOIL SAMPLE LOCATIONS

P37B1

P37B2

NC GRID
NAD 83 NA 2011

+20.00

4 + 7

1'-6" C&G

1'-6" C&G

2'-6" C&G

EXISTING R/W VARIES

PUE

PUE

PUE

RW

F

F

F

F

MED

RCP-V

END -Y12-

DEWEY A
LEROY
DB 504
PB 5

SPEEDY'S BARBECUE, INC.
DB 6618 PG 258
PB 5 PG 78

DB 6214
PG 39

38

37

36

29

36

PROJECT REFERENCE NO.	SHEET
U-5757-P37	3

SOIL SAMPLE ANALYTICAL RESULTS

0 20 40
FEET

P37B1

LEGEND

SOIL SAMPLE LOCATIONS

SOIL SAMPLE RESULTS

	DRO	GRO
P37-B1-7	<1.3	<1.3
P37-B2-5	1.3	<0.64
P37-B2-10	4.0	<0.57

NOTES:
1) All results reported in mg/kg
2) DRO = Diesel Range Organics
3) GRO = Gasoline Range Organics
4) Bold concentrations exceed the NCDEQ TPH Action Limit

P37B1

P37B2

+20.00

1'-6" C&G

1'-6" C&G

2'-6" C&G

EXISTING R/W VARIES

PUE

PUE

PUE

F

F

F

F

RW

RCP-V CB

MED

NC GRID
NAD 83 NA 2011

DEWEY A
LEROY
DB 504
PB 5

DB 618 PG 258
PB 5 PG 78

SPEEDY'S BARBECUE, INC.
DB 6
PB

38

37

29

36

36

END
-Y12-

APPENDIX A
SITE PHOTOGRAPHS

View facing northerly of the western portion of Parcel 37.

View facing northeasterly of the central and eastern portions of Parcel 37.

Original in Color

KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com	PROJECT NO:20201105.001A DRAWN: September 2019 DRAWN BY: ARS CHECKED BY: MB FILE NAME: Photo Pages	**SITE PHOTOGRAPHS** Preliminary Site Assessment Report U-5757-P37 Lexington, Davidson County, North Carolina	FIGURE **A-1**

APPENDIX B

GEOPHYSICAL SURVEY REPORT

PYRAMID GEOPHYSICAL SERVICES
(PROJECT 2019-211)

GEOPHYSICAL SURVEY

METALLIC UST INVESTIGATION:
PARCEL 37
NCDOT PROJECT U-5757 (54035.1.1)

1315 WINSTON ROAD, LEXINGTON, NC

August 20, 2019

Report prepared for: **Michael Burns, P.G.**
Kleinfelder, Inc.
3500 Gateway Center Boulevard, Suite 200
Morrisville, NC 27560

Prepared by: _____

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

Reviewed by: _____

Douglas A. Canavello, P.G.
NC License #1066

503 INDUSTRIAL AVENUE, GREENSBORO, NC 27406
P: 336.335.3174 F: 336.691.0648
C257: GEOLOGY C1251: ENGINEERING

GEOPHYSICAL INVESTIGATION REPORT
Parcel 37 - 1315 Winston Road
Lexington, Davidson County, North Carolina

Table of Contents

Figures

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 Kleinfelder, Inc. at Parcel 37 located at 1315 Winston Road in Lexington, NC. The survey was part of an NCDOT Right-of-Way (ROW) investigation (NCDOT Project U-5757). The survey was designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. Conducted from July 16-17, 2019, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

Geophysical Results: The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. A total of five EM anomalies were identified. Several of the EM anomalies were directly attributed to visible cultural features at the ground surface. EM and GPR data showed evidence of buried metallic debris at the site. Collectively, the geophysical data did not record any evidence of unknown metallic USTs at Parcel 37.

INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Kleinfelder, Inc. at Parcel 37 located at 1315 Winston Road in Lexington, NC. The survey was part of an NCDOT Right-of-Way (ROW) investigation (NCDOT Project U-5757). The survey was designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. Conducted from July 16-17, 2019, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

The site included a commercial restaurant building surrounded by asphalt and concrete surfaces. 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-MK2 (EM61) metal detector integrated with a Geode External GPS/GLONASS receiver. 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 15.0 software programs.

GPR data were acquired across select EM anomalies on July 17, 2019, 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	Surface Metal	
2	Water Meter	
3	Building	
4	Suspected Buried Debris	✓
5	Suspected Buried Debris	✓

Several of the EM anomalies were directly attributed to visible cultural features at the ground surface including surface metal, a water meter, and the building. EM Anomalies 4 and 5 were suspected to be the result of buried metallic debris and were investigated further with 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 three formal GPR transects were performed at the site.

GPR Transects 1-3 were performed across an area of suspected buried metallic debris (EM Anomalies 4 and 5). These transects recorded smaller hyperbolic reflectors typical of buried metallic debris. No evidence of any buried structures such as USTs was observed.

Collectively, the geophysical data did not record any evidence of unknown metallic USTs at Parcel 37. **Figure 4** provides an overlay of the metal detection results on the NCDOT MicroStation engineering plans for reference.

SUMMARY & CONCLUSIONS

Pyramid's evaluation of the EM61 and GPR data collected at Parcel 37 in Lexington, North Carolina, provides the following summary and conclusions:

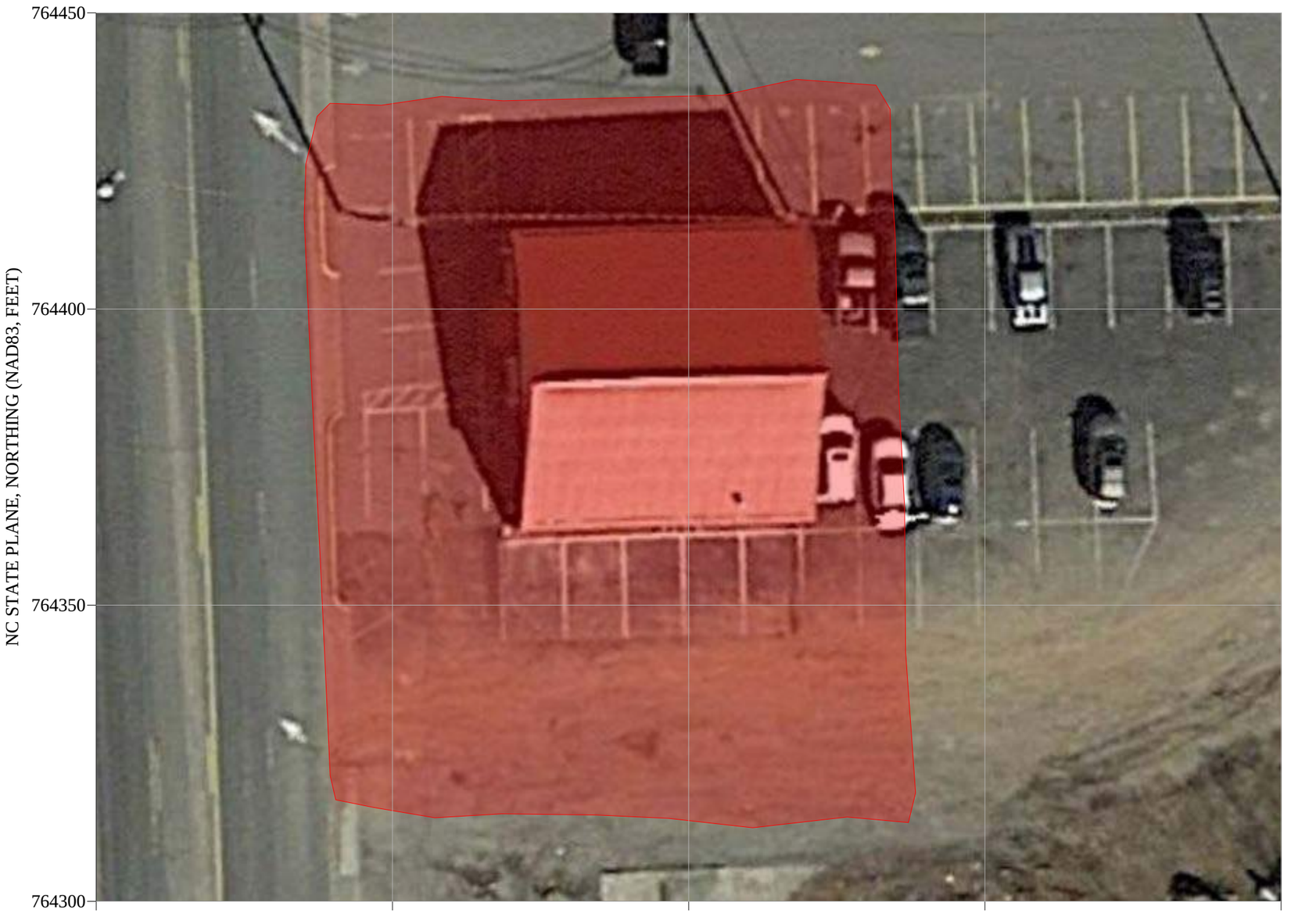
- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the accessible portions of the geophysical survey area.

- Several of the EM anomalies were directly attributed to visible cultural features at the ground surface.
- EM and GPR data showed evidence of buried metallic debris at the site.
- Collectively, the geophysical data did not record any evidence of unknown metallic USTs at Parcel 37.

LIMITATIONS

Geophysical surveys have been performed and this report was prepared for Kleinfelder 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.

APPROXIMATE BOUNDARIES OF GEOPHYSICAL SURVEY AREA



View of Survey Area
(Facing Approximately North)

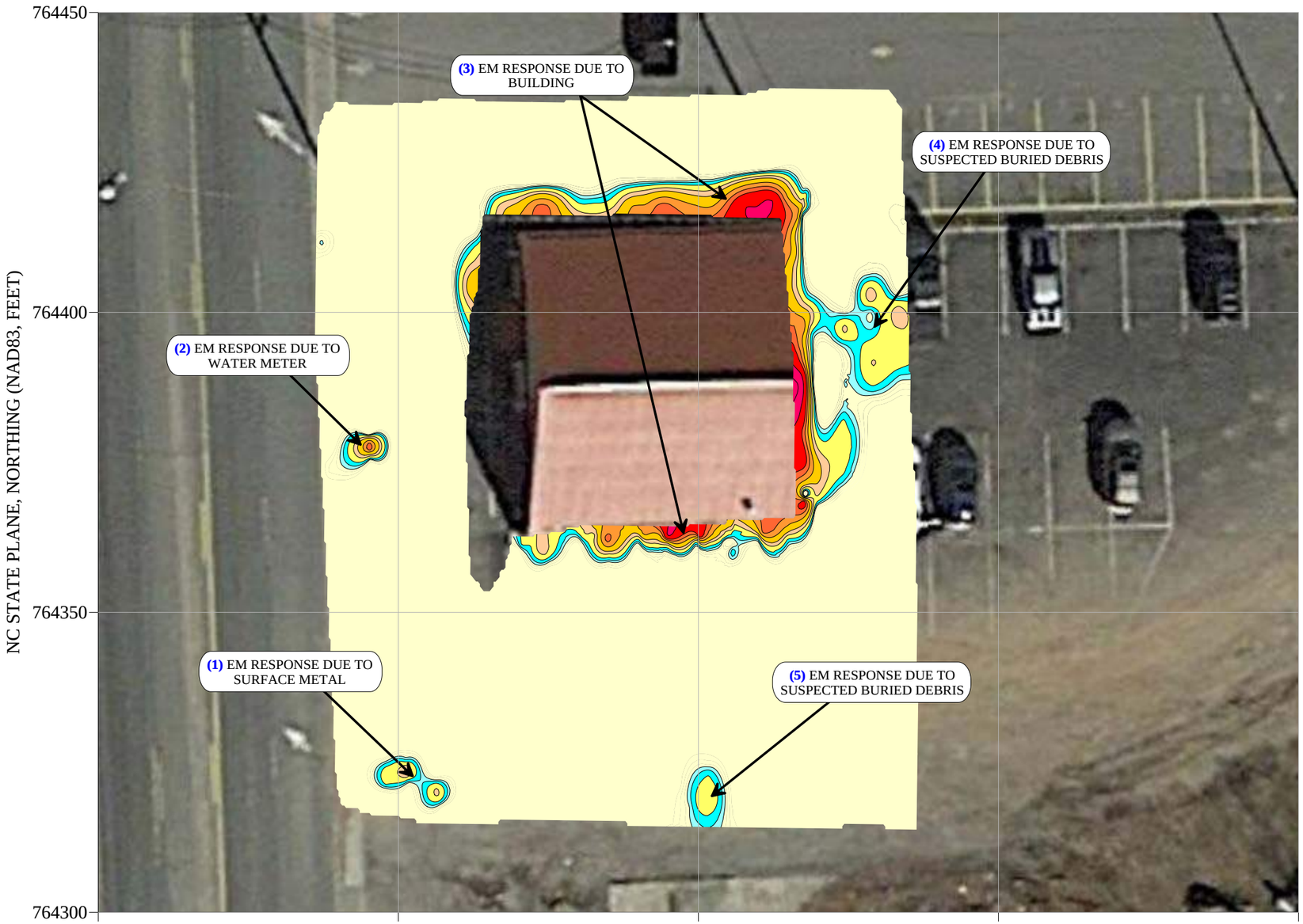
View of Survey Area
(Facing Approximately North)

N

PYRAMID GEOPHYSICS
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

PROJECT	PARCEL 37 LEXINGTON, NORTH CAROLINA NCDOT PROJECT U-5757	TITLE	PARCEL 37 - GEOPHYSICAL SURVEY BOUNDARIES AND SITE PHOTOGRAPHS	DATE 7/19/2019 PYRAMID PROJECT #: 2019-211
CLIENT	KLEINFELDER			**FIGURE 1**

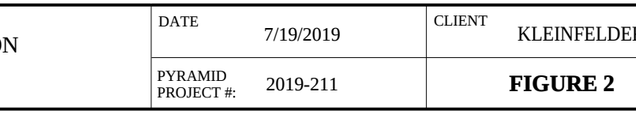
EM61 METAL DETECTION RESULTS



NO EVIDENCE OF METALLIC USTs WAS 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 EM data were collected on July 16, 2019, using a Geonics EM61-MK2 instrument. Verification GPR data were collected using a GSSI UtilityScan DF instrument with a dual frequency 300/800 MHz antenna on July 17, 2019.

EM61 Metal Detection Response (millivolts)



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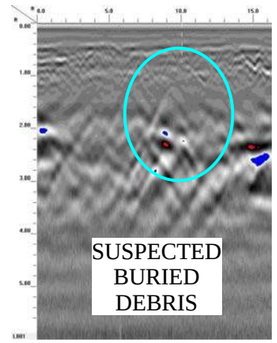
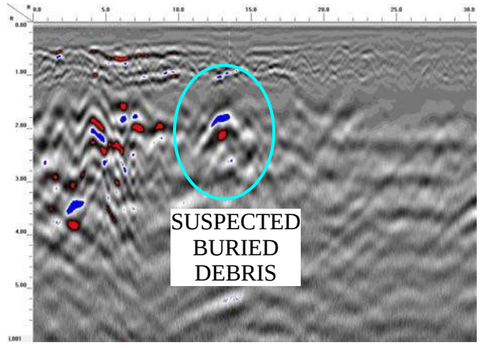
PYRAMID GEOPHYSICS
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

PROJECT: PARCEL 37 LEXINGTON, NORTH CAROLINA NCDOT PROJECT U-5757	TITLE: PARCEL 37 - EM61 METAL DETECTION CONTOUR MAP	DATE: 7/19/2019 PYRAMID PROJECT #: 2019-211	CLIENT: KLEINFELDER **FIGURE 2**

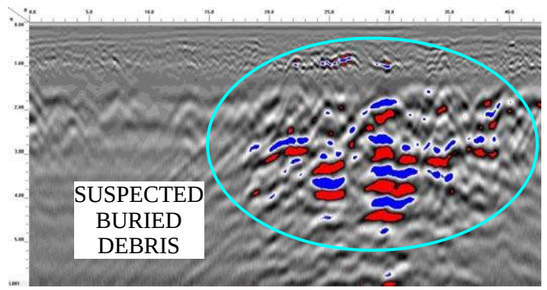
LOCATIONS OF GPR TRANSECTS



GPR TRANSECT 1 (T1)



GPR TRANSECT 2 (T2)



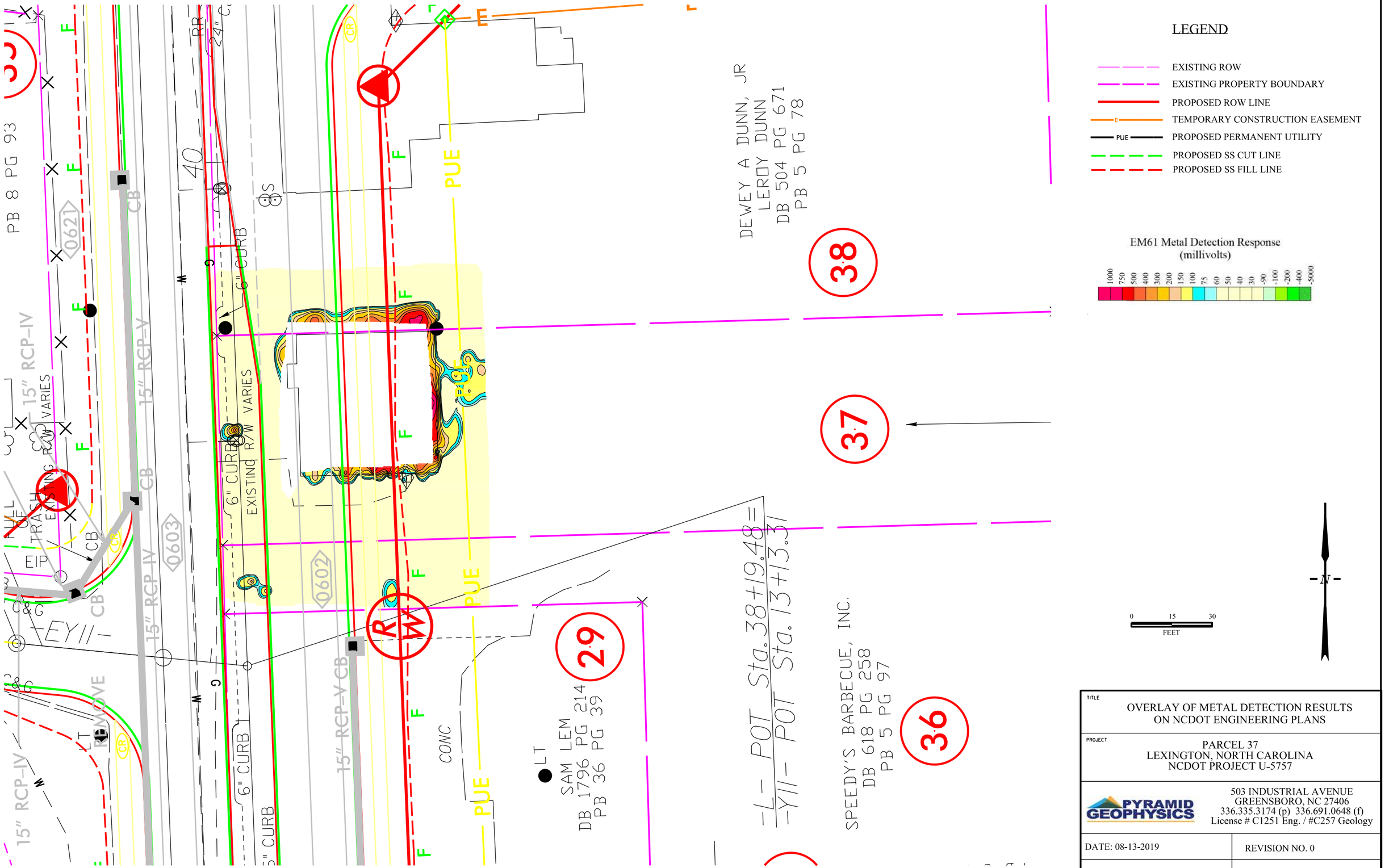
GPR TRANSECT 3 (T2)

N

PYRAMID GEOPHYSICS

503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

PROJECT: PARCEL 37 LEXINGTON, NORTH CAROLINA NCDOT PROJECT U-5757	TITLE: PARCEL 37 - GPR TRANSECT LOCATIONS AND IMAGES	DATE: 7/19/2019	CLIENT: KLEINFELDER
		PYRAMID PROJECT #: 2019-211	**FIGURE 3**



TITLE
OVERLAY OF METAL DETECTION RESULTS
ON NCDOT ENGINEERING PLANS

PROJECT
PARCEL 37
LEXINGTON, NORTH CAROLINA
NCDOT PROJECT U-5757

PYRAMID GEOPHYSICS
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
336.335.3174 (p) 336.691.0648 (f)
License # C1251 Eng. / #C257 Geology

DATE: 08-13-2019	REVISION NO. 0
PYRAMID PROJECT NO. 2019-211	FIGURE NO. 4

APPENDIX C
BORING LOGS

Date Begin - End:	8/06/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	90°F Clear	**Borehole Diameter:**	

BORING LOG P37-B1

FIELD EXPLORATION

Latitude: 35.84379° N
Longitude: -80.25370° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
					1.2		**SAND with Silt**: light brown, dry
					1.3		**CLAY with Silt**: red, dry to moist
					1.0		
					1.2		
5	Direct Push Sleeves		P37-B1-7		1.1		**SILT with Clay**: red, dry to moist, Micaceous
					1.3		
					1.5		
					1.5		**SILT**: light brown, weak odor, dry to moist, trace organic
					0.9		**SILT**: reddish yellow and yellow, dry to moist
					0.4		
10							

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 10 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 9/22/2019

BORING LOG P37-B1

NCDOT: U-5757
Biesecker Road
Lexington, NC

1

PAGE: 1 of 1

Date Begin - End:	8/06/2019	**Drilling Company:**	Quantex	**BORING LOG P37-B2**	
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C		
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe		
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column		
Weather:	90°F Clear	**Borehole Diameter:**			

FIELD EXPLORATION

Latitude: 35.84379° N
Longitude: -80.25370° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
							SAND with Silt: light brown and white, dry
					0.2		Little recovery; Loose Fill **SAND with Gravel**: white and light gray, dry
5	Direct Push Sleeves		P37-B2-5		1.3		
			P37-B2-10		0.6		**CLAY with Silt**: red nodules black, dry to moist
10							

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 10 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A	BORING LOG P37-B2		
DRAWN BY: A SHURTLEFF	NCDOT: U-5757 Biesecker Road Lexington, NC	2	
CHECKED BY: M BURNS			
DATE: 9/22/2019		PAGE: 1 of 1	

APPENDIX D

ANALYTICAL REPORT AND GRAPHS

QED

AQROS

Hydrocarbon Analysis Results

Client: KLEINFELDER
Address:

Samples taken Tuesday, August 6, 2019
Samples extracted Tuesday, August 6, 2019
Samples analysed Tuesday, August 6, 2019

Contact: ABIGAIL SHURTLEFF

Operator CAROLINE STEVENS

Project: NCDOT U-5757

U00904

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
										C5 - C10	C10 - C18	C18	
s	P29-B7-8	48.8	<1.2	3.7	3.4	7.1	1.6	<0.39	<0.049	78.5	13.5	8	Deg.PHC 75.1%,(FCM)
s	P37-B1-7	50.0	<1.3	<1.3	<1.3	<1.3	<0.25	<0.4	<0.05	0	46.1	53.9	Residual HC,(OCR)
s	P37-B2-5	25.6	<0.64	<0.64	1.3	1.3	1.3	<0.2	<0.026	41	27.2	31.8	V.Deg.PHC 72.8%,(FCM),(P)
s	P37-B2-10	22.7	<0.57	<0.57	4	4	3.1	<0.18	<0.023	0	57.1	42.9	V.Deg.PHC 75.9%,(FCM),(P)

Initial Calibrator QC check OK

Final FCM QC Check OK 98.7 %

Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

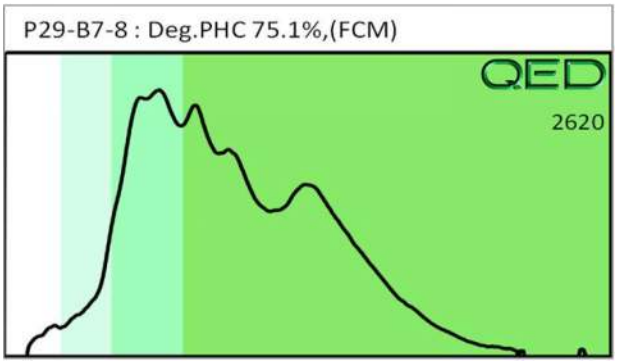
Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence of hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

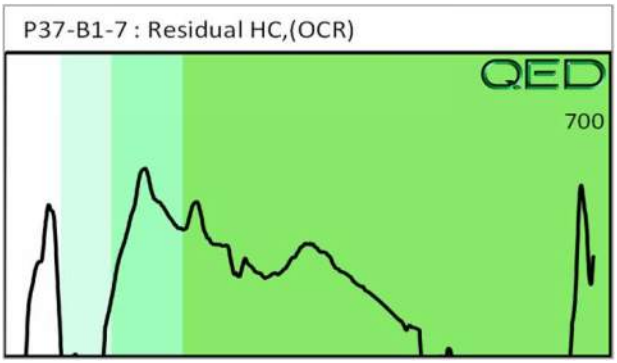
B = Blank Drift : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : (OCR) = Outside cal range : (M) = Modifed Result.

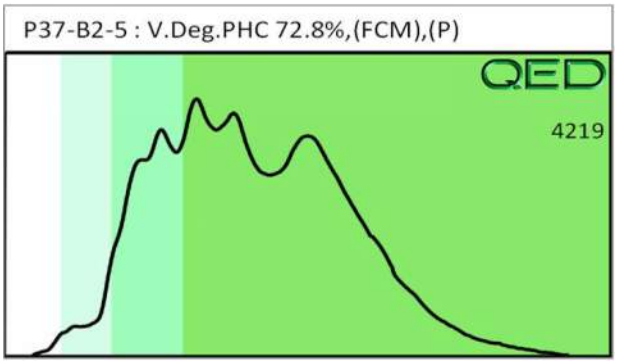
% Ratios estimated aromatic carbon number proportions : HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only. **Data generated by HC-1 Analyser**

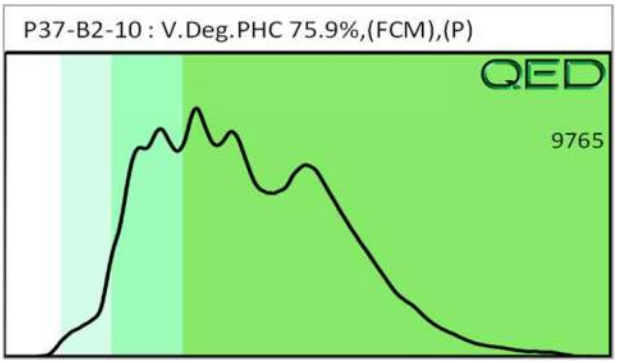
QED Hydrocarbon Fingerprints

Project: NCDOT U-5757 Tuesday, August 6, 2019









KLEINFELDER
Bright People. Right Solutions.

October 9, 2019
Kleinfelder File No. 20201105.001A

Mr. John L. Pilipchuk, LG., PE
North Carolina Department of Transportation
State Geotechnical Engineer
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

SUBJECT: **Preliminary Site Assessment Report**
Parcel 40, 2 AKM, LLC
WBS Element No. 54035.1.1, TIP No. U-5757
NC 8 (Winston Road) from 9th Street to SR 1408 (Biesecker Rd) in Lexington. Widen to multi lanes
Kleinfelder Project No. 20201105.001A

Dear Mr. Pilipchuk,

Kleinfelder is pleased to provide its report detailing the activities conducted as part of the preliminary site assessment for the subject project.

Kleinfelder appreciates the opportunity to be of service to you. Should you have questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely,
KLEINFELDER, INC.

Abigail R. Shurtleff
Environmental Staff Professional

Michael J Burns, PG
Environmental Program Manager

ARS/MJB:asp

KLEINFELDER 3200 Gateway Centre Blvd. Suite 100, Morrisville, NC 27560 **p |** 919.755.5011 **f |** 919.755.1414

PRELIMINARY SITE ASSESSMENT REPORT
PARCEL 40, 2 AKM, LLC
PARCEL 1100800000001
1401 OLD US HIGHWAY 52
LEXINGTON, DAVIDSON COUNTY, NORTH CAROLINA

NCDOT WBS ELEMENT 54035.1.1
STATE PROJECT U-5757
NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408 (BIESECKER RD) IN LEXINGTON. WIDEN TO MULTI LANES

KLEINFELDER PROJECT NO. 20201105.001A

OCTOBER 9, 2019

A Report Prepared for:

Mr. John L. Pilipchuk, LG., PE
North Carolina Department of Transportation
State Geotechnical Engineer
Geotechnical Engineering Unit
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

PRELIMINARY SITE ASSESSMENT REPORT
PARCEL 40, 2 AKM, LLC
PARCEL 1100800000001
1401 OLD US HIGHWAY 52
LEXINGTON, DAVIDSON COUNTY, NORTH CAROLINA

NCDOT WBS ELEMENT 54035.1.1
STATE PROJECT U-5757
NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408 (BIESECKER RD) IN LEXINGTON. WIDEN TO MULTI LANES

Prepared by:

Abigail R. Shurtleff
Environmental Staff Professional

Reviewed by:

Michael J. Burns, PG
Environmental Program Manager

KLEINFELDER
3200 Gateway Centre Blvd. | Suite 100
Raleigh, North Carolina 27560
P | 919.755.5011

October 9, 2019

Kleinfelder Project No. 20201105.001A

PRELIMINARY SITE ASSESSMENT REPORT

Site Name and Location:	Parcel 40 1401 Old US Highway 52 Lexington, Davidson County, North Carolina
Latitude and Longitude:	35.844503°N, -80.253834°W
County Parcel Number	1100800000001
Facility ID Number:	00-0-0000012254
Leaking UST Incident:	30638/WS-7266
State Project No.:	U-5757
NCDOT Project No.:	NCDOT WBS Element 54035.1.1
Description:	NC 8 (Winston Rd) from 9th Street to SR 1408 (Biesecker Rd) in Lexington. Widen to multi lanes
Date of Report:	October 9, 2019
Consultant:	Kleinfelder, Inc. 3200 Gateway Center Boulevard | Suite 100 Morrisville, North Carolina 27560 Corporate Geology License No. C-521 Corporate Licensure for Engineering F-1312

SEAL AND SIGNATURE OF CERTIFYING LICENSED GEOLOGIST

I, Michael J Burns, a Licensed Geologist for Kleinfelder, Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

DocuSigned by:
7E53DC44AC794CA...

10/28/2019

Michael J Burns, LG
NC License No. 1645

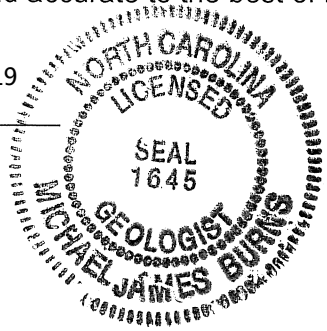


TABLE OF CONTENTS

PRELIMINARY SITE ASSESSMENT
PARCEL 40, 2 AKM, LLC
PARCEL 1100800000001
1401 OLD US HIGHWAY 52
LEXINGTON, DAVIDSON COUNTY, NORTH CAROLINA

NCDOT WBS ELEMENT 54035.1.1
STATE PROJECT U-5757
NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408 (BIESECKER RD) IN LEXINGTON. WIDEN TO MULTI LANES

1 INTRODUCTION

Kleinfelder, Inc. (Kleinfelder) has prepared this Preliminary Site Assessment (PSA) report to document assessment activities performed on a parcel known by the Davidson County, NC Tax Assessor's Office as Parcel Number 110800000001 and by the NCDOT as Parcel 40 (the assessment area is hereafter referred to as the "Project Study Area"). The Project Study Area consists of the western, southern and northern portions of the parcel. Parcel 40 is currently occupied by a Mobil retail gasoline station/convenience store located east of the northern intersection of 2nd Rainbow Street and NC Highway 8 (Winston Road), in the Town of Lexington, Davidson County, North Carolina (Figure 1).

Based on information provided in the Hazardous Materials Survey Report, dated February 28, 2018, prepared by Kleinfelder for SEPI Engineering & Construction, the parcel is currently a retail gasoline service station associated with leaking underground storage tank (LUST) groundwater incident 30638. There are four (4) active underground storage tanks (USTs) located on the site, but outside of the Project Study Area. As such, the purpose of the PSA was to evaluate whether unknown USTs or contaminated soil are present in the Project Study Area that may result in increased project costs and future liability if acquired by the NCDOT.

1.1 SITE DESCRIPTION

Parcel 40 has a listed owner of 2 AKM, LLC. The parcel has a street address of 1401 Old US Highway 52. The parcel consists of an active Mobil retail gasoline station/convenience store. The parcel is bounded by the paved asphalt parking lot of First Wesleyan Church to the north; First Wesleyan Church to the east; Longview Street to the south, beyond which is Speedy's Barbecue restaurant; and NC Highway 8 (Winston Road) to the west, beyond which is residential land. Photographs of the Project Study Area are provided in Appendix A.

1.2 SCOPE OF WORK

Kleinfelder conducted this PSA in accordance with the NCDOT's May 24, 2019, Request for Technical and Cost Proposal (RFP) and Kleinfelder's June 18, 2019 Technical and Cost Proposal. The NCDOT granted a formal Notice to Proceed on June 27, 2019.

2 HISTORY

2.1 PARCEL USAGE

The parcel consists of an active Mobil retail gasoline service station/convenience store.

The February 2018 SEPI Engineering and Construction Hazardous Materials Survey Report included information about a LUST incident for Parcel 40 which suggests the presence of contaminated soil and/or groundwater. The Report identifies the parcel as Parcel 47 (since changed to Parcel 40) located at 1401 Old US Highway 52.

Kleinfelder conducted historical research to determine whether additional environmental listings were identified for Parcel 40 and to review report documents associated with groundwater incident 30638:

- The site has operated as an active retail gasoline station since approximately 1961 under the ownership of Taylor Oil Company (1986-1998), Etna Snack Mart (1998), and The Pantry (1999-2013).
- A release was reported to the North Carolina Department of Environmental Quality (NCDEQ) in 2005 and ten (10) monitoring wells have been installed on the site, one (1) of which is located within the Project Study Area.
- There are four (4) active USTs located on-site, outside of the Project Study Area, and one (1) registered inactive UST (reportedly permanently closed in place in August 2005 in the northern portion of the parcel, outside of the Project Study Area).

2.2 FACILITY ID NUMBERS

Kleinfelder reviewed the NCDEQ UST database for Parcel 40. The parcel is listed with Facility ID 00-0-0000012254 and was identified as having four (4) active USTs: two (2) 12,000-gallon gasoline USTs, one (1) 20,000-gallon gasoline UST, and one (1) 20,000-gallon kerosene UST. Two (2) tanks were installed in 1963, one (1) was installed in 1978, and one (1) was installed in 1982. The facility also has one (1) registered inactive 8,000-gallon gasoline UST, reportedly installed in 1971 and permanently closed in place in August 2005.

2.3 GROUNDWATER INCIDENT NUMBERS

As mentioned in Section 2.1, the site is listed with LUST groundwater incident 30638 (WS-7226). Kleinfelder visited the NCDEQ Winston-Salem Regional Office to review reports related to the LUST incident. Information from select reports is discussed below:

- An 8,000-gallon gasoline UST was permanently closed in place in the northern portion of the parcel on August 1, 2005.
- During closure activities, a GeoProbe was used to collect twenty-three (23) soil samples from 3-5 feet below ground surface (bgs) (beneath the fuel dispensers and product lines) and 13-15 feet bgs (around the perimeter of the UST). Several samples returned total petroleum hydrocarbon (TPH) – gasoline range organics (GRO) action limit which at the time was 10 milligrams per kilogram (mg/kg). In particular, four (4) soil samples collected beneath the western fuel dispensers between 3 and 5 feet bgs ranged from 168 to 4,870 mg/kg TPH GRO and five (5) soil samples collected around the perimeter of the USTs between 13 and 15 feet bgs ranged from 11.7 to 23.8 mg/kg TPH GRO.
- A Limited Site Assessment (LSA) was conducted in 2005 by SEI Engineering & Geological Services. P.C. Four (4) monitoring wells were installed on site in October and December 2005. Petroleum impact was detected in all four monitoring wells above the NC 2L Groundwater Standards. Soil samples from the monitoring well installed within the Project Study Area (MW-1) which is an upgradient well, returned no petroleum hydrocarbon contamination above laboratory detection limits; however, the shallowest soil sample was collected for laboratory analyses from 8 feet bgs. Groundwater flow was documented to the east-southeast. The depth of groundwater has been documented between 22 feet and 25 feet below the ground surface (bgs).
- No additional assessment reports after 2005 were available for review at the time of this report.

Select pages from the reports described above are provided in Appendix E. Select soil boring locations and analytical results are depicted on Figure 3. All monitoring well locations are depicted on Figure 2.

3 OBSERVATIONS

3.1 GROUNDWATER MONITORING WELLS

Based on previous reports reviewed for the site and site visits conducted as part of the PSA, there are ten (10) monitoring wells located on the property that are associated with LUST groundwater incident 30638. One (1) monitoring well (MW-1) was located within the Project Study Area, west of the fuel island and east of the parcel boundary.

3.2 ACTIVE USTS

Based on review of the NCDEQ UST database, site visits and previous reports, there are four (4) active USTs located outside the Project Study Area. There are two (2) 12,000-gallon gasoline USTs, one (1) 20,000-gallon gasoline UST, and one (1) 20,000-gallon kerosene UST. The western extent of the UST basin extends partially within the Project Study Area; however, the USTs themselves are located east of the Project Study Area.

3.3 OTHER FEATURES APPARENT BEYOND PROJECT STUDY AREA

The Project Study Area consisted on the western and southern portions of the parcel. There were nine (9) monitoring wells observed on the eastern portion of the parcel, outside of the Project Study Area. No other features of concern were observed in the remainder of the parcel or beyond the Project Study Area; however, it is known that an 8,000-gallon gasoline UST was permanently closed in place in 2005 on the northern portion of the parcel, outside of the Project Study Area.

4 METHODS

4.1 PROPERTY OWNER CONTACTS

As part of Kleinfelder's scope of work, the listed property owner was contacted about the work schedule for the field work and the type of work being performed. The owner did not express any concern or special conditions associated with the work being performed.

4.2 HEALTH AND SAFETY

Prior to commencing the field work, Kleinfelder personnel developed a Site-Specific Health and Safety Plan (HASP) covering activities to be performed. The site-specific HASP was discussed with all Kleinfelder personnel involved with the project and at a daily onsite "tail gate" safety meetings with subcontractors and sub consultants. In addition to the HASP, Kleinfelder utilized its comprehensive Corporate Health and Safety Program, targeted to address those specific and critical tasks that involve Kleinfelder personnel and subcontractors. The Loss Prevention System (LPS™), a behavior-based program, is Kleinfelder's company-wide safety system implemented and embraced by all levels of the company.

4.3 GEOPHYSICAL INVESTIGATION

Pyramid Environmental & Engineering, P.C (Pyramid) conducted a geophysical investigation in the Project Study Area between July 15 and 16, 2019. Pyramid utilized electromagnetic (EM) induction technology and ground penetrating radar (GPR) to locate potential geophysical anomalies and potential USTs within the Project Study Area.

There were no EM responses that were not associated with known utilities, vehicles, or other previously known conditions. Four (4) active USTs and one (1) inactive UST were known to be located outside of the Project Study Area, with a portion of the UST basin and associated piping located within the eastern-most portion of the Project Study Area.

A copy of the Pyramid Geophysical Investigation Report, detailing the field methodology, is included in Appendix B.

4.4 SOIL ASSESSMENT

The scope of work for the soil assessment was to evaluate the presence of soil contamination along the existing right-of-way and/or easement to evaluate whether known impact is present in this area and may be migrating off-site. The soil borings were planned to be advanced to maximum depths of 10 feet bgs unless groundwater was encountered. Field screening using a

photo ionization detector (PID) was to be conducted at 1-foot intervals beginning at 0 foot to 1 foot. The soil sample with the highest PID reading above background or the sample from the maximum drilled depth would be selected for on-site laboratory analyses.

Prior to the drilling activities, public utilities were marked by NC One Call and private utilities were marked by Pyramid. Boring locations were selected to evaluate soil impact near proposed drainage features and areas where impact from the fueling operations may be present. Kleinfelder did not advance borings in areas that had been assessed for the documented petroleum release when data was available to provide information on the extent of soil impact within the proposed right of way and easement.

Kleinfelder subcontracted Quantex, Inc. (Quantex) to perform the drilling onsite on August 7, 2019. Quantex advanced five (5) soil borings (P40-B1 to P40-B5) by direct-push technology from the ground surface to boring termination (10 feet bgs) at locations specified by Kleinfelder. The soil boring locations were identified in the field using a GPS. The soil boring locations are shown on Figure 2. The borings were located within the public utility easements along NC Highway 8 (Winston Road) and Longview Street, within the parcel boundaries, and around the gasoline fuel island. Soil samples were collected by driving Macro Core™ samplers in 5-foot intervals. Each soil core was cut open, the soil samples were classified, and the soil was divided into 1-foot sections. Each 1-foot section was screened in the field using a PID. The PID readings are summarized in Table 1.

Soils of Parcel 40 were generally composed of a silt or sand within the first two feet, underlain by a clayey silt or silty clay, underlain by sandy silt. Groundwater was not encountered in any of the borings at the termination depth of 10 feet bgs. Copies of the boring logs are included in Appendix C.

4.5 SOIL ANALYSIS

The PID readings from soil borings advanced were noted to be low. Based on the PID data and visual observations, two (2) of the samples from boring P40-B1 and P40-B5 and one (1) sample from borings P40-B2 through P40-B4 were selected for on-site laboratory analysis.

The samples were analyzed by Red LAB, LLC utilizing ultraviolet fluorescence (UVF) methodology to provide real-time analytical results of Total Petroleum Hydrocarbons (TPH), Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and benzene, toluene, ethylbenzene, and total xylenes (BTEX). The UVF method was selected because of the use of

petroleum products on Parcel 40. The UVF analysis also provided data regarding Environmental Protection Agency 16 total Polycyclic Aromatic Hydrocarbons (PAHs), and Benzo(a)pyrene (BaP).

5 RESULTS

5.1 GEOPHYSICAL INVESTIGATION

The EM and GPR surveys did not identified unknown geophysical anomalies within the Project Study Area. A portion of the UST basin was located within the eastern-most portion of the Project Study Area; however, the four (4) active USTs known to be located on-site were located outside of the Project Study Area.

5.2 SOIL SAMPLING DATA

The UVF analysis of soil samples did not indicate the presence of petroleum impact in any of the soil samples analyzed. However, petroleum-impacted soils were discovered beneath the fuel dispensers on the western portion of the parcel, within the existing right-of-way, as indicated in the LSA conducted in 2005. As such, shallow soil impact above NCDEQ Action Limits may remain present within the existing right-of-way and the parcel boundaries beneath the fuel dispensers. The estimated extent of this contamination is depicted on Figure 3.

A summary of soil sample analytical results is presented in Table 2. The laboratory results associated with each soil boring conducted in 2019 and select soil borings from 2005 are presented on Figure 3. The laboratory report and graphs are included in Appendix D.

5.3 SAMPLE OBSERVATIONS

Soils were observed for any obvious evidence of contamination. No visual or olfactory evidence of contamination was noted in any of the soil samples from the borings.

5.4 QUANTITY CALCULATIONS

The horizontal and vertical extent of soil impact was determined based on Kleinfelder's 2019 soil borings, borings advanced during the 2005 assessment, and groundwater data from the documented petroleum release. 2005 soil borings DP-7@3'-5' (TPH GRO 168 mg/kg) and DP-8@ 3'-6' (TPH GRO 4870 mg/kg) located beneath the western-most dispenser were the only samples within the Project Study Area that indicated concentrations which exceed the current TPH GRO action limit. Samples collected in 2005 in borings just to the east of DP-7 and DP-8 (PL-7, PL-8 and PL-9) did not indicate impact above the TPH GRO action level (current action level) and these borings have been used to define the horizontal extent to the east. All other samples collected in 2005, except for two (2) samples collected beneath the eastern dispensers

(outside Project Study Area), did not indicate concentrations above the TPH GRO action limits. The 2005 data appears to suggest that the western dispenser is the primary source of groundwater impact on the site. As such, the vertical soil impact at DP-7 and DP-8 is assumed to extend to the water table at about 22-25 feet bgs. The horizontal extent of soil impact to west has been defined based on the soil boring for monitoring well MW-1. Three soil samples analyzed from this boring did not indicate concentrations above method detection limits. Kleinfelder soil borings P40-B3 and P40-B4 were used to define the horizontal extent of the soil impact to the north and south of DP-7 and DP-8.

Based on Kleinfelder's findings in this assessment and previous assessments performed on the property, petroleum-impacted soils may remain beneath the fuel dispensers on the western portion of the parcel, within the right-of-way. A separate plume may remain beneath the fuel dispensers on the eastern portion of the parcel, outside of the Project Study Area. Quantity calculations are depicted below for the petroleum-impacted soils potentially located within the Project Study Area:

(Figure 3) **Estimated Area of Soil Contamination** = 60-ft long x 18.5-ft wide
Estimated Thickness = 24.2-ft bgs (average groundwater depth) – 3-ft bgs (shallowest encounter) = 21.2-ft thick
Total Estimated Volume = 588.3 tons of petroleum-contaminated soils

6 CONCLUSIONS

Based on results of the EM/GPR survey, soil assessment and field observations, Kleinfelder has reached the following conclusions:

- The GPR and EM investigation did not identify unknown features within the Project Study Area. Fueling equipment such as product piping and multi-product dispensers are located within the Project Study Area. Four (4) active USTs and a closed in-place UST are known to be located on-site, outside of the Project Study Area.
- Parcel 40 is listed in the NCDEQ UST database as Facility Number 12254 and is identified as having four (4) active USTs: two (2) 12,000-gallon gasoline USTs, one (1) 20,000-gallon gasoline UST, and one (1) 20,000-gallon kerosene UST.
- One (1) 8,000-gallon gasoline UST was permanently closed in place in August 2005 in the northern portion of the parcel outside of the Project Study Area, with documented soil contamination above the State Action Limits. A 2005 LSA documented petroleum-impact in four monitoring wells located on site above the NC 2L Groundwater Standards.
- No soil impact above the NCDEQ Action Limits for TPH GRO and DRO was detected in borings advanced by Kleinfelder within the current rights-of-way and the parcel boundaries. Previous boring data suggests concentrations of TPH GRO above the action limit beneath the western dispenser.
- It is estimated that as much as 588.3 tons of petroleum-contaminated soils remain beneath the fuel dispensers on the western portion of the parcel, within the right-of-way. This soil may be encountered as shallow as 3 feet bgs to about 24 feet bgs.
- Groundwater was not encountered in the soil borings at a depth of 10 feet bgs. Previous assessment information note groundwater is an average of 24.2 feet below the ground surface.

7 RECOMMENDATIONS

Based on results of this Preliminary Site Assessment, Kleinfelder recommends sampling or special handling of petroleum impacted soils be performed when encountered within the Project Study Area on Parcel 40 in Lexington, Davidson County, North Carolina.

8 LIMITATIONS

Kleinfelder's work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of its profession practicing in the same locality, under similar conditions and at the date the services are provided. Kleinfelder's conclusions, opinions and recommendations will be based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, Kleinfelder's clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface studies or field tests, should be performed to reduce uncertainties. Acceptance of this report will indicate that NCDOT has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may have been discovered. Kleinfelder assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this report should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, or generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order. NCDOT is solely responsible for directing notification of all governmental agencies, and the public at large, of the existence, release, treatment or disposal of any hazardous materials observed at the project site, either before or during performance of

Kleinfelder's services. NCDOT is responsible for directing all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

TABLES

Table 1: Soil Sample Screening Results

Date	Sample ID	Depth (ft)	PID Reading	Notes
8/7/2019	U5757-P40-B1	1	1.4	
		2	2.3	
		3	2.5	
		4	4.7	UVF Analysis
		5	3.1	
		6	3.1	
		7	2.2	
		8	4.0	UVF Analysis
		9	3.1	
		10	1.4	
8/7/2019	U5757-P40-B2	1	0.8	
		2	1.0	
		3	2.2	UVF Analysis
		4	1.9	
		5	1.9	
		6	1.0	
		7	1.3	
		8	1.3	
		9	1.6	
		10	0.7	
8/7/2019	U5757-P40-B3	1	0.2	
		2	1.8	
		3	3.2	
		4	2.2	
		5	3.1	
		6	3.2	UVF Analysis
		7	2.7	
		8	2.5	
		9	2.4	
		10	1.2	
8/7/2019	U5757-P40-B4	1	0.8	
		2	1.1	
		3	1.3	
		4	1.5	
		5	1.6	
		6	1.8	
		7	2.6	UVF Analysis
		8	2.1	
		9	1.6	
		10	0.6	
8/7/2019	U5757-P40-B5	1	1.1	
		2	0.6	
		3	1.1	
		4	1.8	UVF Analysis
		5	1.3	
		6	1.6	UVF Analysis
		7	1.6	
		8	1.6	
		9	0.9	
		10	0.4	

Notes:
1) PID = Photoionization Detector
2) PID readings in parts per million (ppm)

TABLE 2: Soil Sample Analytical Summary

Parameter	Analytical Results							Comparison Criteria		
	Soil Sample Results									
Sample ID	P40-B1-4	P40-B1-8	P40-B2-3	P40-B3-6	P40-B4-7	P40-B5-4	P40-B5-6	State Action Limit	Protection of Groundwater	Residential Health
PID Reading (ppm)	4.7	4.0	2.2	3.2	2.6	1.8	1.6			
Collection Depth (ft bgs)	4	8	3	6	7	4	6			
Collection Date	8/7/19	8/7/19	8/7/19	8/7/19	8/7/19	8/7/19	8/7/19			
UVF Method										
Diesel Range Organics	<0.59	**7.4**	**0.44**	**1.7**	**5.8**	<0.51	**1.2**	100	--	--
Gasoline Range Organics	<0.59	<0.59	<0.44	<0.49	<0.53	<0.51	<0.56	50	--	--

Notes:

Results displayed in milligram per kilogram (mg/kg)

ft bgs = Feet below ground surface

Bold = Above Laboratory Detection Limit

UVF = Ultraviolet Flouresence

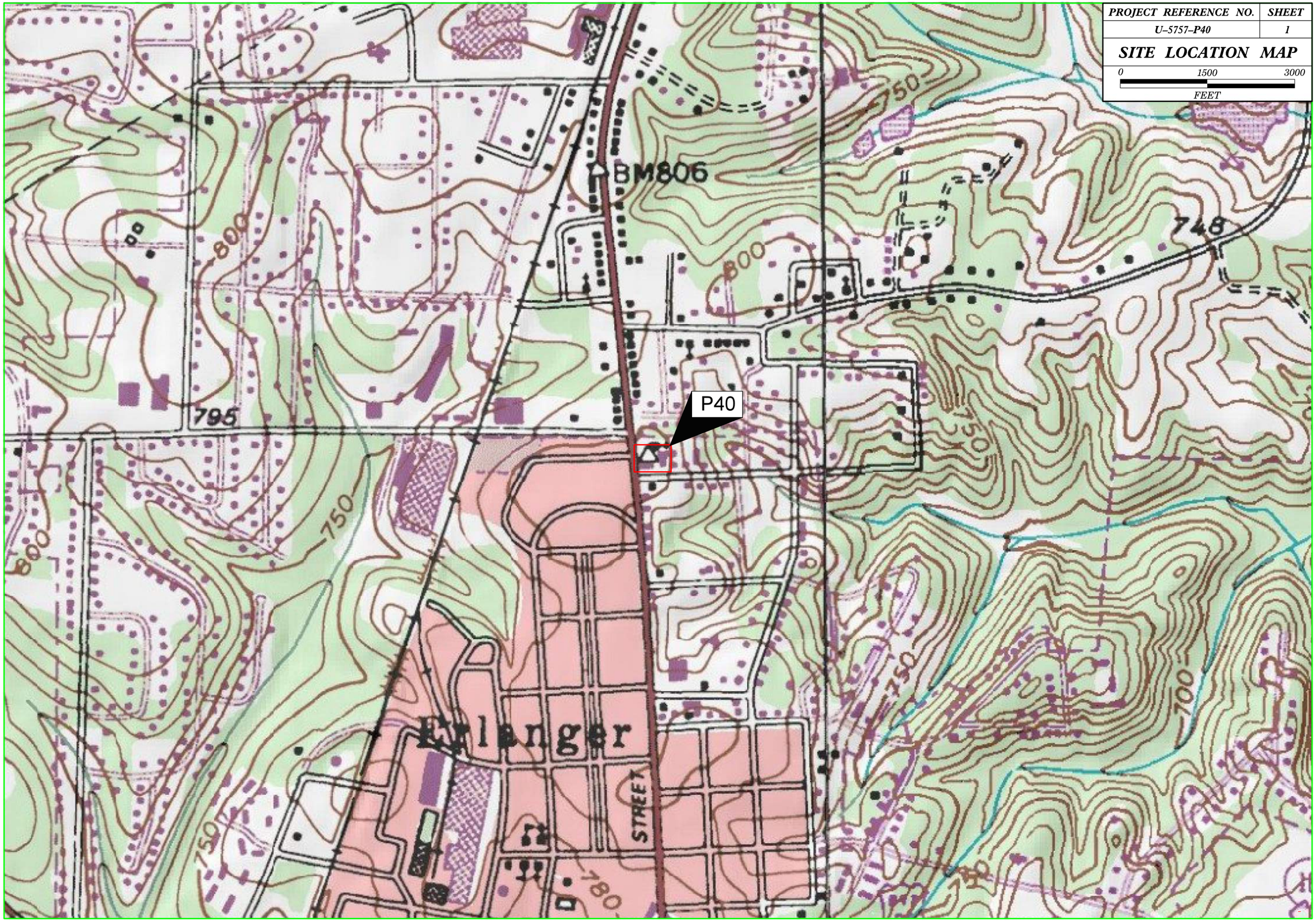
FIGURES

PROJECT REFERENCE NO.	SHEET
U–5757–P40	1

SITE LOCATION MAP

0 1500 3000

FEET



PROJECT REFERENCE NO.	SHEET
U-5757-P40	2

SITE MAP

0 20 40

FEET

LEGEND

P40B1 SOIL SAMPLE LOCATIONS

MWI MONITORING WELL LOCATIONS

NC GRID
NAD 83 NA 2011

P40-B5
P40-B4
P40-B3
P40-B2
P40-BI

MW9
MW10
MW5
MW6
MW2
MW8
MW3
MWI
MW4
MW7

REFUSAL ONTO REINFORCED CONCRETE

36'
PUE
CREST
GAS VENTS
TPC
17'
+75.00
27'
30'
34' FF
FEET

PROJECT REFERENCE NO.	SHEET
U-5757-P40	3
SOIL SAMPLE ANALYTICAL RESULTS	

0 20 40
FEET

LEGEND

- P40-B1 — KLEINFELDER (2019) SOIL SAMPLE LOCATIONS
- MWI — MONITORING WELL LOCATIONS
- DP-7 — PREVIOUS (2005) SOIL SAMPLE LOCATIONS

SOIL SAMPLE RESULTS

	DRO	GRO
P40-B1-4	<0.59	<0.59
P40-B1-8	7.4	<0.59
P40-B2-3	0.44	<0.44
P40-B3-6	1.7	<0.49
P40-B4-7	5.8	<0.53
P40-B5-4	<0.51	<0.51
P40-B5-6	1.2	<0.56
DP-2 3-5	NA	BDL
DP-3 3-5	NA	**923**
DP-6 3-5	NA	**237**
DP-7 3-5	NA	**168**
DP-8 3-6	NA	**4,870**
PL-2 3-5	NA	BDL
PL-4 3-5	NA	BDL
PL-6 3-5	NA	BDL
PL-7 3-5	NA	31.3
MW-1A 8-10	BDL FOR ALL PHC'S	

NOTES:
1) All results reported in mg/kg
2) DRO = Diesel Range Organics
3) GRO = Gasoline Range Organics
4) Bold concentrations exceed the NCDEQ TPH Action Limit
5) BDL = Below Detection Limits
6) NA = Not Analyzed
7) PHC = Petroleum Hydrocarbon

APPENDIX A
SITE PHOTOGRAPHS

View facing northwest toward the Mobil service station and Winston Road on Parcel 40.

View facing southeast toward fuel islands and the UST basin on Parcel 40.

Original in Color

KLEINFELDER *Bright People. Right Solutions.* www.kleinfelder.com	PROJECT NO:20201105.001A DRAWN: September 2019 DRAWN BY: ARS CHECKED BY: MB FILE NAME: Photo Pages	**SITE PHOTOGRAPHS** Preliminary Site Assessment Report U-5757-P40 Lexington, Davidson County, North Carolina	FIGURE **A-1**

View facing south toward Longview Street on Parcel 40.

Original in Color

KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com	PROJECT NO:20201105.001A DRAWN: September 2019 DRAWN BY: ARS CHECKED BY: MB FILE NAME: Photo Pages	**SITE PHOTOGRAPHS** Preliminary Site Assessment Report U-5757-P40 Lexington, Davidson County, North Carolina	FIGURE **A-2**

APPENDIX B

GEOPHYSICAL SURVEY REPORT

PYRAMID GEOPHYSICAL SERVICES
(PROJECT 2019-211)

GEOPHYSICAL SURVEY

METALLIC UST INVESTIGATION:
PARCEL 40
NCDOT PROJECT U-5757 (54035.1.1)

1401 WINSTON ROAD, LEXINGTON, NC

August 20, 2019

Report prepared for: **Michael Burns, P.G.**
Kleinfelder, Inc.
3500 Gateway Center Boulevard, Suite 200
Morrisville, NC 27560

Prepared by: _____

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

Reviewed by: _____

Douglas A. Canavello, P.G.
NC License #1066

503 INDUSTRIAL AVENUE, GREENSBORO, NC 27406
P: 336.335.3174 F: 336.691.0648
C257: GEOLOGY C1251: ENGINEERING

GEOPHYSICAL INVESTIGATION REPORT
Parcel 40 - 1401 Winston Road
Lexington, Davidson County, North Carolina

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Figures

Appendices

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 Kleinfelder, Inc. at Parcel 40 located at 1401 Winston Road in Lexington, NC. The survey was part of an NCDOT Right-of-Way (ROW) investigation (NCDOT Project U-5757). The survey was designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. Conducted from July 16-17, 2019, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

Geophysical Results: The geophysical investigation consisted of electromagnetic (EM) induction-metal detection and ground penetrating radar (GPR) surveys. A total of seven EM anomalies were identified. The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface. EM and GPR data showed evidence of large reinforced concrete pads at the site, but there was no evidence of significant structures such as USTs. Collectively, the geophysical data did not record any evidence of unknown metallic USTs at Parcel 40.

INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Kleinfelder, Inc. at Parcel 40 located at 1401 Winston Road in Lexington, NC. The survey was part of an NCDOT Right-of-Way (ROW) investigation (NCDOT Project U-5757). The survey was designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. Conducted from July 16-17, 2019, the geophysical investigation was performed to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

The site included an active gas station surrounded by asphalt and concrete surfaces. There were three known USTs at the site, all of which were located outside of the survey area. 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-MK2 (EM61) metal detector integrated with a Geode External GPS/GLONASS receiver. 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 15.0 software programs.

GPR data were acquired across select EM anomalies on July 17, 2019, 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	Reinforced Concrete/Pump Islands/Building	✓
2	Light	
3	Fence	
4	Suspected Utility/ Edge of UST Pit/Infrastructure (USTs Outside of Survey Area)	
5	Dumpster	
6	Vehicle	✓
7	Sign	

The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface including a light, a fence, known UST infrastructure (the USTS were outside of the survey area. a dumpster, a vehicle, and a sign. EM Anomaly 1 was the result of the building, pump islands, and suspected reinforced concrete and was investigated further with GPR. EM Anomaly 6 was associated with interference from a vehicle was investigated further with GPR to confirm that no larger structures were obscured by the interference.

Discussion of GPR Results

Figure 3 presents the locations of the formal GPR transects performed at the property as well as select transect images. All of the transect images are included in **Appendix A**. A total of fifteen formal GPR transects were performed at the site.

GPR Transects 1-2 were performed across an area associated with interference from a vehicle (EM Anomaly 6). No evidence of any significant structures was observed, verifying that the EM anomaly was the result of interference from the vehicle.

GPR Transects 3-15 were performed in a grid-like fashion across areas of suspected reinforced concrete, the pump islands, and the building (EM Anomaly 1). These transects

confirmed the presence of metal reinforcement within the concrete and verified that no buried structures were obscured by the interference from the building or pump islands. No evidence of any buried structures such as USTs was observed.

Collectively, the geophysical data did not record any evidence of unknown metallic USTs at Parcel 40. **Figure 4** provides an overlay of the metal detection results on the NCDOT MicroStation engineering plans for reference.

SUMMARY & CONCLUSIONS

Pyramid's evaluation of the EM61 and GPR data collected at Parcel 40 in Lexington, 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.
- The majority of the EM anomalies were directly attributed to visible cultural features at the ground surface.
- EM and GPR data showed evidence of large reinforced concrete pads at the site, but there was no evidence of significant structures such as USTs.
- Collectively, the geophysical data did not record any evidence of unknown metallic USTs at Parcel 40.

LIMITATIONS

Geophysical surveys have been performed and this report was prepared for Kleinfelder 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.

APPROXIMATE BOUNDARIES OF GEOPHYSICAL SURVEY AREA

View of Survey Area
(Facing Approximately North)

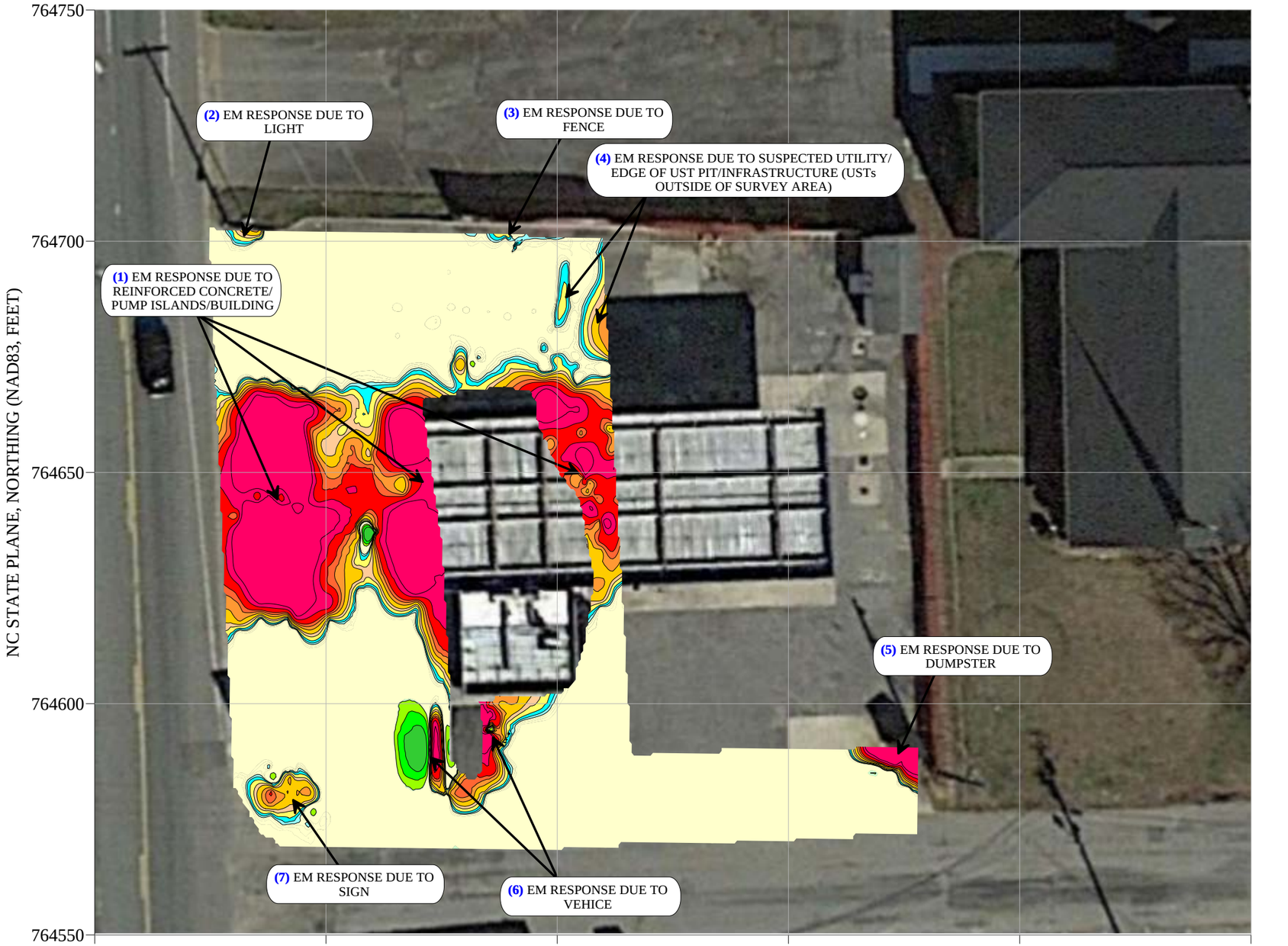
View of Survey Area
(Facing Approximately East)

N

PYRAMID GEOPHYSICS
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

PROJECT: PARCEL 40 LEXINGTON, NORTH CAROLINA NCDOT PROJECT U-5757	TITLE: PARCEL 40 - GEOPHYSICAL SURVEY BOUNDARIES AND SITE PHOTOGRAPHS	DATE: 7/19/2019 PYRAMID PROJECT #: 2019-211	CLIENT: KLEINFELDER **FIGURE 1**

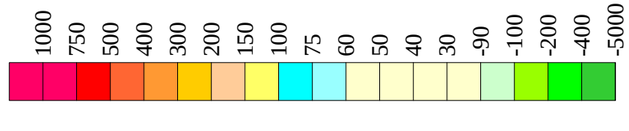
EM61 METAL DETECTION RESULTS



EVIDENCE OF FOUR KNOWN USTS WAS OBSERVED OUTSIDE OF THE SURVEY AREA.
NO EVIDENCE OF UNKOWN METALLIC USTs WAS 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 EM data were collected on July 16, 2019, using a Geonics EM61-MK2 instrument. Verification GPR data were collected using a GSSI UtilityScan DF instrument with a dual frequency 300/800 MHz antenna on July 17, 2019.

EM61 Metal Detection Response (millivolts)



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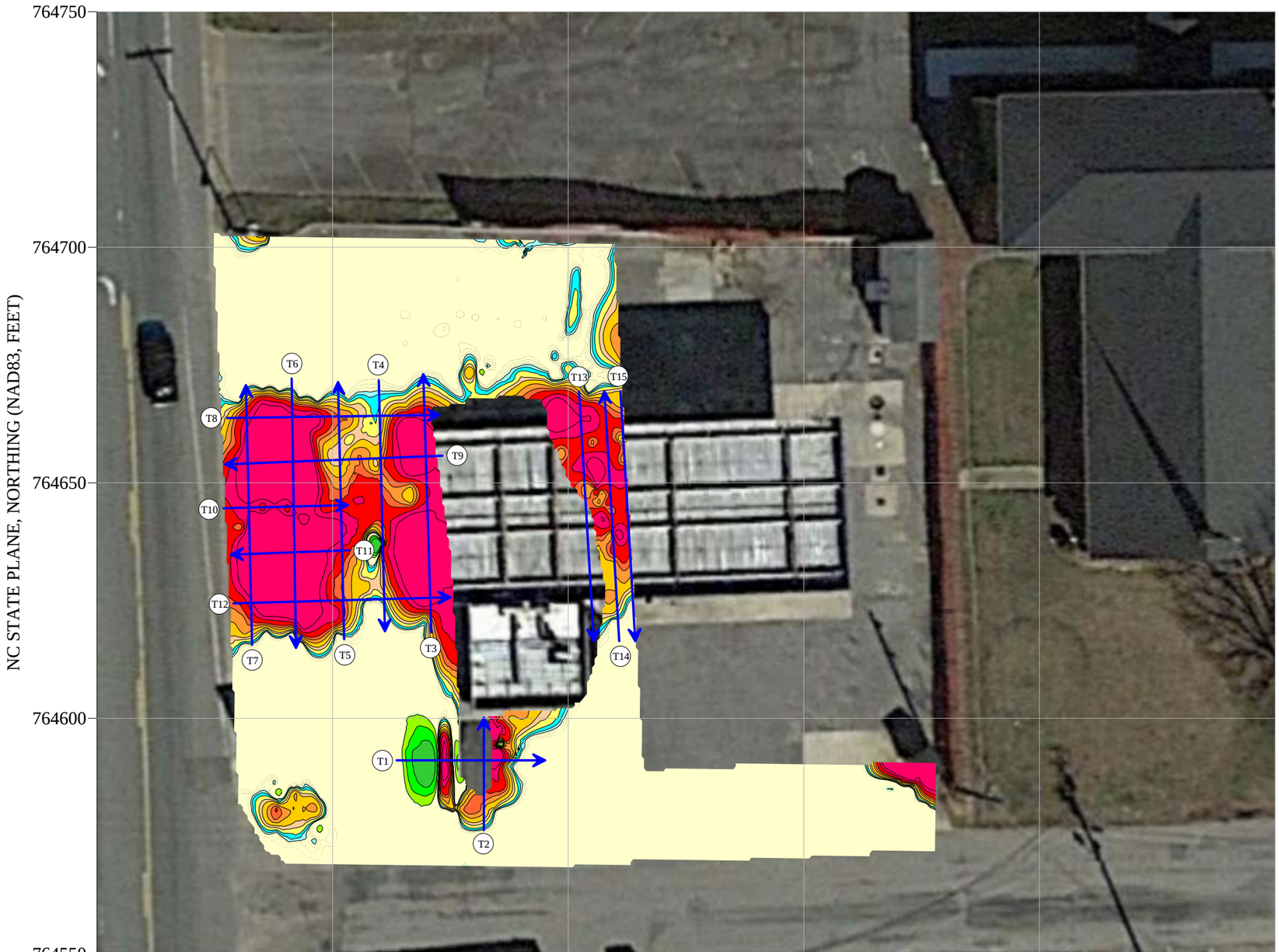
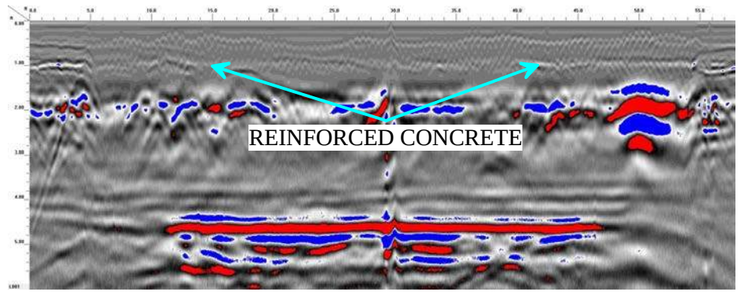
PYRAMID GEOPHYSICS
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

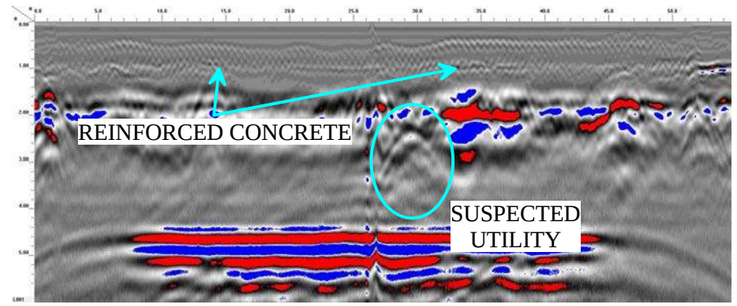
PROJECT: PARCEL 40 LEXINGTON, NORTH CAROLINA NCDOT PROJECT U-5757	TITLE: PARCEL 40 - EM61 METAL DETECTION CONTOUR MAP	DATE: 7/19/2019	CLIENT: KLEINFELDER
		PYRAMID PROJECT #: 2019-211	**FIGURE 2**

LOCATIONS OF GPR TRANSECTS





GPR TRANSECT 3 (T3)



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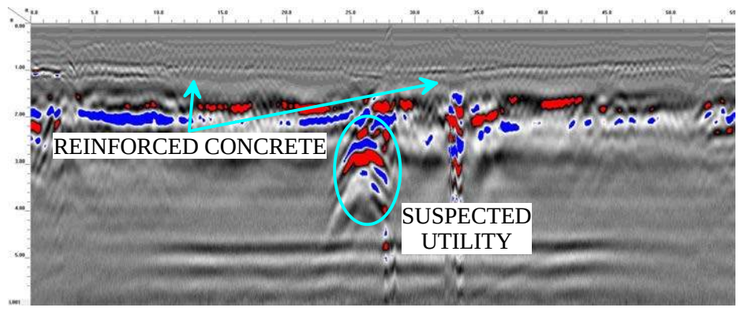


GPR TRANSECT 6 (T6)

N

PYRAMID GEOPHYSICS
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
(336) 335-3174 (p) (336) 691-0648 (f)
License # C1251 Eng. / License # C257 Geology

PROJECT: PARCEL 40 LEXINGTON, NORTH CAROLINA NCDOT PROJECT U-5757	TITLE: PARCEL 40 - GPR TRANSECT LOCATIONS AND SELECT IMAGES	DATE: 7/19/2019	CLIENT: KLEINFELDER
		PYRAMID PROJECT #: 2019-211	**FIGURE 3**

LEGEND

- EXISTING ROW
- EXISTING PROPERTY BOUNDARY
- PROPOSED ROW LINE
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT UTILITY
- PROPOSED SS CUT LINE
- PROPOSED SS FILL LINE

EM61 Metal Detection Response
(millivolts)

1000 750 500 400 300 200 150 100 75 60 50 40 30 -90 -100 -200 -400 -5000

N

0 15 30
FEET

TITLE
OVERLAY OF METAL DETECTION RESULTS
ON NCDOT ENGINEERING PLANS

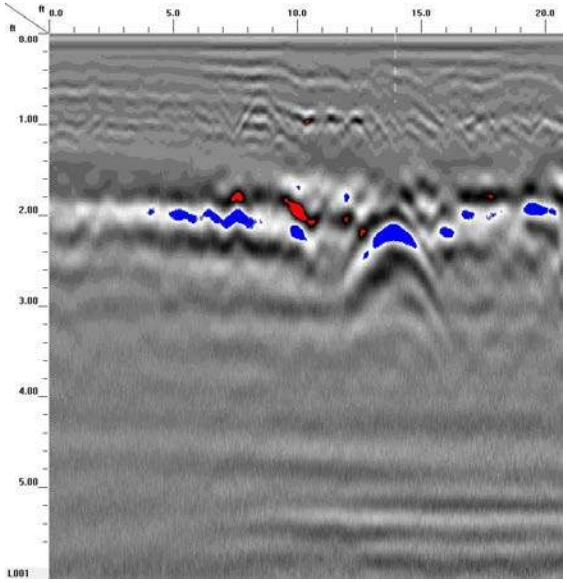
PROJECT
PARCEL 40
LEXINGTON, NORTH CAROLINA
NCDOT PROJECT U-5757

PYRAMID GEOPHYSICS
503 INDUSTRIAL AVENUE
GREENSBORO, NC 27406
336.335.3174 (p) 336.691.0648 (f)
License # C1251 Eng. / #C257 Geology

DATE: 08-13-2019 | REVISION NO. 0

PYRAMID PROJECT NO. 2019-211 | FIGURE NO. 4

Appendix A – GPR Transect Images



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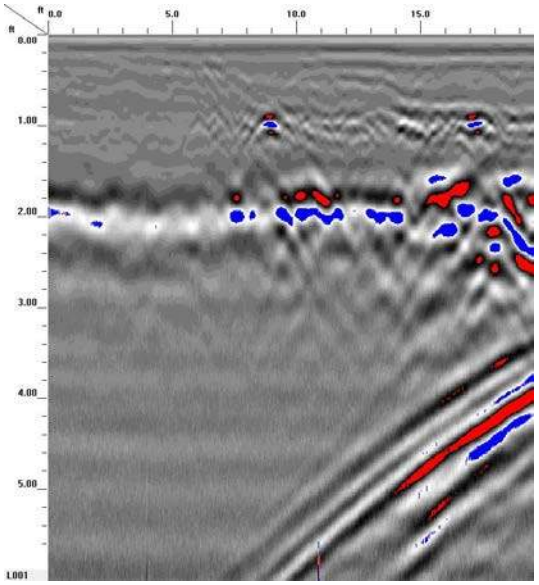

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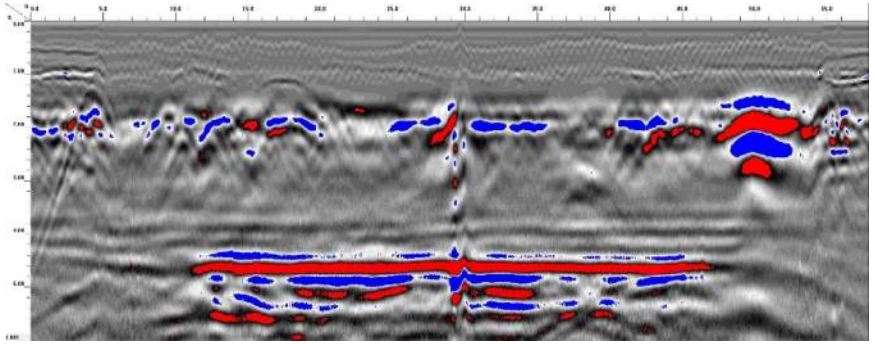

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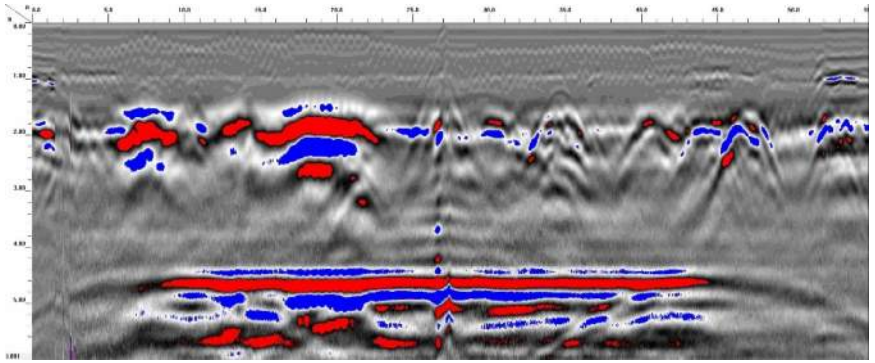

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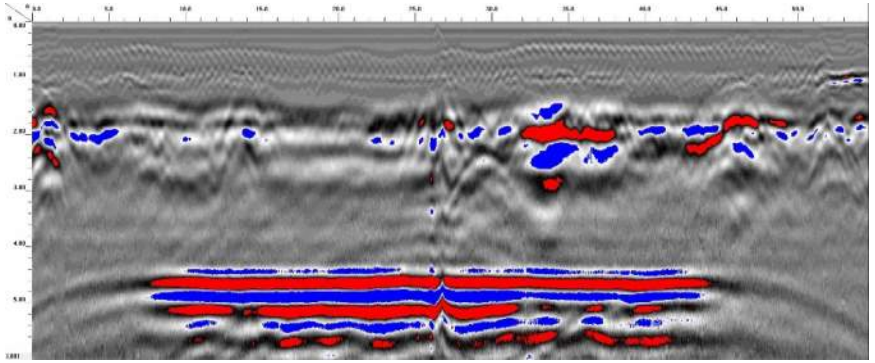

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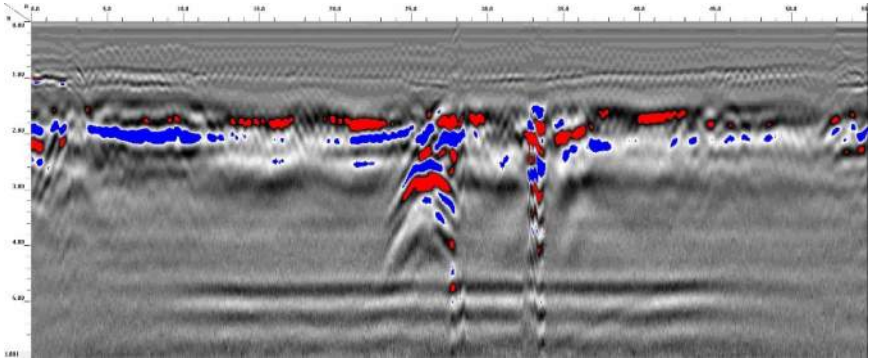

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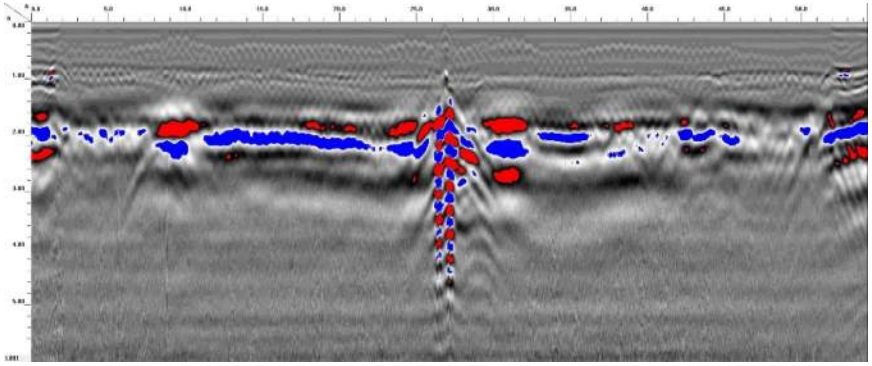

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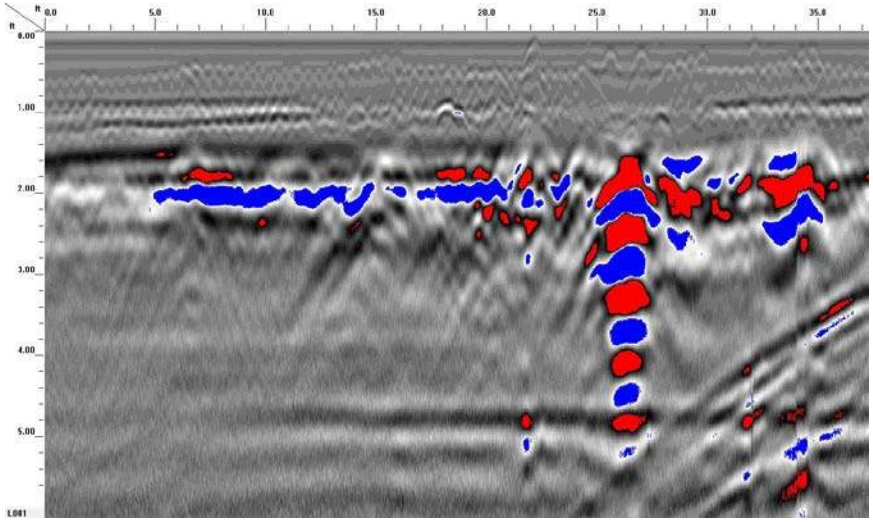

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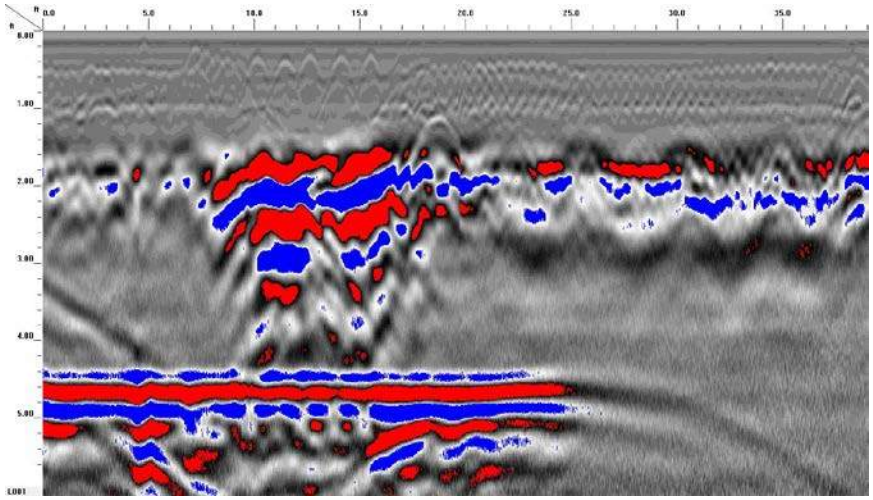

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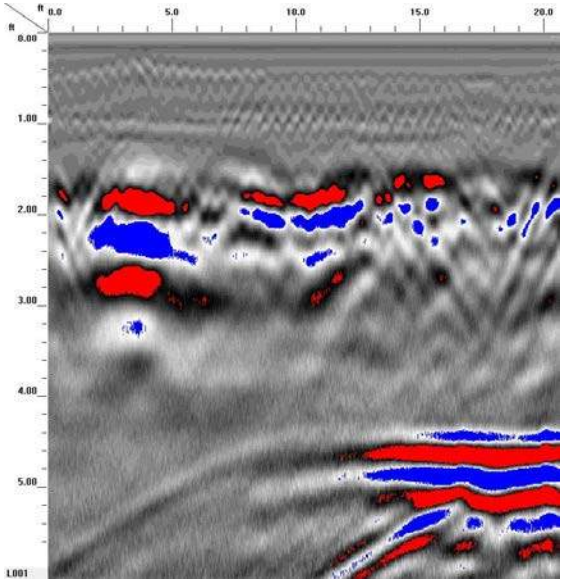

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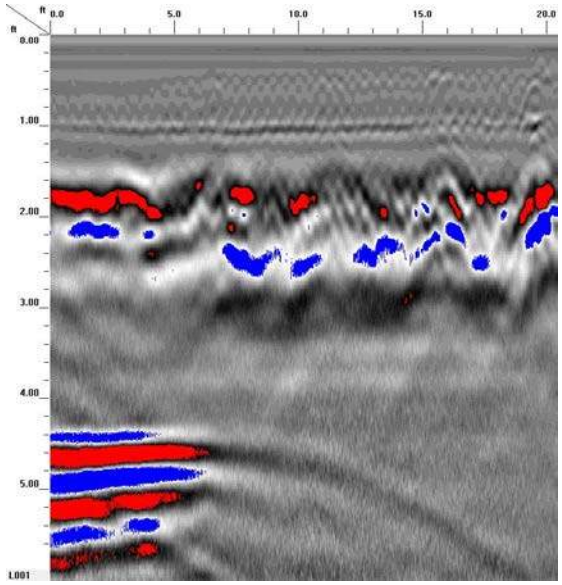

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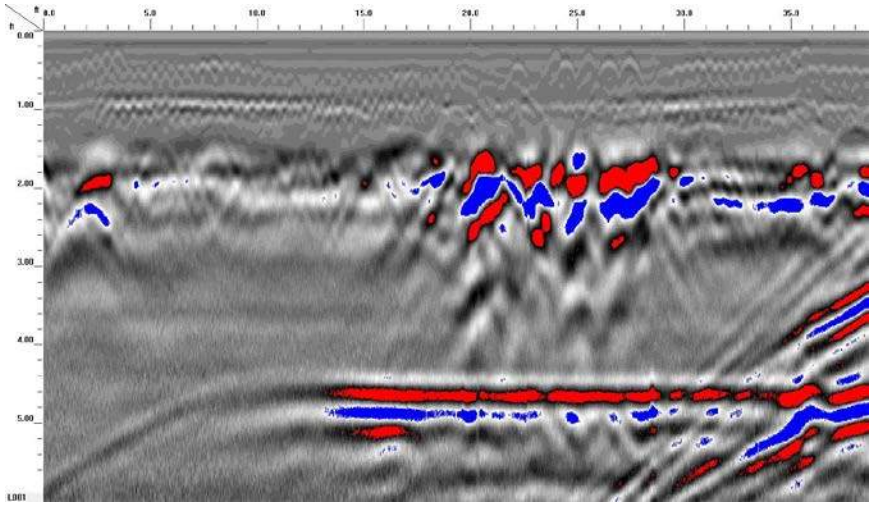

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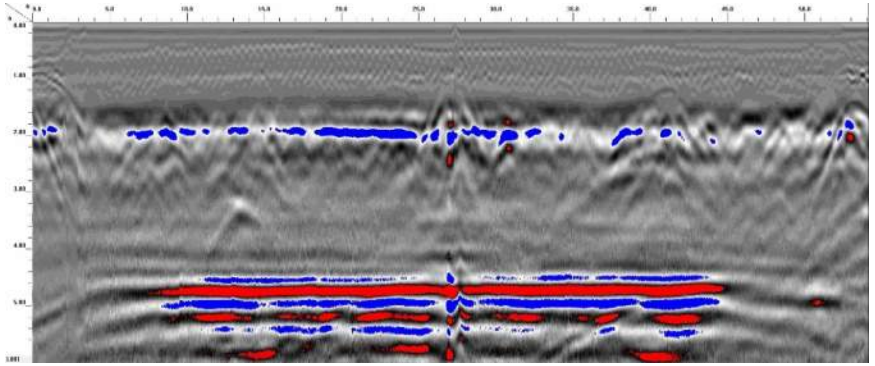

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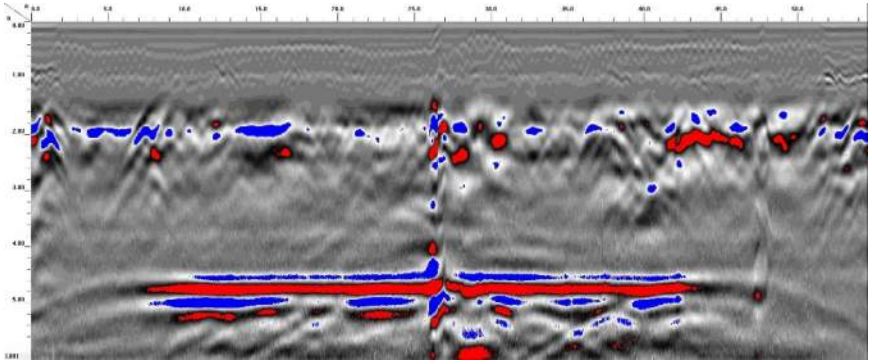

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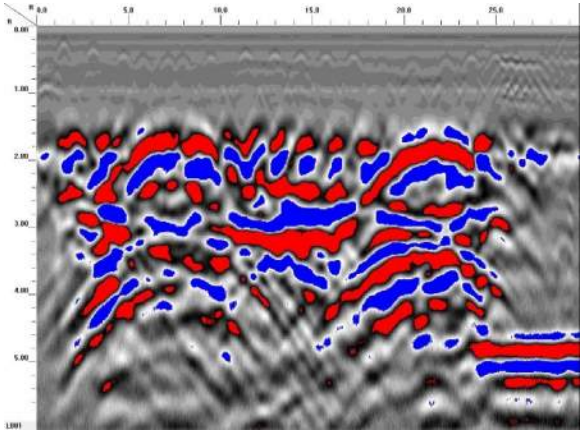

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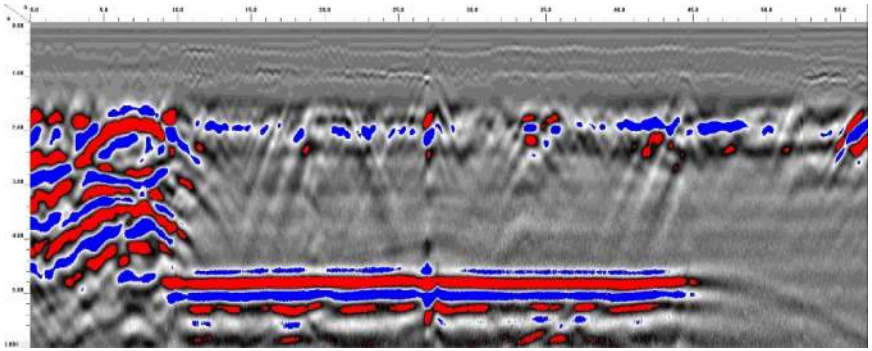


GPR TRANSECT 15

APPENDIX C
BORING LOGS

Date Begin - End:	8/07/2019	**Drilling Company:**	Quantex	**BORING LOG P40-B1**	
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C		
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe		
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column		
Weather:	80°F Clear	**Borehole Diameter:**			

FIELD EXPLORATION

Latitude: 35.84449° N
Longitude: -80.25347° E
Surface Condition: Concrete

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
					1.4		**SILT with Clay**: reddish brown and reddish yellow, dry
					2.3		
					2.5		
	Direct Push Sleeves		P40-B1-4		4.7		
5					3.1		
					3.1		
					2.2		**SILT**: pink and reddish yellow, dry to moist, trace sand
			P40-B1-8		4.0		
					3.1		
10					1.4		

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 5 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 10/7/2019

BORING LOG P40-B1

NCDOT: U-5757
Biesecker Road
Lexington, NC

1

PAGE: 1 of 1

Date Begin - End:	8/07/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	80°F Clear	**Borehole Diameter:**	

BORING LOG P40-B2

FIELD EXPLORATION

Latitude: 35.84449° N
Longitude: -80.25347° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
					0.8		**SILT**: light brown and brown, dry
					1.0		
							Clayey SILT: reddish brown and reddish yellow, dry
	Direct Push Sleeves		P40-B2-4		2.2		
					1.9		
5					1.9		
					1.0		
							SILT: reddish yellow and red, dry to moist
					1.3		
					1.3		
					1.6		
							SILT: pink and reddish yellow, dry to moist, trace sand
10					0.7		

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 5 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 10/7/2019

BORING LOG P40-B2

NCDOT: U-5757
Biesecker Road
Lexington, NC

2

PAGE: 1 of 1

Date Begin - End:	8/07/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	80°F Clear	**Borehole Diameter:**	

BORING LOG P40-B3

FIELD EXPLORATION

Latitude: 35.84449° N
Longitude: -80.25347° E
Surface Condition: Concrete

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
					0.2		**ASPHALT**
					1.8		**Clayey SILT**: reddish brown and reddish yellow, dry
					3.2		
					2.2		
					3.1		
5	Direct Push Sleeves		P40-B3-6		3.2		**SILT**: reddish yellow and red, dry to moist
					2.7		
					2.5		
					2.4		
					1.2		**SILT**: pink and reddish yellow, dry to moist, trace sand
10							

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 5 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 10/7/2019

BORING LOG P40-B3

NCDOT: U-5757
Biesecker Road
Lexington, NC

3

PAGE: 1 of 1

Date Begin - End:	8/07/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	80°F Clear	**Borehole Diameter:**	

BORING LOG P40-B4

FIELD EXPLORATION

Latitude: 35.84449° N
Longitude: -80.25347° E
Surface Condition: Concrete

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
					0.8		**SAND**: light brown multicolored pink, moist
					1.1		
							SILT: light brown and brown, dry to moist
					1.3		
							Clayey SILT: reddish brown and reddish yellow, dry
					1.5		
					1.6		
5	Direct Push Sleeves						
					1.8		
			P40-B4-7		2.6		**SILT**: reddish yellow and red, dry to moist
					2.1		
					1.6		
					0.6		**SILT**: pink and reddish yellow, dry to moist, trace sand
10							

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 5 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A
DRAWN BY: A SHURTLEFF
CHECKED BY: M BURNS
DATE: 10/7/2019

BORING LOG P40-B4

NCDOT: U-5757
Biesecker Road
Lexington, NC

4

PAGE: 1 of 1

Date Begin - End:	8/07/2019	**Drilling Company:**	Quantex
Logged By:	A Shurtleff	**Drill Crew:**	Andrew C
Hor.-Vert. Datum:	WGS 1984 - Not Available	**Drilling Equipment:**	Genuine Geoprobe
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column
Weather:	80°F Clear	**Borehole Diameter:**	

BORING LOG P40-B5

FIELD EXPLORATION

Latitude: 35.84449° N
Longitude: -80.25347° E
Surface Condition: Asphalt

Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
							ASPHALT
					1.1		**SAND**: light brown multicolored pink, moist
					0.6		
					1.1		**SILT**: light brown and reddish brown, dry to moist
			P40-B5-4		1.8		
					1.3		**SAND**: brown multicolored reddish brown, moist, trace silt
5							**CLAY with Silt**: red and reddish yellow, dry to moist
	Direct Push Sleeves		P40-B5-6		1.6		
					1.6		
					1.6		**SILT**: reddish yellow and red, dry to moist
					0.9		
					0.4		
10							

The borehole was terminated at approximately 10 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
Groundwater was not observed during drilling or after completion.
GENERAL NOTES:
An iPad integrated GPS unit was used to locate the borehole with an accuracy of 5 meters.
The boring was backfilled with excavated material

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20201105.001A	BORING LOG P40-B5		
DRAWN BY: A SHURTLEFF	NCDOT: U-5757 Biesecker Road Lexington, NC	5	
CHECKED BY: M BURNS			
DATE: 10/7/2019		PAGE: 1 of 1	

APPENDIX D

ANALYTICAL REPORT AND GRAPHS

QED REDLAB RAPID ENVIRONMENTAL DIAGNOSTICS QROS

Hydrocarbon Analysis Results

Client: KLEINFELDER
Address:

Samples taken Wednesday, August 7, 2019
Samples extracted Wednesday, August 7, 2019
Samples analysed Wednesday, August 7, 2019

Contact: ABI SHURTLEFF

Operator MAX MOYER

Project: NCDOT U-5757 ; PARCEL 40

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	P40 - B1 - 4	23.4	<0.59	<0.59	<0.59	<0.59	<0.12	<0.19	<0.023	0	100	0	PHC not detected
s	P40 - B1 - 8	23.6	<0.59	<0.59	7.4	7.4	5.5	<0.19	<0.024	0	71	29	Deg Fuel 72.3%,(FCM)
s	P40 - B2 - 3	17.4	<0.44	<0.44	0.44	0.44	0.25	<0.14	<0.017	0	100	0	Residual HC
s	P40 - B3 - 6	19.7	<0.49	<0.49	1.7	1.7	1.5	<0.16	<0.02	0	77.2	22.8	Deg Fuel 76.4%,(FCM)
s	P40 - B4 - 7	21.3	<0.53	<0.53	5.8	5.8	4.9	<0.17	<0.021	0	74.5	25.5	Deg Fuel 76.9%,(FCM)

Initial Calibrator QC check OK Final FCM QC Check OK 102.6 %

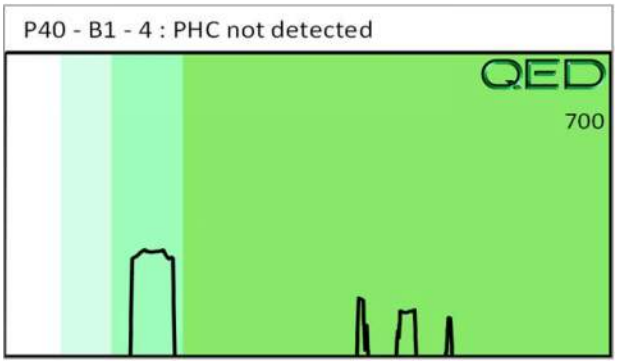
Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content

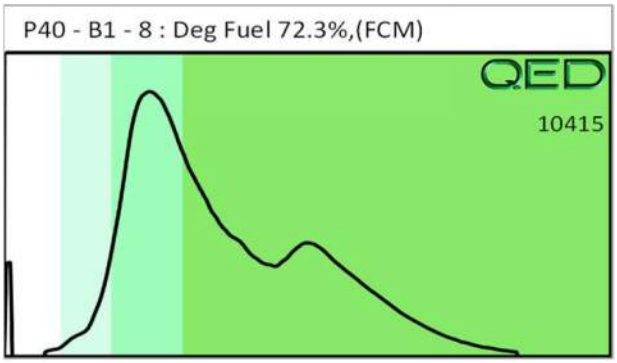
Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library

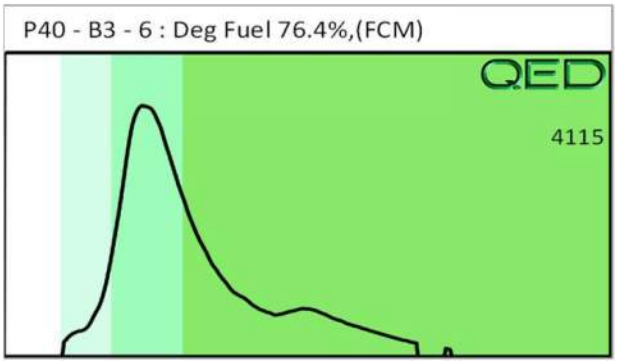
(SBS) or (LBS) = Site Specific or Library Background Subtraction applied to result : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate present

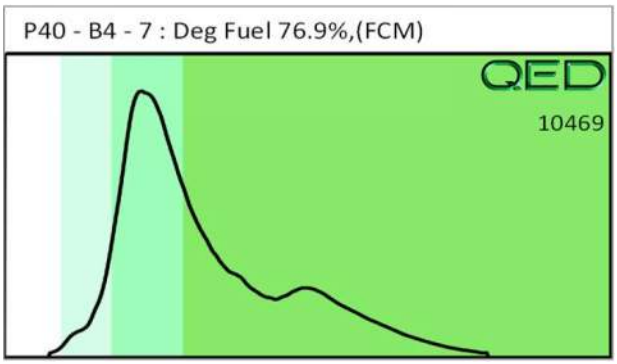
QED Hydrocarbon Fingerprints

Project: NCDOT U-5757 ; PARCEL 40 Wednesday, August 7, 2019









QED

REDLAB RAPID ENVIRONMENTAL DIAGNOSTICS

QROS

Hydrocarbon Analysis Results

Client: KLEINFELDER
Address:

Samples taken Wednesday, August 7, 2019
Samples extracted Wednesday, August 7, 2019
Samples analysed Wednesday, August 7, 2019

Contact: ABI SHURTLEFF

Operator MAX MOYER

Project: NCDOT U-5757 ; PARCEL 40

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	P40 - B5 - 4	20.3	<0.51	<0.51	<0.51	<0.51	<0.1	<0.16	<0.02	0	84.7	15.3	PHC not detected
s	P40 - B5 - 6	22.2	<0.56	<0.56	1.2	1.2	0.62	<0.18	<0.022	0	71	29	Deg Fuel 73.2%,(FCM)

Initial Calibrator QC check OK

Final FCM QC Check OK 101 %

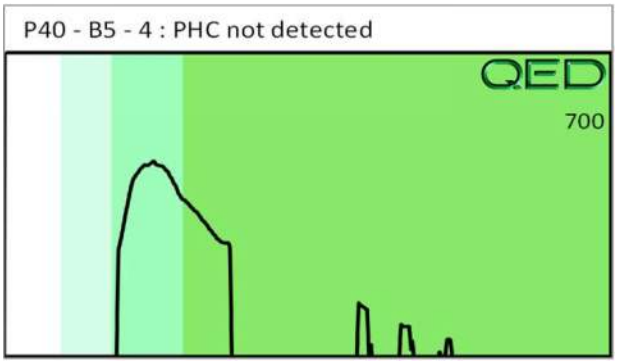
Results generated by a QED HC-1 analyser. Concentration values in mg/kg for soil samples and mg/L for water samples. Soil values are not corrected for moisture or stone content

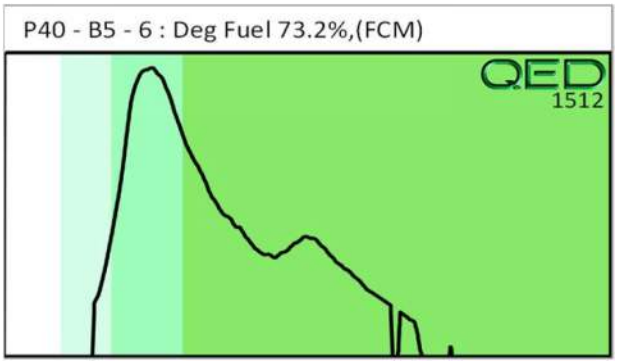
Fingerprints provide a tentative hydrocarbon identification. The abbreviations are:- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for sample fingerprint match to library

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

QED Hydrocarbon Fingerprints

Project: NCDOT U-5757 ; PARCEL 40 Wednesday, August 7, 2019





APPENDIX E

PAGES FROM PREVIOUS REPORTS

Environmental Quality

North Carolina Department of Environmental Quality
Underground Storage Tank
UST-10B

Printed: 5/4/2018 7:38 AM
Inspection Result: Failed
Inspection Date: 5/1/2018
Partial Inspection: No
Arrive and Depart Times: 10:15 AM-11:35 AM

Facility ID:	00-0-0000012254	**Inspector**	Jason Chapple
Facility Name	HOP-IN-OUT #3	**Insp. Type**	Compliance
Facility Address	1401 WINSTON RD LEXINGTON, NC 27292 Davidson County **Located facility, USTs onsite**	**Reason(s)**	Routine Compliance
		Location	35.844628, -80.253582
		Permit Exp.	9/30/2018
Facility Phone	(336) 843-1489		

CONTACTS

Contact Type	Contact Information
Owner since 6/9/2017	2AKM LLC , 1260 CRESTHAVEN LANE LAWRENCEVILLE, GA 30043, Phone: (678) 523-0786
Owner Auth Rep since 6/9/2017	AKBAR BHAMANI, 601 GALIMORE DAIRY RD HIGH POINT, NC 27265, Phone: (678) 523-0786
Primary Operator since 5/1/2018	CRYSTAL EXUM, 1401 WINSTON RD. LEXINGTON, NC 27295, Phone: (336) 458-7981, Email: hopinout3@gmail.com Trained: No
Operator since 6/9/2017	MAAK USA LLC , 601 GALIMORE DAIRY RD HIGH POINT, NC 27265, Phone: (678) 523-0786
Regulatory Operator since 5/1/2018	MAAK USA LLC , 601 GALIMORE DAIRY RD HIGH POINT, NC 27265, Phone: (678) 523-0786

OWNERSHIP CHANGE

New Owner	Change Date	Basis	Transfer of Ownership Form (UST-15) Submitted

EMERGENCY RESPONSE

Emergency response placard with emergency response operator contact information is posted in the dispensing areas if the dispensers are left on without an attendant present?	N/A

OTHER PARTICIPANTS

Name	Organization
Crystal Exum	2AKM LLC

INSPECTOR COMMENTS

Type	Date	Comment
Tank	5/3/2018	5-3-2018, Email from Aimee Gibbs of Circle K/Pantry states tanks were put into Temp. Closure 3/31/2017. Tank Status was not changed from Current to Temp Closure and no permit lapse. For UST systems Temporarily Closed for greater than 90 days an owner or operator must submit a tightness test of the tanks and spill buckets and overfill operability check.

ADDITIONAL INSPECTOR COMMENTS

11-15-2017, Drop tubes installed on Reg and Pre by Jones & Frank, invoice #0342109.

TANKS AND PIPING INFORMATION

Tanks	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
Tank ID	5-Dsl	4-Kero	2-Pre	3-Reg
TIMS Tank ID	5	4	2	3

Tanks	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
Is tank registered?	Yes	Yes	Yes	Yes
Date tank installed	3/22/1982	3/23/1978	3/25/1963	3/25/1963
Capacity of Tank in Gallons	12000	20000	12000	20000
Diameter (Inches)				
Tank / Product use	Motor Fuel	Motor Fuel	Motor Fuel	Motor Fuel
Product stored in Tank	Diesel	Kerosene, Kero Mix	Gasoline, Gas Mix	Gasoline, Gas Mix
Product Detail			Premium	Regular
If hazardous substance, CAS# or description				
If other, description				
Tank status	Current	Current	Current	Current
Tank closure report submitted				
Date tank last operated				
Inches of product in Tank				
Compartment tank	No	No	No	No
Base compartment				
Other compartment(s)				
Manifolded tank	No	No	No	No
Master manifold tank				
Manifolded with tank(s)				
New Tank System installed in accordance with NC or MI				
Tank Construction Material (DW required after 11/1/07)	Single Wall Steel	Single Wall Steel	Single Wall Steel	Single Wall Steel
If other, description				
Tank Manufacturer/Model	Unknown	Unknown	Unknown	Unknown
If other, describe				
Tank material verified by	UST-7A/B	UST-7A/B	UST-7A/B	UST-7A/B
Date Pipe Installed	7/1/2005	7/1/2005	7/1/2005	7/1/2005
Was UST Piping Installed on or after 11/1/2007?	No	No	No	No
Piping Construction Material (DW required after 11/1/07)	Double Wall Flex	Double Wall Flex	Double Wall Flex	Double Wall Flex
If other, description				
Pipe Manufacturer/Model	Unknown	Unknown	Unknown	Unknown
If other, describe				
Pipe material verified by	Visual	Visual	Visual	Visual
If E-blend > 10% or Biodiesel Blend > 20%; Was UST-20 completed and approved?	N/A	N/A	N/A	N/A

CORROSION PROTECTION

Tank Corrosion Protection	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
DWM notified of current CP method	Yes	Yes	Yes	Yes
Integrity assessment performed after 3/1/06	No	No	No	No
CP Method 1	Impressed Current	Impressed Current	Impressed Current	Impressed Current
if other, Description				
CP Installation Date	11/1/1994	11/1/1994	11/1/1994	11/1/1994

Tank Corrosion Protection	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
CP Method 2				
if other, Description				
CP Installation Date				
Flex Connector , Piping Extensions, and/or other metal fittings Present	Other Metal, Elbow, Ball Valve	Other Metal, Elbow, Ball Valve	Other Metal, Elbow, Ball Valve	Other Metal, Elbow, Ball Valve
Flex connector isolated from ground	N/A	N/A	N/A	N/A
Source of verification of CP for Flex Connectors, piping extensions and/or other metal fittings	Visual	Visual	Visual	Visual
if other, Description				
Submersible pump (STP) is isolated from ground	Yes	Yes	Yes	Yes
Piping extensions and/or other metal fittings are isolated from ground	Yes	Yes	Yes	Yes
Flex connector, STP and/or other metal fittings protected from corrosion	N/A	N/A	N/A	N/A
Corrosion protection method	Isolated	Isolated	Isolated	Isolated
Flex connector , Piping extensions, and/or other metal fittings CP Installation Date				
Dielectric Coating Installed (If tank installed after 12/22/88	N/A	N/A	N/A	N/A

Pipe Corrosion Protection	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
DWM notified of current CP method	Yes	Yes	Yes	Yes
CP method	Flexible	Flexible	Flexible	Flexible
if other, Description				
CP Installation Date	7/1/2005	7/1/2005	7/1/2005	7/1/2005
Dielectric Coating Installed (If piping installed after 12/22/88	N/A	N/A	N/A	N/A

Dispenser Corrosion Protection	Dispenser #1(1/2)	Dispenser #2(3/4)	Dispenser #3(5-D)	Dispenser #4(6-K)
Flex Connector , Piping Extensions, and/or other metal fittings Present	Other Metal	Other Metal	Other Metal	Other Metal
Flex connector isolated from ground	N/A	N/A	N/A	N/A
Source of verification of CP for Flex Connectors, piping extensions and/or other metal fittings	Visual	Visual	Visual	Visual

Dispenser Corrosion Protection	Dispenser #1(1/2)	Dispenser #2(3/4)	Dispenser #3(5-D)	Dispenser #4(6-K)
if other, Description				
Piping extensions and/or other metal fittings are isolated from ground	Yes	Yes	Yes	Yes
Flex Connectors, Piping extensions and/or other metal fittings protected from corrosion	N/A	N/A	N/A	N/A
Corrosion protection method	Isolated	Isolated	Isolated	Isolated
Flex connector, Piping extensions, and/or other metal fittings CP Installation Date				
Source of Information for verification of corrosion protection for Riser pipe and other metal piping	Visual	Visual	Visual	Visual
if other, Description				

CP Conclusions	
CP Requirements Met?	No
Issues	CP System must be tested by qualified CP tester (MT1A/H & CL1 if TOS)

Impressed Current Systems	System # 1
Applies to Tanks	#1(5-Dsl), #2(4-Kero), #3(2-Pre), #4(3-Reg)
Current Voltage (Gauge)	21.0000
Current Amperage (Gauge)	2.6000
Current Voltage (Multimeter)	24.5000
Measured Shunt Voltage (mV)	13.1000
Rectifier Shunt Factor (Amps/mV)	0.2000
Amps - Calculated	2.6200
Last three 60-day readings available	Yes
System operating properly	Yes
If no, select all that apply	
If other, describe	
Hour meter reading?	280437
Hour meter installed	Yes

CP Tests	Test #1
Applies to Tanks	
Portion of System Tested	
Date of last Corrosion Protection Test	
CP Test Result	
Was CP Test done in accordance with National Standard?	
CP Tester Name	
Certificate Number	
Certifying Organization	
CP Testing Company Name	
CP Testing Company Phone	
As Left Voltage	
As Left Current	
UST7 form for last CP test submitted to DWM	

SPILL PREVENTION

Has DWM been notified of spill methods?	Yes

Spill/Overfill Details	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
Is a drop tube present?	Yes	Yes	Yes	Yes
Type of Stage I vapor recovery?	Not Required	Not Required	Coaxial	Coaxial

Local Fill	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
Does Tank have a Remote Fill?	No	No	No	No
Spill Protection	Catchment Basin	Catchment Basin	Catchment Basin	Catchment Basin
Is spill prevention equipment provided and verified?	Yes	Yes	Yes	Yes
Manufacturer/Model	OPW: 1-21XX DEVR Series	OPW: 1-21XX DEVR Series	OPW: 1-21XX DEVR Series	OPW: 1-21XX DEVR Series
If other, describe				
Spill bucket is double-walled? (If installed after 11/1/07)	N/A	N/A	N/A	N/A
Spill bucket is isolated or made of non-corroding materials? (If installed after 11/1/07)	N/A	N/A	N/A	N/A
Date spill prevention provided	1/1/1988	1/1/1988	1/1/1988	1/1/1988
Is spill prevention operating properly?	No	No	No	No
If No, select all that apply	Water present, Fuel present	Water present	Water present	Water present, Fuel present
If other, describe				

OVERFILL PREVENTION

Has DWM been notified of overfill methods?	Yes

Overfill Control	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
Is overfill prevention equipment provided and verified?	No	No	Yes	Yes
Date overfill control provided	1/1/1988	1/1/1988	11/15/2017	11/15/2017
Type of overfill equipment	None	None	Auto Shutoff Device	Auto Shutoff Device
Source of information for overfill control verification	Visual observation	Visual observation	Visual observation	Visual observation
If other, describe				
Is overfill control operating properly?			Yes	Yes
If No, select all that apply				
If other, describe				
Overfill check date (UST-22A)				
Overfill check result (UST-22A)				

Dispenser Sumps	Dispenser #1(1/2)	Dispenser #2(3/4)	Dispenser #3(5-D)	Dispenser #4(6-K)
Are containment sumps present?	Yes	Yes	Yes	Yes
Installation Date	7/1/2005	7/1/2005	7/1/2005	7/1/2005
Sump Manufacturer	OPW: Flexworks Disp Sump	OPW: Flexworks Disp Sump	OPW: Flexworks Disp Sump	OPW: Flexworks Disp Sump
If Other (Specify)				
Sump Construction Type	Single Walled	Single Walled	Single Walled	Single Walled
Sump Construction Material	Plastic	Plastic	Plastic	Plastic
If Other (Specify)				
Are containment sumps monitored?	No	No	No	No
Is monitoring required per 2N .0900?	No	No	No	No
Piping components and/or STP were installed/replaced on or after 11/1/07?	No	No	No	No
Are spills or small weeps evident in sumps?	No	No	No	No
Are single wall piping components located in containment sump? (If installed after 11/1/07)				

Other Sumps	Sump#1(Dsl STP)	Sump#2(Kero STP)	Sump#3(Pre STP)	Sump#4(Reg STP)
Are containment sumps present?	Yes	Yes	Yes	Yes
Installation Date	7/1/2005	7/1/2005	7/1/2005	7/1/2005
Sump Manufacturer	OPW: Flexworks Tank Sump	OPW: Flexworks Tank Sump	OPW: Flexworks Tank Sump	OPW: Flexworks Tank Sump
If Other (Specify)				
Sump Construction Type	Single Walled	Single Walled	Single Walled	Single Walled
Sump Construction Material	Plastic	Plastic	Plastic	Plastic
If Other (Specify)				
Are containment sumps monitored?	No	No	No	No
Is monitoring required per 2N .0900?	No	No	No	No
Piping components and/or STP were installed/replaced on or after 11/1/07?	No	No	No	No
Are spills or small weeps evident in sumps?	No	No	No	No
Are single wall piping components located in containment sump?				

Other Sumps	Sump#1(Dsl STP)	Sump#2(Kero STP)	Sump#3(Pre STP)	Sump#4(Reg STP)
(If installed after 11/1/07)				

Other Sumps	Sump#5(Dsl TT)	Sump#6(Kero TT)	Sump#7(Pre TT)	Sump#8(Reg TT)
Are containment sumps present?	No	No	No	No
Installation Date				
Sump Manufacturer				
If Other (Specify)				
Sump Construction Type				
Sump Construction Material				
If Other (Specify)				
Are containment sumps monitored?				
Is monitoring required per 2N .0900?	No	No	No	No
Piping components and/or STP were installed/replaced on or after 11/1/07?	No	No	No	No
Are spills or small weeps evident in sumps?	No	No	No	No
Are single wall piping components located in containment sump? (If installed after 11/1/07)				

SITING AND SECONDARY CONTAINMENT

Siting And Sec.Containment-General	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
UST system upgraded with corrosion protection, spill and overfill before 1/1/91?	No	No	No	No
UST system and/or piping are located within siting and secondary containment areas?	No	No	No	No

LEAK DETECTION

General	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
DWM notified of leak detection method?	Yes	Yes	Yes	Yes
Piping type	Pressurized System	Pressurized System	Pressurized System	Pressurized System
Suction Check Type				
Type LLD present.	MLLD	MLLD	MLLD	MLLD
Tank – Primary leak detection method	Automatic Tank Gauging	Automatic Tank Gauging	Automatic Tank Gauging	Automatic Tank Gauging
Tank - if other, specify				
Tank - Primary LD install date				
Tank – Secondary				

General	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
leak detection method				
Tank - if other, specify				
Piping - Primary leak detection method	Line Tightness Testing (LTT)	Line Tightness Testing (LTT)	Line Tightness Testing (LTT)	Line Tightness Testing (LTT)
Piping - if other, specify				
Piping - Primary LD install date				
Piping - Secondary leak detection method				
Piping - if other, specify				

PIPING LEAK DETECTION

Pressurized Piping	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
Last MLLD/ELLD Test Date				
MLLD/ELLD Test Result				
Last LTT Test Date				
LTT Test Result				
Does test result indicatesuspected release?				
Number of MLLD/ELLD Types	1	1	1	1

MLLD/ELLD Equipment	Tank #1(5-Dsl) LLD #1	Tank #2(4-Kero) LLD #1	Tank #3(2-Pre) LLD #1	Tank #4(3-Reg) LLD #1
MLLD/ELLD Manufacturer/Model	V-R: FX1DV	V-R: FX1DV	V-R: FX1V	V-R: FX1DV
If other, describe				
MLLD/ELLD Third Party Certified?	Yes	Yes	Yes	Yes

AUTOMATIC TANK GAUGE

ATG Systems	ATG #1
ATG Manufacturer/Model	V-R: TLS-350 CSLD
If other, describe	
ATG Third Party Certified?	Yes
Is ATG console operational?	Yes
Tanks	#1(5-Dsl), #2(4-Kero), #3(2-Pre), #4(3-Reg)

ATG Monthly LD	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
2018 May	None	None	None	None
2018 Apr	None	None	None	None
2018 Mar	None	None	None	None
2018 Feb	None	None	None	None
2018 Jan	None	None	None	None
2017 Dec	None	None	None	None
2017 Nov	None	None	None	None
2017 Oct	Temp Closed	Temp Closed	Temp Closed	Temp Closed

ATG Monthly LD	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
2017 Sep	Temp Closed	Temp Closed	Temp Closed	Temp Closed
2017 Aug	Temp Closed	Temp Closed	Temp Closed	Temp Closed
2017 Jul	Temp Closed	Temp Closed	Temp Closed	Temp Closed
2017 Jun	Temp Closed	Temp Closed	Temp Closed	Temp Closed

ATG Conclusions	
Leak Detection Requirements Met?	No
Do the results indicate a suspected release?	No
Issues	0.2 Test not conducted for 3 or more months (LD1*), Records not available (RCD5)

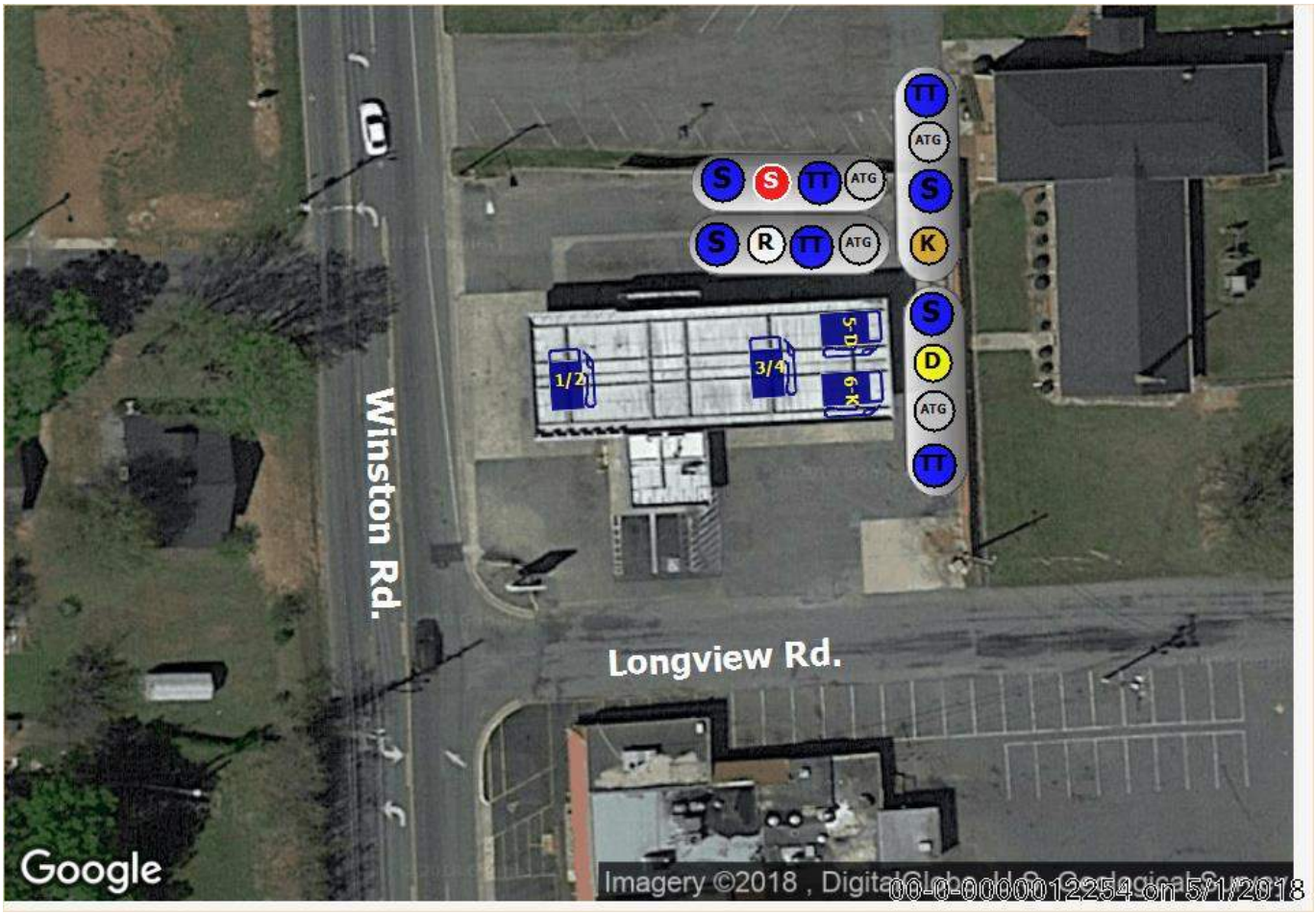
REPAIRS

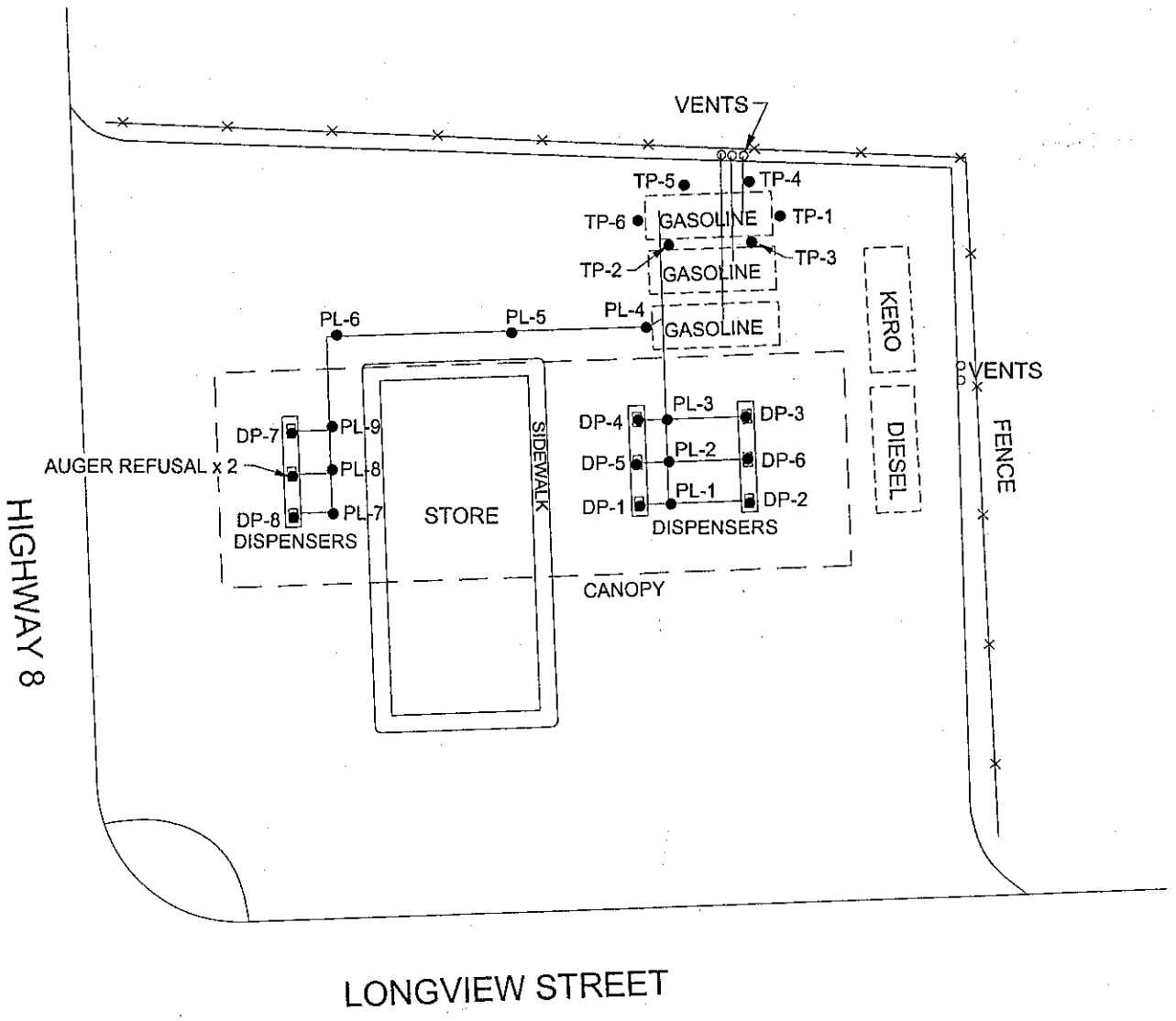
Repairs	
Any Repair Issues?	Yes
Issues	Overfill prevention equipment not tested following repair (UPG33K)

TRANSPORTER/FUEL DELIVERY INFORMATION

Delivery Information	Tank #1(5-Dsl)	Tank #2(4-Kero)	Tank #3(2-Pre)	Tank #4(3-Reg)
All deliveries made to permitted tanks	Yes	Yes	Yes	Yes

SITE DIAGRAM 1





LEGEND:

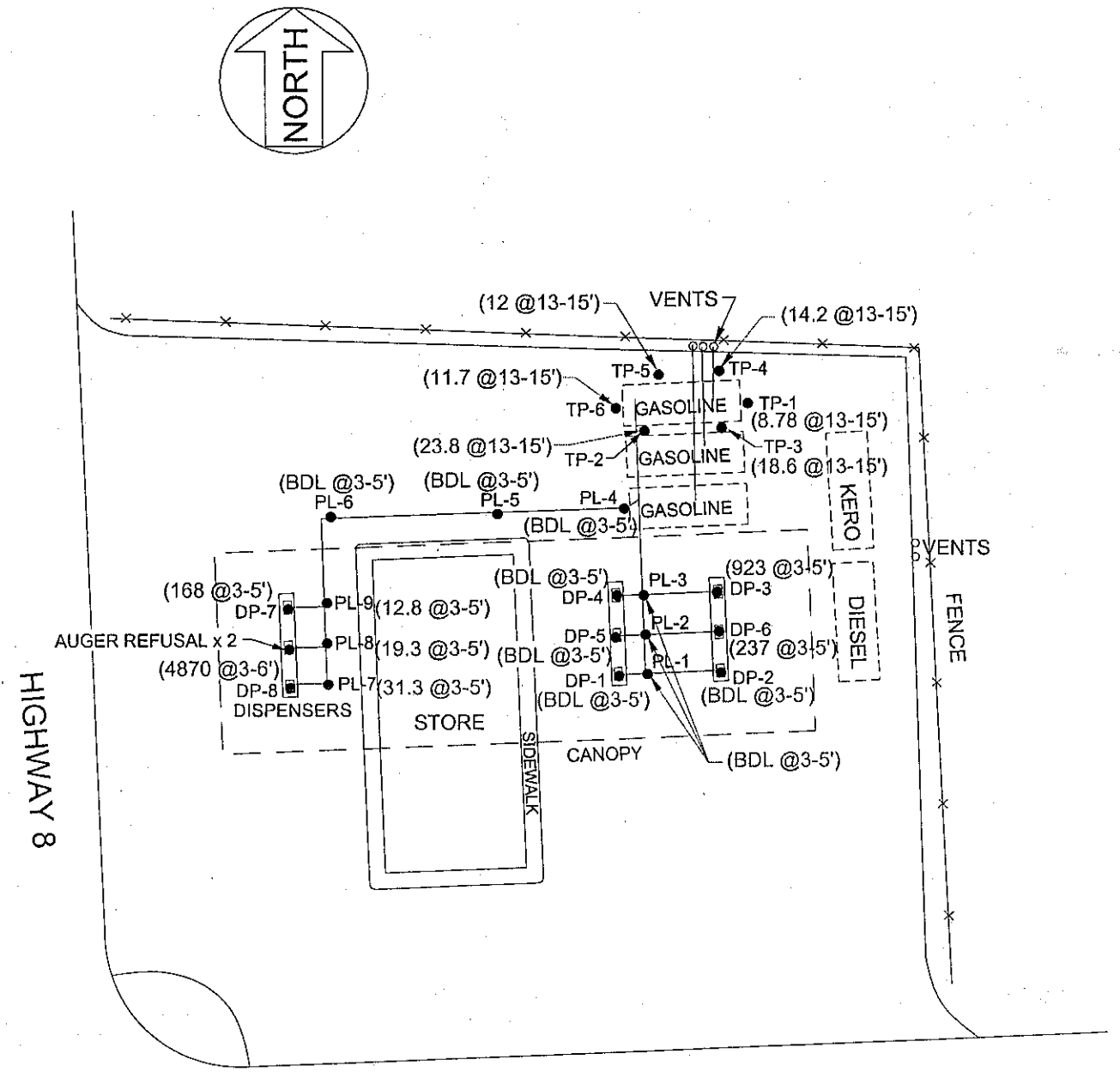
- SAMPLE LOCATION

SEI *Engineering & Geological Services, P.C.*
5100 Reagan Dr., Suite 7A, Charlotte, NC 28206, Ph# 704-597-4022

FIGURE 2: SITE MAP
THE PANTRY #3183
1401 WINSTON RD.
LEXINGTON, NC

W.O. #: 205169
DWG #: PA3183F2

DATE: 8/31/05
DRAWN BY: JCJ



LEGEND:

- ● SAMPLE LOCATION

(XXX) TPH- GASOLINE RANGE ORGANICS CONCENTRATION(mg/kg)
BDL = BELOW DETECTION LIMITS

0 15 30 FT.

SEI *Engineering & Geological Services, P.C.*
5100 Reagan Dr., Suite 7A, Charlotte, NC 28206, Ph# 704-597-4022

FIGURE 3: SOIL ANALYTICAL RESULTS
THE PANTRY #3183
1401 WINSTON RD.
LEXINGTON, NC

W.O. #: 205169
DWG #: PA3183F3

DATE: 8/31/05
DRAWN BY: JCJ

Table 1
Summary of Soil Sampling Results
Date: 9/15/05 The Pantry #3183

Analytical Method		Contaminant of Concern			
Sample ID	**Sample Des**	**Date Collected (m/dd/yy)**	**Sample Depth (ft BGS)**	**EPA 8015 (5030) - GRO mg/kg**	**EPA 8015 (3550) - DRO mg/kg**
DP-1	Dispenser	8/18/05	3-5	BDL	NA
DP-2	Dispenser	8/18/05	3-5	BDL	NA
DP-3	Dispenser	8/18/05	3-5	**923**	NA
DP-4	Dispenser	8/18/05	3-5	BDL	NA
DP-5	Dispenser	8/18/05	3-5	BDL	NA
DP-6	Dispenser	8/18/05	3-5	**237**	NA
DP-7	Dispenser	8/25/05	3-5	**168**	NA
DP-8	Dispenser	8/25/05	3-6	**4870**	NA
TP-1	Tank	8/25/05	13-15	8.78	NA
TP-2	Tank	8/25/05	13-15	**23.8**	NA
TP-3	Tank	8/25/05	13-15	**18.6**	NA
TP-4	Tank	8/25/05	13-15	**14.2**	NA
TP-5	Tank	8/25/05	13-15	**12**	NA
TP-6	Tank	8/25/05	13-15	**11.7**	NA
Soil to groundwater MSCC (mg/kg)				10	40
Residential MSCC (mg/kg)				NE	NE
Industrial/Commercial MSCC (mg/kg)				NE	NE

MSCC = maximum soil contamination concentration
ft. BGS = feet below ground surface
Results must be reported in mg/kg.
mg/kg = milligrams per kilogram
BDL = Below Detection Limits
NE = Not Established

Table 1
Summary of Soil Sampling Results
Date: 9/15/05 The Pantry #3183

Analytical Method		Contaminant of Concern		EPA 8015 (5030) - GRO mg/kg	EPA 8015 (3550) - DRO mg/kg
Sample ID	**Sample Des.**	**Date Collected (m/dd/yy)**	**Sample Depth (ft BGS)**		
PL-1	Product Line	8/18/05	3-5	BDL	NA
PL-2	Product Line	8/18/05	3-5	BDL	NA
PL-3	Product Line	8/18/05	3-5	BDL	NA
PL-4	Product Line	8/18/05	3-5	BDL	NA
PL-5	Product Line	8/18/05	3-5	BDL	NA
PL-6	Product Line	8/18/05	3-5	BDL	NA
PL-7	Product Line	8/25/05	3-5	**31.3**	NA
PL-8	Product Line	8/25/05	3-5	**19.3**	NA
PL-9	Product Line	8/25/05	3-5	**12.8**	NA
Soil to groundwater MSCC (mg/kg)				10	40
Residential MSCC (mg/kg)				NE	NE
Industrial/Commercial MSCC (mg/kg)				NE	NE

MSCC = maximum soil contamination concentration
ft. BGS = feet below ground surface
Results must be reported in mg/kg.
mg/kg = milligrams per kilogram
BDL = Below Detection Limits
NE = Not Established

FAXED TO: 336-771-4631

Department of Environment and Natural Resources, Division of Waste Management, Underground Storage Tank Section

24-Hour Release and UST Leak Reporting Form

This form should be completed and submitted to the UST Section's regional office following a known or suspected release from an underground storage tank (UST) system. This form is required to be submitted within 24 hours of discovery of a known or suspected release.

(DWM USE ONLY)
Incident # _____ Risk (H,I,L,U)_____
Received On _____ Received By _____
Reported by (*circle one*): Phone, Fax or Report
Region _____

Suspected Contamination? (Y/N) Y
Confirmed GW Contamination? (Y/N) N
Confirmed Soil Contamination ?(Y/N) Y
Free Product ? (Y/N) N If Yes, State Greatest Thickness _____

Facility ID Number 0-012254
Date Leak Discovered 9-1-05
Comm/Non-Commercial? COMM
Reg/Non-regulated? REG.

INCIDENT DESCRIPTION

Incident Name: THE PANTRY #3183

Address: 1401 WINSTON RD. County: DAVIDSON

City/Town: LEXINGTON, NC Regional Office (*circle one*): Asheville, Mooresville, Fayetteville, Raleigh, Washington, Wilmington, (Winston-Salem)

Latitude (dd.mm.ssss): Longitude (ddd.mm.ssss) : Confirmed by GPS? (Y/N) ____

Briefly describe suspected or confirmed release: *(including but not limited to: nature of release, date of release, amount of release, amount of free product present and recovery efforts, initial responses conducted, impacts to receptors)*

SOIL SAMPLES COLLECTED AS PART OF AN IN-PLACE-CLOSURE INDICATED A TPH (5030/8015B) OF 923 mg/kg.

HOW RELEASE WAS DISCOVERED

(Check one)

- ☐ Release Detection Equipment or Methods
- ☒ During UST Closure/Removal
- ☐ Property Transfer
- ☐ Visual/Odor
- ☐ Water in Tank
- ☐ Water Supply Well Contamination
- ☐ Groundwater Contamination
- ☐ Surface Water Contamination
- ☐ Other (specify) _____

SOURCE OF CONTAMINATION

Primary Source of Contamination *(Check one)*

- ☐ Suspected UST Release
- ☒ Confirmed UST Release *(Also check one below)*:
  - ☒ A. Dispenser
  - ☐ B. Line Release
  - ☐ C. Tank Release
  - ☐ D. Spill/Overfill
  - ☐ E. Exact Failure Location Unknown or Multiple Failures
- ☐ Unknown Source (Believed to be UST Source, explain in "Incident Description" above)

Primary Contaminant Type *(Check one)*

- ☒ Gasoline/Diesel/Kerosene
- ☐ Heating Oil
- ☐ Other Petroleum Products
- ☐ Metals
- ☐ Other Inorganics
- ☐ Other Organics

Location *(Check one)*

- ☒ Facility
- ☐ Residence
- ☐ Other

Setting *(Check one)*

- ☐ Residential
- ☐ Industrial
- ☒ Urban
- ☐ Rural

Ownership
1. Municipal 2. Military 3. Unknown (4. Private) 5. Federal 6. County 7. State

Operation Type
1. Public Service 2. Agricultural 3. Residential 4. Education/Relig. 5. Industrial (6. Commercial) 7. Mining

III. Site Investigation

A. Provide information on field screening and observations, include methods used to calibrate field-screening instrument(s): A Flame ionization detector (FID) was used to screen field samples.

B. Describe soil sampling points and sampling procedures used, including:

Note: Refer to the "Groundwater Section Guidelines for the Investigation and Remediation of Soils and Groundwater" for information about sampling requirements.

- **Location of samples:** A total of twenty-three soil samples were collected utilizing a Geoprobe direct push sampler during UST in place closure activities. Soil samples TP-1 through TP-6 were taken from the perimeter of the UST at a depth of 13'-15'. Soil samples PL-1 through PL-9 were collected from beneath the product line at depths from 3'-5'. Soil samples DP-1 through DP-9 were collected from beneath the dispensers at a depth of 3'-5'. Figure 2 is a site map showing each sample location.

- **Type of samples (from excavation, stockpiled soil, etc:** A total of twenty-three soil samples were collected utilizing a Geoprobe direct push sampler during UST in place closure activities. Soil samples TP-1 through TP-6 were taken from the perimeter of the UST at a depth of 13'-15'. Soil samples PL-1 through PL-9 were collected from beneath the product line at depths from 3'-5'. Soil samples DP-1 through DP-9 were collected from beneath the dispensers at a depth of 3'-5'. Figure 2 is a site map showing each sample location.

D. UST Information

Tank #	Install-tion dates	Size in Gallons	Tank Dimensions	Last Contents	Previous Contents (if any)
1	UNK	8,000	8' x 21'4"	Gasoline	---

E. Site Characteristics

1. Describe any past releases at this site:

There has not been a known release at this site.

2. Is the facility active or inactive at this time? If the facility is inactive note the last time the USTs were in operation: The facility is an active site. The 8,000-gallon premium gasoline ~~tank~~ lines system was abandoned in-place.

3. Describe surrounding property use (for example, residential Commercial, farming, etc.):
The surrounding property is commercial and residential.

4. Describe site geology/hydrogeology: The site is located in the Carolina Slate Belt, which consists of metavolcanic and metamorphosed intrusive rocks. According to the Geological Map of North Carolina the local bedrock is Metamorphosed Granitic Rock (CZg). Soils mainly encountered on site consist of light tan saprolitic silt. Groundwater was not encountered.

II. Closure Procedures

A. **Describe preparations for closure including the steps taken to notify authorities, permits obtained and the steps taken to clean and purge the tanks:** A Notification of Intent for Permanent Closure (GW/ UST-3) is included within this report to be submitted to the North Carolina Department of Environment, and Natural Resources, Winston Salem Regional Office. Prior to UST closure, the Lexington County Fire Marshal was contacted. The Pantry Inc. emptied the UST prior to closure.

B. **Note the amount of residual material pumped from the tank(s):** NA

C. **Describe the storage, sampling and disposal of the residual material:** NA

D. **Excavation**

Note: *Refer to the "Groundwater Section Guidelines for the Investigation and Remediation of Soils and Groundwater" on limiting excavations. The Trust Fund will not pay for excessive excavation unless it is justified and verified by laboratory results.*

1. **Describe excavation procedures noting the condition of the soils and the dimensions of the excavation in relation to the tanks, piping and/or pumps:** Just enough soil was removed to allow access to the top of the UST. A petroleum odor was not encountered with the soil excavated from the top of the fill port. The excavation area was utilized as an access point to fill the tank with the inert foam. A Geoprobe direct push sampler was utilized to collect the required soil samples.

2. **Note the depth of tank burial(s) (from land surface to top of tank):** The top of the UST was buried approximately three feet below land surface.

SEI
Engineering & Geological Services, P.C.

Limited Site Assessment Report

A. Site Identification

DATE OF REPORT: 1/21/05
Facility I.D.: 0-012254 UST Incident Number (if known): 30638
Site Name: The Pantry #3183
Site Location: 1401 Winston Road
Nearest City/Town: Lexington, NC 27295
County: Davidson

UST Owner: The Pantry, Inc.
Address: PO Box 1410, Sanford, NC 27331-1410 Phone: (919) 774-6700

UST Operator: The Pantry, Inc.
Address: PO Box 1410, Sanford, NC 27331-1410 Phone: (919) 774-6700

Property Owner: Taylor Family Properties, Inc.
Address: c/o Taylor Oil Company, 110 Oakwood Drive, Winston-Salem, NC 28202 Phone: 336-725-9531
Property Occupant: The Pantry #3183
Address: 1401 Winston Road, Lexington, NC 27295 Phone: 336-249-9495

Consultant/Contractor: SEI Engineering and Geological Services, P.C.
Address: 5100 Reagan Drive, Suite 7A, Charlotte, NC 28206 Phone: (800) 873-1250

Release Information
Date Discovered: September 1, 2005
Latitude: N35°50'.48" Longitude: W080°15'13"
Estimated Quantity of Release: Unknown
Cause of Release: Unknown
Source of Release (e.g., Piping/UST): UST System
Sizes and contents of UST system(s) from which the release occurred:
1 – Closed in Place 8/1/05 - Gasoline – 8,000 gallons
2– Gasoline – 12,000 gallons
3 – Gasoline – 20,000 gallons
4 – Kerosene – 20,000 gallons
5 – Diesel – 12,000 gallons

Complete and include in report items B through J in the order listed.

I, Carolyn H. Ralph a Professional Engineer/(Licensed Geologist) (circle one) for SEI Engineering and Geological Services, P.C., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

Carolyn H. Ralph

NORTH CAROLINA LICENSED SEAL 1986 GEOLOGIST CAROLYN H. RALPH

(Please Affix Seal and Signature)

B. Risk Characterization
Submit the following questionnaire in its entirety. Answer all questions completely. Attach additional pages as needed to fully explain answers. Base answers/explanations on information known or required to be obtained during the Limited Site Assessment.

NOTE: *Source area means point of release from an UST system.*

Limited Site Assessment Risk Classification and Land Use Form

Part I – Groundwater/Surface Water/Vapor Impacts
High Risk

1. Has the release contaminated any water supply well including any well used for non-drinking purposes? **NO**

2. Is a water supply well used for drinking water located within 1,000 feet of the source area of the release? **NO**

Properties in the area of The Pantry #3183 are served by the City of Lexington and the Davidson Water, Inc. water departments. The city withdraws water from Lake Thom-A-Lex. The Davidson Water company withdraws water from City Lake and serves as a backup to the City of Lexington. City Lake is approximately 2.5 miles and Lake Thom-A-Lex is approximately 4 miles from the site. These are both surface water supplies. No groundwater is used as a source of public water by the City of Lexington or the Davidson Water company (City of Lexington, Department of Water and Sewer Resources, Water Quality Report 2004).

No drinking water supply wells currently being used have been identified within 1000 feet of the source area. See Table 1 for a list of property owners within 500 feet of the source area. Numbers from the table correlate with numbers on Figure 2 showing the potential receptor locations. Appendix B includes copies of letters sent to property owners within 500 feet. Also included in Appendix B are certified mail return receipts and copies of Water Supply Well Information forms returned by the property owners. One potential receptor was identified by the physical survey within 500 feet, but the property owner later stated on the well survey form that the well was covered in 1980 and is not being used. This property is greater than 250 feet from the source area.

3. Is a water supply well not used for drinking water (e.g., irrigation, washing cars, industrial cooling water, filling swimming pools) located within 250 feet of the source area of the release? **NO**

4. Does groundwater within 500 feet of the source area of the release have the potential for future use (there is no other source of water supply other than the groundwater)? **NO**

Municipal water is available in the area and is used by current residents of Lexington for drinking water.

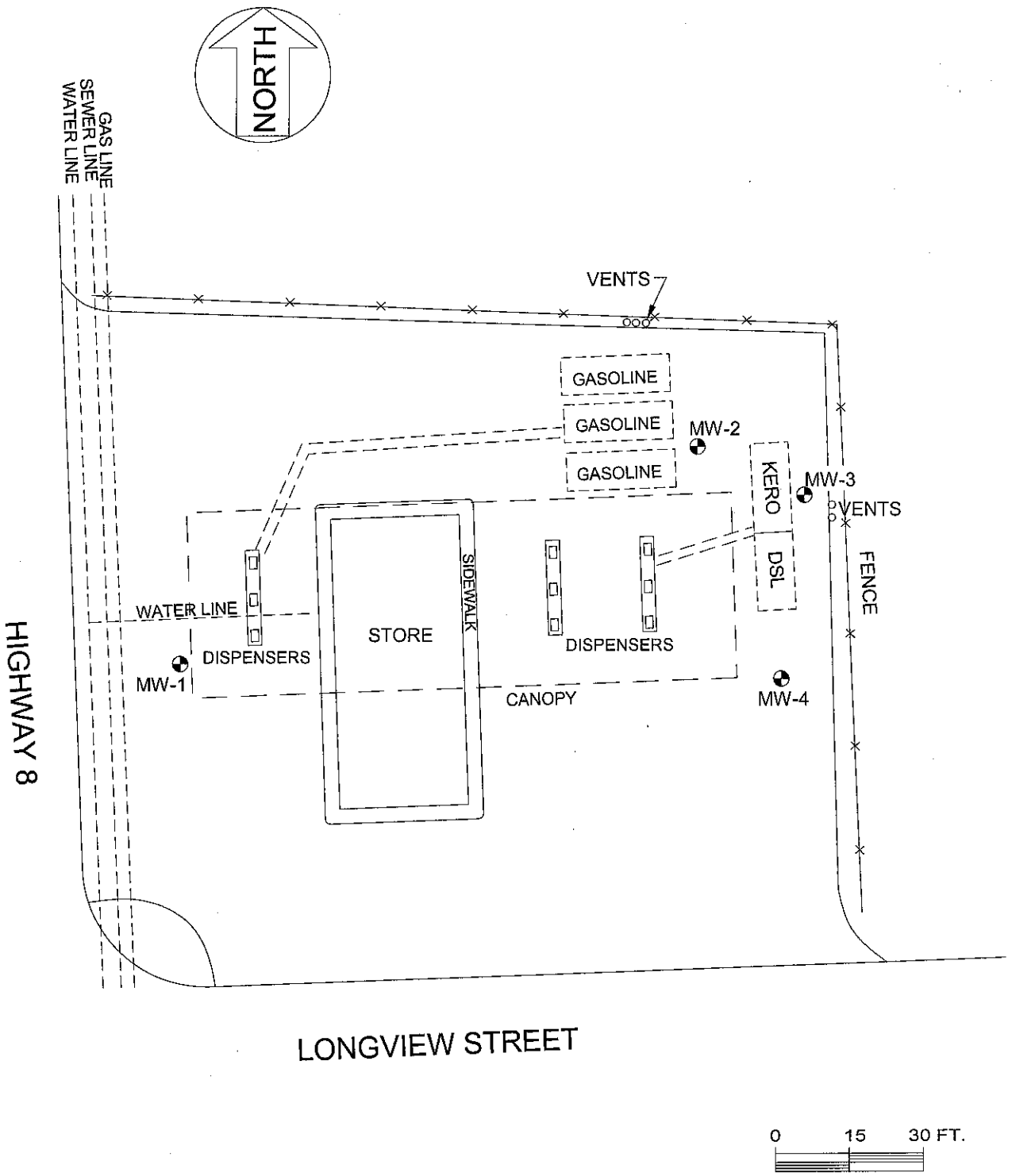
5. Do vapors from the release pose a threat of explosion because of accumulation of the vapors in a confined space or pose any other serious threat to public health, public safety or the environment? **NO**
If yes, describe

6. Are there any other factors that would cause the release to pose an imminent danger to public health, public safety, or the environment? **NO**
If yes, describe.

Intermediate Risk

7. Is a surface water body located within 500 feet of the source area of the release? **NO**
If **YES**, does the maximum groundwater contaminant concentration exceed the surface water quality standards and criteria found in 15A NCAC 2B .0200 by a factor of 10?

8. Is the source area of the release located within an approved or planned wellhead protection area as defined in 42 USC 300h-7(e)? **NO**
If yes, describe.



LEGEND:

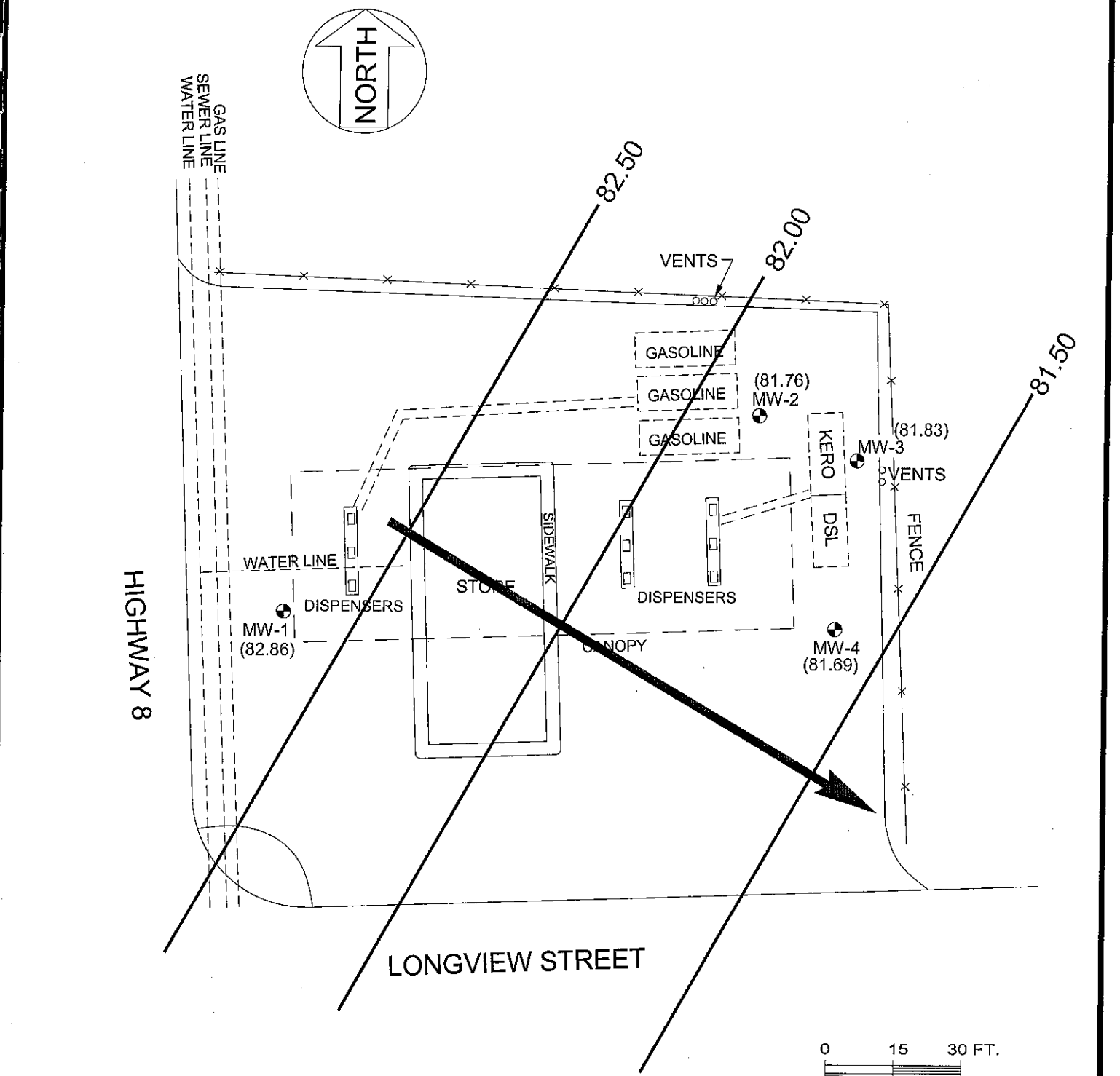
MONITORING WELL

SEI *Engineering & Geological Services, P.C.*
5100 Reagan Dr., Suite 7A, Charlotte, NC 28206, Ph# 704-597-4022

FIGURE 3: SITE MAP
THE PANTRY #3183
1401 WINSTON RD.
LEXINGTON, NC 27295

W.O. #: 205178
DWG #: PA31832B

DATE: 8/31/05
DRAWN BY: JCJ

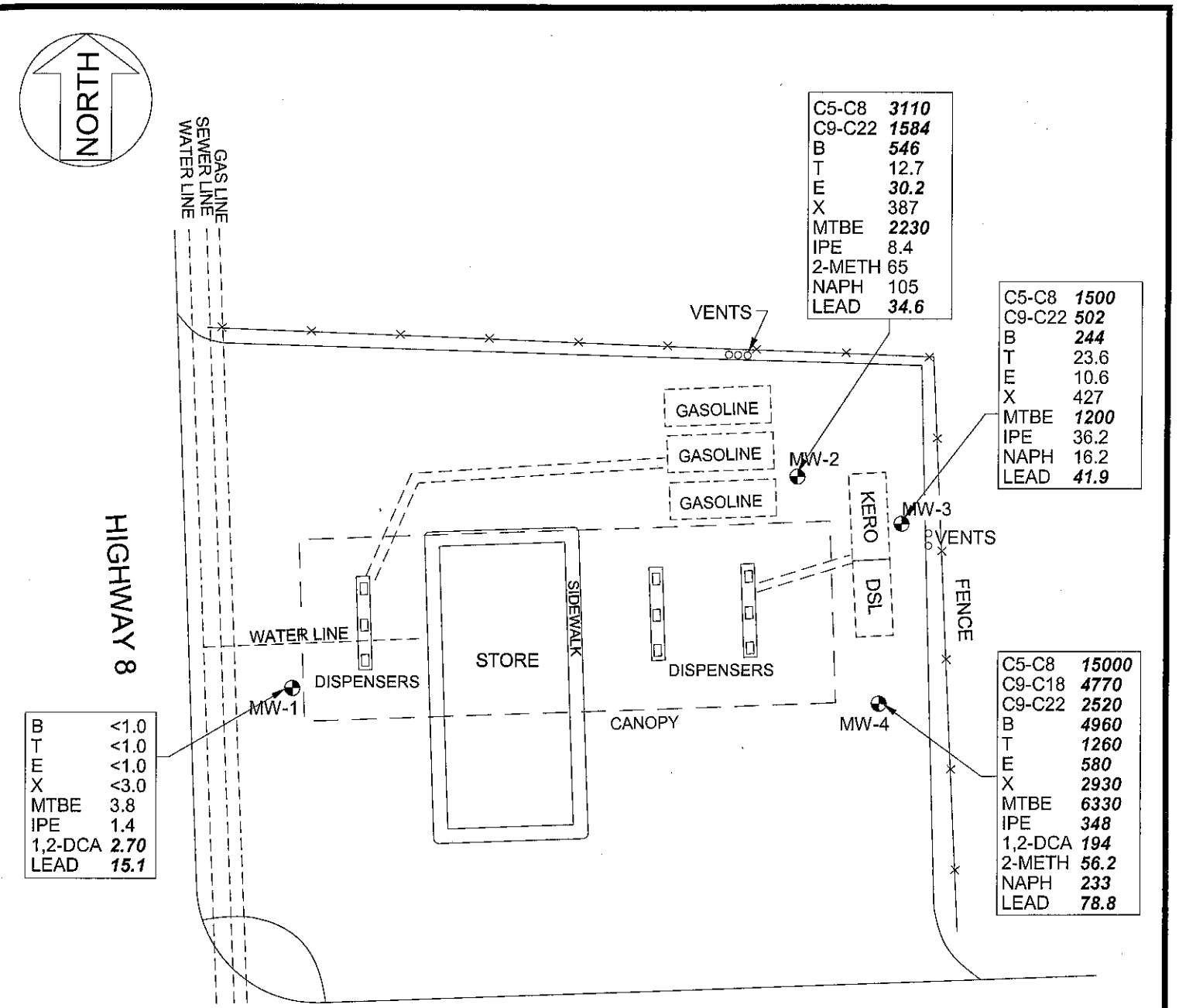


SEI *Engineering & Geological Services, P.C.*
5100 Reagan Dr., Suite 7A, Charlotte, NC 28206, Ph# 704-597-4022

FIGURE 4: POTENTIOMETRIC SURFACE MAP
THE PANTRY #3183
1401 WINSTON RD.
LEXINGTON, NC 27295

W.O. #: 205178
DWG #: PA31834B

DATE: 1/16/06
DRAWN BY: JCJ



LEGEND:

MONITORING WELL

C5-C8	C5-C8 ALIPHATICS
C9-C18	C9-C18 ALIPHATICS
C9-C22	C9-C22 AROMATICS
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
MTBE	MTBE
IPE	IPE
1,2-DCA	1,2-DICHLOROETHANE
2-METH	2-METHYLNAPHTHALENE
NAPH	NAPHTHALENE
LEAD	LEAD

CONCENTRATIONS IN MICROGRAMS PER LITER(ug/L)

BOLD = ABOVE 15A NCAC 2L STANDARD.

MW-1 AND MW-2 SAMPLE DATE = 10/18/05.
MW-3 AND MW-4 SAMPLE DATE = 12/1/05.

0 15 30 FT.

SEI *Engineering & Geological Services, P.C.*
5100 Reagan Dr., Suite 7A, Charlotte, NC 28206, Ph# 704-597-4022

FIGURE 5: GROUNDWATER ANALYTICAL RESULTS
THE PANTRY #3183
1401 WINSTON RD.
LEXINGTON, NC 27295

W.O. #: 205178
DWG #: PA31835B

DATE: 12/1/05
DRAWN BY: JCJ

Table II
Current Groundwater Levels and Well Construction Information
Date: 1/16/06 **IncidentNo./Name: 30638/Pantry #3183** **Facility ID# 0-012254**

Well ID	Date Installed	Date GW Measured	Casing Depth	Screened Interval	Total Depth	TOC Elevation*	Depth to Water from TOC	Free Product Thickness**	Groundwater Elevation*	Comments
MW-1	10/17/2005	12/21/05	20	20-30	30	105.05	22.19	NA	82.86	
MW-2	10/17/2005	12/21/05	25	25-35	35	106.32	24.56	NA	81.76	
MW-3	12/1/2005	12/21/05	20	20-30	30	106.80	24.97	NA	81.83	
MW-4	12/1/2005	12/21/05	20	20-30	30	106.80	25.11	NA	81.69	

* Elevation given in feet above Mean Sea Level and are based on an assumed elevation of 100 feet.
** If free product is present in well, groundwater elevation is calculated by [Top of Casing Elevation-Depth to Water]+[free product thickness x 0.8581]
TOC = Top of Casing NA = Not Applicable
Depths are given in feet below ground surface.

Table III
Soil Analytical Results
Date: 12/15/05 **Incident #/Name:** 30638/Pantry #3183 **Facility ID#:** 0-012254

Analyical Method			MADEP VPH/EPH				8260/8270							
Contaminant of Concern														
Sample ID	Date Collected	Sample Depth	C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	Ethylene Dibromide	Di-Isopropyl Ether	Methyl Tert-Butyl Ether
MW-1A	10/17/2005	8-10	<5.2	<8.2	<8.2	<8.2	<0.0067	<0.0067	<0.0067	<0.020	<0.21	<0.0067	<0.0067	<0.0067
MW-1B	10/17/2005	13-15	<6.1	<8.2	<8.2	<8.2	<0.0072	<0.0072	<0.0072	<0.022	<0.21	<0.0072	<0.0072	0.0577
MW-1C	10/17/2005	18-20	<5.5	<8.7	<8.7	<8.7	<0.0068	<0.0068	<0.0068	<0.020	<0.22	<0.0068	<0.0068	<0.0068
MW-2A	10/17/2005	13-15	<5.6	<8.0	<8.0	<8.0	<0.0062	<0.0062	<0.0062	<0.019	<0.20	<0.0062	<0.0062	0.0276
MW-2B	10/17/2005	18-20	<5.3	<8.2	<8.2	<8.2	<0.0066	<0.0066	<0.0066	<0.020	<0.20	<0.0066	<0.0066	0.0276
MW-2C	10/17/2005	23-25	<5.4	<8.8	<8.8	<8.8	**0.0660**	0.0296	<0.0068	0.158	<0.22	<0.0068	0.0076	0.671
Soil to Groundwater MSCC			72	3300	CI	34	0.0056	7.3	4.6	5	0.58	0.000002	0.37	0.92
Residential MSCC (mg/kg)			939	9386	93860	469	18	3200	1560	3129	313	0.0075	156	213
Ind/Comm MSCC (mg/kg)			24528	245280	HB	12264	164	82000	40000	81760	8176	0.067	4088	1908

Results in **BOLD** are above Soil-to-Groundwater MSCC Standards. Results are reported in milligrams per kilogram (mg/kg).
MSCC = Maximum Soil Contaminant Concentration CI=Considered Immobile HB=Health Based Level >100%
Depths are reported in ft. BGS (feet Below Ground Surface). NE=Not Established

Table IV
Current Groundwater Analytical Results
Date: 12/15/05 **Incident #/Name: 30638/Pantry #3183** **Facility ID#: 0-012254**

Analytical Method		MADEP VPH/EPH				601/602/625											3030c
Contaminant of Concern																	
Sample ID	Date Collected	C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Di-Isopropyl Ether	Ethylene Dibromide	1,2-Dichloroethane	2-Methylnaphthalene	Naphthalene	Chloroform	Lead
MW-1	10/18/2005	<75	<190	<190	<190	<1.0	<1.0	<1.0	<3.0	3.8	1.4	<1.0	**2.70**	<4.8	<4.8	<1.0	**15.1**
MW-2	10/18/2005	**3,110**	1,503	<190	**1584**	**546**	12.7	30.2	387	**2230**	8.4	<1.0	<1.0	**65**	**105**	17.2	**34.6**
MW-3	12/1/2005	**1500**	685	<190	**502**	**244**	23.6	10.6	427	**1200**	36.2	<10	<10	13.6	16.2	40.5	**41.9**
MW-4	12/1/2005	**15,000**	**4770**	<190	**2520**	**4960**	**1260**	580	**2930**	**6330**	**348**	<100	**194**	**56.2**	**233**	<1.0	**78.8**
2L Standard (µg/l)		420	4200	42000	210	1	1000	550	530	200	70	0.0004	0.38	14	21	70	15
GCL (µg/l)		420000	4200000	42000000	210000	5000	257500	84500	87500	200000	70000	50	380	12500	15500	70000	15000

Results are reported in micrograms per liter (µg/l).

GCL = Gross Contamination Level No constituent above GCLs.

Results reported in **BOLD** are above the 15A NCAC 2L Standard.

Table V
UST System Information
Date: 1/16/06 **Incident #/Name: 30638/Pantry #3183**

Site History UST System Information Pantry #3183 1401 Winston Road Lexington, NC 27295 Facility ID#: 0-012254 Incident # 30638					
UST ID Number	**Product** (gasoline, diesel, jet fuel, etc.)	**Capacity** (gallons)	**Date Installed**	**Date Permanently Closed (P), or Still in Use* (C)**	**Was Release Associated With UST System?**
1	Gasoline	8,000	3/25/1971	(P8/1/05)	Yes
2	Gasoline	12,000	3/25/1963	C	Yes
3	Gasoline	20,000	3/25/1963	C	Yes
4	Kerosene	20,000	3/23/1978	C	Yes
5	Diesel	12,000	3/22/1982	C	Yes

* Still in use means not permanently closed.

Table VI
UST Owner/Operator Information (most recent first)
Date: 1/16/06 Incident #/Name: 30638/Pantry #3183
Facility ID #: 0-012254

Site History UST Owner/Operator Information (most recent first)			
Pantry #3183			
1401 Winston Road Lexington, NC 27295			
UST ID Number	**Name of Owner/Operator**	**Dates of Ownership/Operation**	**Owner or Operator?**
All USTs onsite	The Pantry, Inc.	1999-Present	Owner/Operator
Address			**Telephone Number**
PO Box 1410 Sanford, NC 27330			(919) 774-6700
UST ID Number	**Name of Owner/Operator**	**Dates of Ownership/Operation**	**Owner or Operator?**
All USTs onsite	Taylor Oil Company	? - 1999	Owner/Operator
Address			**Telephone Number**
110 Oakwood Drive Winston-Salem, NC 28202			(336) 725-9531
UST ID Number	**Name of Owner/Operator**	**Dates of Ownership/Operation**	**Owner or Operator?**
Address			**Telephone Number**