Prepared for:

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

Preliminary Site Assessment Report

Samar N. Elawar Property
Parcel # 4
1609 N. William Street
Goldsboro, Wayne County, North Carolina
US 117 Alternate from US 70 Bypass to Belfast
TIP Number: U-2714
WBS Element: 38979.1.2

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

Prepared by:

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Assistant Project Manager

Reviewed by:

DocuSigned by:
Kathleen Roush
72DD754524A74DD...

Kathleen Roush, L.G. RSM
Division Manager
NC Geologist License No. 1353

August 29, 2017

not considered final unless all signatures are completed

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1.0 INTRODUCTION

This report presents the results of a Preliminary Site Assessment (PSA) for the North Carolina Department of Transportation (NCDOT) Parcel 4 performed by Apex Companies, LLC (Apex) on behalf of the NCDOT. The subject site of this PSA report will be affected by the widening of the US Highway 117 from US Highway 70 to Belfast Road. The Site is comprised of one parcel and is located at 1609 North William Street and is identified as Parcel 4, Samar N. Elawar Property, within the NCDOT U-2714 design project. The property is located west of North William Street, between the intersections with East US Highway 70 and Wilson Street in Goldsboro, Wayne County, North Carolina, as shown in the attached Site Location Map (**Figure 1)**. The site investigation was conducted in accordance with Apex Company's Technical and Cost proposal dated June 7, 2017.

NCDOT contracted Apex to perform the PSA within the proposed right-of-way (ROW) and/or easement of the Parcel 4 Property due to the potential presence of contamination at the site and the fact that excavation and grading may occur within the area. The PSA was performed to evaluate if soils have been impacted as a result of past and present uses of the property within the proposed investigation area, if buried underground storage tanks (USTs) are present in the area of investigation, and if groundwater is impacted.

The following report presents the results of a ground penetrating radar (GPR) evaluation to identify underground storage tanks (USTs) in the investigation area, and describes the subsurface field investigation at the site. The report includes the evaluation of field screening, as well as field and laboratory analyses with regards to the presence or absence of soil and groundwater contamination within the area of investigation across Parcel 4. **Appendix A** includes a Photograph log for the site.

1.1 Site History

Parcel 4 has been identified with the address of 1609 N William Street. Based on a search of the North Carolina Department of Environmental Quality (NCDEQ) UST database registry, S & R Quick Mart occupies the site. They operate three 10,000-gallon capacity gasoline/gasoline mixture USTs (installed April 16, 1984). The three tanks identified with Facility ID number 0-006066 are listed as "current" in the current UST database. No visual evidence of USTs were noted during field activities, however, the geophysical survey did identify four probable USTs on site. Currently the site operates as S & R quick Mart in a one story building.

Apex personnel also reviewed the NCDEQ Incident Management Database and incident #10799 is listed for this property. A petroleum UST leak was reported July 15, 1993 and was closed out on November 1, 2005. Apex obtained historic reports associated with the release which indicate that the release was located along the front of the property, within the study area.

The site was closed with a 2005 Notice of Residual Petroleum which prohibits future use of the groundwater for water supply purposes. The groundwater isoconcentration maps for the petroleum compounds based on groundwater sampling completed in 2003 show that constituents of concern (COCs) were present across the front of the parcel and potentially extend to the property boundary. A copy of the records obtained by Apex are included in **Appendix B**.

1.2 Site Description

The site is located in a mixed commercial and residential area of Goldsboro in Wayne County and is currently developed as S & R Quick Mart and Gas Station. The S & R Quick Mart building is located centrally on the parcel, with the fuel bay located to the southeast along North William Street. The remaining eastern portion of the site is covered with an asphalt-paved parking area. The site is bordered to the north and west by a truck brokerage and repair facility. North William Street, followed by a U-Haul Neighborhood Dealer/Top Motor Sales borders the site to the east and a vacant property is located to the south. The NCDEQ UST database registry did indicate that three "current" USTs are associated with the site. Additionally, the geophysical surveyor, Pyramid Environmental & Engineering, PC, did identify four GPR anomalies characteristic of USTs. Of the four probable USTs identified the two easternmost USTs are located in the investigation area.

2.0 GEOLOGY

2.1 Regional Geology

Parcel 4 is located within the Coastal Plain Physiographic Province. The Coastal Plain is the largest physiographic province in the state, covering about 45 percent of the land area. According to the US Geological Survey Professional Paper 1404-I entitled "Hydrogeologic Framework of the North Carolina Coastal Plain" (Winner and Coble, 1996), the geology consists of eastward-dipping and eastward-thickening series of sedimentary rocks which range in age from Holocene to Cretaceous. The most common type of sediment types are sand and clay, although a significant amount of limestone occurs in the southern part of the coastal plain. The site overlies the Black Creek Formation. The Black Creek Formation is Late Cretaceous in age and was deposited in a lagoonal to marine environment. It generally consists of thinly laminated gray to black clay with interbedded gray to tan sands. The most notable characteristic of the formation is the high concentration of wood and organic material. Shells and glauconite are also common.

2.2 Site Geology

Site geology was observed through the drilling and sampling of eight direct push probe soil borings (SB) onsite. **Figure 2** presents the boring locations and site layout. Borings did not exceed a total depth of ten feet below ground surface (bgs) since that depth was the maximum excavation depth for proposed drainage features. Soil consisting predominantly of tan to gray sand and brown sandy silt was observed across the parcel. The soils were unconsolidated and as a result the borings often collapsed. Historic work conducted at the site associated with a former leak from the UST system indicates that groundwater reportedly flows toward the east-southeast. Boring logs are presented in **Appendix C**.

3.0 FIELD ACTIVITIES

3.1 Preliminary Activities

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

3.2 Site Reconnaissance

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

3.3 Geophysics Survey Results

The geophysical survey of the site was conducted on June 6 and 7, 2017. Pyramid performed an electromagnetic (EM) induction metal survey followed by a GPR survey. A copy of the Geophysical Report is presented in **Appendix D**. Two areas located on the north and south side

of the pump island contained EM anomalies that were associated with unknown features and were investigated further with the GPR method. Results of GPR scans indicated evidence of four probable USTs within the NCDOT easement. Two probable USTs were located on the north side of the pump island and two probable USTs were located on the south side of the pump island. Each of the four probable USTs are approximately 21 feet long and six feet wide. The two easternmost USTs are located within the investigation area. The anomaly locations are depicted on **Figure 2.** The active USTs associated with the facility are located at the northwest portion of the property, beyond the study area.

3.4 Well Survey

No water supply wells were observed on site. However, two monitoring wells were observed on site. The monitoring wells were not identified so Apex personnel assigned identification for reporting purposes. MW-3 is located northeast of the pump island (GPS coordinates 35,402253, -77.984611). Approximately 0.03 feet of light non-aqueous phase liquid (LNAPL) was present was measured in the well at a depth of 3.58 from the top of the casing (TOC). Monitoring well MW-4 is located southeast of the pump island (GPS coordinates 35,402462, -77.984700). This well also contained approximately 0.03 feet of LNAPL, but at a depth of 3.89 feet from the TOC. Two vaults that appear to be associated with a remediation system were also noted within the investigation area. Vault 1 (VRW-1) is located northeast of the pump island (GPS coordinates of 35,402504, -77.984647) and vault 2 (VRW-2) is located east of the pump island (GPS coordinates 35,402467, -77.984720).

3.5 Soil Sampling

Apex conducted drilling activities at the site on June 8, 2017. Apex drilling subcontractor, CSI, advanced eight direct push soil borings within the proposed investigation area. These eight boring locations were placed by the probable UST systems or in a pattern to maximize the likelihood of intercepting potential soil contamination. **Figure 2** presents the Site Map with boring locations and identifications.

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

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

Apex. The UVF results were generated concurrent with soil boring activities so that rapid assessment could be utilized for strategic boring placement.

3.6 Groundwater Sampling

Apex personnel mobilized to the Site on June 8th, 2017 to obtain groundwater grab samples. Two permanent monitoring wells were already on site and within the investigation area. Apex personnel gauged the two monitoring wells MW-3 and MW-4 and noted 0.03 feet of measurable petroleum LNAPL in each. Because measurable LNAPL was noted in each monitoring well, Apex personnel did not collect grab samples for onsite quantitative analysis of TPH using the REDLAB UVF Hydrocarbon Analyzer. The monitoring wells are presented in **Figure 2.**

4.0 SAMPLING RESULTS

4.1 Soil Sampling Results

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

Elevated FID/PID readings, above ten parts per million (ppm), were not observed in the borings conducted at the site above the smear zone. The FID readings ranged from non-detectable to 2.4 ppm and the PID readings ranged from non-detectable to 3.0 ppm. The FID/PID field screening results from the 2017 sampling event are provided on the boring logs in **Appendix C**. A soil assessment was conducted on July 22, 2004 in which elevated PID readings were noted within the smear zone at depths of three feet to 3.5 below ground surface (bgs) ranging in value from 4.4 ppm to 37.6 ppm. Results of the of the July 22, 2004 sampling event are documented in the Soil Investigation Report prepared by Apex located in **Appendix B.**

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

Based on the UVF analyses, TPH-GRO and TPH-DRO was identified in soils on Parcel 4. TPH-GRO concentrations ranged from below detectable levels to 6.4 milligram per kilogram (mg/kg) (P4-SB8). TPH-DRO concentrations ranged from below detectable levels to 42.3 mg/kg (P4-SB5). TPH-GRO concentrations did not exceed the regulatory action level of 50 mg/kg and the TPH-DRO concentrations did not exceed the regulatory action level of 100 mg/kg.

4.2 Groundwater Sampling Results

Apex personnel gauged the two monitoring wells MW-3 and MW-4 and noted measurable LNAPL in each. Because measurable product was noted in each monitoring well, Apex personnel did not collect grab samples for onsite quantitative analysis of TPH using the REDLAB UVF Hydrocarbon Analyzer. Based on the topography of the site and the location of the probable USTs and pump islands in relation to the two monitoring wells Apex estimates the area of groundwater contamination within the area of investigation to be 3,209 square feet. The smear zone is estimated to be two feet thick therefore the potential contaminated soil volume is estimated to be 3,209 square feet or 237 cubic yards within the ROW and easement. This includes the area reportedly downgradient of the USTs, around the monitoring wells, as well as to the edge of the property. Since LNAPL was observed, Apex assumed that dissolved phase constituents of concern (COCs) could potentially be present to the northeast and southwest. Further review of historical information presented in the Semi-Annual Groundwater Monitoring Report prepared by Apex (January to June 2003) revealed monitoring wells MW-3 and MW-4 to have the highest concentrations of COCs. The site had a remediation system in operation until March 18, 2003, at which time the system was deactivated. Based on Apex's previous experience with these types of systems it is reasonable to assume that some amount of plume rebounding has likely occurred since the system was shut down. Based on the plume data presented in the Semi-Annual Groundwater Monitoring Report dated July 17, 2003 the total area of the plume is 14,206 square feet. The plume extends beyond the area of investigation as defined by NCDOT. It is Apex's assumption that the investigation area, located within the plume, is contaminated based on historical data and the measurable LNAPL observed in wells MW-3 and MW-4. The extent of the plume (as presented in the July 17, 2003 Semi-Annual Groundwater Monitoring Report) and the estimated extent of groundwater contamination and smear zone soil contamination are presented in **Figure 4**. The Semi-Annual Groundwater Monitoring Report is located in **Appendix B.**

5.0 CONCLUSIONS

Based on site observations and onsite UVF analysis, no significant petroleum-impacted soil contamination was identified above the NCDEQ Action level of 50 mg/kg for TPH-GRO or above the NCDEQ Action level of 100 mg/kg for TPH-DRO. Two monitoring wells containing LNAPL were discovered in the area of investigation as well as two remediation vaults. The LNAPL was encountered at approximately 3.5 feet below the ground surface.

The following bulleted summary is based upon Apex's evaluation of field observations and onsite quantitative analyses of samples collected from the Site on June 8, 2017.

- Results of the geophysical survey produced evidence of four anomalies characteristic of USTs. The locations of the anomalies are shown on **Figure 2**.

- Review of the NCDEQ UST database registry reveals that the S & R Quick Mart and Gas Station occupies the site at 1609 N William St., and currently operates, three 10,000-gallon capacity gasoline/gasoline mixture USTs. The three tanks identified with Facility ID number 006066 were installed on April 16, 1984.

- Review of the NCDEQ Incident Management Database indicates that incident #10799 is listed for this property. A petroleum UST leak was reported July 15, 1993 and was closed out on November 1, 2005. Monitoring wells and the remnants of the former treatment system remain. These structures were not removed following the issuance of the "No Further Action" letter as is required by NCDEQ UST Section.

- Eight soil borings were advanced onsite. Soil samples collected from each boring were analyzed in the field using a REDLAB UVF Hydrocarbon Analyzer.

- Soil samples analyzed using the UVF did not contain either TPH-DRO or TPH-GRO concentrations above their respective NCDEQ Action levels of 100 mg/kg and 50 mg/kg.

- Based on the LNAPL present in the existing groundwater wells, location of the USTs, historic impacts, and potential for dissolved phase COCs, Apex estimates that up to 3,209 square feet of groundwater and approximately 3,209 square feet of contaminated smear zone soils (237 cubic yards) may be impacted. The smear zone soils would be encountered at approximately two feet below grade.

6.0 RECOMMENDATIONS

Based on these PSA results, NCDOT will need to abandon the two monitoring wells and the two vaults prior to excavation activities. During excavation activities NCDOT will need to manage any groundwater encountered during excavation activities to assure that the impacted water does not migrate from the site and to prevent exposure to workers. The four probable USTs lie within or adjacent to the proposed easement. This section of the design project is a fill section and the drainage features run along the front of the parcel. Should grading occur during construction activities that encounter the USTs, one or more those USTs will require removal. The impacted groundwater was encountered at approximately 3.5 feet below land surface. The parcel is designed as a fill area but if limited areas require excavation, groundwater could be

encountered as shallow as four feet bgs. NCDOT should be prepared to dewater and containerize contaminated groundwater if encountered during construction activities.

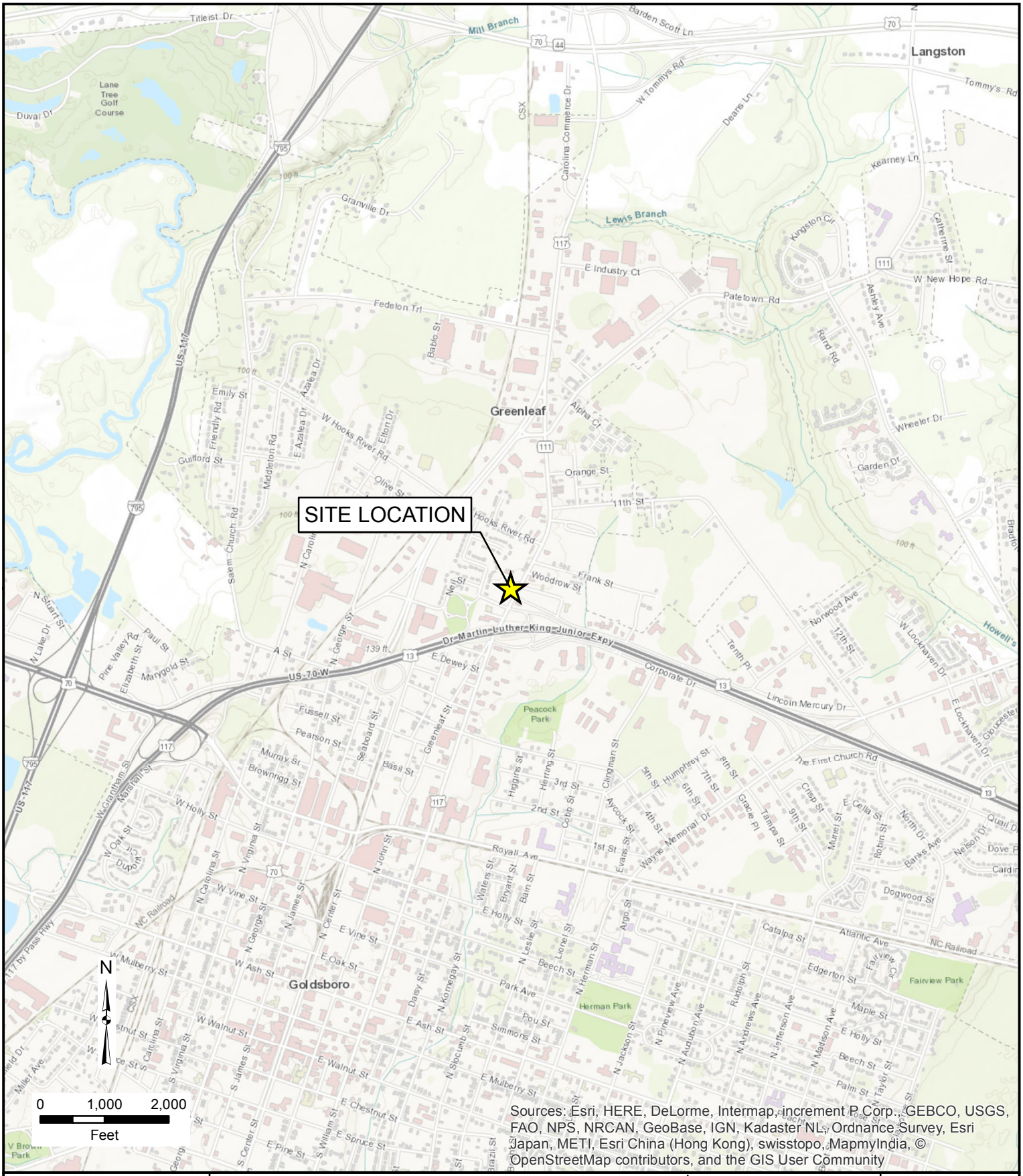
TABLES

Table 1
UVF Onsite Hydrocarbon Analytical Soil and Groundwater Data from June 2017
U-2714, Parcel 04, Samar N. Elawar Property
Goldsboro, North Carolina

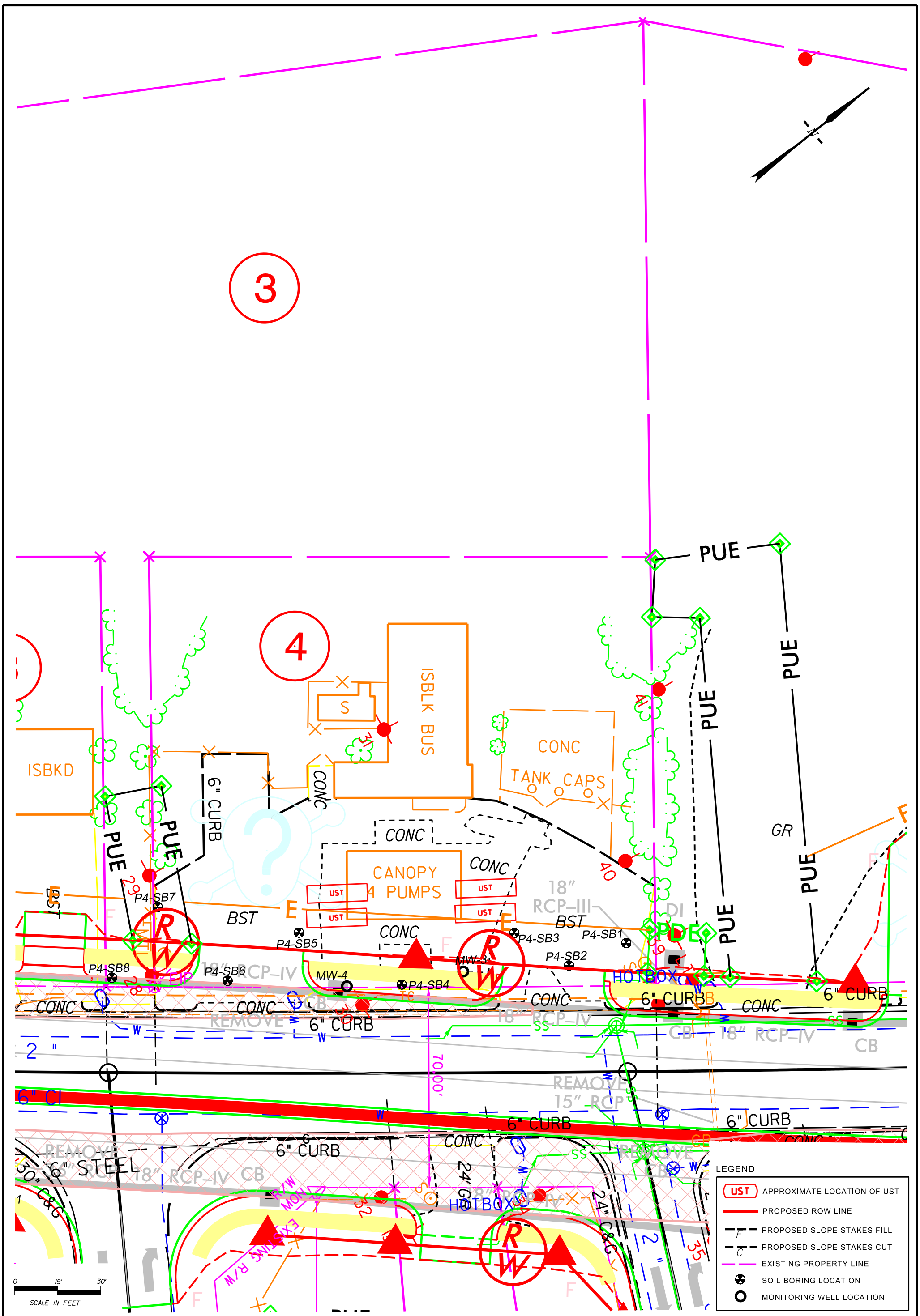
Sample ID Number	Sample Date	Sample Depth (ft bgs)	GRO (mg/kg) (C5-C10)	DRO (mg/kg) (C10-C35)
SOIL				
NCDEQ Action Level in mg/kg			**50**	**100**
P4-SB1	6/8/2017	2	<0.48	0.64
P4-SB2	6/8/2017	2	<0.82	4.5
P4-SB3	6/8/2017	2	<0.51	<0.51
P4-SB4	6/8/2017	2	<1.1	21.8
P4-SB5	6/8/2017	2	<0.53	42.3
P4-SB6	6/8/2017	2	1.3	2.5
P4-SB7	6/8/2017	2	2	4.7
P4-SB8	6/8/2017	2	6.4	7.1

NOTES:
(mg/kg) = Milligrams per kilogram
GRO = Gasoline Range Organics
DRO = Diesel Range Organics
ft bgs = feet below ground surface
TPH - GRO values in exceedance of NCDEQ Action Level of 50 mg/kg are shown in Bold
TPH - DRO values in exceedance of NCDEQ Action Level of 100 mg/kg are shown in Bold

FIGURES



CHECK BY: TH	SITE LOCATION MAP	APEX	FIGURE
DRAWN BY: SP			1
DATE: 7/17/17	PARCEL #4		
SCALE: AS SHOWN	1609 N. WILLIAM STREET		
CAD NO.: 510497-003	GOLDSBORO, NORTH CAROLINA		
PRJ NO.: 510497-003			



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

FIGURE 2
PARCEL 4
SITE MAP WITH SOIL BORING LOCATIONS

Date:	7/15/17
Proj. #	510497-003
CAD File:	pc__4__fig 2.dgn
Approx. Scale:	1" = 30'
Drawn by:	MJO
Client:	NC DOT
Project Title:	GOLDSBORO U-2714

3

4

Sample Identification	P4-SB3
Sample Depth (Feet bgs)	2
TPH GRO (mg/kg)	<0.51
THP DRO (mg/kg)	0.51

Sample Identification	P4-SB2
Sample Depth (Feet bgs)	2
TPH GRO (mg/kg)	<0.82
THP DRO (mg/kg)	4.5

Sample Identification	P4-SB1
Sample Depth (Feet bgs)	2
TPH GRO (mg/kg)	<0.48
THP DRO (mg/kg)	0.64

Sample Identification	P4-SB5
Sample Depth (Feet bgs)	2
TPH GRO (mg/kg)	<0.53
THP DRO (mg/kg)	42.3

Sample Identification	P4-SB6
Sample Depth (Feet bgs)	2
TPH GRO (mg/kg)	1.3
THP DRO (mg/kg)	2.5

Sample Identification	P4-SB7
Sample Depth (Feet bgs)	2
TPH GRO (mg/kg)	2
THP DRO (mg/kg)	4.7

Sample Identification	P4-SB8
Sample Depth (Feet bgs)	2
TPH GRO (mg/kg)	6.4
THP DRO (mg/kg)	7.1

Sample Identification	P4-SB4
Sample Depth (Feet bgs)	2
TPH GRO (mg/kg)	<1.0
THP DRO (mg/kg)	21.8

LEGEND

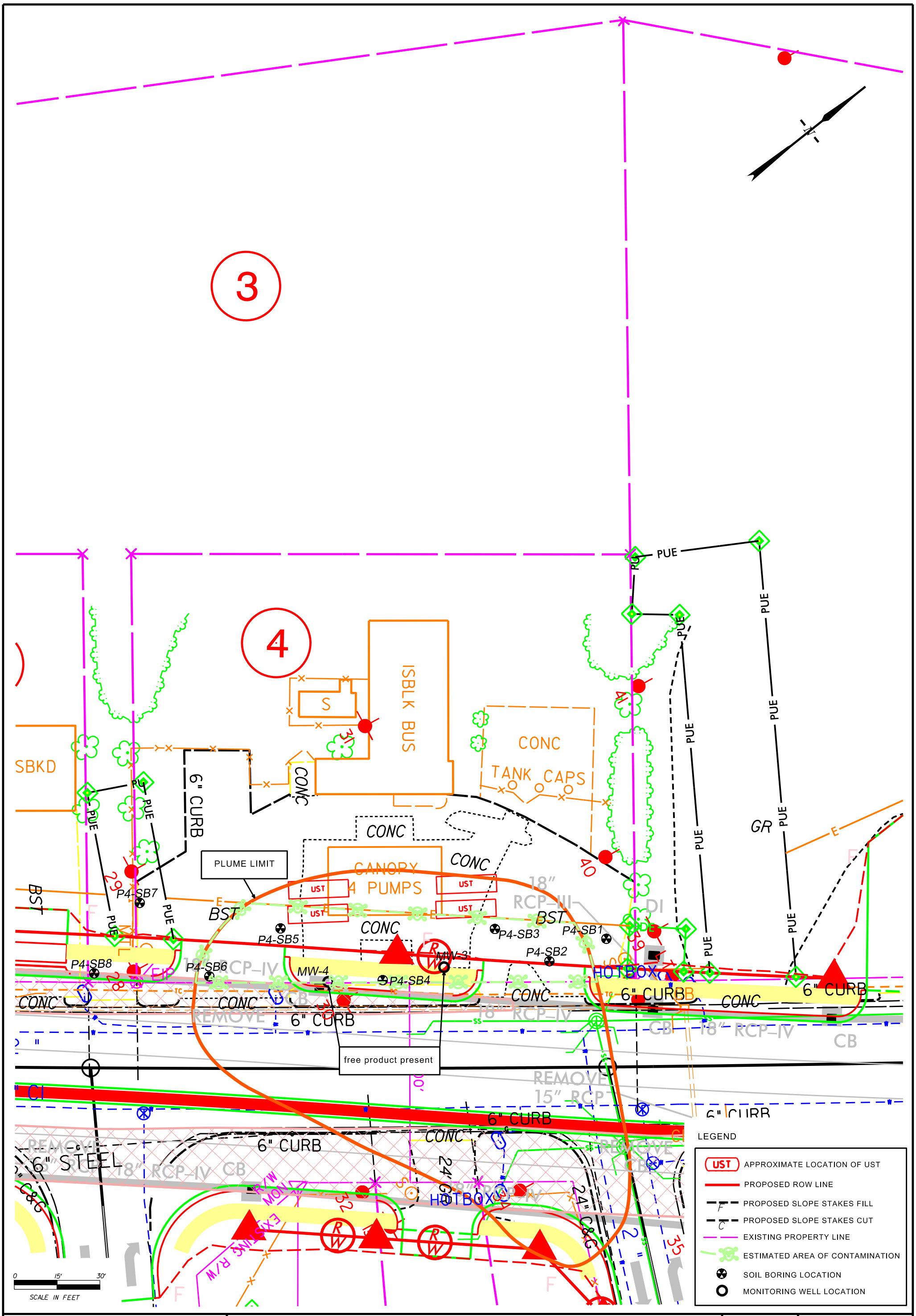
- UST — APPROXIMATE LOCATION OF UST
- PROPOSED ROW LINE
- PROPOSED SLOPE STAKES FILL
- PROPOSED SLOPE STAKES CUT
- EXISTING PROPERTY LINE
- SOIL BORING LOCATION
- MONITORING WELL LOCATION

0 15' 30'
SCALE IN FEET

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

FIGURE 3
PARCEL 4
ONSITE UVF HYDROCARBON ANALYSIS RESULTS - SOIL
(6-8-17)

Date:	7/15/17
Proj. #	510497-003
CAD File:	pc__4__fig 2.dgn
Approx. Scale:	1" = 30'
Drawn by:	MJO
Client:	NC DOT
Project Title:	GOLDSBORO U-2714



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

FIGURE 4
PARCEL 4
SITE MAP WITH ESTIMATED AREA OF CONTAMINATION

Date: 7/15/17	GOLDSBORO U-2714
Proj. #	
CAD File: pc__4__fig 4.dgn	Project Title:
Approx. Scale: 1" = 30'	Drawn by: MJO
Client: NC DOT	

APPENDIX A

PHOTOGRAPH LOG

Photo 1

Overview of site prior to preliminary site assessment activities.

Photo 2

View of underground probable USTs and utility mark outs.

10610 Metromont Pkwy
Suite 206
Charlotte, NC 28269

APEX

WBS	38979.1.2
PROCESSED	TLH
DATE	June 2017
PAGE	

PHOTOGRAPHIC LOG

PSA Field Activities
Parcel 4
1609 N. William Street, Goldsboro, NC

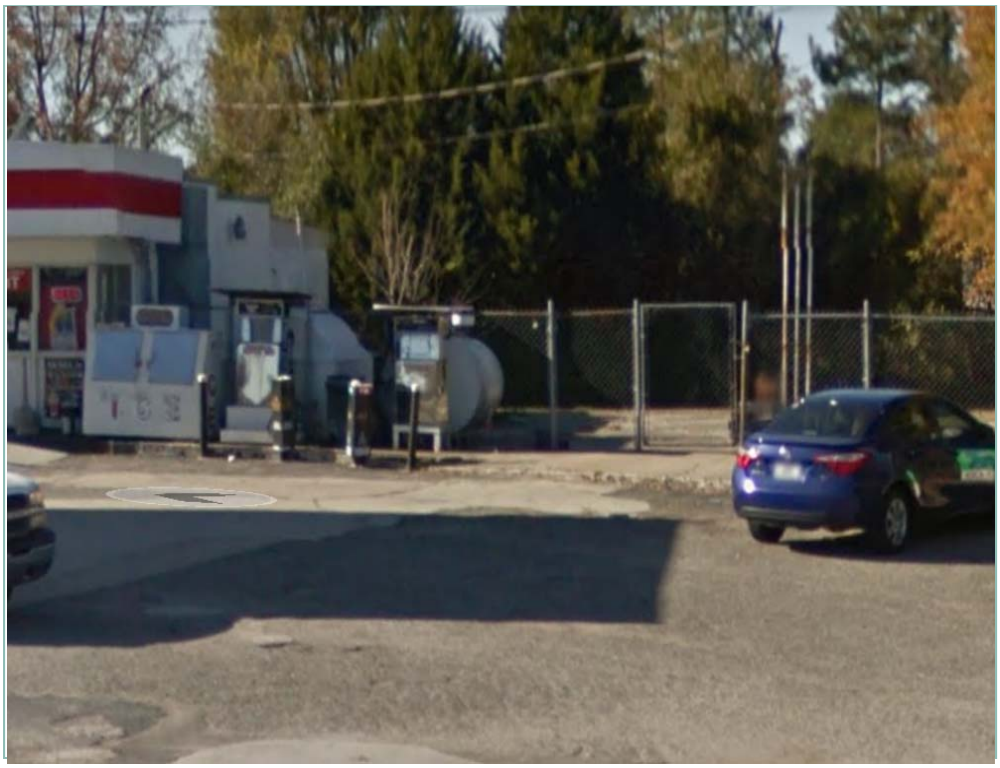


Photo 3

Photo shows two ASTs and three vent pipes.

Photo 4

Photo shows CSI hand clearing for utilities prior to using direct push rig.

APPENDIX B

HISTORIC RECORDS

NCDENR
North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor
William G. Ross Jr., Secretary

Division of Waste Management
Underground Storage Tank Section

Dexter R. Matthews, Director

November 1, 2005

Attn.: Mr. Jerry Douglas, Environmental Coordinator
Abercrombie Oil Company, Inc.
P.O. Box 1361
Danville, VA 24543

Re: Notice of No Further Action
15A NCAC 2L .0115(h)
Risk-based Assessment and Corrective Action for
Petroleum Underground Storage Tanks

U-Filler-Up #33
1609 N. Williams St., Goldsboro, NC
Wayne County
Incident Number: 10799
Risk Classification: Low
Rank: 75R

Dear Mr. Douglas:

The Soil Cleanup Plan/Site Closure Request received by the Underground Storage Tank (UST) Section, Washington Regional Office on December 28, 2004 and the filed Notice of Residual Petroleum received on October 31, 2005 have been reviewed. The review indicates that groundwater contamination meets the cleanup requirements for a low-risk site but exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202.

The UST Section determines that no further action is warranted for this incident. This determination shall apply unless the UST Section later finds that the discharge or release poses an unacceptable risk or a potentially unacceptable risk to human health or the environment. Pursuant to Title 15A NCAC 2L .0115(e) you have a continuing obligation to notify the Department of any changes that might affect the risk or land use classifications that have been assigned.

Be advised that as groundwater contamination exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202, groundwater within the area of contamination or within the area where groundwater contamination is expected to migrate is not suitable for use as a water supply, and/or that as soil contamination exceeds the residential MSCCs, the property containing the soil contamination is not suitable for residential use (e.g., homes, schools nursing homes parks, recreation areas, day care centers).

As groundwater contamination exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202 and pursuant to NCGS 143B-279.9 and 143B-279.11, the approved Notice of Residual Petroleum (attached) was filed with the Register of Deeds in **Wayne** County on **October 17, 2005**. A certified copy was received by the UST Section on **October 31, 2005**.

As groundwater contamination exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202 and/ or soil contamination exceeds the lower of the soil-to-groundwater or residential MSCCs, public notice in accordance with 15A NCAC 2L .0115(k) also is required. Thus, within 30 days of receipt of this letter, a copy of the letter must be provided by certified mail, or by posting in a prominent place, if certified mail is impractical, to the local health director, the chief administrative officer of each political jurisdiction in which the contamination occurs, all property owners and occupants within or contiguous to the area containing contamination, and all property owners and occupants within or contiguous to the area where the contamination is expected to migrate. Within 60 days of receiving this no further action letter, this office must be provided with proof of receipt of the copy of the letter or of refusal by the addressee to accept delivery of the copy of the letter or with a description of the manner in which the letter was posted. This No Further Action determination will not become valid until public notice requirements are completed. Interested parties may examine the Soil Cleanup Report/ Site Closure Request by contacting this regional office and may submit comments on the site to the regional office at the address or telephone number listed below.

This No Further Action determination applies only to the subject incident; for any other incidents at the subject site, the responsible party must continue to address contamination as required.

If you have any questions regarding this notice, please contact me at the address or telephone number listed below.

Sincerely,

Scott Bullock

Scott Bullock, L.G.
Regional UST Supervisor
Washington Regional Office

cc: Wayne County Health Department
Apex Environmental, Inc., 468 Southlake Blvd., Richmond, VA 23236

UST Regional Offices

Asheville (ARO) – 2090 US Highway 70, Swannanoa, NC 28778 **(828) 296-4500**

Fayetteville (FAY) – Systel Building, Suite 714, Fayetteville, NC 28301 **(910) 486-1541**

Mooresville (MOR) – 610 East Center Avenue, Suite 301, Mooresville, NC 28115 **(704) 663-1699**

Raleigh (RRO) – 1628 Mail Service Center, Raleigh, NC 27699 **(919) 571-4700**

Washington (WAS) – 943 Washington Square Mall, Washington, NC 27889 **(252) 946-6481**

Wilmington (WIL) – 127 Cardinal Street Extension, Wilmington, NC 28405 **(910) 395-3900**

Winston-Salem (WS) – 585 Waughtown Street, Winston-Salem, NC 27107 **(336) 771-4600**

Guilford County Environmental Health, 1203 Maple Street, Greensboro, NC 27405, **(336) 641-3771**

Doc ID: 005122120003 Type: CRP
Recorded: 10/17/2005 at 04:21:23 PM
Fee Amt: $20.00 Page 1 of 3
WAYNE COUNTY, NC
LOIS J MOORING REGISTER OF DEEDS
BK 2363 PG 712-714

INDEXED

1231
#10799

NOTICE OF RESIDUAL PETROLEUM

Former U-Fill'er-Up #33, Wayne County, North Carolina

3 2000

The property that is the subject of this Notice (hereinafter referred to as the "Site") contains residual petroleum and is an Underground Storage Tank (UST) incident under North Carolina's Statutes and Regulations, which consist of N.C.G.S. 143-215.94 and regulations adopted thereunder. This Notice is part of a remedial action for the Site that has been approved by the Secretary (or his/her delegate) of the North Carolina Department of Environment and Natural Resources (or its successor in function), as authorized by N.C.G.S. Section 143B-279.9 and 143B-279.11. The North Carolina Department of Environment and Natural Resources shall hereinafter be referred to as "DENR".

NOTICE

Petroleum product was released and/or discharged at the Site. **Petroleum constituents remain on the site, but are not a danger to public health and the environment, provided that the restrictions described herein, and any other measures required by DENR pursuant to N.C.G.S. Sections 143B-279.9 and 143B-279.11, are strictly complied with.** This "Notice of Residual Petroleum" is composed of a description of the property, the location of the residual petroleum and the land use restrictions on the Site. The Notice has been approved and notarized by DENR pursuant to N.C.G.S. Sections 143B-279.9 and 143B-279.11 and has/shall be recorded at the Wayne County Register of Deeds' office Book 1600, Page 76.

Source Property

Afif Rashid El Awar and Wife of Goldsboro, North Carolina is the owner in fee simple of all or a portion of the Site, which is located in the County of Wayne, State of North Carolina, and is known and legally described as:

Beginning at an iron stake located in the Western edge of North William Street in the City of Goldsboro, North Carolina, being North 30 degrees 28 minutes East 360.91 feet from the northwest intersection of William Street and Neil Street, and running thence North 60 degrees 15 minutes West 150 feet along the property now or formerly owned by Helen O. Fail at an iron stake, thence South 30 degrees 28 minutes West 175 feet along the property now or formerly owned by General Industries to an iron stake; thence South 60 degrees 15 minutes East 150 feet continuing along property now or formerly owned by General Industries to an iron stake on the West side of North William Street; thence North 30 degrees 28 minutes East 175 feet to an iron stake, the beginning corner; being the same land conveyed to U-Fill'er-Up, Inc., recorded in Book 1125, Page 447, Wayne County, North Carolina.

Additional Affected Property Also Subject to Restrictions

_____ of _____ is the owner in fee simple of a portion of
(Owner's Name) (City & State of owner)
the Site, which is located in the County of _____, State of North Carolina. Petroleum contamination is located on this property at the time this Notice is approved. This property was also owned or controlled by the underground storage tank owner or operator or another party responsible for the petroleum discharge or release at the time the discharge or release was discovered or reported, or at any time thereafter. This property is known and legally described as:

Not Applicable

For protection of public health and the environment, the following land use restrictions required by N.C.G.S. Section 143B-279.9(b) shall apply to all of the above-described real property. These restrictions shall continue in effect as long as residual petroleum remains on the site in excess of unrestricted use standards and cannot be amended or cancelled unless and until the _____County Register of Deed receives and records the written concurrence of the Secretary (or his/her delegate) of DENR (or its successor in function).

Additional Affected Property Not Subject to Restrictions

Additionally residual petroleum is also located on the following property. The following property is not subject to land use restrictions pursuant to N.C.G.S. Section 143B-279.9(b). The following property is known and legally described as:

Not Applicable

PERPETUAL LAND USE RESTRICTIONS

Groundwater: Groundwater from the site is prohibited from use as a water supply. Water supply wells of any kind shall not be installed or operated on the site.

ENFORCEMENT

The above land use restriction(s) shall be enforced by any owner, operator, or other party responsible for the Site. The above land use restriction(s) may also be enforced by DENR through any of the remedies provided by law or by means of a civil action, and may also be enforced by any unit of local government having jurisdiction over any part of the Site. Any attempt to cancel this Notice without the approval of DENR (or its successor in function) shall be subject to enforcement by DENR to the full extent of the law. Failure by any party required or authorized to enforce any of the above restriction(s) shall in no event be deemed a waiver of the right to do so thereafter as to the same violation or as to one occurring prior or subsequent thereto.

IN WITNESS WHEREOF, Jerry W. Douglas has caused this Notice to be executed pursuant to N.C.G.S. Sections 143B-279.9 and 143B-279.11, this 4TH day of APRIL, 2005.

Abercrombie Oil Company, Inc.
(name of responsible party if agent is signing)

By: Jerry W. Douglas
(signature of responsible party, attorney or other agent if there is one)

Environmental Coordinator
(Title of agent for responsible party if there is one)

Signatory's name typed or printed: Jerry W. Douglas

Choice One: Instrument signed by one person

NORTH CAROLINA
Guilford COUNTY

I, Thomas L Fuqua, a Notary Public for said County and State, do hereby certify that _____ personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and official seal, this the 4 day of April, 2005.

NOTARY PUBLIC
OFFICIAL SEAL
THOMAS L. FUQUA
GUILFORD COUNTY, NC
My Commission Expires 06-28-2005

(Official Seal)

_____
Notary Public (signature)

My commission expires 06-28-2005, 2005."

Approved for the purposes of N.C.G.S. 143B-279.11

Scott Bullock
(signature of Regional Supervisor)

Scott Bullock, Regional Supervisor
(printed name of Regional Supervisor
Washington Regional Office
UST Section
Division of Waste Management
Department of Environment and Natural Resources

RECEIVED
OCT 31 2005
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DWM

NORTH CAROLINA
Pitt COUNTY

I, Sybil Felder Shirley a Notary Public of said County and State, do hereby certify that
(name of Notary Public)
Scott Bullock did personally appear and sign before me this the 11 day of
(name of Regional Supervisor)
April, 2005.

Sybil Felder Shirley
Notary Public (signature)

My commission expires 11-23, 2008.

(Official Seal)

Revised March 7, 2003

File

Apex environmental, inc.®

468 Southlake Boulevard
Richmond, VA 23236
Telephone 804-897-2718
Facsimile 804-897-2794

July 17, 2003

Mr. Bill Crew
North Carolina Department of Environment and Natural Resources
Washington Regional Office
943 Washington Square Mall
Washington, North Carolina 27889

RE: Semi-Annual Groundwater Monitoring Report (January to June 2003)
U-Fill'er-Up #33
1609 North Williams Street
Goldsboro, North Carolina
Groundwater Incident No. 10799
Risk Classification: Intermediate

Dear Mr. Crew:

Enclosed please find one copy of the Semi-Annual Groundwater Monitoring Report prepared by Apex Environmental, Inc. on behalf of Abercrombie Oil Company, Inc. for the referenced site. Should you have any questions regarding the enclosed, please feel free to contact me at (804) 897-2718.

Sincerely,

Christopher L. Cheatham, EIT
Program Manager

Enclosure

cc: Mr. Jerry Douglas, Environmental Coordinator
Abercrombie Oil Company, Inc.

137

Apex environmental, inc.®

468 Southlake Boulevard
Richmond, VA 23236
Telephone 804-897-2718
Facsimile 804-897-2794

Semi-Annual Groundwater Monitoring Report
January to June 2003

Groundwater Incident No. 10799

U-Fill'er-Up #33
1609 North Williams Street
Goldsboro, North Carolina

Submitted To:
Mr. Bill Crew
North Carolina Department of Environment and Natural Resources
Washington Regional Office
943 Washington Square Mall
Washington, North Carolina 27889

Prepared For:
Mr. Jerry Douglas, Environmental Coordinator
Abercrombie Oil Company, Inc.
P.O. Box 1361
Danville, Virginia 24543

Prepared By:
Apex Environmental, Inc.
468 Southlake Boulevard
Richmond, Virginia 23236

July 17, 2003
Apex Project No.: 768299.135

NORTH CAROLINA LICENSED SEAL 1735 GEOLOGIST ROBERT STICKLEY WILLIAMSON

Prepared By:
FOR
Carrie B. Webster
Environmental Scientist

Reviewed By:
Christopher L. Cheatham, EIT
Program Manager

Reviewed By:
Robert S. Williamson, PG
Division Manager
North Carolina Licensed
Geologist #1735

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1.0 INTRODUCTION

On behalf of Abercrombie Oil Company, Inc. (Abercrombie), Apex Environmental, Inc. (Apex) has completed this post-operation semi-annual groundwater monitoring report for the U-Fill'er-Up #33 (UFU #33) facility. The UFU #33 facility is located at 1609 North Williams Street in Goldsboro, North Carolina (Figure 1). This report documents groundwater monitoring for the period beginning January 1, 2003 and ending June 30, 2003, and remediation system deactivation.

As documented in Groundwater Incident No. 10799 files, the North Carolina Department of Environment and Natural Resources (NCDENR) instructed ENSCI Environmental, Inc. (ENSCI) to implement the approved Corrective Action Plan (CAP) dated June 22, 1994, to address the release of gasoline identified at the UFU #33 facility. The presence of dissolved-phase petroleum product and potential impact to on- and off-site receptors served as the basis for CAP development. Subsequent to system activation in November 1995, ENSCI performed routine maintenance and quarterly monitoring activities at the site through June 1996. In February 1998, Abercrombie Oil Company, Inc. was notified of change in risk classification from low to intermediate based on analytical data obtained during ENSCI's remediation efforts. In March 1998, Apex was retained by Abercrombie to respond to the NCDENR mandates regarding the UFU #33 facility. In June 1998, Apex performed a site visit to evaluate the condition of the CAP system components and perform a groundwater monitoring event to assess current dissolved-phase petroleum levels at the site. Based on the findings from the June 1998 site visit and subsequent system inspection, Apex proposed the modifications/component upgrades necessary for system activation. In September 2001, Apex initiated the NCDENR-approved system upgrades. The system was activated on February 2, 2002. A description of the remediation system design and process is presented in Section 2.0. A site plan depicting pertinent features of the subject site and surrounding area is provided as Figure 2.

Based on analytical and flow data obtained during the 3 quarters of system operation, Apex estimated between 83 and 1,276 gallons of gasoline had been recovered. Details of the 2nd, 3rd, and 4th Quarter 2002 O&M activities, analytical data, and recovery calculations are presented in the ARMRs dated July 18, 2002, October 18, 2002, and February 25, 2003, respectively.

This report has been prepared in conformance with the guidelines promulgated in the July 1, 2001 NCDENR *Guidelines for Assessment and Corrective Action* and in accordance with NCDENR correspondence.

2.0 GROUNDWATER MONITORING

In accordance with a NCDENR directive, Apex performed a semi-annual groundwater monitoring event to assess current dissolved-phase petroleum levels. Apex collected groundwater samples from the 9 monitoring wells on the site and surrounding properties. Monitoring well locations are depicted on Figure 2.

Prior to sampling, Apex purged each well to remove suspended solid material from the

water column and to collect samples representative of aquifer conditions. Each well was purged until a minimum of 3 well volumes had been displaced. Groundwater samples were collected using dedicated, disposable, high-density polyethylene (HDPE) bailers and were transferred directly into the appropriate sample containers immediately upon collection. Disposable latex gloves were used during all phases of sample collection. The groundwater samples were submitted to Air, Water, and Soil Laboratories, Inc. (AWS), a North Carolina certified laboratory (certificate #495) in Richmond, Virginia for volatile organics analysis via EPA method 601/602 including isopropyl ether (IPE), methyl tertiary-butyl ether (MTBE), 1,2-Dibromomethane (EDB), and xylenes via SW-846 method 8260 and volatile petroleum hydrocarbons (VPH) analysis via MADEP methodology. The groundwater samples were labeled and preserved pending delivery to the laboratory. Strict sample security and chain-of-custody documentation were maintained during all phases of transport. Tabular summaries of the groundwater monitoring analytical data detected at or above the laboratory detection limits are presented in Tables 1 and 2. Chain-of-custody documentation and the laboratory Certificates of Analyses are included in Appendix A. A tabular summary of current and historical levels of MTBE and benzene, toluene, ethylbenzene, and xylenes (BTEX) detected in groundwater at the UFU #33 facility is included in Appendix B. Isoconcentration maps depicting current MTBE, benzene, toluene, ethylbenzene, xylenes are included as Figures 3 through 7, respectively.

Table 1. Groundwater Analytical Data
Volatile Organics Analysis[1]

Volatile Organics Analysis					
Parameter	Monitoring Well Identification				NC GCL for Groundwater (µg/L)
	MW-1 (µg/L)	MW-3 (µg/L)	MW-4 (µg/L)	MW-7 (µg/L)	
MTBE	<1.0	290	200	42	200,000
Benzene	<1.0	220	1,200	<1.0	5,000
Toluene	<1.0	25	2,200	<1.0	257,000
Ethylbenzene	<1.0	380	1,600	<1.0	29,000
Xylenes	<3.0	290	4,600	<3.0	87,500

[1] Volatile organics analysis via EPA method 601/602 by SW-846 method 8260 reported in micrograms per liter (µg/L).

Table 2. Groundwater Analytical Data
Volatile Petroleum Hydrocarbons via MADEP Methodology[1]

Volatile Petroleum Hydrocarbons via MADEP Methodology		
Parameter	Monitoring Well Identification	
	MW-3 (µg/L)	MW-4 (µg/L)
C5-C8 Aliphatic Hydrocarbons	1,100	8,500
C9-C12 Aliphatic Hydrocarbons	3,100	22,000
C9-C10 Aromatic Hydrocarbons	760	4,400

[1] Volatile petroleum hydrocarbons analysis via MADEP methodology reported in micrograms per liter (µg/L).

Apex used a Solinst™ electronic water level indicator to measure the depth to groundwater at the 9 monitoring points during this investigation. Well locations are depicted on Figure 2. Apex recorded static water levels from the top of each well casing using the water level indicator. Groundwater elevation data is included in Table 3, and a water table gradient map is included as Figure 8. The apparent groundwater flow direction beneath the site based on the water table gradient map is estimated to be east-southeast.

Table 3.
Groundwater Elevation Data Summary

Monitoring Well Identification	Gauging Date	Top of Casing Elevation[1] (feet)	Depth to Water (feet)	Groundwater Elevation (feet)
MW-1	07/14/03	100.00	3.25	96.75
MW-2	07/14/03	100.31	3.33	96.98
MW-3	07/14/03	98.77	3.29	95.48
MW-4	07/14/03	98.82	3.76	95.06
MW-5	07/14/03	99.63	2.64	96.99
MW-6	07/14/03	97.84	2.88	94.96
MW-7	07/14/03	98.74	3.81	94.93
MW-8	07/14/03	96.86	1.17	95.69
MW-9	07/14/03	97.76	2.17	95.59

[1] Top of Casing Elevations based on a survey conducted by ENSCI, relative to arbitrary datum of 100 feet.

3.0 SYSTEM DEACTIVATION

In accordance with NCDENR correspondence dated March 18, 2003, the remediation system at the UFU #33 facility has been deactivated. Subsequent to deactivation, the system was dewatered and secured pending post-operation monitoring. The system utilities were disconnected as part of system deactivation. Apex notified Mr. Bobby Edwards with the City of Goldsboro Water Reclamation Facility of the system deactivation and the termination of treated liquid discharge to the sanitary sewer system. A copy of the notification to the City of Goldsboro is included as Appendix C to this report.

4.0 SUMMARY AND RECOMMENDATIONS

As of December 31, 2002, the remedial system located at UFU #33 facility in Goldsboro, North Carolina had recovered, treated, and discharged approximately 173,207 gallons of groundwater. Apex estimates that between 83 and 1,276 gallons of gasoline were recovered at the site during system operation. The gasoline removal calculations presented in previous quarterly reports are dependent on certain assumptions, such as the percent of BTEX in gasoline, for which actual values are not known for this site. The actual recovered volume of gasoline cannot be known with certainty. The remediation system was deactivated during 1st Quarter 2003 in accordance with NCDENR directives.

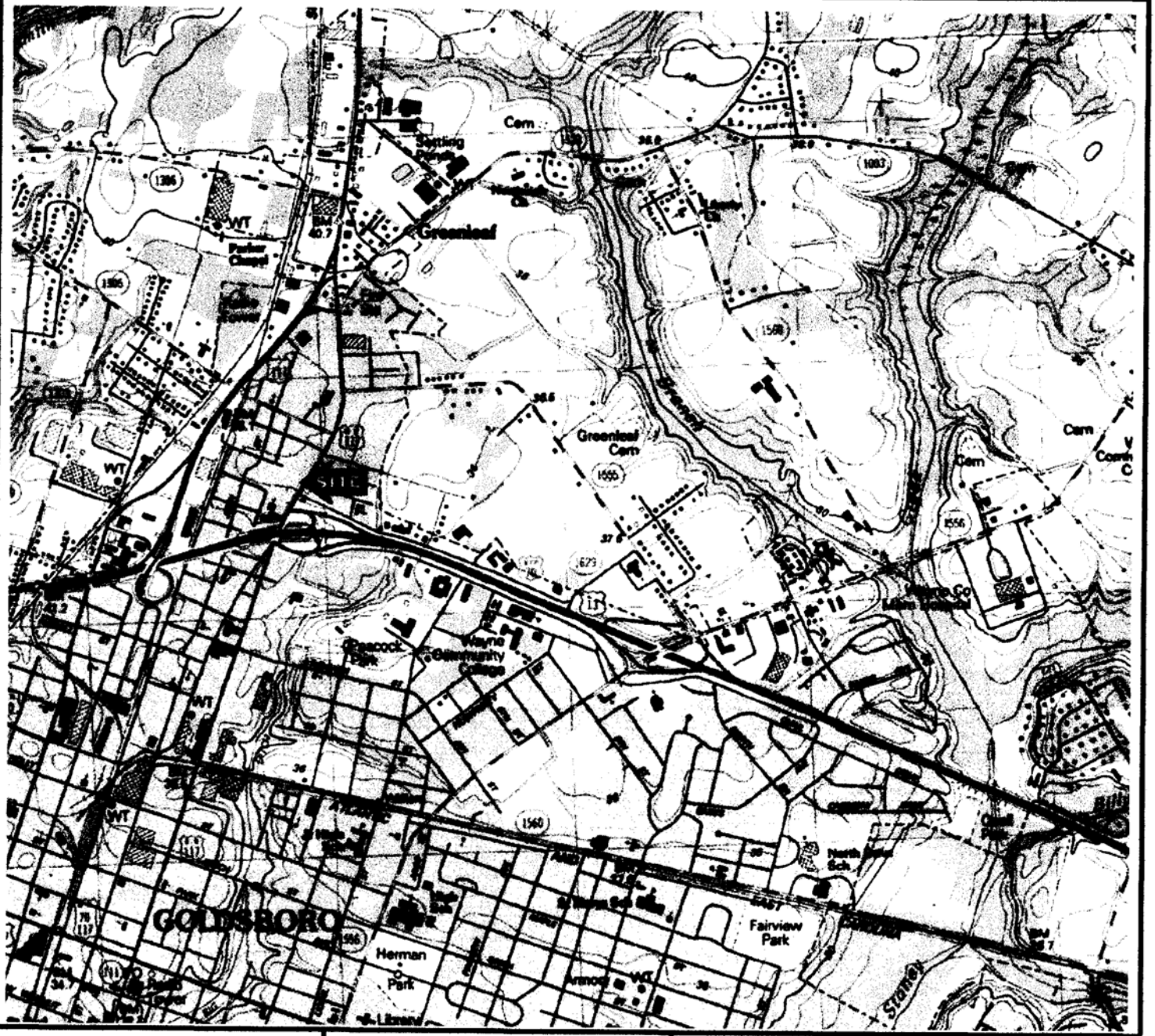
Current groundwater data for the site indicate dissolved-phase concentrations are

below GCLs. Laboratory data also indicate no significant reduction in MADEP VPH concentrations in monitoring wells MW-3 and MW-4. In accordance with NCDENR correspondence dated March 18, 2003, monitoring/remediation at the site should continue "until such time that the concentrations of MADEP fractions are significantly reduced." Based on the NCDENR directive and the persistent MADEP VPH concentrations at the site, Apex recommends remediation system enhancement to include recovery from monitoring wells MW-3 and MW-4. In accordance with the aforementioned NCDENR correspondence, post-operational groundwater monitoring should continue on a semi-annual basis at the site.

This Semi-Annual Groundwater Monitoring Report (January to June 2003), prepared in accordance with the NCDENR-approved scope of work, is being submitted to Mr. Bill Crew of the NCDENR Washington Regional Office on behalf of Abercrombie Oil Company, Inc.

Figure 1
Site Location Map

U-Fill'er-Up #33
1609 North Williams Street
Goldsboro, North Carolina



468 Southlake Boulevard
Richmond, VA 23236
Telephone: (804) 897-2718

Apex environmental, inc.

United States Department of the Interior
Geological Survey
7.5 Minute Series Topographic Map
Contour Interval: 2 meters
Scale: 1 inch = 2000 feet

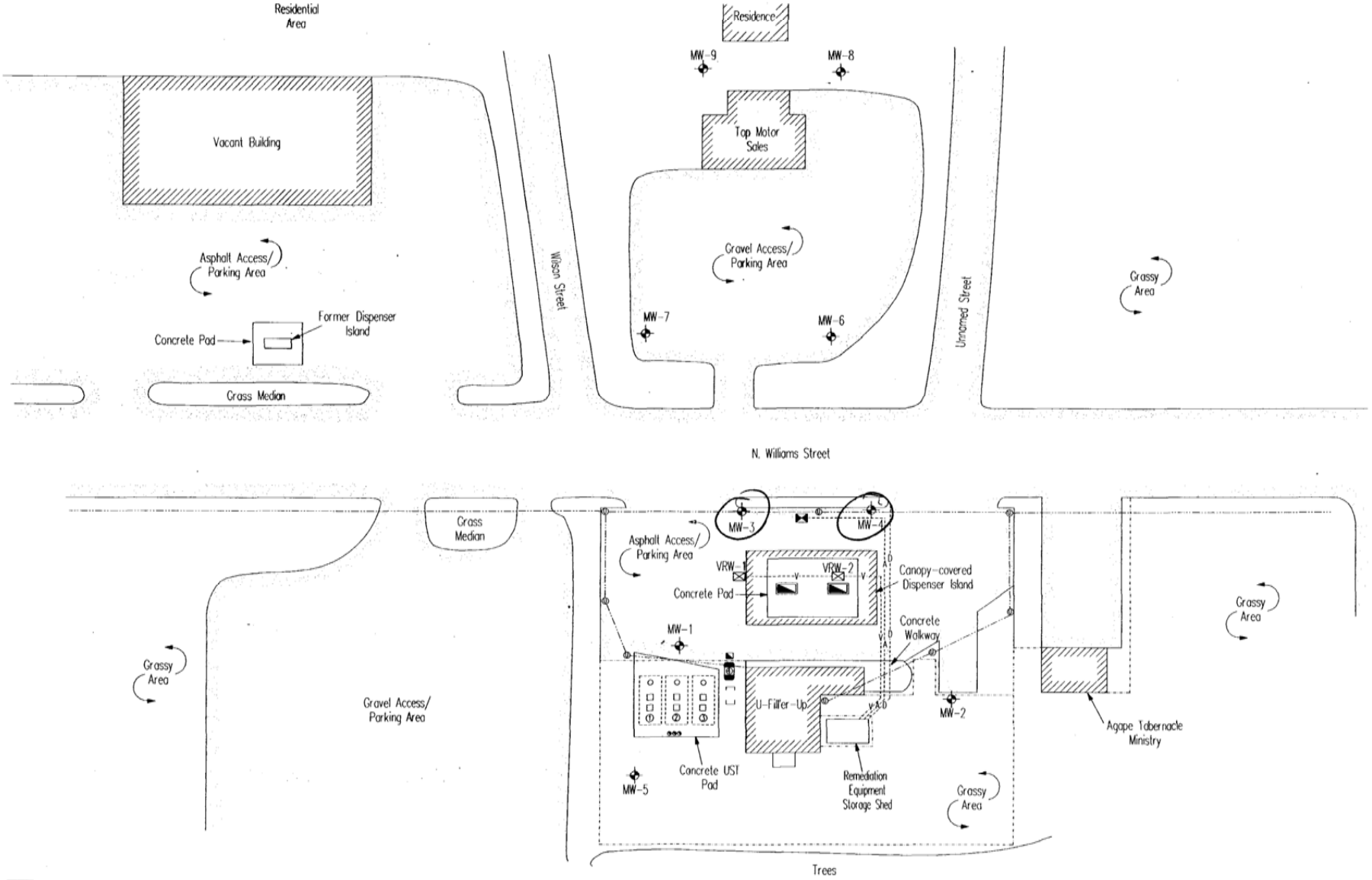
Northeast Goldsboro, North Carolina
(1983)

Project: 1st Quarter 2003

Client: Abercrombie Oil Co., Inc.

Apex Job #: 768299.135

Date: March 2003



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Storage Tank LEGEND

- Underground Storage Tank
- Aboveground Storage Tank
- 1 – 10,000-gallon Premium Unleaded UST
- 2 – 10,000-gallon Plus Unleaded UST
- 3 – 10,000-gallon Regular Unleaded UST
- 4 – 1,000-gallon Racing Fuel AST

REV	BY	DATE

DR.: BRW / KWH 03 Oct 02
CK:
APPD:
SCALE: 1" = 50'
APEX PROJ. NO.: 768299.135
www.apexenv.com

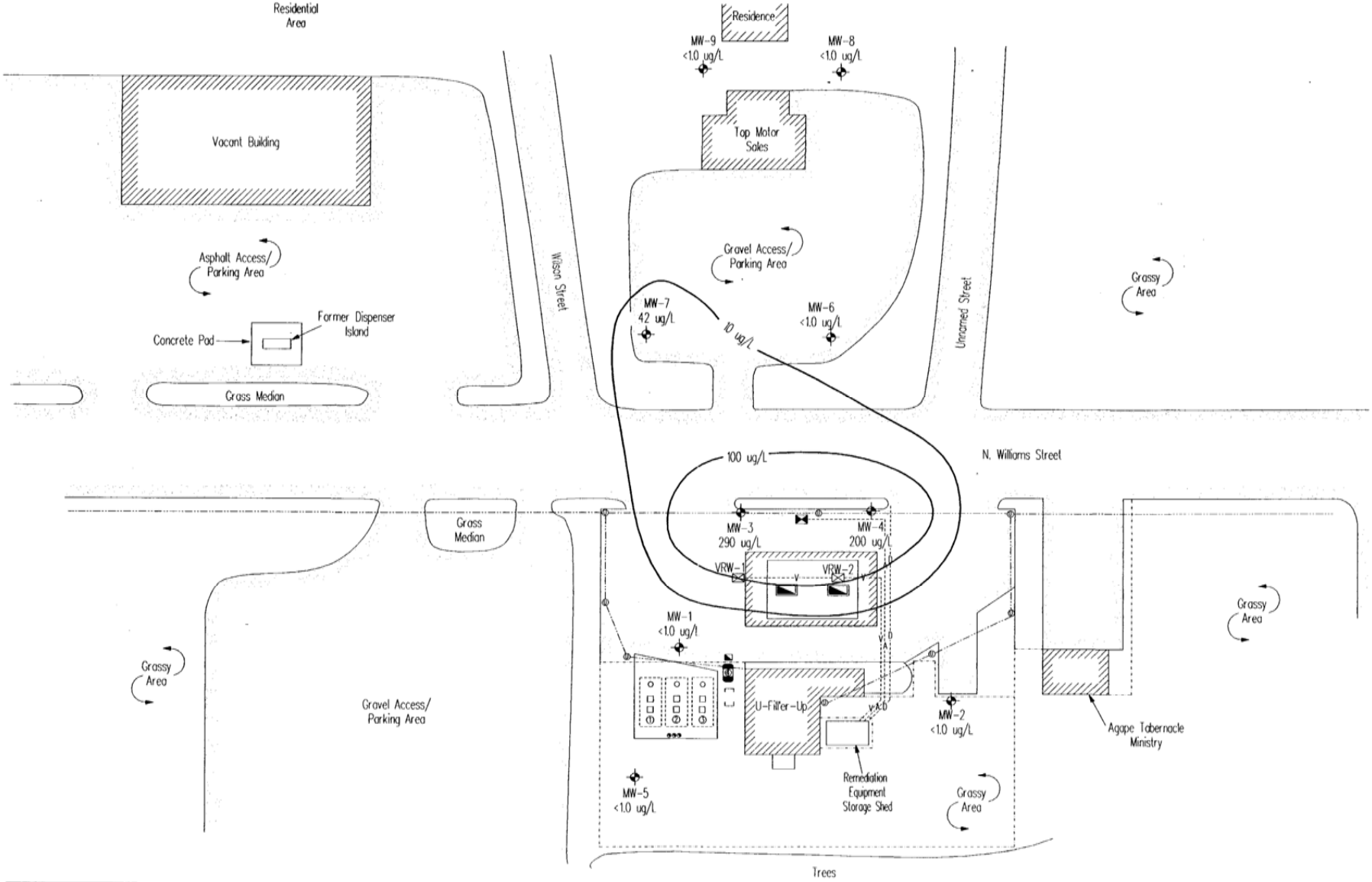
ACTIVE REMEDIATION MONITORING REPORT (1st Quarter 2003)

Groundwater Incident No. 10799

Apex environmental, inc.®
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
(804) 897-2710
apexva@erols.com

DRAWING TITLE
Site Plan
S&R Quick Mart (UF
1609 N. Williams S
Goldsboro, North Ca

DRAWING NUMBER
FIGURE No. 2



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Storage Tank LEGEND

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1 – 10,000-gallon Premium Unleaded UST
2 – 10,000-gallon Plus Unleaded UST
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4 – 1,000-gallon Racing Fuel AST

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1" = 50'

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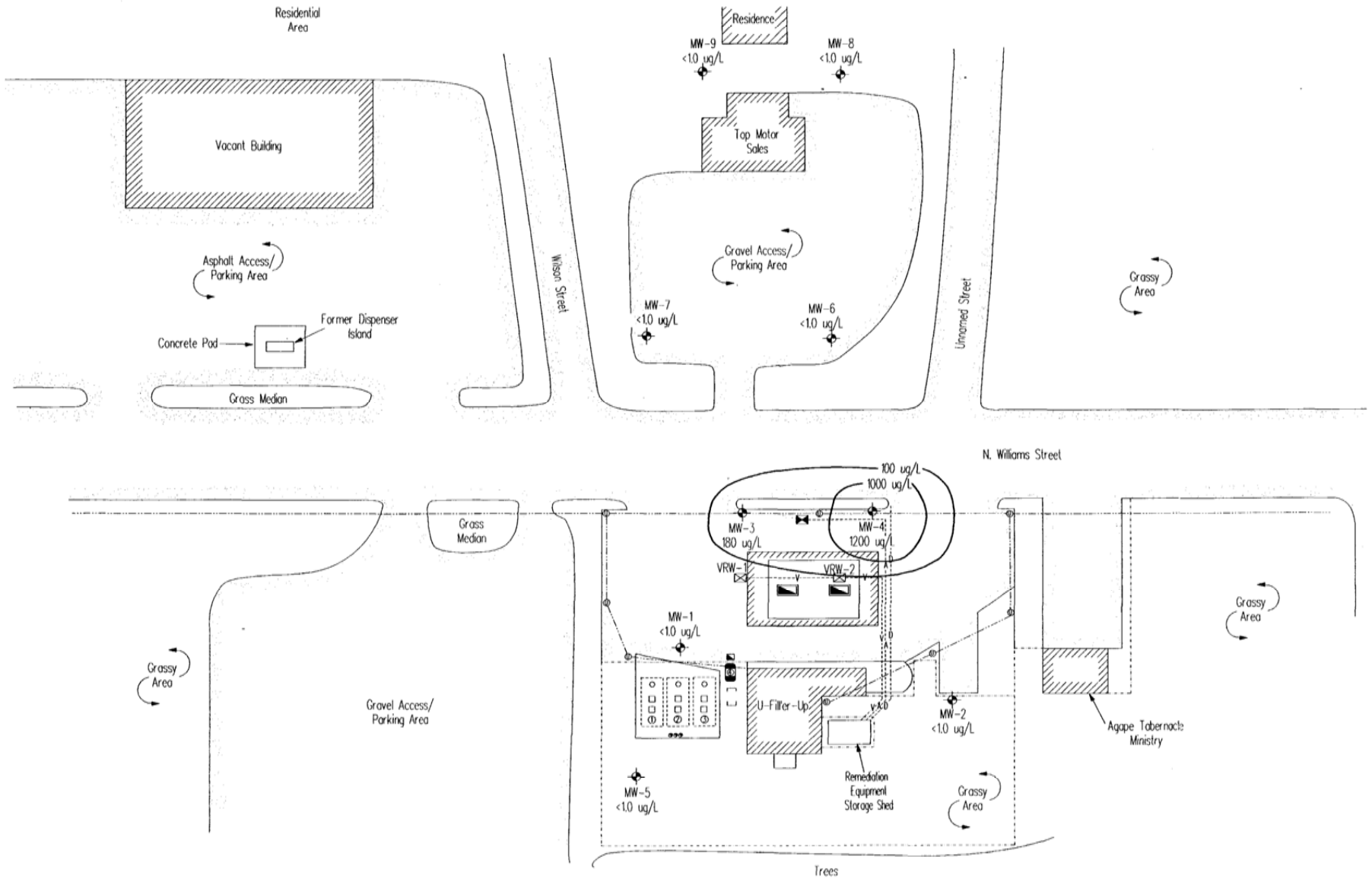
			APEX PROJ. NO.: 768299.135
			www.apexenv.com

ACTIVE REMEDIATION MONITORING REPORT (1st Quarter 2003)
Groundwater Incident No. 10799

Apex environmental, inc.®
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
(804) 897-3718
apexva@erols.com

DRAWING TITLE
MTBE Concentration Map
S&R Quick Mart (UFU
1609 N. Williams St
Goldsboro, North Car

DRAWING NUMBER
FIGURE No. 3



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Storage Tank LEGEND

Underground Storage Tank

Aboveground Storage Tank

1 – 10,000-gallon Premium Unleaded UST
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ACTIVE REMEDIATION MONITORING REPORT (1st Quarter 2003)

Groundwater Incident No. 10799

Apex environmental, inc.®
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
(804) 897-7718
apexva@erols.com

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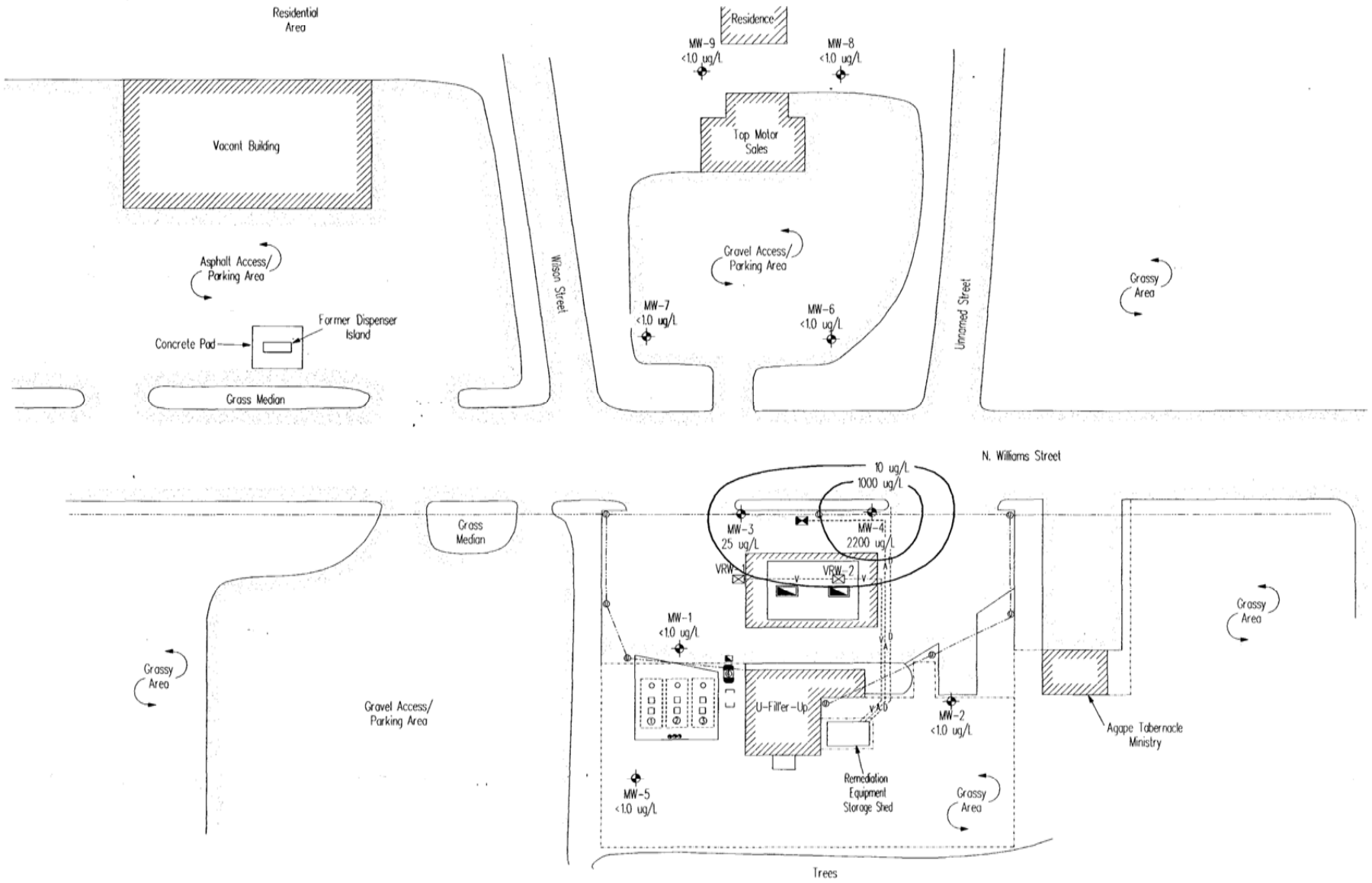
FIGURE No. 4



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4 - 1,000-gallon Racing Fuel AST

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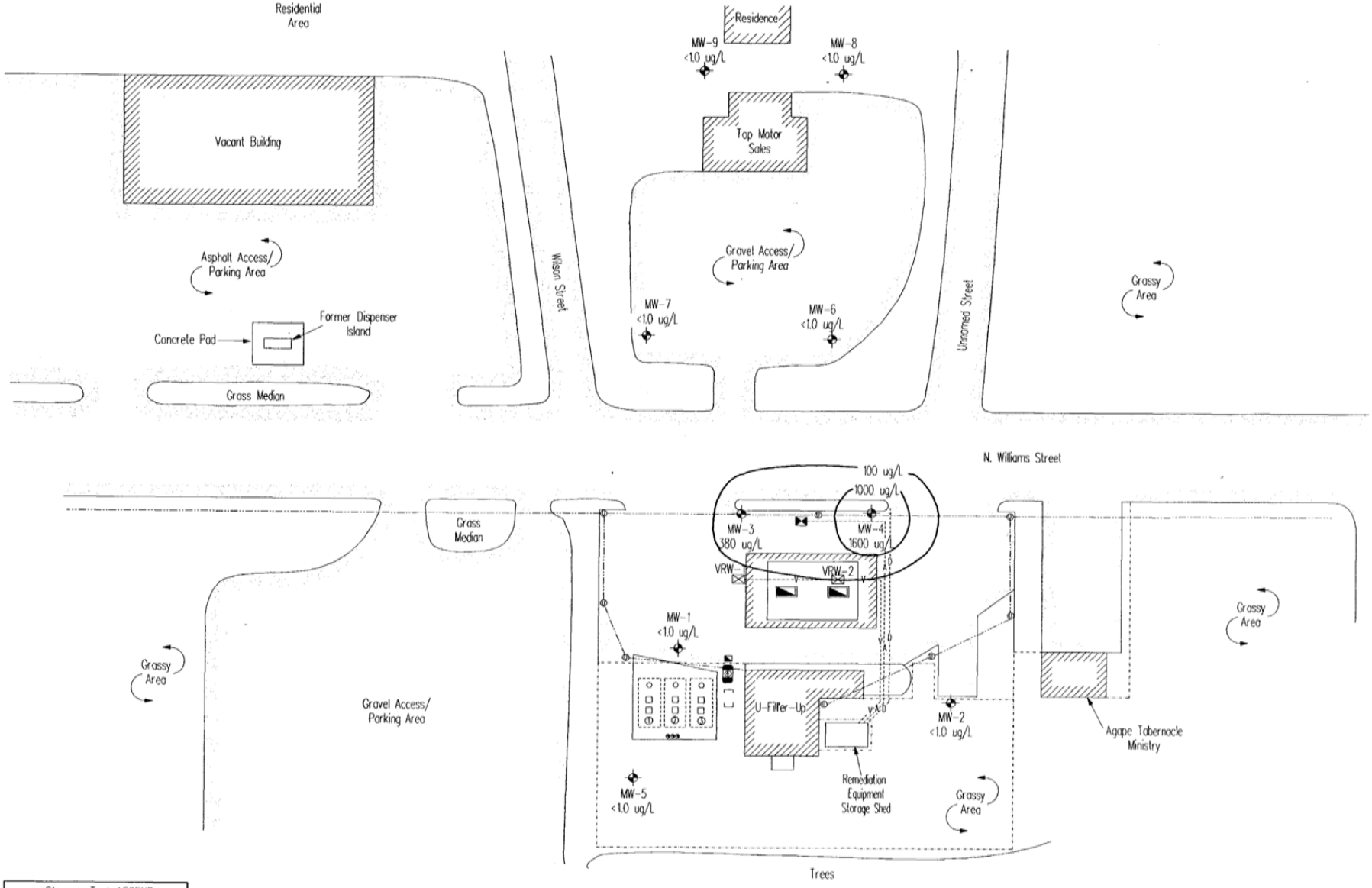
			APEX PROJ. NO.: 768299.135
			www.apexenv.com

ACTIVE REMEDIATION MONITORING
RIst Quarter 2003)
Groundwater Incident No. 10799

Apex environmental, inc.®
4explore SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
(804) 897-2718
q.envo@erols.com

DRAWING TITLE
Toluene Concentration Map
S&R Quick Mart (UFU
1609 N. Williams St
Goldsboro, North Car

DRAWING NUMBER
FIGURE No. 5



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Aboveground Storage Tank

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4 – 1,000-gallon Racing Fuel AST

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1" = 50'

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SCALE: 1" = 50'
APEX PROJ. NO.: 768299.135
www.apexenv.com

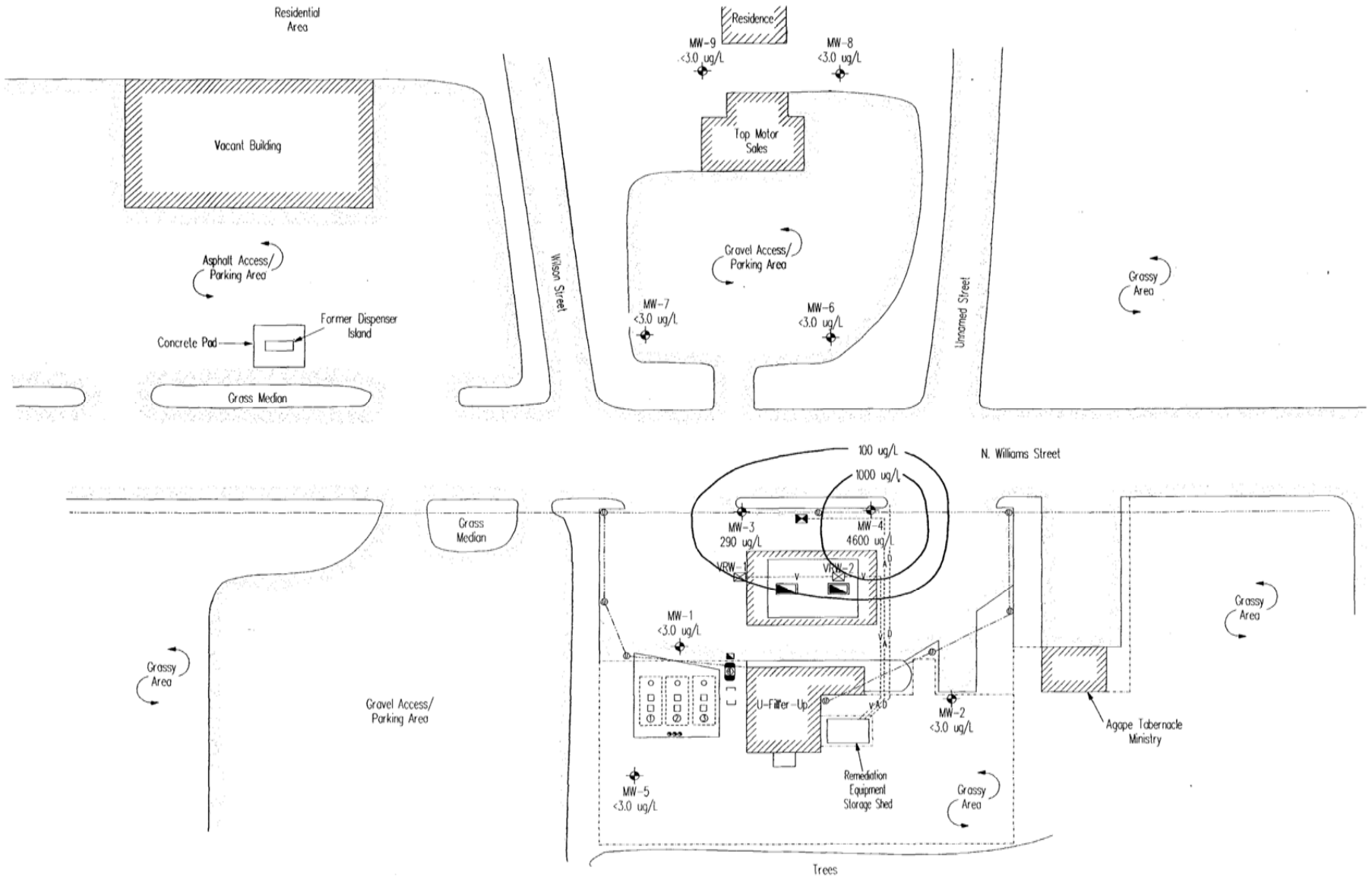
ACTIVE REMEDIATION MONITORING REPORT (1st Quarter 2003)

Groundwater Incident No. 10799

Apex environmental, inc.®
448 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
(804) 897-2718
apexva@erols.com

DRAWING TITLE
Ethylbenzene Concentration M
S&R Quick Mart (UFU
1609 N. Williams St
Goldsboro, North Car

DRAWING NUMBER
FIGURE No. 6



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ACTIVE REMEDIATION MONITORING REPORT (1st Quarter 2003)

Groundwater Incident No. 10799

Apex environmental, inc.®
466 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
(804) 897-3718
apexva@erols.com

DRAWING TITLE
Xylenes Concentration Map
S&R Quick Mart (UF
1609 N. Williams S
Goldsboro, North Ca

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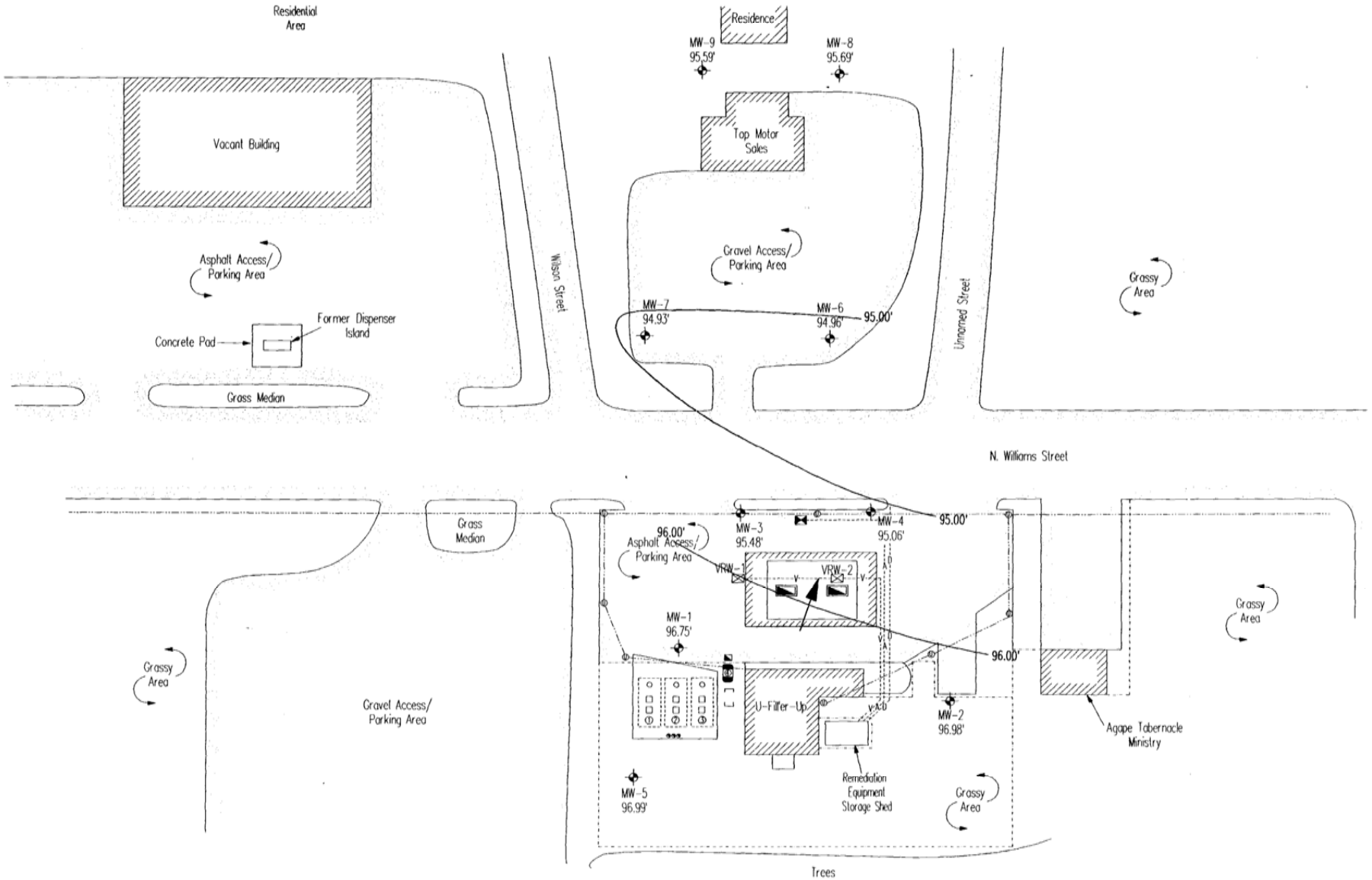
FIGURE No. 7



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Storage Tank LEGEND

- Underground Storage Tank
- Aboveground Storage Tank
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2. 10,000-gallon Plus Unleaded UST
3. 10,000-gallon Regular Unleaded UST
4. 1,000-gallon Racing Fuel AST

REV	BY	DATE

DR.: BRW / KWH 16 July 03
CK:
APPD:
SCALE: 1" = 50'
APEX PROJ. NO.: 768299.135
www.apexenv.com

Semi-Annual Groundwater Monitoring (Jan. to June 2003)

Groundwater Incident No. 10799

Apex environmental, inc.®
465 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
(804) 897-2710
apexva@erols.com

DRAWING TITLE
Water Table Gradien
S&R Quick Mart (UF
1609 N. Williams S
Goldsboro, North Ca

DRAWING NUMBER
FIGURE No. 8

APPENDIX A

Laboratory Certificates of Analysis
and
Chain-of-Custody Documentation

AIR WATER SOIL Laboratories, Inc.

2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

CASE NARRATIVE

Laboratory Project I.D. No.: 03030922

Client Name:	APEX Environmental, Inc.	Date Received:	March 31, 2003
Client Project I.D.:	Abercrombie Oil/UFU-33/768299.135	Date Issued:	April 08, 2003
Submitted to:	Chris Cheatham		

On March 31, 2003, nine water samples were received via hand delivery for analysis per the attached Chain-of-Custody Record. The samples were received with sample containers intact by Emily Tuckwiller (AWS). Upon laboratory receipt, no deviations, discrepancies or irregularities were observed in sample condition, including holding times, temperature, containers or preservatives.

The samples were prepared and analyzed per SW846/EPA/MADEP methodology. All spike and surrogate recoveries were accomplished within acceptable Quality Control Limits as specified per the listed methodology. QC results are listed within each method section.

For questions or inquiries please contact Carmela Tombes at (804) 358-8295.

A cross reference of client sample I.D. vs. Laboratory I.D. follows:

Client Sample I.D.	Laboratory I.D.
299135-1/Monitoring Well MW-1	03030922-1
299135-2/Monitoring Well MW-2	03030922-2
299135-3/Monitoring Well MW-3	03030922-3
299135-4/Monitoring Well MW-4	03030922-4
299135-5/Monitoring Well MW-5	03030922-5
299135-6/Monitoring Well MW-6	03030922-6
299135-7/Monitoring Well MW-7	03030922-7
299135-8/Monitoring Well MW-8	03030922-8
299135-9/Monitoring Well MW-9	03030922-9

AIR WATER & SOIL Laboratories, Inc.

2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

North Carolina Certification #495

Certificate of Analysis

Client Name: APEX Environmental, Inc.
Client Project I.D.: Abercrombie Oil/UFU-33/768299.135
Submitted to: Chris Cheatham

Date Received: March 31, 2003
Date Issued: April 08, 2003

Reference Method: MADEP VPH

Four water samples were analyzed for the following Volatile Petroleum Hydrocarbons.

		Sample I.D.	299135-1 Monitoring Well MW-1	299135-2 Monitoring Well MW-2	299135-3 Monitoring Well MW-3	299135-4 Monitoring Well MW-4
		Date Collected	3/28/03	3/28/03	3/28/03	3/28/03
		Date Extracted	N/A	N/A	N/A	N/A
		Date Analyzed	4/03/03	4/03/03	4/04/03	4/04/03
		Dilution Factor	1	1	10	10
		% Moisture	N/A	N/A	N/A	N/A
Range/Target Analyte	**Reporting Limit**	**Units**				
C5-C8 Aliphatic Hydrocarbons	100	ug/L	BDL	BDL	1100	8500
C9-C12 Aliphatic Hydrocarbons	100	ug/L	BDL	BDL	3100	22,000
C9-C10 Aromatic Hydrocarbons	100	ug/L	BDL	BDL	760	4400
FID Surrogate % Recovery			100%	101%	103%	110%
PID Surrogate % Recovery			99%	99%	99%	104%

BDL = Below Detection Limit

Timothy G. Ungerleider
Laboratory Manager

03030922

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Certificate of Analysis

Client Name: APEX Environmental, Inc.
Client Project I.D.: Abercrombie Oil/UFU-33/768299.135
Submitted to: Chris Cheatham

Date Received: March 31, 2003
Date Issued: April 08, 2003

Reference Method: MADEP VPH

Four water samples were analyzed for the following Volatile Petroleum Hydrocarbons.

		Sample I.D.	299135-5 Monitoring Well MW-5	299135-6 Monitoring Well MW-6	299135-7 Monitoring Well MW-7	299135-8 Monitoring Well MW-8
		Date Collected	3/28/03	3/28/03	3/28/03	3/28/03
		Date Extracted	N/A	N/A	N/A	N/A
		Date Analyzed	4/03/03	4/03/03	4/04/03	4/04/03
		Dilution Factor	1	1	1	1
		% Moisture	N/A	N/A	N/A	N/A
Range/Target Analyte	**Reporting Limit**	**Units**				
C5-C8 Aliphatic Hydrocarbons	100	ug/L	BDL	BDL	BDL	BDL
C9-C12 Aliphatic Hydrocarbons	100	ug/L	BDL	BDL	BDL	BDL
C9-C10 Aromatic Hydrocarbons	100	ug/L	BDL	BDL	BDL	BDL
FID Surrogate % Recovery			100%	100%	101%	101%
PID Surrogate % Recovery			99%	98%	97%	98%

BDL = Below Detection Limit

Timothy G. Ungerleider
Laboratory Manager

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Certificate of Analysis

Client Name: APEX Environmental, Inc.
Client Project I.D.: Abercrombie Oil/UFU-33/768299.135
Submitted to: Chris Cheatham

Date Received: March 31, 2003
Date Issued: April 08, 2003

Reference Method: MADEP VPH

One water sample was analyzed for the following Volatile Petroleum Hydrocarbons.

		Sample I.D.	299135-9 Monitoring Well MW-9			
		Date Collected	3/28/03			
		Date Extracted	N/A			
		Date Analyzed	4/04/03			
		Dilution Factor	1			
		% Moisture	N/A			
Range/Target Analyte	**Reporting Limit**	**Units**				
C5-C8 Aliphatic Hydrocarbons	100	ug/L	BDL			
C9-C12 Aliphatic Hydrocarbons	100	ug/L	BDL			
C9-C10 Aromatic Hydrocarbons	100	ug/L	BDL			
FID Surrogate % Recovery			101%			
PID Surrogate % Recovery			98%			

BDL = Below Detection Limit

Timothy G. Ungerleider
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Certificate of Analysis

Client Name:	APEX Environmental, Inc.	Date Received:	March 31, 2003
Client Project I.D.:	Abercrombie Oil/UFU-33/768299.135	Date Issued:	April 08, 2003
Submitted to:	Chris Cheatham		

Reference Method: EPA method 601/602 by SW-846 method 8260

Five water samples were analyzed for the following Volatile Organics:

Parameter	299135-1 Monitoring Well MW-1 (ug/L)	299135-2 Monitoring Well MW-2 (ug/L)	299135-3 Monitoring Well MW-3 (ug/L)	299135-4 Monitoring Well MW-4 (ug/L)	299135-5 Monitoring Well MW-5 (ug/L)	Detection Limit (ug/L)
Chloromethane	BDL	BDL	BDL	BDL	BDL	1.0
Bromomethane	BDL	BDL	BDL	BDL	BDL	1.0
Vinyl Chloride	BDL	BDL	BDL	BDL	BDL	1.0
Chloroethane	BDL	BDL	BDL	BDL	BDL	1.0
Trichlorofluoromethane	BDL	BDL	BDL	BDL	BDL	1.0
Methylene Chloride	BDL	BDL	BDL	BDL	BDL	1.0
1,1-Dichloroethane	BDL	BDL	BDL	BDL	BDL	1.0
trans-1,2-Dichloroethene	BDL	BDL	BDL	BDL	BDL	1.0
1,1-Dichloroethene	BDL	BDL	BDL	BDL	BDL	1.0
Chloroform	BDL	BDL	BDL	BDL	BDL	1.0
1,1,1-Trichloroethane	BDL	BDL	BDL	BDL	BDL	1.0
Carbon Tetrachloride	BDL	BDL	BDL	BDL	BDL	1.0
1,2-Dichloroethane	BDL	BDL	BDL	BDL	BDL	1.0
Trichloroethene	BDL	BDL	BDL	BDL	BDL	1.0
1,2-Dichloropropane	BDL	BDL	BDL	BDL	BDL	1.0
Bromodichloromethane	BDL	BDL	BDL	BDL	BDL	1.0
2-Chloroethylvinyl ether	BDL	BDL	BDL	BDL	BDL	1.0
Cis-1,3-Dichloropropene	BDL	BDL	BDL	BDL	BDL	1.0
trans-1,3-Dichloropropene	BDL	BDL	BDL	BDL	BDL	1.0
1,1,2-Trichloroethane	BDL	BDL	BDL	BDL	BDL	1.0
Tetrachloroethene	BDL	BDL	BDL	BDL	BDL	1.0
Dibromochloromethane	BDL	BDL	BDL	BDL	BDL	1.0
Chlorobenzene	BDL	BDL	BDL	BDL	BDL	1.0
Bromoform	BDL	BDL	BDL	BDL	BDL	1.0
1,1,2,2-Tetrachloroethane	BDL	BDL	BDL	BDL	BDL	1.0

BDL = Below Detection Limit
* Detection Limit raised due to dilution factor

Timothy G. Ungerleider
Laboratory Manager

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North Carolina Certification #495

Certificate of Analysis

Client Name: APEX Environmental, Inc.
Client Project I.D.: Abercrombie Oil/UFU-33/768299.135
Submitted to: Chris Cheatham

Date Received: March 31, 2003
Date Issued: April 08, 2003

Reference Method: EPA method 601/602 by SW-846 method 8260 continued

Parameter	299135-1 Monitoring Well MW-1 (ug/L)	299135-2 Monitoring Well MW-2 (ug/L)	299135-3 Monitoring Well MW-3 (ug/L)	299135-4 Monitoring Well MW-4 (ug/L)	299135-5 Monitoring Well MW-5 (ug/L)	Detection Limit (ug/L)
1,2-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	1.0
1,3-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	1.0
1,4-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL	1.0
Dichlorodifluoromethane	BDL	BDL	BDL	BDL	BDL	1.0
MTBE	BDL	BDL	290	200	BDL	1.0
Benzene	BDL	BDL	220	1200	BDL	1.0
Toluene	BDL	BDL	25	2200	BDL	1.0
Ethylbenzene	BDL	BDL	380	1600	BDL	1.0
Xylenes	BDL	BDL	290	4600	BDL	3.0
1,2-Dibromo-3-chloropropane	BDL	BDL	BDL	BDL	BDL	1.0
Isopropyl ether	BDL	BDL	BDL	BDL	BDL	1.0
Dibromoethane	BDL	BDL	BDL	BDL	BDL	1.0

BDL = Below Detection Limit

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Certificate of Analysis

Client Name:	APEX Environmental, Inc.	Date Received:	March 31, 2003
Client Project I.D.:	Abercrombie Oil/UFU-33/768299.135	Date Issued:	April 08, 2003
Submitted to:	Chris Cheatham		

Reference Method: EPA method 601/602 by SW-846 method 8260

Four water samples were analyzed for the following Volatile Organics:

Parameter	299135-6 Monitoring Well MW-6 (ug/L)	299135-7 Monitoring Well MW-7 (ug/L)	299135-8 Monitoring Well MW-8 (ug/L)	299135-9 Monitoring Well MW-9 (ug/L)	Detection Limit (ug/L)
Chloromethane	BDL	BDL	BDL	BDL	1.0
Bromomethane	BDL	BDL	BDL	BDL	1.0
Vinyl Chloride	BDL	BDL	BDL	BDL	1.0
Chloroethane	BDL	BDL	BDL	BDL	1.0
Trichlorofluoromethane	BDL	BDL	BDL	BDL	1.0
Methylene Chloride	BDL	BDL	BDL	BDL	1.0
1,1-Dichloroethane	BDL	BDL	BDL	BDL	1.0
trans-1,2-Dichloroethene	BDL	BDL	BDL	BDL	1.0
1,1-Dichloroethene	BDL	BDL	BDL	BDL	1.0
Chloroform	BDL	BDL	BDL	BDL	1.0
1,1,1-Trichloroethane	BDL	BDL	BDL	BDL	1.0
Carbon Tetrachloride	BDL	BDL	BDL	BDL	1.0
1,2-Dichloroethane	BDL	BDL	BDL	BDL	1.0
Trichloroethene	BDL	BDL	BDL	BDL	1.0
1,2-Dichloropropane	BDL	BDL	BDL	BDL	1.0
Bromodichloromethane	BDL	BDL	BDL	BDL	1.0
2-Chloroethylvinyl ether	BDL	BDL	BDL	BDL	1.0
Cis-1,3-Dichloropropene	BDL	BDL	BDL	BDL	1.0
trans-1,3-Dichloropropene	BDL	BDL	BDL	BDL	1.0
1,1,2-Trichloroethane	BDL	BDL	BDL	BDL	1.0
Tetrachloroethene	BDL	BDL	BDL	BDL	1.0
Dibromochloromethane	BDL	BDL	BDL	BDL	1.0
Chlorobenzene	BDL	BDL	BDL	BDL	1.0
Bromoform	BDL	BDL	BDL	BDL	1.0
1,1,2,2-Tetrachloroethane	BDL	BDL	BDL	BDL	1.0

BDL = Below Detection Limit

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Certificate of Analysis

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Client Project I.D.: Abercrombie Oil/UFU-33/768299.135
Submitted to: Chris Cheatham

Date Received: March 31, 2003
Date Issued: April 08, 2003

Reference Method: EPA method 601/602 by SW-846 method 8260 continued

Parameter	299135-6 Monitoring Well MW-6 (ug/L)	299135-7 Monitoring Well MW-7 (ug/L)	299135-8 Monitoring Well MW-8 (ug/L)	299135-9 Monitoring Well MW-9 (ug/L)	Detection Limit (ug/L)
1,2-Dichlorobenzene	BDL	BDL	BDL	BDL	1.0
1,3-Dichlorobenzene	BDL	BDL	BDL	BDL	1.0
1,4-Dichlorobenzene	BDL	BDL	BDL	BDL	1.0
Dichlorodifluoromethane	BDL	BDL	BDL	BDL	1.0
MTBE	BDL	42	BDL	BDL	1.0
Benzene	BDL	BDL	BDL	BDL	1.0
Toluene	BDL	BDL	BDL	BDL	1.0
Ethylbenzene	BDL	BDL	BDL	BDL	1.0
Xylenes	BDL	BDL	BDL	BDL	3.0
1,2-Dibromo-3-chloropropane	BDL	BDL	BDL	BDL	1.0
Isopropyl ether	BDL	BDL	BDL	BDL	1.0
Dibromoethane	BDL	BDL	BDL	BDL	1.0

BDL = Below Detection Limit

Timothy G. Ungerleider
Laboratory Manager

03030922

Apex environmental, inc.™
468 Southlake Boulevard
Richmond, Virginia 23236
(804) 897-2718

CHAIN OF CUSTODY RECORD

JOB NO.	JOB NAME	PROJECT MANAGER
766299.135	Abercrombie 01 | UFU-33	Chris Cheatham
SAMPLER(S): (Signature(s)) A. Rosenthal		(Printed) Aaron Rosenthal

SAMPLE ID	DATE	TIME	COMP.	GRAB	MATRIX	PRES.	STATION / LOCATION	NO. OF CONTAINERS	PARAMETERS: EPA 601/602 +	PARAMETERS: MADEP VPH	TURN-AROUND TIME: STD.	REMARKS
299135-1	3/26/03	1430		X	W	4°C	Monitoring Well MW-1	6	X	X		
299135-2	3/26/03	1410		X	W	4°C	Monitoring Well MW-2	6	X	X		
299135-3	3/26/03	1345		X	W	4°C	Monitoring Well MW-3	6	X	X		
299135-4	3/26/03	1330		X	W	4°C	Monitoring Well MW-4	6	X	X		
299135-5	3/26/03	1310		X	W	4°C	Monitoring Well MW-5	6	X	X		
299135-6	3/26/03	1250		X	W	4°C	Monitoring Well MW-6	6	X	X		
299135-7	3/26/03	1235		X	W	4°C	Monitoring Well MW-7	6	X	X		
299135-8	3/26/03	1220		X	W	4°C	Monitoring Well MW-8	6	X	X		
299135-9	3/26/03	1155		X	W	4°C	Monitoring Well MW-9	6	X	X		
							TOTALS	54	9	9		

Relinquished by: (Signature) ①	Date/Time	Received by: (Signature) ②	Relinquished by: (Signature) ③	Date/Time	Received by: (Signature) ④
(Printed) Kevin Harvey	3/31/03 918	(Printed) Emily Tuckwiller	(Printed)		(Printed)
Relinquished by: (Signature) ⑤	Date/Time	Received by: (Signature) ⑥	Remarks: NC Cert. Required		
(Printed)		(Printed)	03030922		

Distribution: WHITE => original (accompanies samples; returned with results) : YELLOW => laboratory copy : PINK => sampler's copy

1 of 1 pages

Apex environmental, inc.™

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Richmond, Virginia 23236
(804) 897-2718

CHAIN OF CUSTODY RECORD

JOB NO.	JOB NAME	PROJECT MANAGER
76299.135	Amerisouthern Oil / UFID: 33	Chris Cheatham

SAMPLER(S): (Signature(s)) A. Rosenthal

(Printed) Aaron Rosenthal

PARAMETERS

SAMPLE ID	DATE	TIME	COMP.	GRAB	MATRIX	PRES.	STATION / LOCATION	NO. OF CONTAINERS	EPA 601/602 +	BTEX EDB 1,2 DCA	MADEP VPH	TURN-AROUND TIME: Std	REMARKS
299135-1	3/26/03	1430		X	W	4°C	Monitoring Well MW-1	6	X		X		
299135-2	3/26/03	1410		X	W	4°C	Monitoring Well MW-2	6	X		X		
299135-3	3/26/03	1345		X	W	4°C	Monitoring Well MW-3	6	X		X		
299135-4	3/26/03	1330		X	W	4°C	Monitoring Well MW-4	6	X		X		
299135-5	3/26/03	1310		X	W	4°C	Monitoring Well MW-5	6	X		X		
299135-6	3/26/03	1250		X	W	4°C	Monitoring Well MW-6	6	X		X		
299135-7	3/26/03	1235		X	W	4°C	Monitoring Well MW-7	6	X		X		
299135-8	3/26/03	1220		X	W	4°C	Monitoring Well MW-8	6	X		X		
299135-9	3/26/03	1155		X	W	4°C	Monitoring Well MW-9	6	X		X		
							TOTALS	54	9		9		

Relinquished by: (Signature) ①	Date/Time	Received by: (Signature) ②	Relinquished by: (Signature) ③	Date/Time	Received by: (Signature) ④
(Printed) Kevin Harvey	3/31/03 9:10	(Printed) Cindy Tuckwiller	(Printed)		(Printed)
Relinquished by: (Signature) ⑤	Date/Time	Received by: (Signature) ⑥	Remarks: NC Cert Required		
(Printed)		(Printed)			

Distribution: WHITE => original (accompanies samples; returned with results) : YELLOW => laboratory copy : PINK => sampler's copy

APPENDIX B

Current and Historical
Groundwater Analytical Data Summary

Abercrombie Oil / U'filler Up #33
1st Quarter 2003
Current and Historical Groundwater Analytical Data
Groundwater Incident #10799

Sample Location	Sample Date	MTBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
MW-1	10/27/95	11	13.0	59	7.4	58	137.4
	02/21/96	<5.0	<1.0	4.1	<1.0	4.5	8.6
	05/07/69	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	04/08/98	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	06/06/02	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	09/24/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	12/12/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	03/28/03	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
MW-2	10/27/95	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	02/21/96	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	05/07/69	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	04/08/98	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	06/06/02	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	09/24/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	12/12/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	03/28/03	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
MW-3	10/27/95	1,700	2,400	12,000	2,300	81,000	97,700
	02/21/96	510	610	1,100	790	870	3,370
	05/07/69	640	730	1,100	890	1,100	3,820
	04/08/98	1,050	1,880	3,190	1,450	4,010	10,530
	06/06/02	1,040	624	35	865	491	2,015
	09/24/02	1,010	162	6.4[1]	374	68	604
	12/12/02	540	180	66J	300	370	916
	03/28/03	290 ↓	220 ↑	25 ↓	380 ↑	290 ↓	915 ↓
MW-4	10/27/95	3,100	6,200	17,000	2,100	12,000	37,300
	02/21/96	2,100	5,900	1,600	2,400	11,000	20,900
	05/07/69	<2,500	6,500	18,000	2,900	14,000	41,400
	04/08/98	4,550	5,490	7,240	2,430	9,720	24,880
	06/06/02	980	3,450	4,710	1,970	6,370	16,500
	09/24/02	526	2,160	2,430	1,590	4,440	10,620
	12/12/02	340J ↓	1,400 ↓	2,300 ↓	1,600 ↔	5,800 ↓	11,100 ↓
	03/28/03	200 ↓	1,200 ↓	2,200 ↓	1,600 ↔	4,600 ↓	9,600 ↓
MW-5	10/27/95	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	02/21/96	NS[2]	NS	NS	NS	NS	NA[3]
	05/07/69	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	04/08/98	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	06/06/02	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	09/24/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	12/12/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	03/28/03	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
MW-6	10/27/95	67	6.8	<1.0	<1.0	<1.0	<4.0
	02/21/96	170	29	<1.0	<1.0	1	30
	05/07/69	100	9.6	<1.0	<1.0	<1.0	9.6
	04/08/98	80.1	<2.0	<5.0	<5.0	<10.0	<22.0
	06/06/02	19	<2.0	<5.0	<5.0	<10.0	<22.0
	09/24/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	12/12/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	03/28/03	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
MW-7	10/27/95	26	<1.0	<1.0	<1.0	<1.0	<4.0
	02/21/96	82	3.4	<1.0	<1.0	<1.0	3.4
	05/07/69	100	1.8	<1.0	<1.0	<1.0	1.8
	04/08/98	31.7	<2.0	<5.0	<5.0	<10.0	<22.0
	06/06/02	9.5	<2.0	<5.0	<5.0	<10.0	<22.0
	09/24/02	25.7	<1.0	<1.0	<1.0	<3.0	<6.0
	12/12/02	<1.0 ↑	<1.0	<1.0	<1.0	<3.0	<6.0
	03/28/03	42 ↑	<1.0	<1.0	<1.0	<3.0	<6.0

Abercrombie Oil / U'filler Up #33
1st Quarter 2003
Current and Historical Groundwater Analytical Data
Groundwater Incident #10799

Sample Location	Sample Date	MTBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Total BTEX (µg/L)
MW-8	10/27/95	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	02/21/96	NS	NS	NS	NS	NS	NA
	05/07/69	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	04/08/98	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	06/06/02	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	09/24/02	<5.0	<5.0	<5.0	0.9	1.0	1.9
	12/12/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	03/28/03	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
MW-9	10/27/95	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	02/21/96	NS	NS	NS	NS	NS	NA
	05/07/69	<5.0	<1.0	<1.0	<1.0	<1.0	<4.0
	04/08/98	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	06/06/02	<5.0	<2.0	<5.0	<5.0	<10.0	<22.0
	09/24/02	<5.0	<5.0	<5.0	<5.0	<5.0	<20.0
	12/12/02	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
	03/28/03	<1.0	<1.0	<1.0	<1.0	<3.0	<6.0
NC GCL for Groundwater(µg/L)		**200,000**	**5,000**	**257,500**	**29,000**	**87,500**	**NA**

J = Qualifier used of quantitation of analyte is below the calibration curve.

[3]NS = Not Sampled

[4]NA = Not Applicable

Abercrombie Oil / U'filler Up #33
Historic Groundwater Analytical Data
Groundwater Incident No. 10799

4th Quarter 2002 Operations & Maintenance
December 12, 2002

Volatile Petroleum Hydrocarbons Analysis[1]									
Parameter	Monitoring Well Identification								
	MW-1 (ug/L)	MW-2 (ug/L)	MW-3 (ug/L)	MW-4 (ug/L)	MW-5 (ug/L)	MW-6 (ug/L)	MW-7 (ug/L)	MW-8 (ug/L)	MW-9 (ug/L)
C5-C8 Aliphatic Hydrocarbons	<100	<100	**1,800**	**13,000**	<100	<100	<100	<100	<100
C9-C12 Aliphatic Hydrocarbons	<100	<100	**4,100**	**43,000**	<100	<100	<100	<100	<100
C9-C10 Aromatic Hydrocarbons	<100	<100	**690**	**7,600**	<100	<100	<100	<100	<100

[1] Volatile petroleym hydrocarbons analysis via MADEP methodology reported in micrograms per liter (ug/L).

3rd Quarter 2002 Operations & Maintenance
September 24, 2002

Volatile Petroleum Hydrocarbons Analysis[1]									
Parameter	Monitoring Well Identification								
	MW-1 (ug/L)	MW-2 (ug/L)	MW-3 (ug/L)	MW-4 (ug/L)	MW-5 (ug/L)	MW-6 (ug/L)	MW-7 (ug/L)	MW-8 (ug/L)	MW-9 (ug/L)
C5-C8 Aliphatic Hydrocarbons	<100	<100	**1,270**	**11,500**	<100	<100	<100	<100	<500
C9-C12 Aliphatic Hydrocarbons	<100	<100	**3,160**	**31,400**	<100	<100	<100	<100	<500
C9-C10 Aromatic Hydrocarbons	<100	<100	**772**	**5,680**	<100	<100	<100	<100	<500

[1] Volatile petroleym hydrocarbons analysis via MADEP methodology reported in micrograms per liter (ug/L).

2st Quarter 2002 Operations & Maintenance
June 6, 2002

Volatile Petroleum Hydrocarbons Analysis[1]									
Parameter	Monitoring Well Identification								
	MW-1 (ug/L)	MW-2 (ug/L)	MW-3 (ug/L)	MW-4 (ug/L)	MW-5 (ug/L)	MW-6 (ug/L)	MW-7 (ug/L)	MW-8 (ug/L)	MW-9 (ug/L)
C5-C8 Aliphatic Hydrocarbons	<100	<100	**3,110**	**18,700**	<100	<100	<100	<100	<100
C9-C12 Aliphatic Hydrocarbons	<100	<100	**6,280**	**30,700**	<100	<100	<100	<100	<100
C9-C10 Aromatic Hydrocarbons	<100	<100	**1,160**	**4,470**	<100	<100	<100	<100	<100

[1] Volatile petroleym hydrocarbons analysis via MADEP methodology reported in micrograms per liter (ug/L).

APPENDIX C

Correspondence with the City of Goldsboro

Apex environmental, inc.®

468 Southlake Boulevard
Richmond, VA 23236
Telephone 804-897-2718
Facsimile 804-897-2794

March 25, 2003

Mr. Bobby Edwards
Pretreatment Coordinator
City of Goldsboro
Goldsboro Water Reclamation Facility
714 Arrington Bridge Road
Goldsboro, North Carolina 27530

RE: Industrial User Pretreatment Permit (IUP) # 9409
Corrective Action Implementation
Abercrombie Oil Company, Inc.
U-Fill'er-Up #33
1609 North Williams Street
Goldsboro, North Carolina

Dear Mr. Edwards:

As per our phone conversation on March 24, 2003, Apex Environmental Inc., on behalf of Abercrombie Oil Company, Inc., is issuing this letter to serve as notice of deactivation of the remediation system located at the above address. Treated liquid discharge activities associated with the aforementioned remediation system have been terminated. A copy of North Carolina Department of Environment and Natural Resources correspondence requesting system deactivation is enclosed for your records. Should you have any regarding this matter, please feel free to contact me at (804) 897-2718.

Sincerely,

Kevin Harvey
Environmental Scientist

Enclosure

841

Apex environmental, inc.®

468 Southlake Boulevard
Richmond, VA 23236
Telephone 804-897-2718
Facsimile 804-897-2794

December 17, 2004

Mr. Bill Crew
North Carolina Department of Environment and Natural Resources
Washington Regional Office
943 Washington Square Mall
Washington, North Carolina 27889

RE: Soil Assessment Report
U-Fill'er-Up #33
1609 North Williams Street
Goldsboro, North Carolina
Groundwater Incident No. 10799
Risk Classification: Low

Dear Mr. Crew:

Enclosed please find one copy of the Soil Assessment Report prepared by Apex Environmental, Inc. on behalf of Abercrombie Oil Company, Inc. for the above referenced site. Should you have any questions regarding the enclosed, please feel free to contact me at (804) 897-2718.

Sincerely,

Christopher L. Cheatham, EIT
Program Manager

Enclosure

cc: Mr. Jerry Douglas, Environmental Coordinator
Abercrombie Oil Company, Inc.

Apex environmental, inc.®

468 Southlake Boulevard
Richmond, VA 23236
Telephone 804-897-2718
Facsimile 804-897-2794

Soil Assessment Report

Groundwater Incident No. 10799
Risk Classification: Low

U-Fill'er-Up #33
1609 North Williams Street
Goldsboro, North Carolina
035^0 24' 10.40" N, 077^0 59' 6.66" W

Submitted To:
Mr. Bill Crew
North Carolina Department of Environment and Natural Resources
Washington Regional Office
943 Washington Square Mall
Washington, North Carolina 27889

Prepared For:
Mr. Jerry Douglas, Environmental Coordinator
Abercrombie Oil Company, Inc.
P.O. Box 1361
Danville, Virginia 24543

Prepared By:
Apex Environmental, Inc.
468 Southlake Boulevard
Richmond, Virginia 23236

December 17, 2004
Apex Project No.: 768299.166

NORTH CAROLINA LICENSED SEAL 1735 GEOLOGIST ROBERT STANLEY WILLIAMSON

Prepared By:
Aaron M. Rosenthal
Environmental Scientist

Reviewed By:
Christopher L. Cheatham, EIT
Program Manager

Reviewed By:
Robert S. Williamson, PG
Division Manager
North Carolina Licensed
Geologist #1735

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1.0 INTRODUCTION

As requested by the North Carolina Department of Environment and Natural Resources in correspondence dated, April 15, 2004, Apex has completed this soil assessment report for the U-Fill'er-Up #33 UFU #33 facility. The subject site is located at 1609 North William Street in Goldsboro, Wayne County, North Carolina and is depicted on the site location map included as Figure 1.

1.1 Ownership of Underground Storage Tanks (USTs)

Abercrombie Oil Company, Inc.
Danville, Virginia 24543

1.2 Contacts

Primary Contact:	Mr. Jerry Douglas, Environmental Coordinator Abercrombie Oil Company, Inc. P.O. Box 1361 Danville, Virginia, 24543
Primary Consultant:	Apex Environmental, Inc. 468 Southlake Blvd. Richmond, Virginia 23236 (804) 897-2718
Laboratory:	Air, Water, and Soil Laboratories, Inc. 2119A North Hamilton St. Richmond, Virginia 23230 (804) 358-8295 NC Certification #495

1.3 Release Information

According to the Comprehensive Site Assessment (CSA) report prepared by ENSCI Environmental. Inc. and dated February 19, 1998, "A release of petroleum from the removed (three) USTs was confirmed in June 1993". The estimated quantity of the release is unknown.

1.4 UST Information

Current UST information is presented in Table 1 below. UST locations are depicted on the site map included as Figure 2.

Table 1.
UST Information

Tank Number	Installation Date	Capacity (gallons)	Contents
1	Unknown	10,000	Premium Unleaded Gasoline
2	Unknown	10,000	Plus Unleaded Gasoline
3	Unknown	10,000	Regular Unleaded Gasoline

2.0 BACKGROUND

As documented in Groundwater Incident No. 10799 files, the North Carolina Department of Environment and Natural Resources (NCDENR) instructed ENSCI Environmental, Inc. (ENSCI) to implement the approved Corrective Action Plan (CAP) dated June 22, 1994, to address the release of gasoline identified at the UFU #33 facility. The presence of dissolved-phase petroleum product and potential impact to on- and off-site receptors served as the basis for CAP development. Subsequent to system activation in November 1995, ENSCI performed routine maintenance and quarterly monitoring activities at the site through June 1996. In February 1998, Abercrombie Oil Company, Inc. was notified of change in risk classification from low to intermediate based on analytical data obtained during ENSCI's remediation efforts. In March 1998, Apex was retained by Abercrombie to respond to the NCDENR mandates regarding the UFU #33 facility. In June 1998, Apex performed a site visit to evaluate the condition of the CAP system components and perform a groundwater monitoring event to assess current dissolved-phase petroleum levels at the site. Based on the findings from the June 1998 site visit and subsequent system inspection, Apex proposed the modifications/component upgrades necessary for system activation. In September 2001, Apex initiated the NCDENR-approved system upgrades. The system was activated on February 2, 2002.

Apex conducted system operation and maintenance activities at the site throughout 2002. As documented in the 4th Quarter 2002 Active Remediation Monitoring Report, Apex recommended deactivation of the remediation system located at the site and implementation of a post-operational groundwater monitoring program.

In accordance with NCDENR correspondence dated March 18, 2003, the remediation system at the UFU #33 facility was deactivated. Subsequent to deactivation, Apex conducted semi-annual groundwater monitoring events at the site on March 28, 2003 and October 16, 2003. Laboratory data collected during groundwater monitoring indicated dissolved-phase concentrations are present; however, these concentrations are below GCLs. Laboratory data also indicated no significant reduction in MADEP VPH concentrations in monitoring wells MW-3 and MW-4 as compared to historical levels.

This report has been prepared in accordance with NCDENR correspondence dated April 15, 2004 on behalf of Abercrombie Oil Company in compliance with regulatory requirements 15A NCAC 2L .0115(i). Details of previous site characterization, active

remediation, and soil and groundwater monitoring activities are documented in Groundwater Incident No. 10799 case files.

2.1 Receptor Information

The subject site is situated within the City of Goldsboro jurisdictional limits. According to the City of Goldsboro's Public Utilities Department, the subject site and surrounding properties are supplied potable water from the city's municipal system. Commercial and residential real estate comprise the abutting properties. North William Street abuts the southeast property boundary. A drainage ditch is located approximately 1,000 feet east of the subject property. A site plan depicting pertinent features of the subject site and surrounding area is provided as Figure 2. A table listing the current owner and adjacent property owners to the site is provided as Table 2 below.

Table 2.
Property Owners

Tax Parcel Number	Owner Name (Last, First, MI)	Address (Orientation)
3600224998	Elawar, Afif Rashad and Samar	1609 N. Williams Street (subject property)
3600235220	Quinn, Vivian Fail	N. Williams Street (adjacent north)
3600224837	General Industries, Inc.	1601 N. Williams Street (adjacent south and west)
3600226991	Top Motor Sales Capps, James Royster	1604 N. Williams Street (adjacent east)
3600237042	Allen, Steven B. Etals	(adjacent northeast)
3600226742	Kohli, Ravinder	(adjacent southeast)

2.2 Site Geology

According to the Geologic Map of North Carolina (North Carolina Geological Survey), the subject site is underlain by the Yorktown Formation and Duplin Formation, Undivided. The former is described as consisting of *"fossiliferous clay with varying amounts of fine-grained sand, bluish gray, shell material commonly concentrated in lenses; mainly in area north of Neuse River"* (Brown, 1985). The latter is described as consisting of *"shelly, medium-to coarse-grained sand, sandy marl, and limestone, bluish gray; mainly in area south of Neuse River"* (Brown, 1985).

Lithologic descriptions of soil borings drilled during this soil assessment event are consistent with geologic publications, consisting primarily of sandy silts and fine-grained sands.

3.0 SOIL INVESTIGATION

In accordance with the April 15, 2004 NCDENR directive, Apex performed a soil assessment event using direct-push technology. The details of the subsurface investigation are presented in the following sections.

3.1 Subsurface Investigation

On July 22, 2004, Apex drilled 11 soil borings to depths ranging from four to eight feet below ground surface at the site. The soil borings were drilled using a truck-mounted Geoprobe™ equipped with continuous-flight samplers with an internal diameter of two inches. Disposable acetate sample liners were used to collect four-foot soil samples. Drilling and sampling were conducted in accordance with ASTM-D-1586-87 protocol. The soil boring locations are depicted on Figure 2.

3.2 Results of Field and Laboratory Testing

3.2.1 Vapor Phase

Headspace analysis of soil samples collected during installation of soil borings was conducted using a Photovac 2020 photoionization detector (PID) calibrated to 100 parts per million (ppm) isobutylene. This instrument is capable of detecting volatile organic compound (VOC) vapors, typically associated with petroleum fuels, ranging between 0.5 ppm and 2,000 ppm. Headspace monitoring of the equilibrated soil samples collected during soil boring installation revealed VOC vapor concentrations ranging from non-detectable to 216 ppm. Headspace values are included on the boring logs included in Appendix A, and for samples retained for analysis, Table 3.

Table 3.
Headspace PID Values
(July 22, 2004)

Sample Location	Depth (feet)	PID Value (ppm)[1]
BH-2-1	3	32.4
BH-4-1	3.5	4.4
BH-9-1	3	37.6
BH-11-2	6	216

[1] Measured with Photovac 2020 PID and calibrated to 100 ppm isobutylene prior to use.

3.2.2 Adsorbed Phase

Samples were collected continuously from the soil borings to determine the presence or absence of petroleum compounds. Based on headspace analysis, four soil samples (see Table 3) were retained for laboratory analysis. The soil samples were labeled and stored on ice pending delivery to Air,

Water, and Soil Laboratories (AWS) in Richmond, Virginia for volatile petroleum hydrocarbons (VPH) and volatile organic compounds (VOC) analysis by U.S. EPA SW846/MADEP methodology. Strict sample security and chain-of-custody documentation were maintained during all phases of transport. A tabular summary of VPH soil analytical data is presented in Table 4. A tabular summary of VOC soil analytical data is presented in Table 5. The laboratory Certificate of Analysis and chain-of-custody records are provided in Appendix B.

Table 4.
Volatile Petroleum Hydrocarbons Analytical Data
(July 22, 2004)

Sample Location	C5-C8 Aliphatic Hydrocarbons (mg/kg)[1]	C9-C12 Aliphatic Hydrocarbons (mg/kg)	C9-C10 Aromatic Hydrocarbons (mg/kg)
BH-2-1	<10.0	<10.0	<10.0
BH-4-1	<10.0	<10.0	<10.0
BH-9-1	<10.0	<10.0	<10.0
BH-11-2	22	120	73
MSCC[2]	**72**	**3,255**	**34**
RSCL[3]	**939**	**9,386**	~~93,860~~ 40

[1] Volatile petroleum hydrocarbons analysis via MADEP methodology reported in milligrams per kilogram (mg/kg).
[2] Soil-to-Groundwater Maximum Contaminant Concentration (MSCC) reported in mg/kg. (NCDENR April 2001)
[3] Residential Soil Cleanup Levels (RSCL) reported in mg/kg. (NCDENR April 2001)

Table 5.
Volatile Organic Compounds
Soil Analytical Results
(July 22, 2004)

Sample Location	Benzene (mg/kg)[1]	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,3,5 Trimethyl-benzene (mg/kg)
BH-2-1	<0.2	<0.2	<0.2	<0.2	<0.2
BH-4-1	<0.2	<0.2	<0.2	<0.2	<0.2
BH-9-1	<0.2	<0.2	<0.2	<0.2	<0.2
BH-11-2	<0.2	<0.2	<0.2	0.5	1.8
MSCC[2]	**0.0056**	**7.0**	**0.24**	**5.0**	**7.0**
RSCL[3]	**22**	**3,200**	**1,560**	**32,000**	**782**

[1] Volatile organic compounds analysis via SW846 method 8260B reported in milligrams per kilogram (mg/kg).
[2] Soil-to-Groundwater Maximum Contaminant Concentration reported in mg/kg. (NCDENR April 2001)
[3] Residential Soil Cleanup Levels (RSCL) reported in mg/kg. (NCDENR April 2001)

4.0 SOIL ASSESSMENT CONCLUSIONS AND RECOMMENDATIONS

In accordance with NCDENR directives, Apex has completed this soil assessment at the UFU #33 site. VOCs were not detected at or above the laboratory's respective method detection

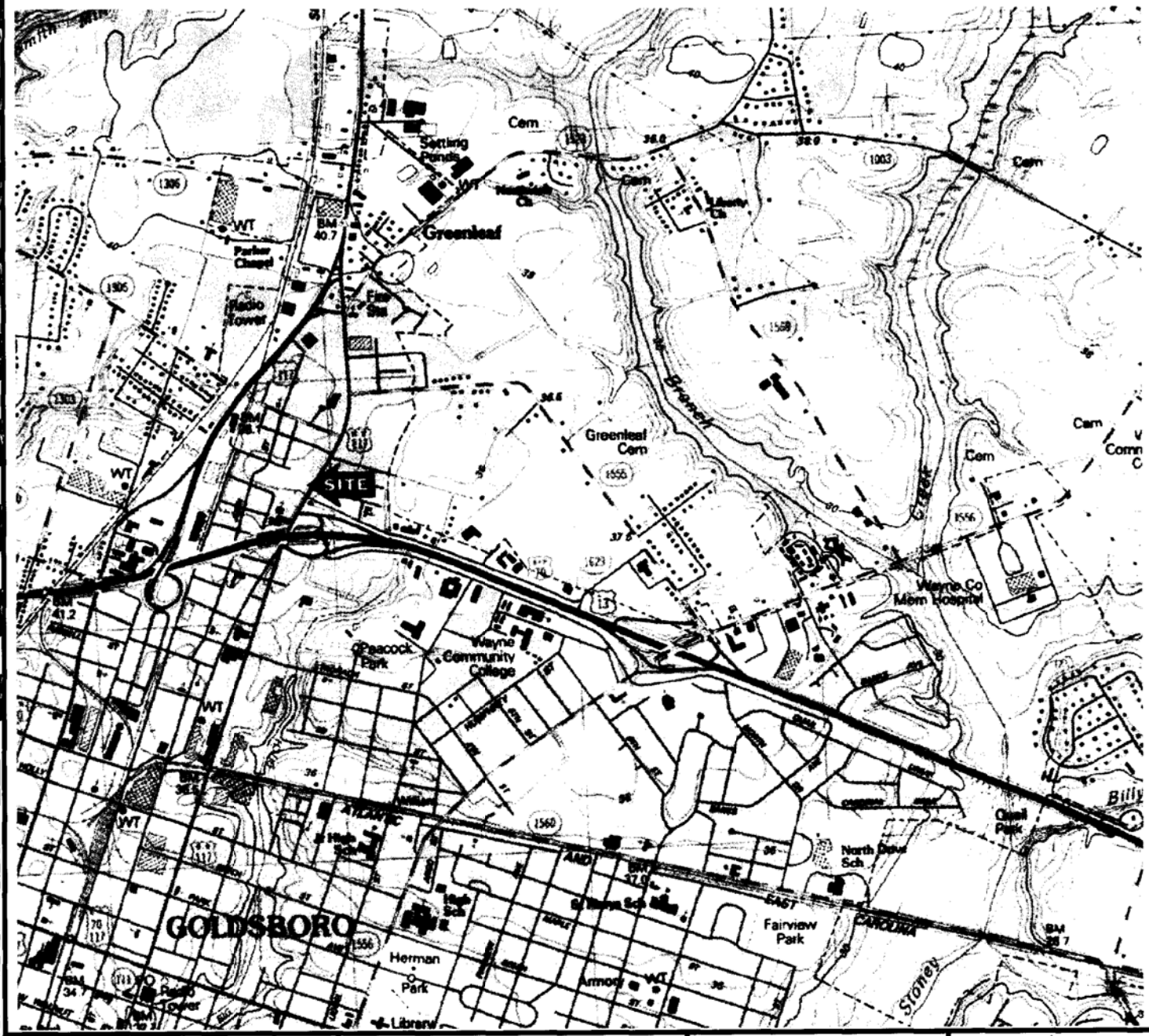
limits in any soil samples submitted for analysis during this investigation. Aromatic hydrocarbons (C9-C10) were detected in the soil sample identified as BH-11-2 at a concentration of 73 milligrams per kilogram (mg/kg). The concentration of aromatic hydrocarbons detected in sample BH-11-2 exceeds the NCDENR established Soil-to-Groundwater Maximum Contaminant Concentration (MSCC) of 34 mg/kg; however, it is below the NCDENR's established value of 93,860 mg/kg for Residential Soil Cleanup Levels.

Based on field and analytical data presented in this report, and current NCDENR risk classification (LOW), Apex recommends no further action at the subject site. This Soil Assessment Report, prepared on behalf of Abercrombie Oil Company, is being delivered to Mr. Bill Crew of the NCDENR Washington Regional office.

FIGURES

Figure 1
Site Location Map

U-Fill'er-Up #33
1609 North Williams Street
Goldsboro, North Carolina



468 Southlake Boulevard
Richmond, VA 23236
Telephone: (804) 897-2718

Apex environmental, inc.

United States Department of the Interior
Geological Survey
7.5 Minute Series Topographic Map
Contour Interval: 2 meters
Scale: 1 inch = 2000 feet

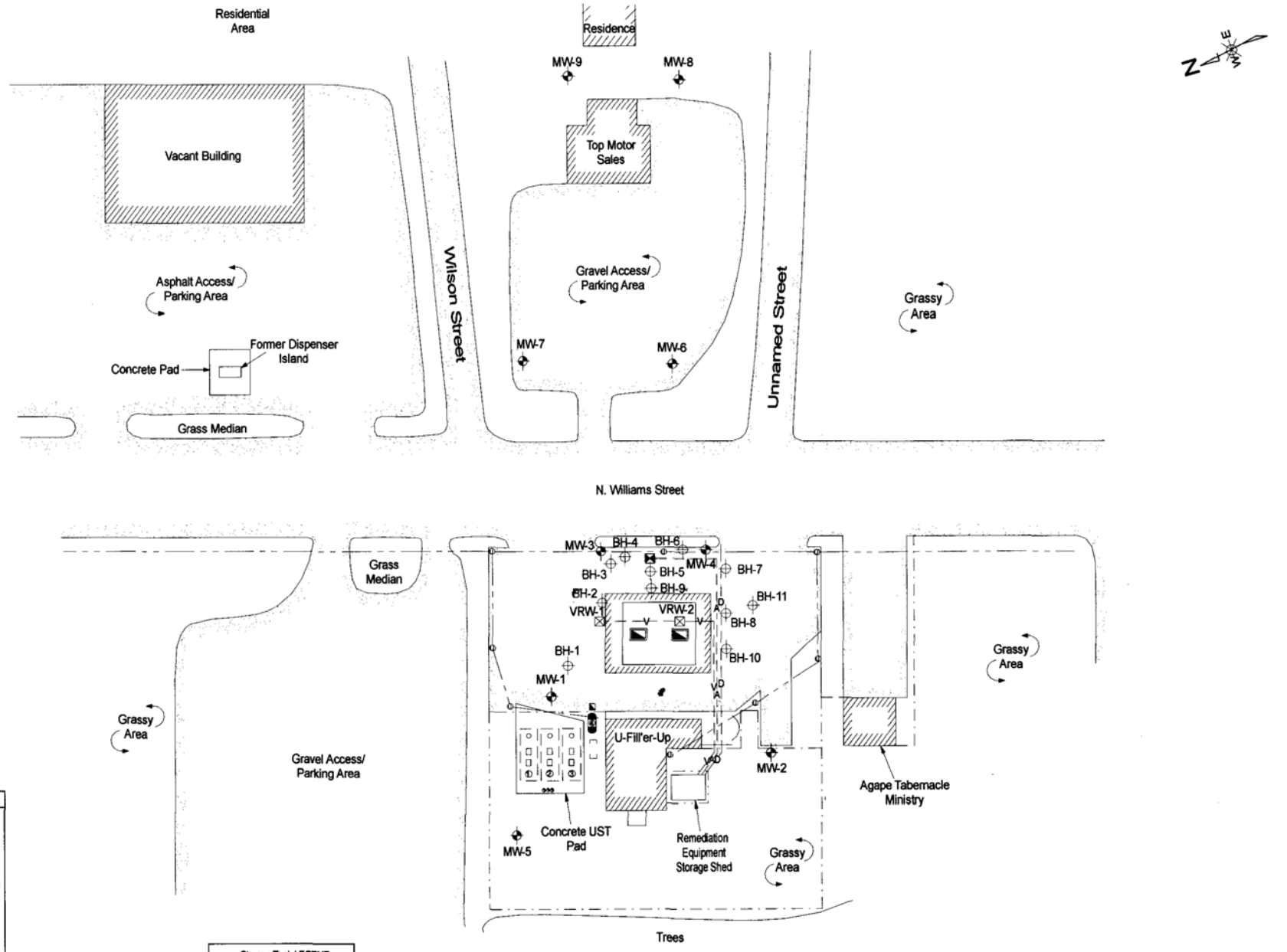
Northeast Goldsboro, North Carolina
(1983)

Project: Soil Assessment

Client: Abercrombie Oil Co., Inc.

Apex Job #: 768299.166

Date: November 2004



REV	BY	DATE	
1	AMR	11/04	

DR.: BRW / KWH OCT 2002
CK.:
APP'D.:
SCALE: 1" = 70'
APEX PROJ. NO.: 768299.166
www.apexenv.com

SOIL ASSESSMENT REPORT

Groundwater Incident No. 10799

Apex environmental, inc.®
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
(804) 897-2718
apexvc@erols.com

DRAWING TITLE
Site Plan and Soil Boring Location Map
S&R Quick Mart (UFU #33)
1609 N. Williams Street
Goldsboro, North Carolina

DRAWING NUMBER: FIGURE No. 2
REV: 0

APPENDIX A

Soil Boring Logs

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-1
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 8.0'
Remarks: _____

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
							Asphalt surface	Ground Surface Boring not completed as a monitoring well.
	BH-1-1	N/A	38/48	3.2			Approximately 3-4 inches of fill followed by yellowish-orange medium to fine-grained SAND (SW) grading to light, olive-gray medium to fine-grained sandy SILT (SM); firm, no petroleum odor.	
4								5
	BH-1-2	N/A	40/48	2.9			Light, olive-gray medium to fine-grained sandy SILT (ML) grading to light gray medium to fine-grained silty SAND (SM); wet at approximately 7 feet, no petroleum odor.	
8							Boring terminated at depth of 8 feet.	10
12								
15								15
20								20
25								25
30								30

Geologist: A. Rheudasil

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-2
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 4.0'
Remarks: _____

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
							Asphalt surface	Ground Surface
	BH-2-1	N/A	40/48	32.4			Approximately 3-4 inches of fill followed by yellowish-orange medium to fine-grained SAND (SW) grading to light, olive-gray medium to fine-grained sandy SILT (ML); wet at approximately 4 feet, slight petroleum odor.	Boring not completed as a monitoring well.
4							Boring terminated at depth of 4 feet.	
5								
8								
10								
12								
15								
20								
25								
30								

Geologist: A. Rountree

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-3
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 4.0'
Remarks: _____

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
							Asphalt surface	Ground Surface
	BH-3-1	N/A	40/48	8.3			Approximately 3-4 inches of fill followed by yellowish-orange medium to fine-grained SAND (SW) grading to light, olive-gray medium to fine-grained sandy SILT (ML); wet at approximately 4 feet, slight petroleum odor.	Boring not completed as a monitoring well.
4							Boring terminated at depth of 4 feet.	
5								
8								
10								
12								
15								
20								
25								
30								

Geologist: A. Rowland

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-4
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 4.0'
Remarks: Soil sample BH-4-1 submitted for laboratory analysis

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
							Asphalt surface	Ground Surface
	BH-4-1	N/A	40/48	4.4			Approximately 3-4 inches of fill followed by yellowish-orange medium to fine-grained SAND (SW) grading to light, olive-gray medium to fine-grained sandy SILT (ML); wet at approximately 4 feet, slight petroleum odor.	Boring not completed as a monitoring well.
4							Boring terminated at depth of 4 feet.	
8								
12								
15								
20								
25								
30								

Geologist: A. Rosenthal

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-5
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 4.0'
Remarks: _____

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
							Asphalt surface	Ground Surface
	BH-5-1	N/A	40/48	22.1			Approximately 3-4 inches of fill followed by yellowish-orange medium to fine-grained SAND (SW) grading to light, olive-gray medium to fine-grained sandy SILT (ML); wet at approximately 4 feet, slight petroleum odor.	Boring not completed as a monitoring well.
4							Boring terminated at depth of 4 feet.	
8								
12								
15								
20								
25								
30								

Geologist: A. Rowland

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-6
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 4.0'
Remarks: Soil sample BH-6-1 submitted for laboratory analysis

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
								Ground Surface
							Asphalt surface	Boring not completed as a monitoring well.
	BH-6-1	N/A	32/48	13.0			Approximately 3-4 inches of fill followed by yellowish-orange medium to fine-grained SAND (SW) grading to light, olive-gray medium to fine-grained sandy SILT (ML); wet at approximately 4 feet, slight to mild petroleum odor.	
4							Boring terminated at depth of 4 feet.	5
8								10
12								
15								15
20								20
25								25
30								30

Geologist: J. Rosenthal

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-7
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 8.0'
Remarks: Soil sample BH-7-2 submitted for laboratory analysis

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
								Ground Surface
							Asphalt surface	Boring not completed as a monitoring well.
	BH-7-1	N/A	42/48	88.2			Approximately 3-4 inches of fill followed by light, olive-gray medium to fine-grained sandy SILT (ML) grading to yellowish-orange to light-brown sandy CLAY (CL); firm, slight petroleum odor.	
4								5
	BH-7-2	N/A	48/48	126			Yellowish-orange to light-brown sandy CLAY (CL) grading to light-gray medium-grained clayey SAND (SC); moist at approximately 6 feet, slight petroleum odor.	
8							Boring terminated at depth of 8 feet.	10
12								
15								15
20								20
25								25
30								30

Geologist: A. Brent Ed

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-8
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 8.0'
Remarks: Soil sample BH-8-2 submitted for laboratory analysis

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
							Asphalt surface	Ground Surface Boring not completed as a monitoring well.
	BH-8-1	N/A	36/48	32.8			Approximately 3-4 inches of fill followed by light, olive-gray medium to fine-grained sandy SILT (ML) grading to yellowish-orange to light-brown sandy CLAY (CL); firm, no petroleum odor.	
4								5
	BH-8-2	N/A	48/48	116			Yellowish-orange to light-brown sandy CLAY (CL) grading to light-gray medium-grained clayey SAND (SC); wet at approximately 6 feet, mild petroleum odor.	
8							Boring terminated at depth of 8 feet.	10
12								
15								15
20								20
25								25
30								30

Geologist: A. Rountree

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-9
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 4.0'
Remarks: _____

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
							Asphalt surface	Ground Surface Boring not completed as a monitoring well.
	BH-9-1	N/A	36/48	37.6			Approximately 3-4 inches of fill followed by yellowish-orange medium to fine-grained SAND (SW) grading to light, olive-gray medium to fine-grained sandy SILT (ML); wet at approximately 4 feet, slight petroleum odor.	
4							Boring terminated at depth of 4 feet.	5
8								10
12								
15								15
20								20
25								25
30								30

Geologist: _____

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-10
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 4.0'
Remarks:

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
								Ground Surface
	BH-10-1	N/A	32/48	4.2			Asphalt surface Approximately 3-4 inches of fill followed by yellowish-orange medium to fine-grained SAND (SW) grading to light, olive-gray medium to fine-grained sandy SILT (ML); wet at approximately 4 feet, no petroleum odor. Boring terminated at depth of 4 feet.	Boring not completed as a monitoring well.
4								
8								
12								
15								
20								
25								
30								

Geologist: A. Rosenthal

Apex environmental, inc.
468 SOUTHLAKE BOULEVARD
RICHMOND, VIRGINIA 23236
TELEPHONE: (804) 897-2718

Project: U-Fill'er-Up #33	Job No.: 768299.166
Location: Goldsboro, NC	Boring/Well ID: BH-11
Date: November 12, 2004	
Project Manager: Chris Cheatham	

Start Date: 7/22/04
Complete Date: 7/22/04
Well Cap: N/A
Security Box: N/A

Hole Diameter: 2.00 inches (I.D.)
Casing Diameter: N/A
Drilling Method: Direct Push

Top of Casing Elevation: N/A
Total Depth: 8.0'
Remarks: Soil sample BH-11-2 submitted for laboratory analysis

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description	Well Diagram
								Ground Surface
							Asphalt surface	Boring not completed as a monitoring well.
	BH-11-1	N/A	32/48	116			Approximately 3-4 inches of fill followed by light, olive-gray medium to fine-grained sandy SILT (ML) grading to yellowish-orange to light-brown sandy CLAY (CL); moist at approximately 4 feet, slight petroleum odor.	
4								5
	BH-11-2	N/A	28/48	216			Yellowish-orange to light-brown sandy CLAY (CL) grading to light-gray medium-grained clayey SAND (SC); moist at approximately 6 feet, no petroleum odor.	
8							Boring terminated at depth of 8 feet.	10
12								
15								15
20								20
25								25
30								30

Geologist: [signature]

APPENDIX B

Laboratory Certificates of Analysis
and
Chain-of-Custody Documentation

AIR WATER & SOIL Laboratories, Inc.

2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

CASE NARRATIVE

Laboratory Project I.D. No.: 040702567

Client Name:	APEX Environmental, Inc.	Date Received:	July 23, 2004
Client Project I.D.:	Abercrombie Oil/UFU-33/#768299.166	Date Issued:	August 05, 2004
Submitted to:	Chris Cheatham	Date Reissued:	August 06, 2004

On July 23, 2004, four soil samples were received via hand delivery for analysis per the attached Chain-of-Custody Record. The samples were received with sample containers intact by Emily Tuckwiller (AWS). Upon laboratory receipt, no deviations, discrepancies or irregularities were observed in sample condition, including holding times, temperature, containers or preservatives.

The samples were prepared and analyzed per SW846/MADEP methodology. All spike and surrogate recoveries were accomplished within acceptable Quality Control Limits as specified per the listed methodology. QC results are listed within each method section. All soil results have been reported on a dry weight basis.

This Certificate of Analysis was reissued on August 06, 2004 to correct the number of samples received.

For questions or inquiries please contact Carmela Tombes at (804) 358-8295.

A cross reference of client sample I.D. vs. Laboratory I.D. follows:

Client Sample I.D.	Laboratory I.D.
166722-1/Bore Hole BH-2-1	040702567-1
166722-2/Bore Hole BH-4-1	040702567-2
166722-3/Bore Hole BH-9-1	040702567-3
166722-4/Bore Hole BH-11-2	040702567-4

AIR WATER & SOIL Laboratories, Inc.

2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

North Carolina Certification #495

Certificate of Analysis

Client Name:	APEX Environmental, Inc.	Date Received:	July 23, 2004
Client Project I.D.:	Abercrombie Oil/UFU-33/#768299.166	Date Issued:	August 05, 2004
Submitted to:	Chris Cheatham	Date Reissued:	August 06, 2004

Reference Method: MADEP VPH

Four soil samples were analyzed for the following Volatile Petroleum Hydrocarbons. All results are reported on a dry weight basis.

		Sample I.D.	166722-1/Bore Hole BH-2-1	166722-2/Bore Hole BH-4-1	166722-3/Bore Hole BH-9-1	166722-4/Bore Hole BH-11-2
		Date Collected	7/22/04	7/22/04	7/22/04	7/22/04
		Date Extracted	N/A	N/A	N/A	N/A
		Date Analyzed	08/04/04	08/04/04	08/04/04	08/04/04
		Dilution Factor	50	50	50	50
		% Dry Weight	82.8	91.4	89.5	81.7
Range/Target Analyte	**Reporting Limit**	**Units**				
C5-C8 Aliphatic Hydrocarbons	10	mg/kg	BDL	BDL	BDL	22
C9-C12 Aliphatic Hydrocarbons	10	mg/kg	BDL	BDL	BDL	120
C9-C10 Aromatic Hydrocarbons	10	mg/kg	BDL	BDL	BDL	73
FID Surrogate % Recovery			112%	122%	108%	96%
PID Surrogate % Recovery			116%	106%	111%	95%

BDL = Below Detection Limit

Ted Soyars
Laboratory Manager

040702567

AIR WATER & SOIL Laboratories, Inc.

2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

North Carolina Certification #495

Certificate of Analysis

Client Name:	APEX Environmental, Inc.	Date Received:	July 23, 2004
Client Project I.D.:	Abercrombie Oil/UFU-33/#768299.166	Date Issued:	August 05, 2004
Submitted to:	Chris Cheatham	Date Reissued:	August 06, 2004

Reference Method: SW846 method 8260B

Four soil samples were analyzed for the following Volatile Organic Compounds. All results are reported on a dry weight basis.

Parameter	166722-1/Bore Hole BH-2-1 (mg/kg)	166722-2/Bore Hole BH-4-1 (mg/kg)	166722-3/Bore Hole BH-9-1 (mg/kg)	166722-4/Bore Hole BH-11-2 (mg/kg)	Detection Limit (mg/kg)
Dichlorodifluoromethane	BDL	BDL	BDL	BDL	0.2
Chloromethane	BDL	BDL	BDL	BDL	0.2
Vinyl Chloride	BDL	BDL	BDL	BDL	0.2
Bromomethane	BDL	BDL	BDL	BDL	0.2
Chloroethane	BDL	BDL	BDL	BDL	0.2
Trichlorofluoromethane	BDL	BDL	BDL	BDL	0.2
1,1-Dichloroethene	BDL	BDL	BDL	BDL	0.2
Acetone	BDL	BDL	BDL	BDL	0.2
Iodomethane	BDL	BDL	BDL	BDL	0.2
Carbon disulfide	BDL	BDL	BDL	BDL	0.2
Methylene Chloride	BDL	BDL	BDL	BDL	0.2
trans-1,2-Dichloroethene	BDL	BDL	BDL	BDL	0.2
1,1-Dichloroethane	BDL	BDL	BDL	BDL	0.2
Vinyl acetate	BDL	BDL	BDL	BDL	0.2
2,2-Dichloropropane	BDL	BDL	BDL	BDL	0.2
cis-1,2-Dichloroethene	BDL	BDL	BDL	BDL	0.2
2-Butanone (MEK)	BDL	BDL	BDL	BDL	0.2
Bromochloromethane	BDL	BDL	BDL	BDL	0.2
Chloroform	BDL	BDL	BDL	BDL	0.2
1,1,1-Trichloroethane	BDL	BDL	BDL	BDL	0.2
Carbon tetrachloride	BDL	BDL	BDL	BDL	0.2
1,1-Dichloro-1-propene	BDL	BDL	BDL	BDL	0.2
Benzene	BDL	BDL	BDL	BDL	0.2
1,2-Dichloroethane	BDL	BDL	BDL	BDL	0.2
Trichloroethene	BDL	BDL	BDL	BDL	0.2
1,2-Dichloropropane	BDL	BDL	BDL	BDL	0.2
Dibromomethane	BDL	BDL	BDL	BDL	0.2
Bromodichloromethane	BDL	BDL	BDL	BDL	0.2
cis-1,3-Dichloro-1-propene	BDL	BDL	BDL	BDL	0.2
4-Methyl-2-Pentanone	BDL	BDL	BDL	BDL	0.2
Toluene	BDL	BDL	BDL	BDL	0.2
trans-1,3-Dichloro-1-propene	BDL	BDL	BDL	BDL	0.2
1,1,2-Trichloroethane	BDL	BDL	BDL	BDL	0.2

BDL = Below Detection Limit

Ted Soyars
Laboratory Manager

AIR WATER SOIL Laboratories, Inc.

2109A North Hamilton Street • Richmond, Virginia 23230 • Tel: (804) 358-8295 Fax: (804) 358-8297

North Carolina Certification #495

Certificate of Analysis

Client Name:	APEX Environmental, Inc.	Date Received:	July 23, 2004
Client Project I.D.:	Abercrombie Oil/UFU-33/#768299.166	Date Issued:	August 05, 2004
Submitted to:	Chris Cheatham	Date Reissued:	August 06, 2004

Reference Method: SW846 method 8260B continued

Parameter	166722-1/Bore Hole BH-2-1 (mg/kg)	166722-2/Bore Hole BH-4-1 (mg/kg)	166722-3/Bore Hole BH-9-1 (mg/kg)	166722-4/Bore Hole BH-11-2 (mg/kg)	Detection Limit (mg/kg)
Tetrachloroethene	BDL	BDL	BDL	BDL	0.2
1,3-Dichloropropane	BDL	BDL	BDL	BDL	0.2
2-Hexanone	BDL	BDL	BDL	BDL	0.2
Dibromochloromethane	BDL	BDL	BDL	BDL	0.2
1,2-Dibromoethane (EDB)	BDL	BDL	BDL	BDL	0.2
Chlorobenzene	BDL	BDL	BDL	BDL	0.2
1,1,1,2-Tetrachloroethane	BDL	BDL	BDL	BDL	0.2
Ethylbenzene	BDL	BDL	BDL	BDL	0.2
Xylenes	BDL	BDL	BDL	0.5	0.2
Styrene	BDL	BDL	BDL	BDL	0.2
Bromoform	BDL	BDL	BDL	BDL	0.2
Isopropylbenzene	BDL	BDL	BDL	BDL	0.2
Bromobenzene	BDL	BDL	BDL	BDL	0.2
1,1,2,2-Tetrachloroethane	BDL	BDL	BDL	BDL	0.2
1,2,3-Trichloropropane	BDL	BDL	BDL	BDL	0.2
Propylbenzene	BDL	BDL	BDL	BDL	0.2
2-Chlorotoluene	BDL	BDL	BDL	BDL	0.2
4-Chlorotoluene	BDL	BDL	BDL	BDL	0.2
1,3,5-Trimethylbenzene	BDL	BDL	BDL	1.8	0.2
tert-Butylbenzene	BDL	BDL	BDL	BDL	0.2
1,2,4-Trimethylbenzene	BDL	BDL	BDL	BDL	0.2
sec-Butylbenzene	BDL	BDL	BDL	BDL	0.2
1,3-Dichlorobenzene	BDL	BDL	BDL	BDL	0.2
p-Isopropyltoluene	BDL	BDL	BDL	BDL	0.2
1,4-Dichlorobenzene	BDL	BDL	BDL	BDL	0.2
1,2-Dichlorobenzene	BDL	BDL	BDL	BDL	0.2
n-Butylbenzene	BDL	BDL	BDL	BDL	0.2
1,2-Dibromo-3-chloropropane	BDL	BDL	BDL	BDL	0.2
1,2,4-Trichlorobenzene	BDL	BDL	BDL	BDL	0.2
Hexachlorobutadiene	BDL	BDL	BDL	BDL	0.2
Naphthalene	BDL	BDL	BDL	BDL	0.2
1,2,3-Trichlorobenzene	BDL	BDL	BDL	0.5	0.2
MTBE	BDL	BDL	BDL	BDL	0.2

BDL = Below Detection Limit

Ted Soyars
Laboratory Manager

040702567

Apex environmental, inc.™

468 Southlake Boulevard
Richmond, Virginia 23236
(804) 897-2718

CHAIN OF CUSTODY RECORD

JOB NO.	JOB NAME	PROJECT MANAGER
768299.166	Abercrombie 01 / UFU-33	Chris Cheatham

SAMPLER(S): (Signature(s)) — (Printed): Kevin Harvey

PARAMETERS: NO. OF CONTAINERS; 8260 + TPH & MTBE; MADEP VPH

TURN-AROUND TIME: STD

SAMPLE ID	DATE	TIME	COMP.	GRAB	MATRIX	PRES.	STATION / LOCATION	NO. OF CONTAINERS	8260 + TPH & MTBE	MADEP VPH	REMARKS
166722-1	7/22/04	1045		X	S	4°C	Bore Hole BH-2-1	2	X	X	3' BGS
166722-2	↓	1106		X	S	↓	Bore Hole BH-4-1	2	X	X	3.5' BGS
166722-3	↓	1230		X	S	↓	Bore Hole BH-9-1	2	X	X	3' BGS
166722-4	↓	1330		X	S	↓	Bore Hole BH-11-2	2	X	X	6' BGS
							TOTALS	8			

Relinquished by: (Signature) ①	Date/Time	Received by: (Signature) ②	Relinquished by: (Signature) ③	Date/Time	Received by: (Signature) ④
(Printed) Kevin Harvey	7/23/04 1720	(Printed) Emily Tuckwiller	(Printed)		(Printed)
Relinquished by: (Signature) ⑤	Date/Time	Received by: (Signature) ⑥	Remarks: PC Cert Required		
(Printed)		(Printed)			

Distribution: WHITE => original (accompanies samples; returned with results) : YELLOW => laboratory copy : PINK => sampler's copy

APPENDIX C

BORING LOGS

Apex Companies, LLC

Boring Log

Boring/Well No.: P4-SB1	**Site Name: Parcel 4 - Samar N Elawar Property**
Date: 06/08/17	**Location: Goldsboro, Wayne County, NC**
Job No.: 510497-003	**Sample Method: Hand Auger and Direct Push**
Apex Rep: Troy L. Holzschuh	**Drilling Method: Hand Auger and Direct Push**
Drilling Company: Carolina Soil Investigations	**Driller Name/Cert #: Danny Summers/2579**
Remarks:	

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Asphalt and Rock
1				Tan and Orange, Sandy Silt
2	2.2	1.25	Sample at 2'	
3				Yellow and Brown Marbled, Clayey, Sandy Silt
4				Water
5				
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

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

Apex Companies, LLC

Boring Log

Boring/Well No.: P4-SB2	**Site Name: Parcel 4 - Samar N Elawar Property**
Date: 06/08/17	**Location: Goldsboro, Wayne County, NC**
Job No.: 510497-003	**Sample Method: Hand Auger and Direct Push**
Apex Rep: Troy L. Holzschuh	**Drilling Method: Hand Auger and Direct Push**
Drilling Company: Carolina Soil Investigations	**Driller Name/Cert #: Danny Summers/2579**
Remarks:	

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Asphalt
1				Tan Sand and Aggregate
				Black, Sandy Silt
2	2.4	1.8	Sample at 2'	
3				Tan Sand
4				
				Water
5				
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

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

Apex Companies, LLC

Boring Log

Boring/Well No.: P4-SB3	**Site Name: Parcel 4 - Samar N Elawar Property**
Date: 06/08/17	**Location: Goldsboro, Wayne County, NC**
Job No.: 510497-003	**Sample Method: Hand Auger and Direct Push**
Apex Rep: Troy L. Holzschuh	**Drilling Method: Hand Auger and Direct Push**
Drilling Company: Carolina Soil Investigations	**Driller Name/Cert #: Danny Summers/2579**
Remarks:	

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Asphalt
1				Tan Sand, Aggregate
2	2.2	1	Sample at 2'	
				Tan, Clayey Sand
3				
				Gray Sand, Smear
4				
				Water
5				Smear Zone
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

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

Apex Companies, LLC

Boring Log

Boring/Well No.: P4-SB4	**Site Name: Parcel 4 - Samar N Elawar Property**
Date: 06/08/17	**Location: Goldsboro, Wayne County, NC**
Job No.: 510497-003	**Sample Method: Hand Auger and Direct Push**
Apex Rep: Troy L. Holzschuh	**Drilling Method: Hand Auger and Direct Push**
Drilling Company: Carolina Soil Investigations	**Driller Name/Cert #: Danny Summers/2579**
Remarks:	

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Asphalt, Aggregate Base
1				Black Sand, Medium
2	2.5	1.75	Sample at 2'	
3				Gray Sand
4				Smear
				Water
5				
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

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

Apex Companies, LLC

Boring Log

Boring/Well No.: P4-SB5	**Site Name: Parcel 4 - Samar N Elawar Property**
Date: 06/08/17	**Location: Goldsboro, Wayne County, NC**
Job No.: 510497-003	**Sample Method: Hand Auger and Direct Push**
Apex Rep: Troy L. Holzschuh	**Drilling Method: Hand Auger and Direct Push**
Drilling Company: Carolina Soil Investigations	**Driller Name/Cert #: Danny Summers/2579**
Remarks:	

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Asphalt, Rock
1				Tan Sand, Medium
2	2.2	1.95	Sample at 2'	
3				Gray Sand, Medium
				Smear
4				Water
5				
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

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

Apex Companies, LLC

Boring Log

Boring/Well No.: P4-SB6	**Site Name: Parcel 4 - Samar N Elawar Property**
Date: 06/08/17	**Location: Goldsboro, Wayne County, NC**
Job No.: 510497-003	**Sample Method: Hand Auger and Direct Push**
Apex Rep: Troy L. Holzschuh	**Drilling Method: Hand Auger and Direct Push**
Drilling Company: Carolina Soil Investigations	**Driller Name/Cert #: Danny Summers/2579**
Remarks:	

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Asphalt
1				Tan Sand
				Brown, Sandy Silt
2	1.8	3	Sample at 2'	
3				Smear
				Green-Brown, Sandy Silt
4				
				Water
5				Smear Zone
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

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

Apex Companies, LLC

Boring Log

Boring/Well No.: P4-SB7	**Site Name: Parcel 4 - Samar N Elawar Property**
Date: 06/08/17	**Location: Goldsboro, Wayne County, NC**
Job No.: 510497-003	**Sample Method: Hand Auger and Direct Push**
Apex Rep: Troy L. Holzschuh	**Drilling Method: Hand Auger and Direct Push**
Drilling Company: Carolina Soil Investigations	**Driller Name/Cert #: Danny Summers/2579**
Remarks:	

Depth (ft BLS)	FID Reading (ppm)	PID Reading (ppm)	Lab Sample ID	Soil/Lithologic Description
				Asphalt and Aggregate
1				Tan Sand, Medium
2	2	1	Sample at 2'	
3				Greenish Brown, Clayey Sand
4				Smear
				Water
5				
				Boring terminated at 5 feet
6				
7				
8				
9				
10				
11				
12				
13				
14				

WELL CONSTRUCTION DETAILS (If Applicable)

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

Apex Companies, LLC

Boring Log

Boring/Well No.: P4-SB8	**Site Name: Parcel 4 - Samar N Elawar Property**
Date: 06/08/17	**Location: Goldsboro, Wayne County, NC**
Job No.: 510497-003	**Sample Method: Hand Auger and Direct Push**
Apex Rep: Troy L. Holzschuh	**Drilling Method: Hand Auger and Direct Push**
Drilling Company: Carolina Soil Investigations	**Driller Name/Cert #: Danny Summers/2579**
Remarks:	

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

WELL CONSTRUCTION DETAILS (If Applicable)	
Well Type/Diameter:	Outer Casing Interval:
Total Depth:	Outer Casing Diameter:
Screen Interval:	Bentonite Interval:
Sand Interval:	Slot Size:
Grout Interval:	Static Water Level:

APPENDIX D

GEOPHYSICAL REPORT

PYRAMID GEOPHYSICAL SERVICES
(PROJECT 2017-156)

GEOPHYSICAL SURVEY

METALLIC UST INVESTIGATION:
PARCEL 004
NCDOT PROJECT U-2714

1609 N. WILLIAM STREET, GOLDSBORO, NC

JULY 7, 2017

Report prepared for: Troy Holzschuh
Apex Companies
10610 Metromont Parkway, Suite 206
Charlotte, North Carolina 28269

Prepared by: _____
Eric C. Cross, P.G.
NC License #2181

Reviewed by: _____
Mike Jones, P.G.
NC License #1168

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

GEOPHYSICAL INVESTIGATION REPORT
Parcel 004 – 1609 N. William Street
Goldsboro, Wayne 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 Apex Companies (Apex) at Parcel 004, located at 1609 N. William Street, Goldsboro, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project U-2714). Apex directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. The geophysical investigation was conducted from June 6-7, 2017 to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

Geophysical Results: Several of the EM anomalies were directly attributed to visible cultural features at the ground surface. Two areas (north and south of the pump island) contained EM anomalies that were associated with unknown buried metal, and were investigated by GPR. A total of 6 GPR Transects identified the following:

- Two probable USTs were located on the south side of the pump island. Each tank was approximately 21 feet long and 6 feet wide.
- Two probable USTs were located on the north side of the pump island. Each tank was approximately 21 feet long and 6 feet wide.
- Review of the NCDOT easements at the project site indicate that, at least, the two easternmost probable USTs are located within or directly adjacent to the Temporary Construction Easement.
- Reconnaissance GPR verified the presence of metal-reinforced concrete at two locations on the east side of the pump island.

Collectively, the geophysical data recorded evidence of four probable metallic USTs at Parcel 004. Additionally, the known, active USTs currently servicing the property were observed at the northwest portion of the parcel, outside of the geophysical survey area.

INTRODUCTION

Pyramid Environmental conducted a geophysical investigation for Apex at Parcel 004, located at 1609 N. William Street, Goldsboro, NC. The survey was part of a North Carolina Department of Transportation (NCDOT) Right-of-Way (ROW) investigation (NCDOT Project U-2714). Apex directed Pyramid as to the geophysical survey boundaries at the project site, which were designed to extend from the existing edge of pavement into the proposed ROW and/or easements, whichever distance was greater. The geophysical investigation was conducted from June 6-7, 2017 to determine if unknown, metallic underground storage tanks (USTs) were present beneath the survey area.

The site included an active service station with a metal canopy and pump island surrounded by asphalt parking areas and grass medians. It should be noted that the known, active USTs supplying fuel to the pump island were observed outside of the geophysical survey area in the northwest portion of the property. An aerial photograph showing the survey area boundaries and ground-level photographs are shown in **Figure 1**.

FIELD METHODOLOGY

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

According to the instrument specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. Smaller objects (1-foot or less in size) can be detected to a maximum depth of 4 to 5 feet. The EM61 data were digitally collected at

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

GPR data were acquired across select EM anomalies from June 7, 2017, using a Geophysical Survey Systems, Inc. (GSSI) UtilityScan DF unit equipped with a dual frequency 300/800 MHz antenna. Data were collected both in reconnaissance fashion as well as along formal transect lines across EM features. The GPR data were viewed in real-time using a vertical scan of 512 samples, at a rate of 48 scans per second. GPR data were viewed down to a maximum depth of approximately 6 feet, based on dielectric constants calculated by the DF unit in the field during the reconnaissance scans. GPR transects across specific anomalies were saved to the hard drive of the DF unit for post-processing and figure generation.

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

Geophysical Surveys for Underground Storage Tanks
on NCDOT Projects

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

DISCUSSION OF RESULTS

Discussion of EM Results

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

LIST OF METALLIC ANOMALIES IDENTIFIED BY EM SURVEY

Metallic Anomaly #	Cause of Anomaly	Investigated with GPR
1	Donation box/pole/sign	
2	Vehicle	
3	Suspected conduit	
4	Edge of two probable USTs	☑
5	Reinforced concrete	☑
6	Edge of two probable USTs	☑
7	Suspected debris	
8	Sign	
9	Metal vault lid	
10	Water meter	

The majority of the EM anomalies (Anomalies 1, 2, 3, 7, 8, 9 and 10) were directly attributed to known cultural features such as a vehicle, signs, a metal vault lid, a water meter, and a suspected conduit. However, Anomalies 4 and 6 were high-amplitude features that were associated with unknown buried metal; their size and amplitude were suggestive of large structures such as USTs. Anomaly 5 was suspected to be associated with metal-reinforced concrete. All of these features were investigated further by GPR.

Discussion of GPR Results

Figure 3 presents the locations of the formal GPR transects performed at the property, as well as the transect images. A total of six GPR transects were performed at the site. GPR Transects 1-3 were performed across the high amplitude EM anomaly on the south side of the pump island (Anomaly 4). These transects recorded two distinct hyperbolic reflectors and two discreet lateral reflectors that were consistent with probable USTs. Due to the clear hyperbolic and lateral reflectors and correlation between the EM and GPR data, Pyramid is classifying this feature as two probable metallic USTs. Each probable UST was approximately 21 feet long and 6 feet wide.

GPR Transects 4-6 were performed across the high amplitude EM anomaly on the north side of the pump island (Anomaly 6). These transects recorded two distinct hyperbolic reflectors and two discreet lateral reflectors that were consistent with probable USTs. Due to the clear hyperbolic and lateral reflectors and correlation between the EM and GPR data, Pyramid is classifying this feature as two probable metallic USTs. Each probable UST was approximately 21 feet long and 6 feet wide.

Review of the NCDOT easements at the project site indicate that, at least, the easternmost probable USTs are located within or directly adjacent to the Temporary Construction Easement.

Reconnaissance GPR scans verified the presence of metal reinforcement in the concrete at the locations associated with EM Anomaly 5. No evidence of any subsurface structures such as USTs was observed below the reinforcement.

Collectively, the geophysical data recorded evidence of four probable metallic USTs at Parcel 004. **Figure 4** provides the locations and sizes of all probable USTs identified by the survey. **Figure 5** provides an overlay of the geophysical survey area onto the NCDOT MicroStation engineering plans (proposed ROW and easements) for reference.

SUMMARY & CONCLUSIONS

Pyramid's evaluation of the EM61 and GPR data collected at Parcel 004 in Goldsboro, North Carolina, provides the following summary and conclusions:

- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the accessible portions of the geophysical survey area.
- Several of the EM anomalies were directly attributed to visible cultural features at the ground surface.
- Two areas (north and south of the pump island) contained EM anomalies that were associated with unknown buried metal, and were investigated by GPR.
- A total of 6 GPR Transects identified the following:
    - Two probable USTs were located on the south side of the pump island. Each tank was approximately 21 feet long and 6 feet wide.
    - Two probable USTs were located on the north side of the pump island. Each tank was approximately 21 feet long and 6 feet wide.
    - Review of the NCDOT easements at the project site indicate that, at least, the two easternmost probable USTs are located within or directly adjacent to the Temporary Construction Easement.
    - Reconnaissance GPR verified the presence of metal-reinforced concrete at two locations on the east side of the pump island.
- Collectively, the geophysical data recorded evidence of four probable metallic USTs at Parcel 004. Additionally, the known, active USTs currently servicing the property were observed at the northwest portion of the parcel, outside of the geophysical survey area.

LIMITATIONS

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

N

APPROXIMATE BOUNDARIES OF GEOPHYSICAL SURVEY AREA

View of Survey Area
(Facing Approximately South)

View of Survey Area
(Facing Approximately Southwest)

TITLE
PARCEL 004 - GEOPHYSICAL SURVEY
BOUNDARIES AND SITE PHOTOGRAPHS

PROJECT
PARCEL 004
GOLDSBORO, NORTH CAROLINA
NCDOT PROJECT U-2714

PYRAMID GEOPHYSICS
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License # C1251 Eng. / License # C257 Geology

DATE 6/30/2017

CLIENT APEX COMPANIES

PYRAMID PROJECT #: 2017-156

FIGURE 1

N

EM61 METAL DETECTION RESULTS

EVIDENCE OF FOUR PROBABLE METALLIC USTSs OBSERVED.

The contour plot shows the differential results of the EM61 instrument in millivolts (mV). The differential results focus on larger metallic objects such as USTs and drums. The EM61 data were collected on June 6, 2017, using a Geonics EM61 instrument. Verification GPR data were collected using a GSSI UtilityScan DF instrument with a dual frequency 300/800 MHz antenna on June 7, 2017.

EM61 Metal Detection Response (millivolts)

TITLE
PARCEL 004 -
EM61 RESULTS CONTOUR MAP

PROJECT
PARCEL 004
GOLDSBORO, NORTH CAROLINA
NCDOT PROJECT U-2714

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DATE 6/30/2017

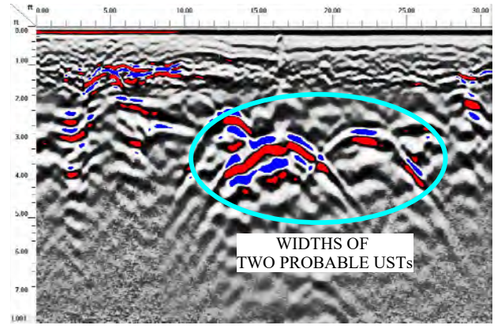
CLIENT APEX COMPANIES

PYRAMID PROJECT #: 2017-156

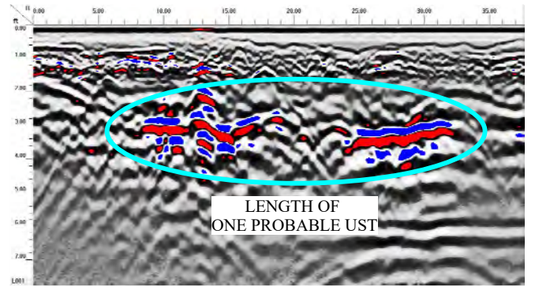
FIGURE 2

LOCATIONS OF GPR TRANSECTS

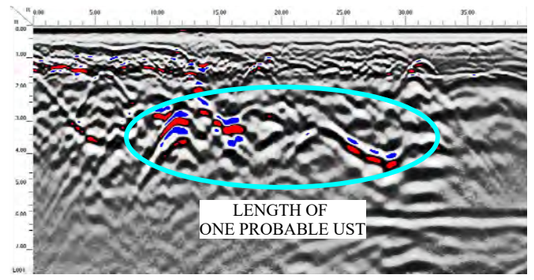
N



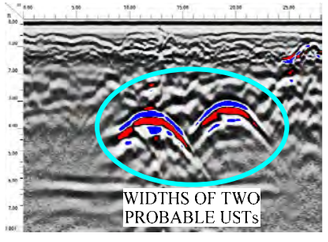
GPR TRANSECT 1 (T1)



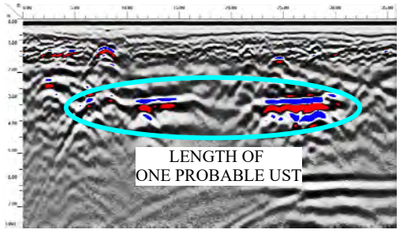
GPR TRANSECT 2 (T2)



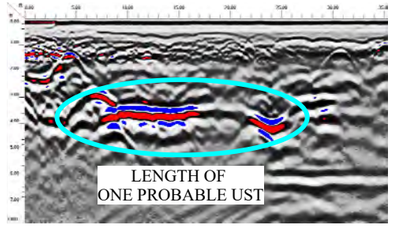
GPR TRANSECT 3 (T3)



GPR TRANSECT 4 (T4)



GPR TRANSECT 5 (T5)



GPR TRANSECT 6 (T6)

TITLE	PARCEL 004 - GPR TRANSECT LOCATIONS AND IMAGES
PROJECT	PARCEL 004 GOLDSBORO, NORTH CAROLINA NCDOT PROJECT U-2714

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DATE 6/30/2017	CLIENT APEX COMPANIES
PYRAMID PROJECT #: 2017-156	**FIGURE 3**

N

LOCATIONS OF PROBABLE METALLIC USTs

NC STATE PLANE, NORTHING (NAD83, FEET)

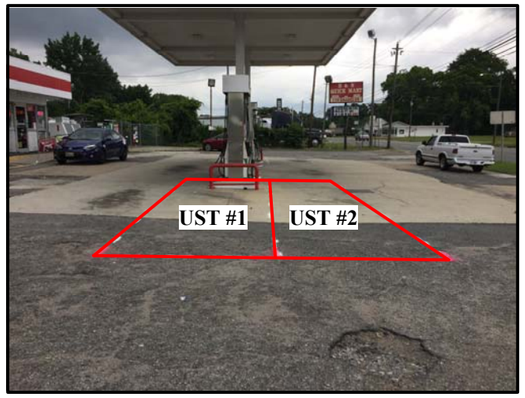
603060
603040
603020
603000
602980
602960
602940
602920
602900
602880

2302440 2302460 2302480 2302500 2302520 2302540 2302560 2302580 2302600 2302620 2302640

NC STATE PLANE, EASTING (NAD83, FEET)

APPROXIMATE DIMENSIONS OF PROBABLE METALLIC USTs

PROBABLE UST #1:	**21' LONG X 6' WIDE**
PROBABLE UST #2:	**21' LONG X 6' WIDE**
PROBABLE UST #3:	**21' LONG X 6' WIDE**
PROBABLE UST #4:	**21' LONG X 6' WIDE**



View of Probable UST #1 & #2
Facing Approximately Northeast

View of Probable UST #3 & #4
Facing Approximately Southwest

TITLE	PARCEL 004 - LOCATIONS AND SIZES OF PROBABLE USTs
PROJECT	PARCEL 004 GOLDSBORO, NORTH CAROLINA NCDOT PROJECT U-2714

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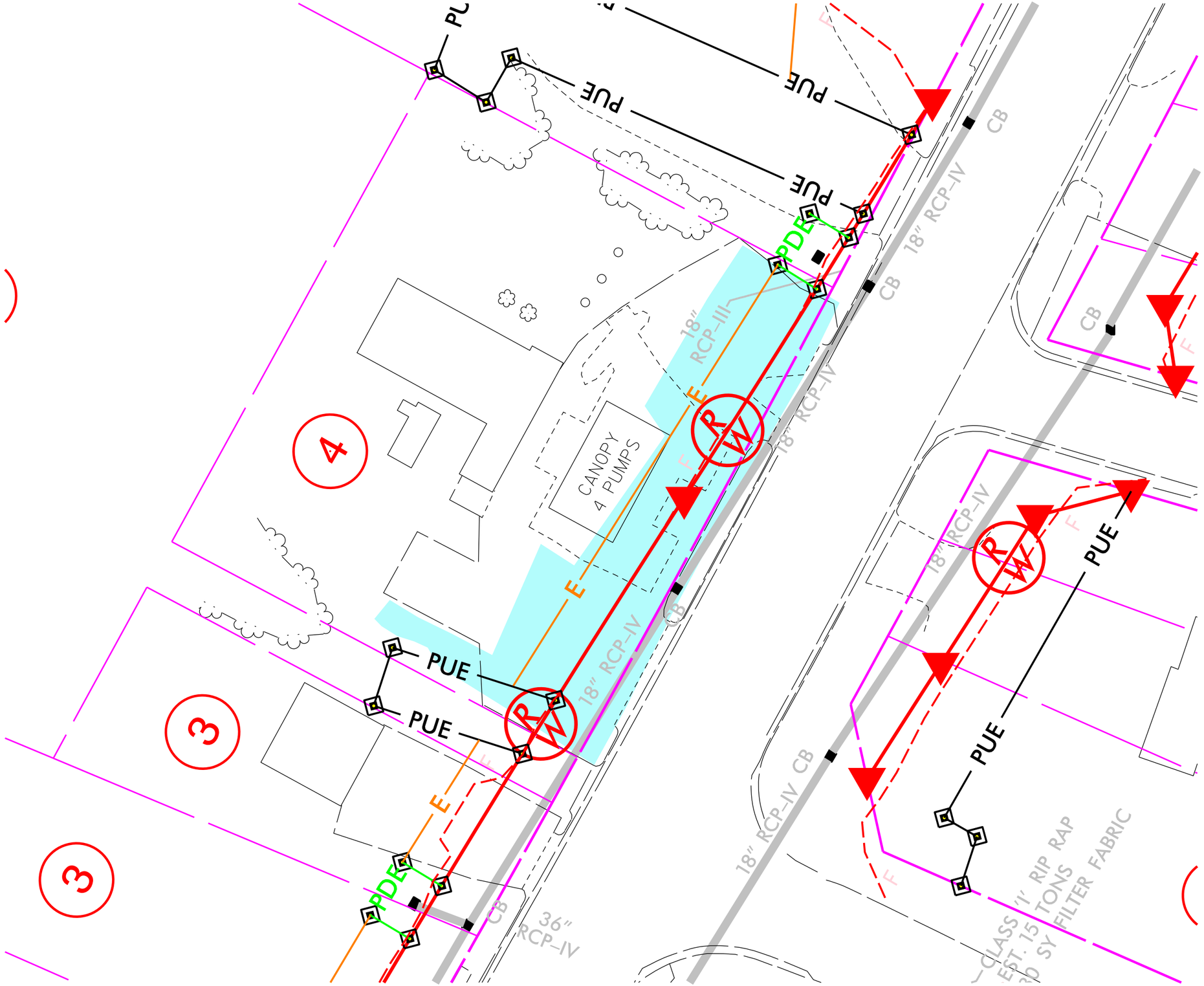
DATE	6/30/2017	CLIENT	APEX COMPANIES
PYRAMID PROJECT #:	2017-156		**FIGURE 4**



LEGEND

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

0 25 50
FEET

N

TITLE: OVERLAY OF GEOPHYSICAL SURVEY BOUNDARIES ON NCDOT ENGINEERING PLANS

PROJECT: PARCEL 004
GOLDSBORO, NORTH CAROLINA
NCDOT PROJECT U-2714

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DATE: 6-30-17	REVISION NO. 0
PYRAMID PROJECT NO. 2017-156	FIGURE NO. 5

APPENDIX E

UVF HYDROCARBON ANALYSIS RESULTS

QED REDLAB RAPID ENVIRONMENTAL DIAGNOSTICS AQROS

Hydrocarbon Analysis Results

Client: NCDOT
Address: PARCEL 4
1609 N William St
Goldsboro, NC

Contact: Dennis Li

Project: 510497-003

Samples taken Thursday, June 08, 2017
Samples extracted Thursday, June 08, 2017
Samples analysed Thursday, June 08, 2017

Operator KH

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	P4-SB1 (2)	19.3	<0.48	<0.48	0.64	0.64	0.53	0.03	0.002	0	59.8	40.2	V.Deg.PHC (FCM) 78.6%
s	P4-SB2 (2)	32.8	<0.82	<0.82	4.5	4.5	3.8	0.4	<0.003	0	83.8	16.2	Deg.PHC (FCM) 70%
s	P4-SB3 (2)	20.3	<0.51	<0.51	0.51	0.51	0.36	<0.02	<0.002	0	65.2	34.8	V.Deg.PHC (FCM) 70.7%
s	P4-SB4 (2)	45.9	<1.1	<1.1	21.8	21.8	17.8	1.9	0.031	0	80.4	19.6	Deg.PHC (FCM) 75.6%
s	P4-SB5 (2)	21.1	<0.53	<0.53	42.3	42.3	35.5	3.6	0.066	0	77.8	22.2	Deg.PHC (FCM) 67.4%
s	P4-SB6 (2)	20.6	<0.52	1.3	2.5	3.8	1.9	0.22	<0.002	42.2	45.9	11.9	Deg.PHC (FCM) 71.3%
s	P4-SB7 (2)	20.2	<0.5	2	4.7	6.7	4	0.41	0.004	35.6	51.7	12.7	Deg.PHC (FCM) 62.3%
s	P4-SB8 (2)	19.3	<0.48	6.4	7.1	13.5	5.3	0.61	0.009	56.4	35	8.6	Deg.PHC (FCM) 72.6%

Initial Calibrator QC check OK

Final FCM QC Check OK 98.6 %

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

Project: 510497-003 Thursday, June 08, 2017