Mr. Cyrus Parker, P.E., L.G. North Carolina Department of Transportation Geotechnical Unit 1020 Birch Ridge Drive, Bldg D Raleigh, NC 27610

Re: **Preliminary Site Assessment Reports**

- 1. Parcel # 3 ~ BEBCO LLC Property
- 2. Parcel # 10 ~ All Points Trucking Inc.
- 3. Parcel # 19 ~ HH Downs LLC Property (Formerly Known as the Billy Stegall Jr. Property)
- 4. Parcel # 22 ~ Gerald Rhyne Property.

WBS Element:

34948.1.1

State Project:

U-3447

County:

Mecklenburg

AMEC Project:

693003447

2005 CONTRACT

Dear Mr. Parker:

AMEC Earth & Environmental, Inc. of North Carolina (AMEC) is pleased to furnish the North Carolina Department of Transportation (NCDOT) with four copies of the above referenced reports. We will deliver digital copies of these reports after your review.

If you have any comments or questions concerning these reports, please do not hesitate to call me at 704.875-3570.

Regards.

AMEC Earth & Environmental, Inc. of North Carolina

Helen Corley, L.G.

Program Manager

Helen Caley

Preliminary Site Assessment

All Points Trucking, Inc., Parcel #10 Mecklenburg County, North Carolina

NCDOT State Project: 34948.1.1 (U-3447)

AMEC Project: 693003447

July 26, 2006

Prepared for:

North Carolina Department of Transportation Geotechnical Unit 1020 Birch Ridge Drive Raleigh, NC 27610 Telephone: 919-250-4088

Prepared By:

AMEC Earth and Environmental, Inc. of North Carolina 9800 West Kincey Avenue, Suite 190 Huntersville, North Carolina 28078 (704) 875-3570

Preliminary Site Assessment

All Points Trucking, Inc., Parcel #10
Mecklenburg County, North Carolina
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July 26, 2006

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Helen P. Corley, L.G. Senior Geologist/Project Manager

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APPENDIX 2 - BORING LOGS

APPENDIX 3 - COMPLETE ANALYTICAL RESULTS/CHAIN OF CUSTODY

1.0 INTRODUCTION

In accordance with the North Carolina Department of Transportation (NCDOT) Notice to Proceed dated May 26, 2006, AMEC Earth and Environmental, Inc. of North Carolina (AMEC) has performed a Preliminary Site Assessment (PSA) for portions of the All Points Trucking Property (Parcel # 10) to be acquired for drainage improvements along Downs Circle. The property is located at 12708 Downs Circle, Pineville, Mecklenburg County, North Carolina. The investigation was conducted in accordance with AMEC's Technical and Cost proposal dated May 22, 2006.

NCDOT contracted AMEC to perform a PSA on the All Points Trucking Property due to usage of the property. The property is used as a large truck maintenance shop. The PSA was performed to determine if soils have been impacted by petroleum compounds as a result of past or present uses of the property locate within the proposed right-of-way (ROW) and along the drainage easement. The investigation was specifically completed to determine the presence or absence of petroleum hydrocarbons along the proposed drain line and drainage ditch areas.

The following report describes our field investigations and results of chemical analyses. It includes the evaluation of the analytical data with regards to the presence or absence of soil contamination within the existing right-of-way (ROW) and estimates the extent of soil contamination.

1.1 Site Location

The All Points Trucking Property is located on the south side of Downs Circle immediately southeast of the end of Downs Road in Pineville, Mecklenburg County, North Carolina. It is located within the Piedmont physiographic province of south-central North Carolina.

Figure 1 shows the site location and vicinity.

1.2 Site Description

The site is approximately a 0.77 acre parcel. A single story metal workshop occupies the site. Present at the site are roll off dumpsters used for scrap metal storage, several above ground storage tanks (ASTs) and miscellaneous scrap material from large truck repair operations.

The proposed drainage improvements traverse the full length of the Parcel #10 road frontage (180 feet) on Downs Circle Road as well as along 190 ft of the property boundary between Parcel #10 and the neighboring sod business, Parcel #9. The soil borings approximated the proposed drainage line and drainage ditch as closely as possible without impacting subsurface utilities. Areas inaccessible to the direct push rig were sampled using a hand auger. Future catch basin and drop inlet locations were also specifically targeted.

The area of the proposed drainage improvements along the property contact of Parcels #10 and #9 were accessed from Parcel #9. The ditch is functioning as a small stream as evidenced by the abundance of small fish. All of the ditch samples were hand auger borings located across the stream, closer to Parcel #10 thus more closely targeting the center of the upcoming drainage construction.

Near the southern (downstream) limit of the upcoming drainage activity an AST (250 gallon) located on Parcel #10 was present and sampling was conducted in close proximity to the AST. Petroleum odors that were present in the area may have originated from the AST fill port/vent pipe. The AST appeared to contain diesel fuel. Sample locations and the site layout are shown in Figure 2. A photographic log of the site details is included as Appendix 1.

Adjacent properties across Downs Circle and Downs Road to the west and northwest are residential; the remaining adjacent properties are all commercial.

2.0 GEOLOGY

2.1 Regional Geology

The All Points Trucking Property is located in the Charlotte Belt of the Piedmont physiographic province of south central North Carolina. The Charlotte Belt is a complex series of Paleozoic metamorphic and igneous rocks consisting of metamorphosed granites, metagabbros and diorites, mafic and felsic metavolcanics, and granitic-to-mafic intrusive bodies.

2.2 Site Geology

Site geology was observed through the sampling of 18 hand auger and direct push probe borings. Borings extended to total depths ranging from 1 to 3 feet below ground surface (bgs). Soils generally consisted of a surfical fill of gravel with fines underlain by fill and/or saprolite. The saprolite consisted of a clayey sandy silt, orangish brown and light brown. Gabbro appears to be the bedrock underlying the site. Boring logs are presented in Appendix 2.

Saturated conditions (ground water) were encountered in the eight borings (P10-2 through P10-9) located in close proximity to the ditch. The soils were commonly saturated at a depth of 1 foot bgs. The stream flows southeast from the site and the local topography suggests that ground-water flow would also be to the southeast in the site vicinity.

3.0 FIELD ACTIVITIES

3.1 Preliminary Activities

Prior to commencing field activities at the site, several tasks were accomplished in preparation for the subsurface investigation. The Health and Safety Plan (HSP) was modified to include the site-specific health and safety information necessary for the field activities. North Carolina-1-Call was contacted to facilitate the location of underground utilities in the vicinity of selected boring locations. Environmental Drilling and Probing Services of Charlotte, NC (EDPS) was retained by AMEC to perform the direct push sampling. Pace Laboratories, Inc. was contacted for acquisition of sample bottles. Upon arrival at the site there was concern that some of the subsurface utilities had not been marked due to the presence of telephone risers without any markings. North Carolina-1-Call was again contacted and personnel were immediately dispatched to mark the conflicting utilities. The utilities were marked and the subsurface investigation was conducted without incident.

3.2 Site Reconnaissance

AMEC personnel completed site reconnaissance on May 11th and 18th, 2006. The area was visually examined for the presence of any UST or areas/obstructions that could potentially affect the upcoming subsurface investigation.

3.3 Well Survey

No well survey was performed as part of this PSA and no water supply wells were observed by AMEC on the site. A water meter from the municipal water supply was observed on the property.

3.4 Soil Sampling

Nine hand auger soil borings were conducted perpendicular to Downs Circle along the Parcel #10 and Parcel #9 boundary within the drainage easement along the small stream at an approximate spacing of 20ft on May 30, 2006. These samples were used to target the future ditch line location as closely as possible. The southern most boring, P10-1, was also located approximately 3ft from a 250 gallon AST. The northern most boring, P10-9, was located upgradient of the proposed stormwater outfall to the ditch at the future location

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of a junction box/drop inlet. The borings were completed to depths ranging from 1ft to 2ft bgs. The total depth of each boring represents the refusal depth and is the assumed depth to competent bedrock.

Nine additional borings were located within the ROW parallel to Downs Circle on May 31, 2006. These borings were also spaced approximately 20ft apart and were terminated at a depth of 3ft bgs due to the presence of a sanitary sewer line approximately 4.5ft bgs. These borings also targeted areas where proposed drainage construction will occur.

The sample locations are shown on Figure 2.

No evidence of potential soil contamination was identified by field observations (i.e. petroleum odors, petroleum staining, PID response) in any of the borings. PID screening results are incorporated in Table 1 and on the boring logs included as Appendix 2. No ground-water samples were collected.

Soil samples were collected in accordance with EPA protocols in laboratory-supplied containers. The soil samples for GRO analysis were collected using the 5030 prep method with methanol preservation. Samples for DRO analysis were collected in 4oz. glass containers. Once placed in the containers, the samples were labeled with the sample number, time of collection, date of collection, name of the collector, and the requested analysis. The samples were packed on ice, and then hand delivered to Pace Analytical, a North Carolina Certified Laboratory following proper chain-of-custody procedures.

All equipment used for obtaining samples was decontaminated in accordance with EPA protocols. This included steam cleaning for the direct push equipment and the following for sampling tools:

- equipment thoroughly cleaned with a phosphorous-free detergent;
- rinsed with tap water;
- rinsed with methanol; and,
- rinsed with de-ionized water.

4.0 RESULTS

4.1 Soil Sampling Results

AMEC conducted soil sampling at the All Points Trucking Property (Parcel # 10) on May 30, and 31, 2006. The purpose of the sampling was to determine if releases of petroleum hydrocarbons had occurred, and if so, to estimate the volume of soil that might require special handling during construction activities. The sampling was accomplished using direct push and hand auger methods accompanied by field screening for organic vapors with a PID.

One soil sample was collected from each of the eighteen soil borings. No measurable PID responses, petroleum odors, or petroleum staining were observed in any of the soil borings. Laboratory analyses did not indicate detectable concentrations of GRO in any of the samples. Analyses of soil samples for DRO indicated a detectable concentration in the 5 of the 9 samples collected along the ditch along the Parcel #10 and Parcel #9 boundary. The reported DRO concentrations ranged from 7.6 to 55 mg/kg and the contaminant distribution does not appear to be isolated to a single area. Three of the reported concentrations exceeded the 10 mg/kg NCDENR Initial Action Level for petroleum fuel compounds. Sample P10-1 that was placed beside the 250 gallon AST and was the most downgradient sample along the ditch, did not have any analytical detections.

There were no analytical detections in any of the nine borings parallel to Downs Circle.

No samples were submitted for VOC or SVOC analyses because there were no field indicators of petroleum contaminants.

Results of chemical analyses of soil samples are summarized in Table 1, with detections also posted on Figure 2. Copies of the original laboratory report and chain-of-custody documentation are included as Appendix 2.

4.2 Extent of Impacted Soils

This investigation and analytical program were implemented to determine the presence or absence of petroleum hydrocarbons and, if possible, to estimate the volume of impacted soil present within the Right-of-Way/Easement study area. For the purposes of this PSA it

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was assumed that soil excavation activities will extend to the top of competent rock. The average depth to rock, as defined by auger refusal, is approximately 1.5ft bgs in the area of DRO impacted soil.

DRO was reported in five borings along the drainage ditch. Three of the samples had concentrations exceeding the 40mg/kg NCDENR Action Level for DRO. Based upon the location of the soil borings and the widespread distribution of DRO down the ditch in the proposed study area, AMEC estimates that 180 cubic yards of soil may require special handling if disturbed during construction. The area of potentially petroleum-impacted soil is shown on Figure 2.

5.0 CONCLUSIONS

The following conclusions are based upon AMEC's evaluation of field observations and laboratory analyses of samples collected from the site on May 30-31, 2006.

- The commercial building at the All Points Trucking Property, Parcel #10 is occupied by a large truck service center.
- No field indicators of petroleum contaminants were observed in samples collected for this investigation.
- Laboratory analyses of soil samples indicated no detectable levels of GRO in any of the nine samples.
- Laboratory analyses of soil samples indicated DRO detections ranging from 7.6 to 55 mg/kg in 5 of the 18 boring locations.
- All of the DRO detections were associated with the drainage ditch/stream area and were collected from approximately 1ft bgs.
- The DRO contaminant appears to have been transported and distributed down the ditch/stream from Downs Circle Road or across the road.
- Approximately 180 cubic yards of petroleum-contaminated soil is potentially present within the ditch/stream area.

6.0 RECOMMENDATIONS

If NCDOT excavates soil in the contaminated area, AMEC recommends the following action:

 Segregation during soil excavation then proper disposal of potentially petroleum-impacted soil from the proposed drainage improvement during construction operations.

CONCEPTUAL DESIGN REPORT

. General Information

- 1. Conceptual Design Plan
 - A. North Cross Shopping Center
 - B. Carolina Medical Center
 - C. Birkdale
 - D. Monteith
- 2. Engineering Calculations
- 3. Water Quality and H&H Analysis
- 4. Analysis Matrix & BMP Selection

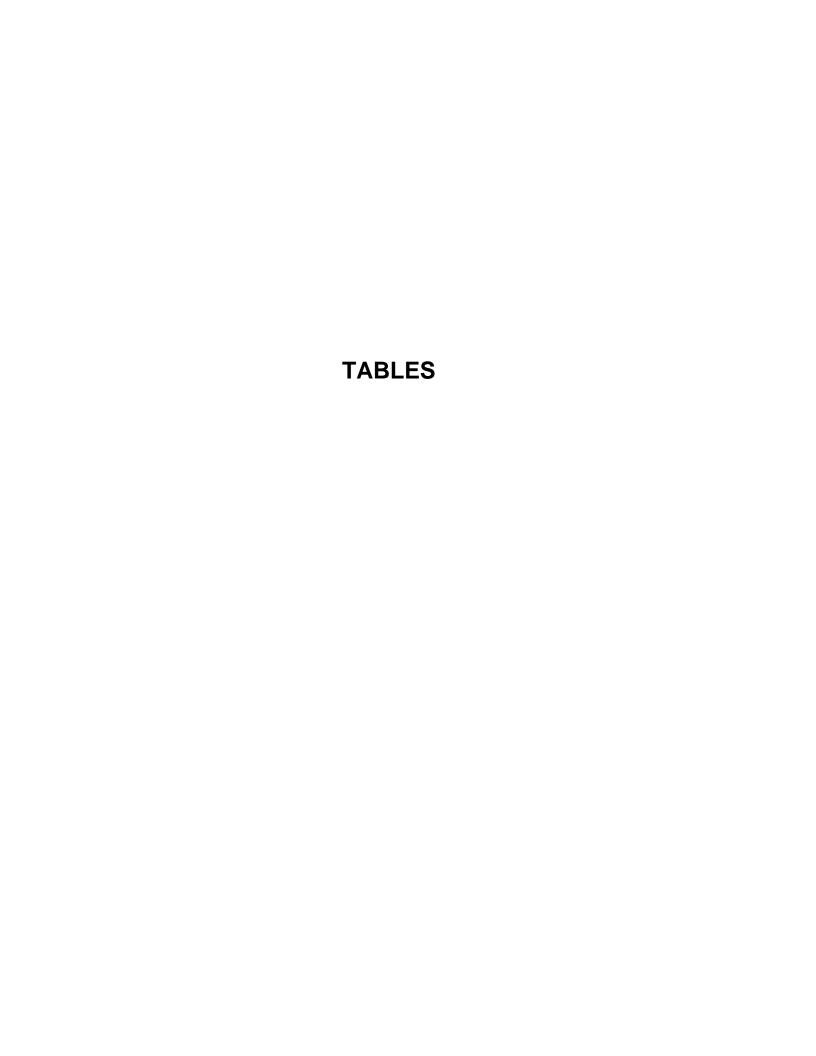


Table 1

Gasoline and Diesel Range Organic Analytical Results in Soil Samples NCDOT Parcel #10

All Points Trucking Inc. Property

Pineville, North Carolina

		Carrata Banth	Field	Soils		
Sample ID	Sample Date	Sample Depth (feet bgs)	Screening	GRO	DRO	
NC Action Leve	lo.	(**************************************	(ppm)	(mg/kg)	(mg/kg)	
NC Action Leve	IS			10	40	
P10-1	05/30/2006	0-1.5	0	BQL (4.9)	BQL (6.4)	
P10-2	05/30/2006	0-1	0	BQL (6.9)	47.	
P10-3	05/30/2006	0-1	0	BQL (7.6)	BQL (8.5)	
P10-4	05/30/2006	0.5-1.5	0	BQL (5.2)	BQL (5.9)	
P10-5	05/30/2006	0-1	0	BQL (6.2)	49.	
P10-6	05/30/2006	0-1	0	BQL (6.2)	7.6	
P10-7	05/30/2006	0-1	0	BQL (5.9)	BQL (30)	
P10-8	05/30/2006	1-1.5	0	BQL (4.9)	55.	
P10-9	05/30/2006	0.5-1	0	BQL (5.1)	9.7	
P10-10	05/31/2006	1-3	0	BQL (4.9)	BQL (6.2)	
P10-11	05/31/2006	1-3	0	BQL (5.2)	BQL (6.3)	
P10-12	05/31/2006	1-3	0	BQL (4.7)	BQL (6.5)	
P10-13	05/31/2006	1-3	0	BQL (4.9)	BQL (6.4)	
P10-14	05/31/2006	1-3	0	BQL (5.1)	BQL (6.8)	
P10-15	05/31/2006	1-3	0	BQL (4.7)	BQL (5.9)	
P10-16	05/31/2006	1-3	0	BQL (5.1)	BQL (6.7)	
P10-17	05/31/2006	1-3	0	BQL (4.5)	BQL (6.4)	
P10-18	05/31/2006	1-3	0	BQL (4.6)	BQL (5.8)	

NOTES:

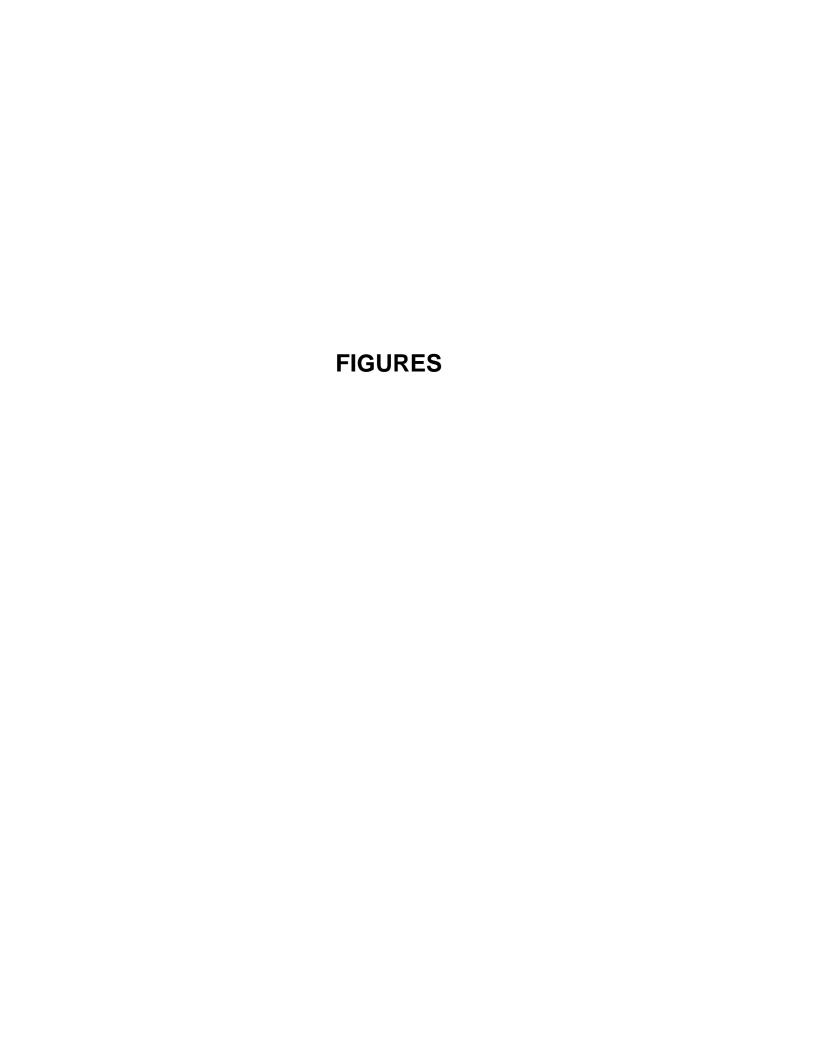
bgs = below ground surface

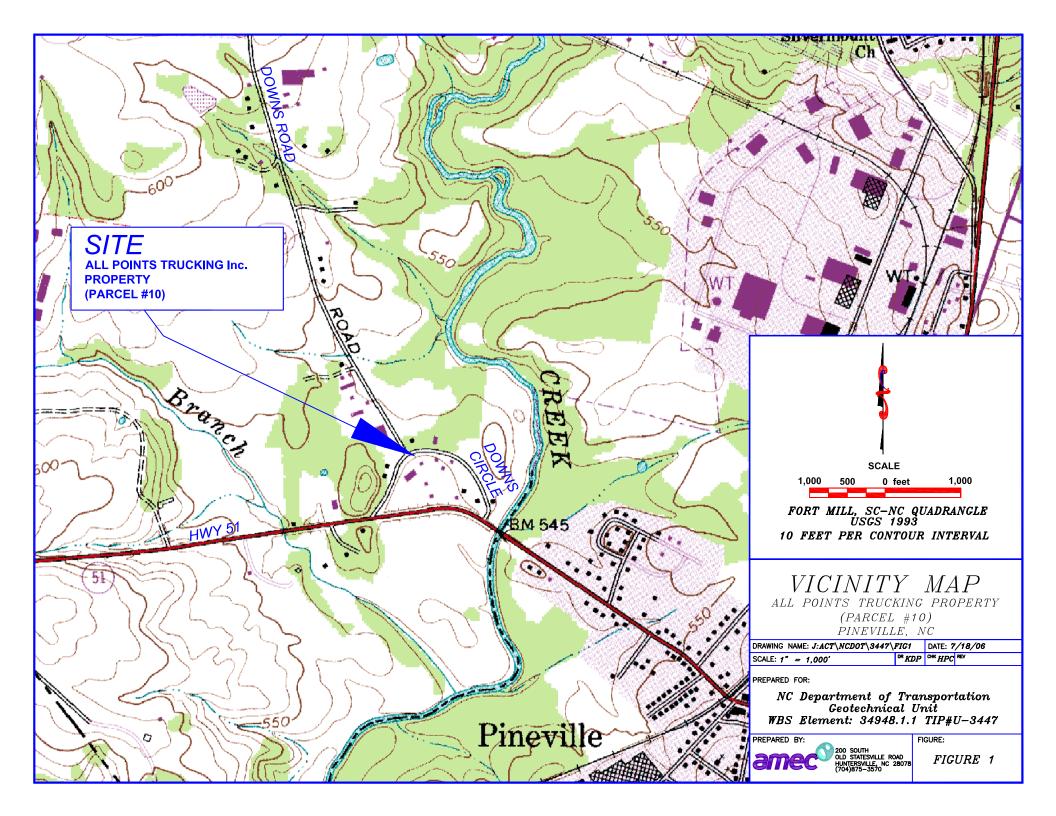
GRO = Gasoline Range Organics by Method 5035

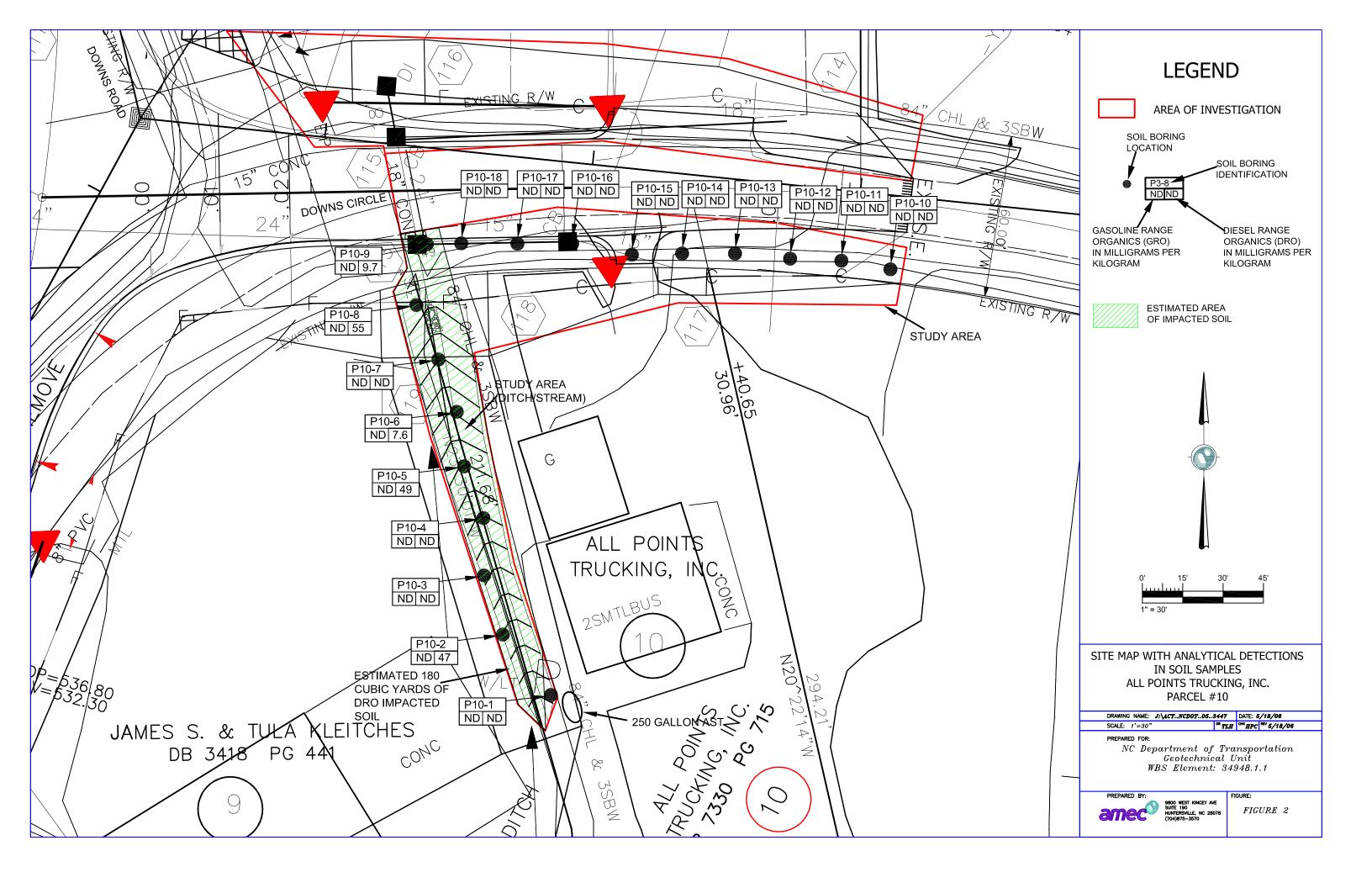
DRO = Diesel Range Organics by Method 3550

BQL = analyte not detected above quantitation limit shown in ()

Standards derived from the North Carolina Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater







APPENDIX 1 SITE PHOTOGRAPHS

Photo Log



Photo No.

1

Date: 5/11/06

Direction Photo Taken: Southeast

Description:

Ditch/stream between Parcel #10 and Parcel #9



Photo No.

2

Date: 5/11/06

Direction Photo Taken: East

Description: Area of site along Downs Circle





Photo No. 3

Date: 5/11/06

Direction Photo Taken: West

Description:

Area of site along Downs Circle



Photo No.

4

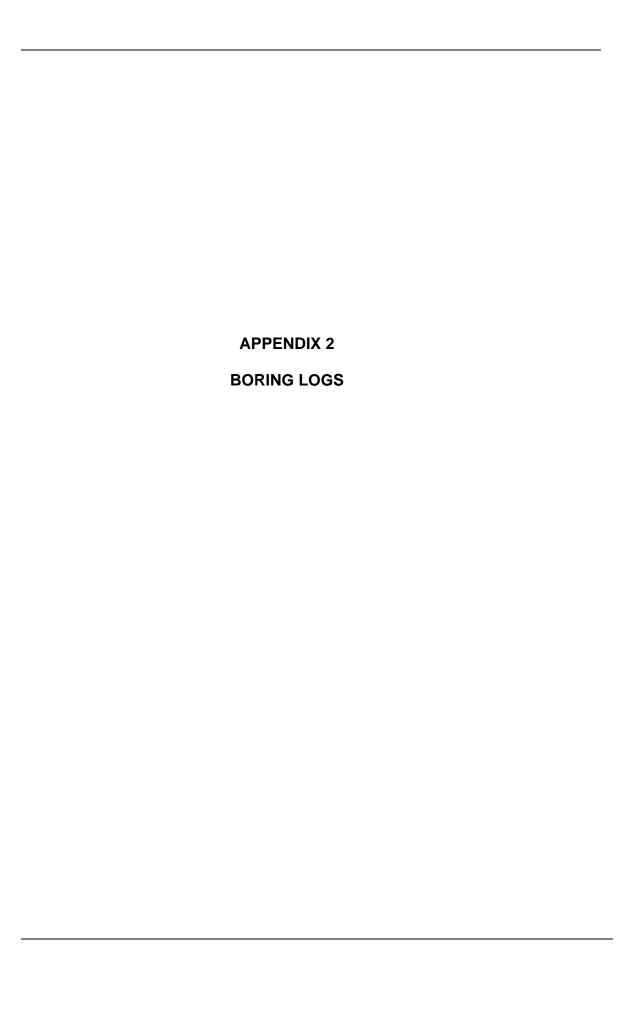
Date: 5/11/06

Direction Photo Taken: North

Description:

250 gallon AST at the southern end of the drainage easement





Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Hand Auger

BORING NO: P 10-1

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	uscs	Field PID Results (ppm)	Recovery	Sample Comments
0.0		Ground Surface Gravelly Silt		0		
-			ML			
				0		
2.0		REFUSAL AT 1.5'				
-						
4.0						
_						
6.0						
-						
8.0						

Hole Size: 3-1/2"

Huntersville, North Carolina 28078

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Hand Auger

BORING NO: P 10-2

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0		Ground Surface				
- - -	/ / / / / /	Sandy Clayey Silt Greenish-grey and brown mottled, wet	ML	0		Wet
_		REFUSAL IN ROCK AT 1'				
_						
2.0-						
_						
-						
-						
4.0-						
-						
_						
-						
6.0-						
-						
-						
-						
8.0-						
-						
-						

Hole Size: 3-1/2"

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Hand Auger

BORING NO: P 10-3

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0		Ground Surface				Wet
- - - -		Sandy Clayey Silt Greenish-grey and brown mottled, wet	ML	0		
2.0-	777			0		
2.0		REFUSAL IN ROCK AT 2'				
_						
-						
4.0-						
_						
_						
6.0						
_						
_						
8.0-						
_						
_						

Hole Size: 3-1/2"

Project Number: 6-9300-3447 Project Location: Pineville, NC

BORING NO: P 10-4

Drilling Company: EDPS Date: 5/30/2006

Driller: Tommy Bolyard Geologist: Kelly D. Phillips

Drilling Method: Hand Auger

Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
	Ground Surface Sandy Clavey Silt with Gravel	N A I	0		
		IVIL	0		
	Sandy Silt Orangish-brown and grey	МН	0		
	REFUSAL AT 1.5'				
	Symbol	Ground Surface Sandy Clayey Silt with Gravel Greenish-grey and brown mottled, wet SAPROLITE Sandy Silt Orangish-brown and grey	Ground Surface Sandy Clayey Silt with Gravel Greenish-grey and brown mottled, wet SAPROLITE Sandy Silt Orangish-brown and grey MH	Ground Surface Sandy Clayey Silt with Gravel Greenish-grey and brown mottled, wet SAPROLITE Sandy Silt Orangish-brown and grey Description Ground Surface ML 0 MH 0	Ground Surface Sandy Clayey Silt with Gravel Greenish-grey and brown mottled, wet SAPROLITE Sandy Silt Orangish-brown and grey MH 0

Hole Size: 3-1/2"

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-5

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0		Ground Surface				
- - -		Sandy Silt Brown; wet at 1.2'	ML	0		
-				0		Wet at 1.2'
2.0-		REFUSAL AT 1.5'				
-						
_						
4.0						
-						
-						
6.0-						
-						
-						
8.0-						
-						
_						

Hole Size: 2"

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-6

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0-		Ground Surface				W - + - + 0 0 0
- - - - -		Sandy Silt Greenish-grey and brown mottled, wet at 0.2'	ML	0		Wet at 0.2'
2.0-		REFUSAL AT 1.5'				
4.0-						
6.0-						
8.0-						

Hole Size: 2"

Project Number: 6-9300-3447 Project Location: Pineville, NC

BORING NO: P 10-7

Drilling Company: EDPS Date: 5/30/2006

Driller: Tommy Bolyard Geologist: Kelly D. Phillips

Drilling Method: Direct Push Macrocore

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0		Ground Surface				Wet
- - -		Sandy Silt Greenish-grey and brown mottled, wet	ML	0		Wet
		REFUSAL IN ROCK AT 1'				
2.0						
-						
-						
-						
4.0						
-						
-						
-						
6.0						
-						
-						
8.0-						
_						

Hole Size: 2"

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-8

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0		Ground Surface Sandy Silt		0		
- - - -		Sandy Silt Brown; wet at 1.2'	ML	0		Wet at 1.2'
2.0-		REFUSAL AT 1.5'				
- - - - -						
4.0						
-						
6.0						
8.0-						
_						

Hole Size: 2"

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-9

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0		Ground Surface				Wet
-		Sandy Clayey Silt Greenish-grey and brown mottled, wet	ML	0		
_		REFUSAL IN ROCK AT 1'				
2.0						
-						
-						
4.0						
_						
6.0						
_						
8.0-						
-						
_						

Hole Size: 2"

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-10

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0-		Ground Surface FILL Clayey Silt Brown with localized areas of gravel	ML	0		Limited probes to 3' maximum depth due to the presence of a sanitary sewer pipe at 4' bgs
2.0-		TERMINATION AT 3'		0		
4.0-						
6.0						
8.0-						

Hole Size: 2"

Huntersville, North Carolina 28078

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

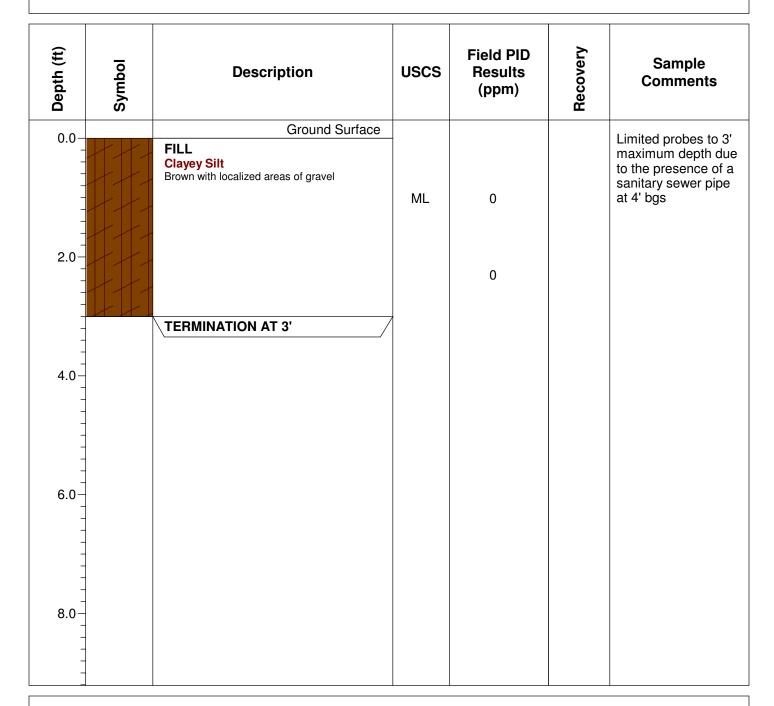
Drilling Method: Direct Push Macrocore

BORING NO: P 10-11

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips



Hole Size: 2"

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-12

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	uscs	Field PID Results (ppm)	Recovery	Sample Comments
0.0-		Ground Surface FILL Clayey Silt Brown with localized areas of gravel	ML	0		Limited probes to 3' maximum depth due to the presence of a sanitary sewer pipe at 4' bgs
2.0-		SAPROLITE Clayey Silt Orangish-brown and light brown TERMINATION AT 3'	ML	0		
4.0-						
6.0-						
8.0-						

Hole Size: 2"

Huntersville, North Carolina 28078

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-13

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0-		Ground Surface FILL				Limited probes to 3'
- - - - -		Clayey Silt Brown with localized areas of gravel	ML	0		maximum depth due to the presence of a sanitary sewer pipe at 4' bgs
2.0-				0		
-		TERMINATION AT 3'				
4.0-						
-						
6.0						
- - -						
8.0-						
-						

Hole Size: 2"

9800 West Kincey Ave, Suite 190 Huntersville, North Carolina 28078

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-14

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0-		Ground Surface FILL Clayey Silt Brown with localized areas of gravel	ML	0		Limited probes to 3' maximum depth due to the presence of a sanitary sewer pipe at 4' bgs
2.0-		TERMINATION AT 3'		0		
4.0-						
6.0						
8.0-						

Hole Size: 2"

Huntersville, North Carolina 28078

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-15

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0	#C#C	Ground Surface Asphalt Gravel with fines FILL Clayey Silt Brown	GM	0		Limited probes to 3' maximum depth due to the presence of a sanitary sewer pipe at 4' bgs
2.0		TERMINATION AT 3'	ML	0		
4.0-						
6.0						
8.0-						

Hole Size: 2"

9800 West Kincey Ave, Suite 190 Huntersville, North Carolina 28078

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

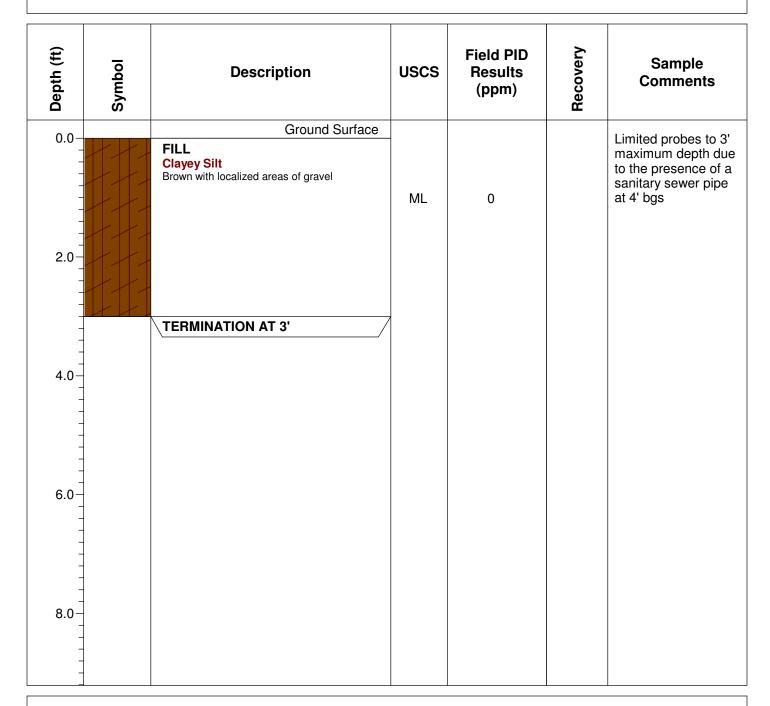
Drilling Method: Direct Push Macrocore

BORING NO: P 10-16

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips



Hole Size: 2"

9800 West Kincey Ave, Suite 190 Huntersville, North Carolina 28078

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Direct Push Macrocore

BORING NO: P 10-17

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0		Ground Surface				Limited probes to 3'
		FILL Clayey Silt with Sand Brown	ML	0		maximum depth due to the presence of a sanitary sewer pipe at 4' bgs
2.0		SAPROLITE Clayey Silt Orangish-brown and light brown	ML	0		
_		TERMINATION AT 3'				
4.0						
6.0						
8.0						

Hole Size: 2"

Huntersville, North Carolina 28078

Project Number: 6-9300-3447

Drilling Company: EDPS

Driller: Tommy Bolyard

Drilling Method: Hand Auger

BORING NO: P 10-18

Project Location: Pineville, NC

Date: 5/30/2006

Geologist: Kelly D. Phillips

Depth (ft)	Symbol	Description	USCS	Field PID Results (ppm)	Recovery	Sample Comments
0.0-		Ground Surface FILL Clayey Silt with Sand Brown	ML	0		Limited probes to 3' maximum depth due to the presence of a sanitary sewer pipe at 4' bgs
2.0-		SAPROLITE Clayey Silt Orangish-brown and light brown TERMINATION AT 3'	ML	0		
4.0						
6.0						
8.0-						

Hole Size: 3-1/2"

Huntersville, North Carolina 28078

APPENDIX 3 LABORATORY ANALYTICAL REPORTS & CHAIN-OF-CUSTODY



ı ave Anaiyuvai beivives, iliv. 9800 Kincey Avenue, Suite 100 Huntersville, NC 28078 Phone: 704.875.9092 Fax: 704.875.9091

Asheville, NC 28804 Phone: 828.254.7176

raut Analyliual otiviuts, iliu.

Fax: 828.252.4618

2225 Riverside Drive

June 14. 2006

Ms. Helen Corley AMEC 9800 West Kincey Ave Suite 190 Huntersville, NC 28078

Lab Project Number: 92120290

Client Project ID:

NCDOT Pine Par 10 WBS 34948.11

Dear Ms. Corley:

Enclosed are the analytical results for sample(s) received by the laboratory May 30, 2006through May 31, 2006 Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals Analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Charlotte laboratory unless otherwise footnoted.

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

R#chard richard.swartz@pacelabs.com

Project Manager

Enclosures

FL NELAP





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Fax: 828.252.4618

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Solid results are reported on a dry weight basis

Lab Sample No:

927037705

Client Sample ID: P10-1

Project Sample Number: 92120290-001

Date Collected: 05/30/06 11:15

Matrix: Soil

Date Received: 05/30/06 17:40

•				11d c1 17. 3011	Date N	.eceived. 03/30/0	0 .
Parameters Wet Chemistry	Results	Units	Report Limit	Analyzed By	CAS No.	Qual RegLmt	
Percent Moisture	Method: % Mo	oisture					
Percent Moisture	21.7	%		05/31/06 08:14 KDF			
GC Semivolatiles							
TPH in Soil by 3545/8015	Prep/Method:	EPA 3545 /	EPA 8015				
Diesel Fuel	ND	mg/kg	6.4	06/10/06 08:06 KBS	68334-30-5		
n-Pentacosane (S)	51	%		06/10/06 08:06 KBS	629-99-2		
Date Extracted	06/07/06			06/07/06			
GC Volatiles							
GAS, Soil, North Carolina	Method: EPA	8015					
Gasoline	ND	mg/kg	4.9	06/09/06 00:36 DHW			
4-Bromofluorobenzene (S)	81	%		06/09/06 00:36 DHW			

Date: 06/14/06

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Fax: 828.252.4618

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: 927037713

Client Sample ID: P10-2

Project Sample Number: 92120290-002

Date Collected: 05/30/06 12:45

Matrix: Soil

Date Received: 05/30/06 17:40

,				11401 771 3011	Dutt N	deceived: 03/30/00 1	,
Parameters	Results	Units	Report Limit	Analyzed By	CAS No.	<u>Qual</u> RegLmt	
Wet Chemistry						10320	
Percent Moisture	Method: % Mc	oisture					
Percent Moisture	36.5	%		05/31/06 17:08 TNM			
GC Semivolatiles							
TPH in Soil by 3545/8015	Prep/Method:	EPA 3545 /	EPA 8015				
Diesel Fuel	47.	mg/kg	7.9	06/10/06 09:23 KBS	68334-30-5		
n-Pentacosane (S)	51	%		06/10/06 09:23 KBS	629-99-2		
Date Extracted	06/07/06			06/07/06			
GC Volatiles							
GAS, Soil, North Carolina	Method: EPA	8015					
Gasoline	ND	mg/kg	6.9	06/09/06 01:04 DHW			
4-Bromofluorobenzene (S)	72	%		06/09/06 01:04 DHW	460-00-4		

Date: 06/14/06

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No:

927037721 Client Sample ID: P10-3

Project Sample Number: 92120290-003

Date Collected: 05/30/06 13:00

Matrix: Soil

Date Received: 05/30/06 17:40

Parameters Wet Chemistry	Results	Units	Report Limit	Analyzed	Ву	CAS No.	Qua1	RegLmt
Percent Moisture	Method: % M	oisture						
Percent Moisture	41.5	%		05/31/06 17:08	TNM			
GC Semivolatiles								
TPH in Soil by 3545/8015	Prep/Method	: EPA 3545 /	EPA 8015					
Diesel Fuel	ND	mg/kg	8.5	06/13/06 13:44	KBS	68334-30-5		
n-Pentacosane (S)	80	%		06/13/06 13:44	KBS	629-99-2		
Date Extracted	06/12/06			06/12/06				
GC Volatiles								
GAS, Soil, North Carolina	Method: EPA	8015						
Gasoline	ND	mg/kg	7.6	06/09/06 02:31	DHW			
4-Bromofluorobenzene (S)	84	%		06/09/06 02:31	DHW	460-00-4		

Date: 06/14/06

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: 927037739

Client Sample ID: P10-4

Project Sample Number: 92120290-004

Date Collected: 05/30/06 13:15

Matrix: Soil

Date Received: 05/30/06 17:40

Cirent Sample 10: P10-4				Matrix: Soil		Date R	eceived	1: 05/30/0	6 1
Parameters	Results		Report Limit	Analyzed	Ву	CAS No.	Qual	RegLmt	
Wet Chemistry									
Percent Moisture	Method: % Mc	oisture							
Percent Moisture	15.9	%		05/31/06 17:08	TNM				
GC Semivolatiles									
TPH in Soil by 3545/8015	Prep/Method:	EPA 3545 /	EPA 8015						
Diesel Fuel	ND	mg/kg	5.9	06/10/06 08:45	KBS	68334-30-5			
n-Pentacosane (S)	55	%		06/10/06 08:45	KBS	629-99-2			
Date Extracted	06/07/06			06/07/06					
GC Volatiles									
GAS, Soil, North Carolina	Method: EPA	8015							
Gasoline	ND	mg/kg	5.2	06/09/06 02:59	DHW				
4-Bromofluorobenzene (S)	50	%		06/09/06 02:59	DHW	460-00-4			

Date: 06/14/06

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Fax: 828.252.4618

Lab Project Number: 92120290

06/09/06 03:28 DHW 460-00-4

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: Client Sample ID: P10-5

4-Bromofluorobenzene (S)

64

%

927037747

Project Sample Number: 92120290-005

Date Collected: 05/30/06 13:20

Matrix: Soil

Date Received: 05/30/06 17:40

Parameters Wet Chemistry	Results	Units	Report Limit	Analyzed By	CAS No.	Qual RegLmt
Percent Moisture	Method: % Mo	isture				
Percent Moisture	18.0	%		05/31/06 17:08 TNM		
GC Semivolatiles						
TPH in Soil by 3545/8015	Prep/Method:	EPA 3545 /	EPA 8015			
Diesel Fuel	49.	mg/kg	30.	06/10/06 11:20 KBS	68334-30-5	1
n-Pentacosane (S)	143	%		06/10/06 11:20 KBS	629-99-2	
Date Extracted	06/07/06			06/07/06		
GC Volatiles						
GAS, Soil, North Carolina	Method: EPA	8015				
Gasoline	ND	mg/kg	6.2	06/09/06 03:28 DHW		

Date: 06/14/06

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: 927037754 Client Sample ID: P10-6 Project Sample Number: 92120290-006

Date Collected: 05/30/06 13:30

Matrix: Soil

Date Received: 05/30/06 17:40

Parameters Wet Chemistry	Results	Units	Report Limit	Analyzed	Ву	CAS No.	Qual RegLmt
Percent Moisture	Method: % Mc	isture					
Percent Moisture	31.5	%		05/31/06 17:09 T	ГИМ		
GC Semivolatiles							
TPH in Soil by 3545/8015	Prep/Method:	EPA 3545 /	EPA 8015				
Diesel Fuel	7.6	mg/kg	7.3	06/10/06 10:41 K	KBS 6	8334-30-5	
n-Pentacosane (S)	22	%		06/10/06 10:41 K	KBS 6	529-99-2	2
Date Extracted	06/07/06			06/07/06			
GC Volatiles							
GAS, Soil, North Carolina	Method: EPA	8015					
Gasoline	ND	mg/kg	6.2	06/09/06 03:57 D	MHC		
4-Bromofluorobenzene (S)	79	%		06/09/06 03:57 D	DHW 4	160-00-4	

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927037762

Lab Sample No:

Client Sample ID: P10-7

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Project Sample Number: 92120290-007

Date Collected: 05/30/06 13:40

Matrix: Soil

Date Received: 05/30/06 17:40

Parameters Wet Chemistry	Results	<u>Units</u>	Report Limit	Analyzed E	CAS No.	Qual RegLmt
Percent Moisture	Method: % Mc	oisture				
Percent Moisture	16.5	%		05/31/06 17:09 TN	М	
GC Semivolatiles						
TPH in Soil by 3545/8015	Prep/Method:	: EPA 3545 /	EPA 8015			
Diesel Fuel	ND	mg/kg	30.	06/10/06 10:41 KB	S 68334-30-5	1
n-Pentacosane (S)	231	%		06/10/06 10:41 KB	S 629-99-2	3
Date Extracted	06/07/06			06/07/06		
GC Volatiles						
GAS, Soil, North Carolina	Method: EPA	8015				
Gasoline	ND	mg/kg	5.9	06/09/06 04:26 DH	W	
4-Bromofluorobenzene (S)	65	%		06/09/06 04:26 DH	W 460-00-4	

Date: 06/14/06

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Fax: 828.252.4618

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: 927

927037770

Project Sample Number: 92120290-008

200 2 1

Date Collected: 05/30/06 13:50

Client Sample ID: P10-8

Matrix: Soil

Date Received: 05/30/06 17:40

Parameters Results Units Report Limit Analyzed By CAS No. Qual RegLmt Wet Chemistry Percent Moisture Method: % Moisture Percent Moisture 10.6 05/31/06 17:09 TNM GC Semivolatiles TPH in Soil by 3545/8015 Prep/Method: EPA 3545 / EPA 8015 Diesel Fuel 55. mg/kg 06/10/06 11:20 KBS 68334-30-5 n-Pentacosane (S) 106 % 06/10/06 11:20 KBS 629-99-2 Date Extracted 06/07/06 06/07/06

GC Volatiles

Gasoline

GAS, Soil, North Carolina

4-Bromofluorobenzene (S)

Method: EPA 8015

ND mg/kg

4.9

06/09/06 04:54 DHW

64 %

06/09/06 04:54 DHW 460-00-4

Date: 06/14/06

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Pace Analytical Services, Inc.

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: Client Sample ID: P10-9

927037788

Project Sample Number: 92120290-009

Date Collected: 05/30/06 14:00

Matrix: Soil

Date Received: 05/30/06 17:40

Parameters Wet Chemistry	Results	Units	Report Limit	Analyzed	Ву	CAS No.	Qual RegLmt
Percent Moisture	Method: % Mo	isture					
Percent Moisture	25.7	%		05/31/06 17:09	TNM		
GC Semivolatiles							
TPH in Soil by 3545/8015	Prep/Method:	EPA 3545 /	EPA 8015				
Diesel Fuel	9.7	mg/kg	6.7	06/10/06 08:06 H	KBS	68334-30-5	
n-Pentacosane (S)	52	%		06/10/06 08:06 H	KBS	629-99-2	
Date Extracted	06/07/06			06/07/06			
GC Volatiles							
GAS, Soil, North Carolina	Method: EPA 8	3015					
Gasoline	ND	mg/kg	5.1	06/09/06 05:23 [DHW		
4-Bromofluorobenzene (S)	65	%		06/09/06 05:23 [DHW	460-00-4	

Date: 06/14/06

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: 927042093

J42093 Projec

Project Sample Number: 92120290-010

Matrix: Soil

Date Collected: 05/31/06 09:30 Date Received: 05/31/06 17:15

Client Sample ID: P10-10

•.

Parameters	Results	Units	Report Limit	Analyzed	Вy	CAS No.	Qual	RegLmt
Wet Chemistry								
Percent Moisture	Method: % Mo	isture						
Percent Moisture	18.8	%		06/01/06 10:08	TNM			
CC Camius 1-4-11-								

GC Semivolatiles

 TPH in Soil by 3545/8015
 Prep/Method: EPA 3545 / EPA 8015

 Diesel Fuel
 ND mg/kg 6.2

 n-Pentacosane (S)
 54 %

06/07/06

06/10/06 07:27 KBS 68334-30-5 06/10/06 07:27 KBS 629-99-2

06/07/06

GC Volatiles

Date Extracted

GAS, Soil, North Carolina Method Gasoline ND 4-Bromofluorobenzene (S) 80

Method: EPA 8015

) mg/kg) % 4.9 06/09/06 22:35 DHW

06/09/06 22:35 DHW 460-00-4

Date: 06/14/06

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: Client Sample ID: P10-11

927042101

Project Sample Number: 92120290-011

Date Collected: 05/31/06 09:40

Matrix: Soil

Date Received: 05/31/06 17:15

Parameters Wet Chemistry	Results	<u>Units</u>	Report Limit	Analyzed	Ву	_CAS No.	Qual	RegLmt
Percent Moisture	Method: % M	oisture						
Percent Moisture	20.3	%		06/01/06 10:09	TNM			
GC Semivolatiles								
TPH in Soil by 3545/8015	Prep/Method	: EPA 3545 /	EPA 8015					
Diesel Fuel	ND	mg/kg	6.3	06/10/06 05:32	KBS	68334-30-5		
n-Pentacosane (S)	55	%		06/10/06 05:32	KBS	629-99-2		
Date Extracted	06/07/06			06/07/06				
GC Volatiles								
GAS, Soil, North Carolina	Method: EPA	8015						
Gasoline	ND	mg/kg	5.2	06/10/06 00:59	DHW			
4-Bromofluorobenzene (S)	99	%		06/10/06 00:59	DHW	460-00-4		

Date: 06/14/06

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927042119

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Project Sample Number: 92120290-012 Matrix: Soil

Date Collected: 05/31/06 09:50 Date Received: 05/31/06 17:15

<u>Parameters</u> Results Units Report Limit Analyzed By CAS No. Qual RegLmt Wet Chemistry Percent Moisture Method: % Moisture Percent Moisture 23.2 % 06/01/06 10:09 TNM GC Semivolatiles

TPH in Soil by 3545/8015 Prep/Method: EPA 3545 / EPA 8015 Diesel Fuel

ND mg/kg 06/13/06 14:27 KBS 68334-30-5 59 % 06/13/06 14:27 KBS 629-99-2

Date Extracted 06/12/06 06/12/06

GC Volatiles

n-Pentacosane (S)

Lab Sample No:

Client Sample ID: P10-12

GAS, Soil, North Carolina Method: EPA 8015 Gasoline ND mg/kg 4.7

06/10/06 01:28 DHW 4-Bromofluorobenzene (S) 86 % 06/10/06 01:28 DHW 460-00-4

Date: 06/14/06

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Pace Analytical Services, Inc. 2225 Riverside Drive Asheville, NC 28804 Phone: 828.254.7176

Fax: 828.252.4618

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No:

927042127

Project Sample Number: 92120290-013

Date Collected: 05/31/06 09:55

Client Sample ID: P10-13

Matrix: Soil

Date Received: 05/31/06 17:15

Parameters Wet Chemistry	Results	Units	Report Limit	Analyzed	Ву	CAS No.	<u>Qual</u>	RegLmt
Percent Moisture	Method: % Mo	isture						
Percent Moisture	22.2	%		06/01/06 10:09 7	ΓNΜ			
GC Semivolatiles								
TPH in Soil by 3545/8015	Prep/Method:	EPA 3545 /	EPA 8015					
Diesel Fuel	ND	mg/kg	6.4	06/10/06 06:10 k	KBS	68334-30-5		
n-Pentacosane (S)	66	%		06/10/06 06:10 k	KBS	629-99-2		
Date Extracted	06/07/06			06/07/06				
GC Volatiles								
GAS, Soil, North Carolina	Method: EPA	8015						
Gasoline	ND	mg/kg	4.9	06/10/06 01:57	DHW			
4-Bromofluorobenzene (S)	79	%		06/10/06 01:57	DHW	460-00-4		

Date: 06/14/06

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Asheville Certification IDs
NC Wastewater 40
NC Drinking Water 37712
SC 99030
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REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No:

Client Sample ID: P10-14

927042135

Project Sample Number: 92120290-014

6.8

Date Collected: 05/31/06 10:00

Matrix: Soil

Date Received: 05/31/06 17:15

<u>Parameters</u>	Results	Units	Report Limit	Analyzed	Ву	CAS No.	Qua1	RegLmt
U.t. Chandatan								

Wet Chemistry
Percent Moisture

Method: % Moisture 26.6 %

06/01/06 10:09 TNM

GC Semivolatiles

Percent Moisture

TPH in Soil by 3545/8015

Diesel Fuel n-Pentacosane (S) Date Extracted Prep/Method: EPA 3545 / EPA 8015

ND mg/kg 78 % 06/12/06 06/13/06 15:26 KBS 68334-30-5 06/13/06 15:26 KBS 629-99-2

06/12/06

GC Volatiles

GAS, Soil, North Carolina Gasoline 4-Bromofluorobenzene (S)

Method: EPA 8015

ND mg/kg 82 % 5.1 06/10/06 02:26 DHW

06/10/06 02:26 DHW 460-00-4

Date: 06/14/06

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Asheville Certification IDs

NC Wastewater 40 NC Drinking Water 37712 SC 99030

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Charlotte Certification IDs
NC Wastewater 12
NC Drinking Water 37706
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Pace Analytical Services, Inc.

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: 927042143 Client Sample ID: P10-15

Project Sample Number: 92120290-015

Date Collected: 05/31/06 10:05

Matrix: Soil

Date Received: 05/31/06 17:15

Parameters Wet Chemistry	Results	Units	Report Limit	Analyzed	Ву	CAS_No.	Qual	RegLmt
Percent Moisture	Method: % Mo	isture						
Percent Moisture	15.6	%		06/01/06 10:10	TNM			
GC Semivolatiles								
TPH in Soil by 3545/8015	Prep/Method:	EPA 3545 /	EPA 8015					
Diesel Fuel	ND	mg/kg	5.9	06/10/06 06:49	KBS	68334-30-5		
n-Pentacosane (S)	70	%		06/10/06 06:49	KBS	629-99-2		
Date Extracted	06/07/06			06/07/06				
GC Volatiles								
GAS, Soil, North Carolina	Method: EPA	8015						
Gasoline	ND	mg/kg	4.7	06/10/06 02:55	DHW			
4-Bromofluorobenzene (S)	81	%		06/10/06 02:55	DHW	460-00-4		

Date: 06/14/06

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: 927042150

Client Sample ID: P10-16

Project Sample Number: 92120290-016

Date Collected: 05/31/06 10:15

Matrix: Soil

Date Received: 05/31/06 17:15

Parameters	Results	Units	Report Limit	Analyzed	Ву	CAS No.	Qual	RegLmt
Wet Chemistry								
Percent Moisture	Method: % M	oisture						
Percent Moisture	25.6	%		06/01/06 10:10 T	NM			
GC Semivolatiles								
TPH in Soil by 3545/8015	Prep/Method	: EPA 3545 /	EPA 8015					
Diesel Fuel	ND	mg/kg	6.7	06/09/06 22:28 K	(BS	68334-30-5		
n-Pentacosane (S)	29	%		06/09/06 22:28 K	(BS	629-99-2	2	
Date Extracted	06/08/06			06/08/06				
GC Volatiles								
GAS, Soil, North Carolina	Method: EPA	8015						
Gasoline	ND	mg/kg	5.1	06/10/06 03:23 D)HW			
4-Bromofluorobenzene (S)	80	%		06/10/06 03:23 D)HW	460-00-4		

Date: 06/14/06

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No:

Client Sample ID: P10-17

927042168

Project Sample Number: 92120290-017

Date Collected: 05/31/06 10:20

Matrix: Soil

Date Received: 05/31/06 17:15

Parameters Wet Chemistry	Results	Units	Report Limit	Analyzed	By CAS No.	Qual RegLmt
Percent Moisture	Method: % Mo	istura				
Percent Moisture	22.0			00/01/00 10 11 T	3.13.4	
rercent noisture	22.0	%		06/01/06 10:11 T	NM	
GC Semivolatiles						
TPH in Soil by 3545/8015	Prep/Method:	EPA 3545 /	EPA 8015			
Diesel Fuel	ND	mg/kg	6.4	06/10/06 01:40 K	BS 68334-30-5	
n-Pentacosane (S)	51	%		06/10/06 01:40 K	BS 629-99-2	
Date Extracted	06/08/06			06/08/06		
GC Volatiles						
GAS, Soil, North Carolina	Method: EPA	8015				
Gasoline	ND	mg/kg	4.5	06/10/06 03:52 D	HW	
4-Bromofluorobenzene (S)	79	%		06/10/06 03:52 D	HW 460-00-4	

Date: 06/14/06

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NC Wastewater 40 NC Drinking Water 37712 SC 99030 FL NELAP E87648

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

Lab Sample No: 927042176 Client Sample ID: P10-18 Project Sample Number: 92120290-018

Date Collected: 05/31/06 10:40

Matrix: Soil

Date Received: 05/31/06 17:15

Parameters	Results	Units	Report Limit	Analyzed By	CAS No.	Qual RegLmt					
Wet Chemistry											
Percent Moisture	Method: % M	Method: % Moisture									
Percent Moisture	13.7	%		06/01/06 10:11 TNM							
GC Semivolatiles											
TPH in Soil by 3545/8015	Prep/Method	: EPA 3545 /	EPA 8015								
Diesel Fuel	ND	mg/kg	5.8	06/10/06 00:23 KBS	68334-30-5						
n-Pentacosane (S)	57	%		06/10/06 00:23 KBS	629-99-2						
Date Extracted	06/08/06			06/08/06							
GC Volatiles											
GAS, Soil, North Carolina	Method: EPA	8015									
Gasoline	ND	mg/kg	4.6	06/10/06 04:21 DHW							
4-Bromofluorobenzene (S)	80	%		06/10/06 04:21 DHW	460-00-4						

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

PARAMETER FOOTNOTES

Method 9071B modified to use ASE.

All pH, Free Chlorine, Total Chlorine and Ferrous Iron analyses conducted outside of EPA recommended immediate hold time.

Depending on the moisture content the PRLs can be elevated for all soil samples reported on a dry weight basis.

2-Chloroethyl vinyl ether has been shown to degrade in the presence of acid.

ND Not detected at or above adjusted reporting limit

NC Not Calculable

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

MDL Adjusted Method Detection Limit

(S) Surrogate

The sample extract could not be concentrated to the normal final volume. This resulted in an elevated [1] reporting limit.

[2] Low surrogate recovery was confirmed as a matrix effect by a second analysis.

[3] The surrogate recovery was outside QC acceptance limits due to matrix interference.

Date: 06/14/06

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Asheville Certification IDs NC Wastewater NC Drinking Water 37712 SC 99030 FL NELAP E87648 REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

QC Batch: 159166

Analysis Method: EPA 8015

QC Batch Method: EPA 3545

Analysis Description: TPH in Soil by 3545/8015

Associated Lab Samples:

927037713 927037721 927037705

927037739

927037747

927037754

927037762 927037770 927037788

927042093

927042101

927042119

927042127

927042135

927042143

METHOD BLANK: 927065847

Parameter

Parameter

Diesel Fuel

n-Pentacosane (S)

Diesel Fuel

n-Pentacosane (S)

Associated Lab Samples: 927037705

LABORATORY CONTROL SAMPLE: 927065854

927037713 927037788 927037721 927042093 927037739 927042101 927037747

927037754

927037762

927037770 927042143

Reporting

Footnotes

927042119

927042127

927042135

mg/kg

Units

B1ank Result ND

61

Limit 5.0

<u>Footnotes</u>

%

Spike

LCS

LCS

Units mg/kg

Result Conc. 166.70 93.84

% Rec 56

71

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927065862 927065870

		927037705	Spike	MS	MSD	MS	MSD			
Parameter	Units	Result	Conc.	<u>Result</u>	Result	%_Rec 2	%_ <u>Rec</u>	RPD	<u>Footnotes</u>	
Diesel Fuel	mg/kg	1.202	212.90	132.1	201.4	62	94	42	1	
n-Pentacosane (S)						76	111			

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QUALITY CONTROL DATA

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

QC Batch: 159210

Analysis Method: EPA 8015

QC Batch Method: EPA 3545

Associated Lab Samples:

927042150

927042168

927042176

Analysis Description: TPH in Soil by 3545/8015

METHOD BLANK: 927067546

Associated Lab Samples:

927042150 927042168 927042176

Parameter

Units

B1ank Result Reporting Limit

Footnotes

Diesel Fuel n-Pentacosane (S)

n-Pentacosane (S)

mg/kg %

ND 50 5.0

LABORATORY CONTROL SAMPLE: 927067553

Parameter Diesel Fuel Units mg/kg Spike Conc. 166.70

LCS Result 97.14

LCS % Rec Footnotes 58

63

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927067561 927067579

927042259 Spike MS MSD MS MSD Parameter Result Units Conc. Result Result Rec % Rec RPD Footnotes Diesel Fuel 1.213 219.00 mg/kg 116.4 110.2 53 50 6 n-Pentacosane (S) 57 53

Date: 06/14/06

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QUALITY CONTROL DATA

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Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

QC Batch: 159259

Analysis Method: EPA 8015

QC Batch Method: EPA 8015

Analysis Description: GAS, Soil, North Carolina

Associated Lab Samples:

927037713 927037705 927037721

927037739 927037747

927037754

927037762 927037770 927037788

Footnotes

Footnotes

METHOD BLANK: 927070789

Associated Lab Samples:

927037705 927037713 927037721 927037739 927037747

927037754

927037762

Parameter

Gasoline

Parameter

Gasoline

4-Bromofluorobenzene (S)

927037770 927037788

Units

mg/kg

%

Reporting

Limit

5.0

ND 88

Blank

Result

LABORATORY CONTROL SAMPLE: 927070797

Spike

LCS

LCS

Units mg/kg Conc. Result 25.00 26.20 % Rec 105

86

MATRIX SPIKE: 927070805

4-Bromofluorobenzene (S)

4-Bromofluorobenzene (S)

4-Bromofluorobenzene (S)

Parameter Gasoline

Units mg/kg 927037622 Result

0.3917

Spike Conc. 21.88

MS Result 23.64

% Rec Footnotes 106

MS

97

Footnotes

SAMPLE DUPLICATE: 927070813

Parameter

Gasoline

Units mg/kg

%

927037630 Result

ND

84

DUP Result ND

82

RPD NC

Date: 06/14/06

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Asheville Certification IDs

NC Wastewater 40 NC Drinking Water 37712

SC 99030 FL NELAP E87648 REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

QC Batch: 159354

Analysis Method: EPA 8015

QC Batch Method: EPA 8015

Analysis Description: GAS, Soil, North Carolina

Associated Lab Samples:

927042101 927042119

927042127 927042135

927042093 927042143

927042150

927042168 927042176

Footnotes

METHOD BLANK: 927073627

927042101

927042119

927042127 927042135 927042143

927042150

Associated Lab Samples:

927042093 927042168

927042176

Reporting

Units mg/kg B1ank Result ND

Limit

5.0

4-Bromofluorobenzene (S)

%

84

LABORATORY CONTROL SAMPLE: 927073635

Parameter Gasoline

<u>Parameter</u>

Gasoline

Units

mg/kg

Spike Conc. 25.00

LCS Result 25.00

LCS

% Rec

100

90

MATRIX SPIKE: 927073643

4-Bromofluorobenzene (S)

Parameter

Gasoline

Parameter

Gasoline

927069955 Units Result

Spike Conc

MS Result MS

Footnotes

mg/kg 0.2360 12.06

12.49

%_Rec_Footnotes 102

4-Bromofluorobenzene (S)

94

Footnotes

SAMPLE DUPLICATE: 927073650

927070136 Units Result

DUP

Result

RPD

NC

4-Bromofluorobenzene (S)

mg/kg

%

ND 84 ND 83

Date: 06/14/06

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Asheville Certification IDs

NC Wastewater 40 NC Drinking Water 37712

SC 99030 FL NELAP E87648 REPORT OF LABORATORY ANALYSIS

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2225 Riverside Drive

QUALITY CONTROL DATA

Lab Project Number: 92120290

Footnotes

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

QC Batch: 158460

Analysis Method: % Moisture

Associated Lab Samples:

QC Batch Method:

Analysis Description: Percent Moisture

SAMPLE DUPLICATE: 927037796

927036673

DUP

Parameter Units Result Result **RPD** Percent Moisture % 25.80 26.70

927037705

Date: 06/14/06

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QUALITY CONTROL DATA

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

QC Batch: 158603

Analysis Method: % Moisture

QC Batch Method:

Analysis Description: Percent Moisture

Associated Lab Samples: 927037713

927037739

927037754

927037762

927037721

927037770 927037788

SAMPLE DUPLICATE: 927041608

927040741

DUP

Parameter Units Result Result RPD

Footnotes

927037747

Percent Moisture

17.30

15.10

14

Date: 06/14/06

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QUALITY CONTROL DATA

Lab Project Number: 92120290

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

QC Batch: 158643

Analysis Method: % Moisture

QC Batch Method:

Analysis Description: Percent Moisture

Associated Lab Samples:

927042093 927042101

927042119

927042127 927042135

927042143

927042150

927042168

927042176

SAMPLE DUPLICATE: 927043224

Danamata...

Percent Moisture

927039859

DUP

Parameter

Units % Result 14.00 Result 11.10 RPD 23 Footnotes

Date: 06/14/06

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Lab Project Number: 92120290

Fax: 704.875.9091

Client Project ID: NCDOT Pine Par 10 WBS 34948.11

QUALITY CONTROL DATA PARAMETER FOOTNOTES

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

LCS(D) Laboratory Control Sample (Duplicate)

MS(D) Matrix Spike (Duplicate)

DUP Sample Duplicate

ND Not detected at or above adjusted reporting limit

NC Not Calculable

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

MDL Adjusted Method Detection Limit

RPD Relative Percent Difference

(S) Surrogate

[1] RPD value was outside of control limits, however % Recoveries were acceptable. Samples for QC batch

accepted based on % recoveries and completeness of QC data.

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Asheville Certification IDs NC Wastewater 40 NC Drinking Water 37712

SC 99030 FL NELAP E87648 Charlotte Certification IDsNC Wastewater12NC Drinking Water37706SC99006FL NELAPE87627

Chain-Or-Cusiodi / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. Pace Analytical ° of Page: Section A Section B Section C 0999468 Required Client Information: Required Project Information: Invoice Information: Company AMEC Address ASOO West Livery Ave#190 Report To: Helen Colley REGULATORY AGENCY ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER Company Name: brotechnical UST ☐ RCRA □ Other Huntersulle N 28078 Address: □GA □MI □ MN ☑NC SITE LOCATION Email,To: Purchase Order No.: Pace Quote Reference: WRS Firmont helen, covicara ame, com □ WI □OH □SC OTHER Pace Project Manager: KICharal Swantz Project Name? hevile-Parce 10 7048758712 Filtered (Y/N) Requested Due Date/TAT: Project Number: Pace Profile #: Requested Analysis: Section D Required Client Information MATRIX CODE DRINKING WATER WT WASTE WATER WW Preservatives SAMPLE TYPE 3=GRAB C=COMP MATRIX CODE SAMPLEID COLLECTED SL OL WP AR OT TS 2120270 One Character per box. COMPOSITE START (A-Z, 0-9 / ,-) COMPOSITE END/GRAB Pace Project Number Samples IDs MUST BE UNIQUE DATE TIME TIME DATE Lab I.D 0930 0940 0950 0955 0 1006 1005 914 7150 1015 1020 7 167 1040 7170 DATE RELINQUISHED BY / AFFILIATION **ACCEPTED BY / AFFILIATION** TIME DATE TIME SAMPLE CONDITION Additional Comments: -ombine with results from Chainthe 987496 from 5/30/06 For Report, all with any Questions. 3/31 1716 × SAMPLER NAME AND SIGNATURE SIGNATURE OF SAMPLER! DATE Signed (MM / DD / YY) EE REVERSE SIDE FOR INSTRUCTIONS

CHAIN-OF-CUSTODY / Analytical Request Doctiment The Chain-of-Custody is a LEGAL DOCUMENT, All relevant fields must be completed acc Pace Analytical Page: of Section A Section B Section C 0987496 Required Client Information: Required Project Information: Invoice Information REGULATORY AGENCY ☐ NPDES ☐ GROUND WATER □ DRINKING WATER -Geotechnical contract UST ☐ RCRA Other MN MNC □GA SITE LOCATION Email To: Nelen , Corley a awar . Can Pace Quote Reference: 34948.1, Purchase Order No.: □OH □SC □ WI OTHER Page Project Marlager: wartz Project Name Proville - Parcel 10 iltered (Y/N) Project Number: Requested Due Date/TAT: Pace Profile #: Requested Section D Required Client Information Preservatives SAMPLE TYPE -GRAB C=COMP DRINKING WATER DW WATER WASTE WATER SAMPLE ID P SL OL WP AR OT TS PRODUCT SOIL/SOLID 2126290 COLLECTED One Character per box. COMPOSITE END/GRAB COMPOSITE START (A-Z, 0-9 / .-)Pace Project Number Samples IDs MUST BE UNIQUE DATE TIME TIME 7037705 1245 1300 777.1 1315 5 7747 6 7154 1330 1340 1350 9 400 **RELINQUISHED BY / AFFIL!ATION** ACCEPTED BY / AFFILIATION DATE TIME DATE TIME SAMPLE CONDITION Additional Comments: Y/N/Y/N Heaso Call with any Questions 301061 SAMPLER NAME AND SIGNATURE SIGNATURE OF SAMPLER DATE Signéd (MM / DD / YY) SEE REVERSE SIDE FOR INSTRUCTIONS